Two-Step To Win: Balancing Representation of Primary and General Electorates in Congress*

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Abstract: Candidates for the U.S. House must usually navigate two elections every two years to attain office, either dissuading or defeating opposition first at a primary election and second at a general election. How do they balance representing these two electorates when in office, and what are the electoral consequences of failing to do so? Using a set of roll call votes matched to survey data from every House district and a hierarchical model, I show that members represent both primary and general electorates and are about 2.5 times more representative of their general. I then show that members who vote against their primary electorate are less likely to win election to the subsequent congress, for example that members of the 111th and 112th House who most often vote against their primary electorates were 22 percentage points less likely to be reseated. The electoral penalty from primary electorates is notably larger for Republican members, which is a potential source of asymmetric polarization in Congress.

*A supplemental appendix is available at `http://www.sethjhill.com/working/SJH_TwoStep_Appendix.pdf`. I am grateful for feedback from David Broockman, Neil Malhotra, and Chris Tausanovitch.

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> As it is essential to liberty that the government in general should have a common interest with the people, so it is particularly essential that the [House] should have an immediate dependence on, and an intimate sympathy with, the people. Frequent elections are unquestionably the only policy by which this dependence and sympathy can be effectually secured.
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> James Madison, *Federalist 52*, 1788

Madison opened the second discussion in *Federalist 52* by offering what he viewed as a statement of fact, quoted in the epigraph above. He notes that frequent elections are the "only policy" that effectually connects the interests of representatives empowered with control of government to the interests of the people. Seminal work in political science agrees about the central place of elections in representation (e.g., Mayhew, 1974). How well American elections as practiced actually create common interests is a longstanding question. Decades of scholarship suggests modest though inconsistent correspondence between the preferences of constituents and the behaviors of their representatives. More contemporary work has argued that correspondence has fallen in recent years (Fiorina and Abrams, 2009) or that the correspondence is distributed unequally among certain classes of citizens (Bartels, 2008; Gilens, 2012). A key observation about this fall in correspondence is that Republican members of Congress appear to have become less representative at a greater rate than Democrats (e.g., McCarty, Poole, and Rosenthal, 2006), commonly known as *asymmetric polarization*.

Are elections today failing to effectually connect representatives to their constituents? While analysis of member behavior and constituent opinion generally finds correspondence between the two, the magnitude of this correspondence is not always great. Current explanations come up short in explaining why elections are generating more polarized members of congress today than in the past, or why one major party would be leading the other in a march away from the middle. This divergence of party behavior contrasts many theories of of voter behavior that predict party convergence, and thus is a central puzzle in modern American politics.

I argue that primary elections can explain part of this disconnect and part of the asymmetric polarization by the Republican party. Most evidence on incomplete correspondence considers the relationship between general electorates or full constituencies and member behavior. These comparisons skirt the reality that most members of congress are subjected to competitive primary

elections prior to the general election. If elections are the only policy to create shared interests of constituents and representatives, then primary elections should be part of any evaluation of responsiveness. To what extent do members represent their primary constituencies in addition to their general constituencies? And, what are the electoral costs if they do not?

In this essay, I use survey data and hierarchical models to get best estimates of the preferences of primary and general electorates in each House district across a set of issues and congresses. I then compare the preferences of each primary and general electorate in each congressional district over 20 issues related to roll call votes on those same issues cast by their member in the 111th, 112th, or 113th House (from 2009 to 2014). For example, I find that the larger the proportion of the primary (and general) electorate that values jobs over protecting the environment, the more likely the member was to vote in the 113th House to liberalize access to offshore drilling (HR 2231). I find that members are representative of both electorates, with point estimates suggesting the interests of the general electorate to be about 2.5 times more represented than the interests of the primary electorate. In analysis separated by party, I find that Republican members are about equally representative of their primary and general electorates, while Democrats are three times more representative of their general electorates.

I then show that members who more often vote against their primary and general electorates are less likely to win election to the subsequent congress. While others have shown an electoral penalty for voting against the interests of the general electorate, this is the first direct evidence of a similar penalty for voting against the preferences of the primary electorate. I find that members of the 111th and 112th House who vote against their primary electorates more than 25 percent of the time are 22 percentage points less likely to be seated in the next congress, all else equal. When estimating this effect separately by party, I find the penalty for Republican incumbents is twice the size of that of Democratic incumbents. This suggests that the electoral connection binds in primary as well as general elections, that members who do not demonstrate shared interests with the voters who turn out in their primary elections are less likely to retain office, and that Republican members especially must be concerned about primary elections. Indeed, I show that Republican members

are more representative of their primary electorates relative to their general electorates than are Democratic members.

My results make three contributions. First, they suggest an explanation for asymmetric polarization in congress. Republican members are more representative of their primary electorates and pay a greater electoral penalty for voting against their primary electorates than Democrats. Primaries are thus implicated in Republican voting in congress moving in a conservative direction beyond the preferences of their general electorates. Second, my analysis considers the preferences of primary and general electorates on specific issues, rather than on scaled estimates of ideological correspondence. Analysis at the level of specific issues has a long history in political science, but this is the first paper to measure issue preferences of both primary and general electorates across multiple issues in every House district. I also consider the effect within-party, and I believe this to be some of the first evidence that within-party variation across districts in primary elections is related to within-party member voting in congress.

Third, while I focus on the influence of primary electorates, my results show the continuing importance of the preferences of general electorates on member behavior. The electoral connection has taken somewhat of a beating in recent years, including many who question the basic competence of voters to gain accountability over their members. My evidence shows that the preferences of voters on specific issues remains a relevant consideration for members in congress (see also Ansolabehere and Jones, 2010). Though primary elections are also relevant, general elections continue their importance, especially for Democratic members of the House. Members behave within the institutions that they confront, crafting a balance between representing the two electoral constituencies whose votes they must win.

I proceed by summarizing previous theoretical and empirical accounts of the electoral connection, representation, and congressional primary elections. I then present my procedure to estimate the preferences of each primary and general electorate in each House district, and relate these preferences to member votes across a set of roll calls. I then show that members who vote against their primary electorates are less likely to be seated in the subsequent congress, explore the mech-

anism of the electoral penalty, discuss alternative mechanisms and responsiveness more broadly, and conclude.

Theory and results on representation and primary elections

If the citizens who participate in primary elections have different preferences than those who participate in the general election, primaries present a quandary both for ambitious politicians and for primary voters. Sophisticated primary voters appreciate that a general election follows the primary and that nominating a candidate with divergent policy views may lead to a loss at the general election. If the opponent at the general election is less likely than the primary opponent to represent their interests, sincerely voting for the most preferred candidate at the primary election may be a poor strategy. Thus, primary voters face a choice: nominate a candidate who has a better chance to win the general election to the detriment of their views, or take a risk with respect to the general election and nominate the candidate who most accurately reflects their interests.[1] Of course, primary voters may hedge and nominate a candidate who is some mix of representing their interests and having a better chance to win the general election.

Ambitious politicians face a similar quandary as they make choices over policy positions. They might cater entirely to the interests of the primary electorate, cater entirely to the interests of the general electorate, or somehow mix the interests of the two to increase their chances of winning both elections.[2] There are two relevant empirical questions regarding primary elections and representation, with limited research on each. First, how do members balance the interests of primary and general electorates when the two interests are in conflict? Second, how large an electoral penalty do members pay for voting against either or both electorates? The first question addresses how representation operates in congress, while the second question evaluates the nature of the electoral connection. If there is little or no electoral penalty for voting against either or both constituencies, it suggests a breakdown in the representative relationship. If there is a penalty, however,

[1] See Aranson and Ordeshook (1972) and Coleman (1971) for spatial theories of candidate strategies given primary voter behavior and Hall (2014) for empirical evidence of this risk.

[2] Some incumbents lose the party primary but go on to win the general election through other access to the general ballot, e.g. Lieberman of Connecticut or Murkowski of Alaska. I set aside this strategy as it is rare and, in some states, not permitted by statute ("sore-loser laws", e.g. Burden, Jones, and Kang, 2014).

it suggests elections are serving their purpose in creating a "common interest" between members and voters, at least to some degree. An electoral penalty also suggests the need to evaluate responsiveness across both primary and general elections.

Elections have long been proposed as the institutional solution to connect the interests of the governed to the interests of the representatives, from Madison and the Framers of the Constitution to modern social science. Connecting member behavior that is out of step with constituents to electoral defeat suggests that elections do serve to discipline incumbent behavior. This discipline appears to hold to a modest degree on issues and policy (e.g., Ansolabehere, Snyder, Jr., and Stewart III, 2001; Canes-Wrone, Brady, and Cogan, 2002; Nyhan et al., 2012), and to perhaps a stronger degree on valence issues like scandal, war, and the economy (e.g., Groseclose and Krehbiel, 1994; Kramer, 1971; Rosenstone, 1983; Vavreck, 2009).[3]

Political scientists have also long investigated the connection that elections are supposed to create: a correspondence between the interests and preferences of constituencies and the behavior of their members of congress. Scholars have studied the question from the representative's perspective, describing how representatives make decisions and connect their actions to support in their various constituencies (e.g., Arnold, 1990; Fenno, 1978; Fiorina, 1974; Kingdon, 1973; Mayhew, 1974). Others have measured characteristics and preferences of constituencies and related these to the roll call votes cast by members (e.g., Krehbiel and Rivers, 1988; Miller and Stokes, 1963). More recent larger-sample opinion surveys have allowed consideration of the overall relationship between summary measures of constituent views and summary measures of representative votes (e.g., Ansolabehere, Snyder, Jr., and Stewart III, 2001; Bafumi and Herron, 2010; Clinton, 2006; Tausanovitch and Warshaw, 2013), or comparison of roll call votes to respondent preferences on specific issues (Ansolabehere and Jones, 2010).[4]

One interesting feature of the limited correspondence is the apparent smaller correspondence

[3] See Broockman (2015) for an alternative view on the mapping from voter preferences to member choices and implications for representation.

[4] Gerber and Lewis (2004) use a unique data source of actual ballots cast to measure correspondence of general election constituent preferences to legislator behavior, notably including by party of voter. Gerber and Lewis (2004) do not, however, find an effect of the legislator's partisan constituency.

between the behavior of Republicans in congress and their general constituents, and Democratic members and theirs. Many scholars find that when you compare member voting behavior to a measure of ideology in the district, the Democratic slope is steeper than the Republican slope, suggesting greater representation of interests by Democrats (ideology measured by presidential vote or survey responses, e.g. Ansolabehere, Snyder, Jr., and Stewart III, 2001; Clinton, 2006; McCarty, Poole, and Rosenthal, 2009). Further, while both parties have become more ideological in congress over the last 30 years, trends show that the increasing divergence between the two parties seems to be driven more by Republican movement to the right than Democratic movement to the left (e.g. McCarty, Poole, and Rosenthal, 2006). The source of this *asymmetric polarization* remains unclear.

While most investigation of representation looks at general electorates or constituencies as a whole, responsiveness to primary electorates has not been ignored. Fenno (1978) argues that members consider the interests of various constituencies in making their choices. Statistical analysis has evaluated empirical implications of primary influence (Brady, Han, and Pope, 2007), or shows a relationship between separate measures of general and primary electorate ideology to summaries of ideology from member roll call voting (Butler, 2009; Hill, 2014).[5] Despite the intuitive connection between primary elections and polarization, most analysis of the implementation of or variation in the strength of primaries finds no or small connection to polarization (Bullock and Clinton, 2011; Burden, 2001; Gerber and Morton, 1998; Hirano et al., 2010; McGhee et al., 2014).

From a theoretical perspective, Aranson and Ordeshook (1972) extend the spatial theory of voting to sequential elections, showing that candidate strategies depend not only on the distribution of preferences for general and primary electorates, but also crucially on the decision rules of primary voters. When primary voters are fully strategic, candidates run as if they were only facing a general election. When primary voters are partially or fully sincere, however, the strategies candidates must follow depend upon a variety of unknowns, from the distributions of the two electorate preferences, to the ideology of primary and general opponents. Coleman (1971) presents a model

[5] All extant quantitative papers that consider primary electorates, however, look only at general measures of ideology, rather than preferences on specific issues.

of candidate location with primaries that shows that candidates either locate at the position of the median voter in their primary or some position closer to the median of the general electorate, again depending upon the distributions of voters and preferences.

In summary, strong consensus exists that elections should lead to representation of the interests of voters. This electoral connection is supported by empirical work that finds members of congress who more often vote against the interests of their general electorates are less likely to win reelection. The degree of correspondence created by this mechanism is less clear. A great amount of work finds detectable but relatively modest responsiveness between members and constituents, and apparently less correspondence for Republican members of congress than for Democrats.

Little of this empirical work, however, considers the electoral connection implied by members standing for primary and general elections in sequence. Below, I estimate the relative correspondence between member behavior and the preferences of their primary and general electorates, and then the electoral consequences for members who fall short on correspondence with one or both electorates. I investigate if these relationships vary by party in pursuit of an explanation for asymmetric polarization. This requires measuring the preferences of each primary and general electorate in each House district on a set of issues on which members vote.

Estimating the preferences of primary and general electorates in each district

In this section, I present the data and statistical model I use to estimate the preferences of primary and general electorate voters in each House district across a set of issues related to specific roll call votes. In the following section, I relate these estimates to the actual roll call votes cast. The data come from large public opinion surveys, and I use a hierarchical model to pool observations across geographies and turnout histories to get best estimates of these quantities in each general and primary electorate. I present evidence on the improvement of the model over simple aggregation in estimating district-electorate preferences.

To estimate preferences of primary and general electorates, I use the 2010 and 2012 Cooperative Congressional Election Studies (CCES, Ansolabehere, 2010, 2012). Each survey is a nation-

ally representative sample of around 50,000 Americans with interviews before and after the 2010 and 2012 elections, stratified by state and fielded over the internet. The surveys asked standard sets of political questions about attitudes, preferences, and beliefs, and behaviors such as vote choice and turnout. The surveys also validate turnout records by matching respondents to administrative records, a crucial component to accurately describing who has actually turned out in each election.

I use specific questions from each CCES to measure the preferences of respondents regarding an issue that was voted upon by Congress. These questions come in one of two forms. First, the surveys asked respondents about a handful of roll call votes: "Congress considered many important bills over the past two years. For each of the following tell us whether you support or oppose the legislation in principle." I use all such roll call vote questions. The 2010 CCES asked about 111th House roll calls for the Affordable Care Act, a carbon tax, Dodd-Frank financial reform, ending Don't Ask Don't Tell, the State Children's Health Insurance Program, and the American Recovery and Reinvestment Act of 2009 (the government stimulus in response to the severe economic recession). The 2012 CCES asked about 112th House roll calls for repealing the Affordable Care Act, the Ryan budget plan, the Korea Free Trade agreement, the Simpson-Bowles budget, and the Keystone Pipeline.[6] I call these measures in the CCES the respondent's *support* for the roll call.

Because the set of roll call votes in the House asked by the CCES is somewhat limited, I supplemented these issues. I looked through the set of policy questions asked of respondents in each CCES, and for each policy question attempted to match to a specific roll call vote in the House. For example, both surveys ask respondents, "All things considered, do you think it was a mistake to invade Afghanistan?" and on July 1, 2010 the House voted on an amendment to set a timetable for withdrawal of troops from Afghanistan. I present the set of seven questions matched to eight roll calls I identified in Appendix Table A1, which shows mappings from questions on abortion, gun control, budget deficit reduction, jobs vs the environment, Iraq, Afghanistan, and the Tea Party to specific roll call votes recorded in the 111th, 112th, and 113th House. I call these

[6] I set aside the 2012 question asking respondent preferences on the 2010 Affordable Care Act. See the documentation for each CCES for details on all questions (Ansolabehere, 2010, 2012).

measures in the CCES the respondent's *attitude* on the roll call.

To estimate the attitudes or support for specific roll call votes of primary and general electorates in each district, I use a hierarchical model and the survey responses from the CCES. Although the CCES is a large survey, describing the preferences of primary and general electorates in each congressional district is still limited by small sample sizes. Thus, the hierarchical model pools observations across geography and turnout to get a best estimate of the target electorate. For example, to estimate the preferences of Republican primary voters in Tennessee's second district, the hierarchical model uses the knowledge that many primary voters in TN-02 are also Republican general voters in TN-02, and are also Republican residents of the state of Tennessee, and thus may share interests with these larger groups. The hierarchical model only pools information from these other groups if the data suggest that the groups are similar.[7]

I provide here a basic intuition of the hierarchical model, and present the full specification and details in Supplemental Appendix Section B. For each survey question in the CCES, I run three separate hierarchical models, one for Democratic registrants, one for Republican registrants, and one for other party registrants. Separate models allow all coefficients and random effects to vary by party and issue. Within each party, I model the individual respondent's attitude or stated support for the roll call vote with three characteristics: their demographics, their geography, and their turnout history. I include a standard set of demographic predictors for political attitudes: age, income, and indicators for male, black, married, and seldom or never attend church. I also include terms for the validated turnout of the respondent in the congressional primary and general election of the year of the study, 2010 or 2012. Because turnout is likely to depend upon the nature of the contest, I allow the effect of turnout to vary by state and congressional district as random effects. I also allow for random effects for each Census region, state, and congressional district.[8]

[7] Hierarchical models such as this have the lowest mean-square error of a class of multi-level estimators (see, e.g., Jackman, 2009, ch. 7 for citations). Note, though, that these models shrink estimates towards the grand mean, on average. To the extent my estimates of electorate preferences are pulled toward the overall mean, it seems likely I am less likely to measure the influence of variation in these preferences across districts. Thus, the effects I find below likely underestimate the true effects.

[8] My method to estimate policy preferences from public opinion surveys is related to a line of recent work on estimating the policy opinions of subnational electorates using hierarchical models (Gelman and Little, 1997). These methods, called multi-level regression with post-stratification (MRP), use post-stratification along with the hierarchical

In practice, the model estimates how attitudes or support for each roll call varies with where the person lives, in what elections they turned out, their party, and their individual demographics. I use the coefficients from this model to calculate predicted values for each respondent on each attitude or support. Then, to estimate the level of support or attitude in each electorate, I select all respondents who voted in that election and in that congressional district, and take the weighted average of their predicted values, with weighting by the survey post-stratification weights. For example, to estimate support for the Keystone Pipeline among Democratic primary voters in TN-02 in 2012, I take the weighted average of the predicted support for Keystone Pipeline of the respondents to the 2012 CCES who are validated to have voted in the 2012 congressional primary in Tennessee district 2 and are registered Democrats. My estimate of support for this primary electorate is 64 percent. To estimate support for the Keystone Pipeline among general election voters of all parties in TN-02 in 2012, I take the weighted average of the predicted support for Keystone Pipeline of the respondents to the 2012 CCES who are validated to have voted in the 2012 general election in Tennessee district 2. My estimate of support for this general electorate is 81 percent. Note that the same respondent may be included in both these averages if they voted in both the congressional primary and the general election in 2012, as many did.

In Supplementary Appendix Section C, I show the validity of this procedure of estimating electorate preferences. I document that congressional district 2012 presidential vote share is better predicted by my model estimates of congressional district preferences about the Affordable Care Act and support for the Tea Party than by simply using the CCES survey totals in each district. My estimates improve variance explained of the actual presidential votes cast in the district by 10 and 20 percentage points, respectively.

Relationship of electorate preferences to roll call votes

In this section, I present the relationship between my estimates of the interests of the primary and general electorates and the roll call votes of their members of the House. I first present graphical

model to improve estimation. However, I do not have Census targets for primary elections, and cannot post-stratify to Census targets, which is a central difference. Using the post-stratification weights from the CCES serves a similar purpose.

summaries comparing member votes to each electorate, and then present multiple regression models that account for the effect of each electorate in the presence of the other. The results show that member votes on bills before congress are related to the attitudes and support on those issues of both electorates.

In Figure 1, I compare member votes on the 20 roll calls to attitudes or support for those issues in the members' general electorates by issue, congress, and party of the member. In each frame the y-axis is a yea vote on the bill, and the x-axis is support or attitude on the bill among the general electorate. Because attitudes and support are measured on different scales, I standardize both measures to mean zero and standard deviation one for each issue.[9] I plot trends for each bill using smoothing splines. The generally positive slopes show that the more the general electorate supports the roll call or holds attitudes consistent with that roll call, the more likely is the member to vote for that bill.

In the 111th House among Democrats (top left frame), all 8 bills show a positive relationship. The smoothed lines present the relationship between the district's distance from mean district support and how likely a member is to vote yea. Looking up from zero on the x-axis shows how likely a member is to vote yea in a district with average level of support for the bill – average support across house districts on that issue. This ranges from about a 20 percent likelihood of setting a timetable to withdraw from Afghanistan to more than 95 percent likelihood of voting for children's health insurance (SCHIP).[10] While a few slopes across these frames are negative, most are flat or positive.[11]

The frames of Figure 1 suggest two classes of votes. Some votes are mostly unanimous yea or nay within party, thus showing little responsiveness to variation across district general electorates in attitude or support. Unanimous votes include, for example, the Ryan Budget among Democrats

[9] In Appendix Figure A2, I plot vote against general electorate for all members. In Appendix Sections E and F, I present all tables and figures separately by roll call questions and attitude questions.

[10] Because I have normalized units, we cannot conclude from this figure that there is more responsiveness on one issue over the other. In Appendix Figures A3 to A6, I present these relationships for only the questions asked as roll calls on the survey where support is in comparable units.

[11] I include all roll calls in these figures so that I am not selecting on a positive relationship and biasing in favor of finding responsiveness – this is the full set of survey questions and roll calls I selected prior to analysis.

in the 112th House, or offshore drilling among Republicans in the 113th House. Other votes do demonstrate within-party disagreement, and these votes generally show a positive relationship with the attitudes or support in the general electorate. Within each party, yea or nay vote on these bills appears related to the reported interests of each member's general election constituency.[12]

In Figure 2, I replicate the smooth trends in Figure 1 but substitute on the x-axis the normalized support among the member's same-party primary electorate.[13] For this variable, I normalize attitude/support *within* party, rather than across parties as in the general electorate plots. Thus, mean attitude/support here is the average of Democratic primary electorates in the top row and the average of Republican primary electorates in the bottom row. The smaller number of cases in each district makes these estimates more noisy, and the smoothing splines are more bumpy in these figures. Even so, I find positive relationships between the preferences of primary electorates and voting by members of Congress.[14]

Multiple regression models

The figures and smoothed trends suggest influence from both primary and general electorates. However, to the extent the preferences of the two are correlated, it is not clear which is more or less influential on the member's vote. To evaluate relative influence, I turn to a multiple regression model, which uses cross-sectional variation in the attitudes of the two electorates to identify the marginal influence of each. In all models, I control for party of the member, because this is strongly correlated with the preferences of the same-party primary electorate. Note, however, that this leads to a conservative estimate of representation, as part of the responsiveness to voters

[12] The CCESs have asked retrospective preferences about roll call votes already cast, and the 113th House occurred after the fielding of the most recent CCES (2012) at the time of writing, leading to the smaller set of issues for the 113th.

[13] Some states do not hold separate primaries by party, or use varying rules. To describe the member's party primary electorate consistently across the nation, I use the set of registrants who self-report being registered with the Democrat or Republican party and have a validated primary vote in that district. In places where this is not fully accurate, I am introducing measurement error in the primary variable, which seems unlikely to bias me in favor of finding an effect of the primary electorate.

[14] Where the relationship between attitudes about how to balance the budget and vote on the fiscal cliff deal are negative for general electorates (Figure 1, 112th House), I find a strong positive relationship between vote by Republican members and attitudes of their primary electorates (Figure 2, bottom middle frame). There is some evidence of this influence among Republican primary electorates again with the budget deal in the 113th congress.

in the district operates through the party of their member. Instead, what these models measure is the relative influence of the interests of the primary and general electorates within each party caucus/conference.[15]

In Table 1, I present six model specifications. Explanatory variables include the average attitude or support in the general electorate, the average attitude or support in the primary electorate of the member's party (the Democratic primary for Democratic members, the Republican primary for Republican members), each normalized to mean zero and variance one, and fixed effects for each roll call vote times party. The fixed effects allow each roll call vote to have a separate intercept (average support) for Democrat and Republican members, meaning that the coefficients on the electorate terms measure the average marginal effect of differences in these constituency preferences within party.[16]

The results of Table 1 suggest that the interests of both primary and general electorates influence roll call voting in Congress. The coefficients in the first column suggest that, on average, a one standard deviation increase in support or attitude for a roll call among the general electorate increases likelihood of a yea vote by 5 percentage points, all else equal. Note that all else equal holds much equal, such as average level of support for the bill among each party and the correlation of party of representative to support for the bill across districts. Likewise, a one standard deviation increase in support or attitude for a roll call among the primary electorate of the member's party increases likelihood of a yea vote by 2 percentage points, all else equal. These coefficients suggest that the preferences of the general electorate are about 2.5 times more influential than the preferences of the primary electorate.[17]

In columns two and three, I present models with the terms for general and primary electorate

[15] I discuss below alternative mechanisms as well as the coefficients and their larger magnitudes in models without control for party of member.

[16] Note that the roll call times party fixed effects nest congressional session-party fixed effects so that all session-party-specific factors are also held constant.

[17] In Appendix Table A2, I present similar models for the roll call questions asked as roll call votes to respondents. These questions have the nice feature of a natural coding: support for the roll call in the electorate ranges from 0 to 1, and member vote is either 0 or 1. In the specification of column 1, I estimate that moving from support of 0 to full support in the electorate moves the probability of a yea vote by 61 percent, and a similar movement among the primary electorate by 56 percent.

preferences entered separately. In column four, I offer a more conservative estimate of the two effects by also including state times roll call fixed effects, allowing the intercept to vary by state on each roll call in addition to party. This attenuates the coefficients but I again find a pattern of both electorates influencing votes and the general electorate being of larger consequence.

In columns five and six, I estimate the model separately for Republican and Democratic members. Although the differences are not statistically significant, the point estimates are interesting, suggesting that Republican members (a) are less representative of one standard deviation of preferences of the general electorate than Democratic members (0.02 vs 0.06), and (b) are about equally representative of their primary and general electorates. Democrats are driving the apparently greater responsiveness to the general electorate. This relatively greater representation of primary interests by Republican members is cross-sectional observation of asymmetric polarization.

In summary, comparing member votes on a set of 20 issues before the 111th through 113th Houses to the preferences of each member's primary and general electorate on each issue shows responsiveness to both electorates. Members on average appear to be about 2.5 times more responsive to their general electorate, though this is drive by greater responsiveness by Democrats compared to about equal responsiveness to primary and general electorates by Republicans. In the next section, I consider the electoral consequences of voting against each electorate.

The electoral connection: representation of primary electorates

The correlation between the preferences of the primary electorate and votes in the House begs a question of the connection. Do members vote this way in consideration of the primary elections? In this section, I show that the more often members of Congress vote against their primary (and general) electorate, the less likely they are to be reelected. This implies that members, at least to some degree, vote with their primary electorate for fear of electoral retribution.

To estimate the electoral effects of voting against the primary, I first classify how often the member voted against the preferences of each of their primary and general election constituency.

To do so, for each of the 16 roll call votes above from the 111th and 112th House, I run three logit regressions.[18] In the first model, I predict member vote on the roll call with the attitudes or support of their general electorate as estimated above. In the second and third model, I predict member vote on the roll call with the attitudes or support of their primary electorate as estimated above, separately for Democrats and Republicans. I define voting against the electorate from these three regressions as cases of classification error, that is where the logit model predicted the member to vote yea (nay) and they voted nay (yea). For each member on each roll call, then, they might vote with or against either or both of their general and primary electorates.

After I measure whether or not the member votes against their primary and general electorate on each roll call vote, I calculate the rate of agreement across votes within each Congress, for each member. I thus measure (a) the proportion of roll call votes on which the member votes against the preferences of their primary electorate in that congress, and (b) the proportion of roll call votes on which the member votes against the preferences of their general electorate in that congress. If there is an electoral cost to voting against the primary (or general) electorate, members who have higher values on these two variables should be less likely to win election to the subsequent congress. Members of these two Houses voted against their primary and general electorates on 10.1 and 23.9 percent of roll calls, on average.

In Figure 3, I plot the proportion of the members of the 111th and 112th House who are seated in the subsequent House (y-axis) against the proportion of roll call votes they cast against their primary and general electorates.[19] Each point is the proportion seated in the next congress for each of twelve types of members defined by how often the vote against their general electorate (grouped along the x-axis), and how often they vote against their primary electorate (noted by the plotting symbol as indicated in the legend). For example, the large square farthest to the left,

[18] I have only four roll call votes from the 113th so exclude it from this analysis.

[19] To determine if the member serves in the subsequent House, I take the roll call vote matrices from the current and subsequent congress from `http://www.voteview.com` and `http://adric.sscnet.ucla.edu/rollcall/` (Lewis and Poole, 2004), and check whether the ICPSR identifier for the member in the first matrix is present in the second matrix. I exclude all members from districts with multiple members serving in the first congress. In two cases, I over-rode these rules: I code Jesse Jackson, Jr (IL-02) and Tim Scott (SC-01) as seated in the 113th House because each won reelection in 2012 prior to resigning/being appointed to the Senate and not casting any roll call votes in the 113th House.

representing the most common group as indicated by the size of the symbol, shows that members who vote against the preferences of their general electorate on between 0 and 12.5 percent of roll call votes and against the preferences of their primary electorate on between 0 and 12.5 percent of roll call votes are seated in the next congress 87 percent of the time. In contrast, members who vote against their primary and general electorate between 12.5 and 25 percent of the time (the second circle from the left), are seated in the next congress 70 percent of the time.[20]

Two features stand out in Figure 3. First, looking across the four groups defined by rate of voting against the general electorate across the x-axis, the more often a member votes against their general electorate, the less likely they are to be seated in the subsequent congress. This relationship lends credence to my measure because it is consistent with previous findings using different designs that members who diverge from their general electorates face an electoral penalty (e.g. Ansolabehere, Snyder, Jr., and Stewart III, 2001; Canes-Wrone, Brady, and Cogan, 2002). A second feature is the generally negative trend of the three plotting symbols within each grouping of the general electorate, representing rate of voting against the primary electorate. The more often the member votes against their primary electorate holding fixed the rate of voting against the general electorate, the less likely they are to be seated in the subsequent congress. Most strikingly, among members who vote against their general electorate on between 12.5 and 25 percent of the roll call votes in my study, more than 80 percent of those usually voting with their primary electorate are seated in the next congress (second square from the left) while 40 percent of those who vote against their primary electorate more than 25 percent of the time are reseated (second triangle from the left).

To estimate the relationship between diverging from the preferences of primary and general electorates and electoral outcomes with more statistical control, I present results from regression models in Table 2. In these models, I include indicator variables for which category of divergence on roll call voting the member resides in for both primary and general electorates, and also include

[20] I divided the rates of voting against electorates into approximate round numbers that would also maintain reasonable cell sizes for most of their intersections. Most members vote most of the time with most of their constituents and, of course, some of my classifications are probably inaccurate due to measurement error of constituency preferences.

fixed effects for congress, party, and congress times party. These models estimate the effect of voting against primary and general electorates holding constant all features of the member's party in that congress, exploiting within-congress-party variation on divergence in roll call voting. The dependent variable is being seated in the subsequent congress, again limiting cases to members who served the entire term in that district.[21]

The OLS coefficients in Table 2 show that voting against the primary and general electorate decreases the chances that a member serves in the subsequent House. In the first column, I include only the indicators for the proportion of roll call votes the member casts against the preferences of their general electorate, finding as suggested in Figure 3 a negative relationship with voting against the general electorate. Members who vote most often against their general electorate are 14 percentage points less likely to be reelected than those who vote most consistently with their general electorate.

In the second column, I include only the indicators for voting against the primary electorate along with an intercept term. The two coefficients indicate that voting against the primary electorate between 12.5 and 25 percent of the time decreases chances of sitting in the next congress by 9 percentage points, and voting against more than 25 percent of the time decreases chances by 26 percentage points, all else equal. In column three, I include both sets of indicators, allowing for the potential correlation between voting against primary and general electorates. The coefficients on voting against the primary decline slightly in magnitude and one loses statistical significance. Nonetheless, the results suggest that, when controlling for party, congress, and votes against the general electorate, voting against the preferences of the primary electorate more than 25 percent of the time decreases chances of being seated in the subsequent congress by 22 percentage points.[22]

In columns four and five of Table 2, I estimate the model from column three separately for Democrat and Republican members. Two results stand out. First, Republican chances of being

[21] Note that I am do not account for characteristics of the challenging candidates. Surely part of the electoral mechanism that penalizes members for voting against the preferences of either primary or general electorates is the entry of candidates to challenge the incumbent at one of the two elections (Jacobson and Kernell, 1983). I leave that question aside and let the coefficients estimate the average effect across challengers.

[22] Controlling for district safety, measured by distance from 50 in district presidential vote, attenuates this coefficient from 22 to 19 percentage points. Results available from the author on request.

seated in the next congress appear essentially unrelated to whether or not they vote against their general electorate, while Democrats chances are notably so. The coefficients for the four categories for Republicans are all approximately the same size and not statistically distinguishable, while Democratic chances of being seated fall from 85 percent when least often voting against the general electorate to 61 percent when most often voting against the general electorate. Second, and in stark contrast, the coefficients on the indicator for voting against the primary electorate more than 25 percent of the time suggest Republicans have more to worry about when voting against their primary electorates. The results suggest such Republicans are 31 percentage points less likely to be reseated as compared to Democrats being 16 points less likely, all else equal.

These results suggest that Republican members of Congress in this period paid little electoral penalty for voting against the preferences of their general electorates, while Democrats paid a larger penalty. To put the comparison of the general and primary electorates in relative terms, moving from the lowest category of voting against the general electorate (less than 12.5 percent of the time) to the highest category (more than 50 percent of the time) *increases* a Republican incumbent's chances of reelection by 6 percentage points, while decreasing a Democratic incumbent's chances of reelection by 24 points, all else equal. Meanwhile, voting against the primary electorate at the highest rate (more than 25 percent of the time) decreases a Republican's chance for reelection by 31 points and a Democrat's by 16 points.

Points of exit on path to reelection

I have shown above that members who vote against their primary electorate are less likely to be seated in the subsequent Congress. Here I briefly explore the mechanism of the penalty, finding that members who vote against their primary electorate are less likely to stand in the subsequent primary, are less likely to win that primary if they do stand, and are less likely to win the general election even when they do win the primary election.

To explore these questions, I use data from Gary Jacobson on the electoral disposition of members of the 111th and 112th Houses. Jacobson records retirements, primary election defeats, and general election defeats for each House incumbent. I code incumbents who do not retire from pol-

itics, do not run for higher office, and are not redistricted into a two-incumbent contest as standing in the subsequent primary. I then identify those incumbents who win the primary, and those incumbents who go on to win the general election.[23]

In Figure 4, I plot the points of exit for the incumbents in my sample from the 111th and 112th House on the way to the subsequent congress. I present the proportion of incumbents who did not stand in the primary (upper left), lost the primary having stood (upper right), and lost the general having won the primary (lower left). I present these rates respectively for incumbents who voted against their general electorates at the highest rates (greater than 50 percent), incumbents who voted against their primary electorates at the highest rates (greater than 25 percent), and the incumbents who are in neither of these categories, voting against their general electorates on less than 50 percent of rolls and their primary electorates less than 25 percent.

Figure 4 shows that 20.3% of incumbents who voted against their primary electorates on 25 percent or more of roll call votes did not stand in the subsequent primary election, compared to 10.5% of incumbents who voted against their general electorates 50 percent or more and 7.9% of remaining incumbents. The figure also shows that voting against the primary electorate increases chances of being defeated at the primary, though that event is unlikely in any case (1.2% versus 2.0%). Finally, even having made it through the primary, members who most often vote against their primary electorates are more likely to lose the general election, even compared to members who are voting most often against their general electorates (28.0% defeated versus 16.7% versus 7.3% of all incumbents).

This third frame of Figure 4 merits further consideration. The rates suggests a penalty at the *general* election for voting against the primary electorate. Fourteen of the 50 incumbents who won their primary despite voting against the preferences of their primary electorate more than 25 percent of the time ended up losing their general election (thus the bar height of 28% in Figure 4). Of these 14, only two were opposed in the primary, so most "won" their primary through lack of challenge.[24] Eleven of the 14 were Democrats from the 111th Congress and six of these 11 from

[23] I code Jeff Landry (LA-03) as losing in the primary election because he lost in a runoff to another Republican.

[24] I identified primary challenges using data from the Federal Election Commission on primary election results.

the South, all part of the landslide of losses for House Democrats in the 2010 election. Only one of the 14 voted against their general electorate in the lowest category of 12.5 percent or less, while 9 voted against their general electorate on 25 percent or more of the roll call votes. These descriptives suggest that this apparent general election penalty for voting against the primary electorate may be due to spurious correlation. However, it would be useful to extend my analysis with future cases to evaluate the possibility of an electoral penalty at the general election for voting against the preferences of primary voters.[25]

In summary, I have shown in this section that House incumbents who vote against the preferences of their primary electorate are less likely to be seated in the subsequent congress. When controlling for voting against the preferences of the general electorate, which also harms chances of reelection, members who most often vote against their primary electorates are 22 percentage points less likely to be seated in the subsequent Congress. I show that this penalty is larger for Republican than Democratic incumbents in this period, while the general election penalty is larger for the Democrats and non-existent for the Republicans. This could be a source of asymmetric polarization in congress. Finally, I show that the penalty for voting against the primary operates at three stages of the electoral process. Incumbents who vote against their primary electorates are less likely to compete in the subsequent primary, less likely to win the primary if they do stand, and less likely to win the general election if they do win the primary, though this final claim rests on a small number of incumbents, many of whom were not challenged in their primary election.

Tests for alternative mechanisms

One of my key empirical findings is that roll call voting in the U.S. House is representative of the preferences of both primary and general electorates. This evidence is correlational, and so it is worth considering alternative mechanisms to the electoral connection. I consider in this section three alternative explanations for this evidence that would suggest members are not actually re-

[25] For example, are primary voters less likely to offer monetary or volunteer resources to members who vote too often against their preferences, hurting chances at the general election? Or, does the general electorate also react to some degree to a member's failure to please his or her primary constituency (e.g. a candidate selection story such as Snyder, Jr. and Ting, 2011)?

sponding to their primary electorates but instead to some unmeasured spurious factor: the follow-the-leader effect, a candidate entry model, and the effect of partisan donors. I offer arguments against each of these explanations, suggesting that preponderance of theory and evidence supports the electoral mechanism.

Two alternative mechanisms of my findings are about endogeneity between member choices and primary preferences. The first, what I call the follow-the-leader explanation per Lenz (2012), argues that voters in these House districts answer survey questions in ways that are correspondent with member votes because they have learned what their member supports and adopted that position due to shared partisanship or other affinity. For example, Republican primary voters in a district may not have strong preferences on the Affordable Care Act, but when they learn how strongly their Republican member of Congress opposes the policy, they adopt that issue position. Subsequently, when they are surveyed on the issue they report being opposed to the ACA, generating a correlation between their preferences and their member's roll call vote. The causal arrow in this case, however, moves from the member's position to the primary electorate rather than the reverse.

A second mechanism that would generate an endogenous correlation between primary electorate preferences and member votes is candidate entry. Most candidates for the House are likely to be politically active citizens in their districts, and thus are more likely to be primary voters than general voters. Even if these members vote solely on their personal policy preferences without concern for electoral consequences, they are more likely to look like the preferences of primary voters (of that party) than of general voters.[26] This selection story could lead to a correspondence between electorate preferences and member roll call voting even if members were not considering the preferences of their electorates.

Both the follow-the-leader and the candidate entry stories are challenged by my finding of an electoral penalty for voting against the primary and the general electorate. If voters were simply

[26] Candidate entry would also generate the correspondence with the preferences of the general electorate: if general electorates vary in their preferences across districts, random citizens drawn from those general electorates will demonstrate cross-sectional correspondence to their district's general electorate.

following the leader then the member could vote how they wanted and we would not observe members who vote more often against the preferences of their electorate being more likely to lose. Likewise, incumbents may be a random draw from the primary election constituencies in their districts who vote as they personally please without consideration of electoral consequences. But, in addition to the electoral consequences I estimate in this article, incumbents engage in behaviors that indicate they seem to care about reelection – they devote considerable time to raising campaign funds, constituency service, giving speeches in districts, securing distributive goods, etc. This suggests that part of the correspondence between electorate preferences and member votes is motivated by electoral considerations and that members are not solely voting their own personal policy views.

A third alternative mechanism for the correspondence between electorate preferences and member behavior is that members are motivated to raise funds for their campaigns, and donors are more likely to look like primary voters than general voters. Under this story, donors demand that members vote on bills in ways that go against their general electorate reelection incentives, and because donor preferences are similar to primary electorate preferences, my empirical comparisons above attribute a donor effect to the primary electorate.

I present here evidence from contribution data that donors are not likely to drive the correlation between the preferences of primary electorates and the votes cast by their representative. I consider individual contributions to House candidates in 2010 and 2012, setting aside the many non-individual contributions from corporate PACs and other committees that fund a large portion of House campaigns (non-individual contributions made up 34 and 36 percent of House contributions in 2010 and 2012).[27] This seems a conservative measure of contributor ideology if PACs and non-individual contributors are more likely to be influence-seeking and less likely to be from within-district. The data show that 38.3 and 41.2 percent (2010 and 2012) of individual contribution dollars to the candidates in the average House district come from donors who list an address in the candidate's district (I aggregate this number from the geocoded donation records compiled by

[27] See `https://www.opensecrets.org/bigpicture/stats.php`.

Bonica, 2013*b*,*a*). With well more than half of individual contributions coming from out of district and 1 out of 3 dollars coming from non-individual contributors, my finding that within-party variation in the preferences of primary electorates influences roll call voting is difficult to attribute solely to the influence of within-district donors. It would have to be either that candidates are especially responsive to within-district donations or that out-of-district and committee donors coordinate on candidates in other districts in ways that correlate with the candidate's primary electorate in that district, and further that neither of these factors was driven by the electoral connection. While possible, it seems more likely that candidates are responding to or anticipating an electoral threat from their primary voters.

In summary, there are alternative mechanisms that might generate the empirical evidence presented above suggesting the pathway connecting primary voters to member behavior is not through an electoral connection. But, my brief exploration of three plausible alternatives suggests that none are as coherent and parsimonious as the electoral connection.

Discussion on the magnitude of responsiveness

To this point, I have presented argument and evidence that the preferences of primary electorates are an important influence on member behavior, and that members who vote less consistently in the interests of their primary voters are less likely to retain office. My results suggest that members are responsive to their primary electorates in addition to their general electorates, however the magnitude of this responsiveness is perhaps not large. Drawing broader conclusions about representation from these regression coefficients is complicated by the inclusion of party fixed effects in these models. In this section, I consider these relationships without party fixed effects to address broader claims about responsiveness. The tradeoff of excluding party fixed effects is likely some loss to inferential validity.

Most empirical work on responsiveness has compared summaries of the preferences of general electorates or the broader constituency and member ideology. Yet doing so in the absence of consideration of the primary electorate has two problems. First, the potential for omitted variable

bias if the preferences of the primary electorate are correlated with the preferences of the general electorate and have an influence on roll call voting. As is well known, if member votes are approximated by an equation $y_i = \alpha + \beta x_i + \delta z_i + \epsilon$, with y_i the vote or summary of votes for member i, x_i the preferences of the general electorate in district i on that roll or that summary, and z_i the preferences of the primary electorate, a regression model excluding z_i yields a biased estimate of β if $\delta \neq 0$ and x and z have non-zero correlation. Given the strong correlation between member vote, party composition of the district, and the presence of partisan primaries, it seems likely that in most modern congresses x and z are positively correlated. What remains less certain is the level of this correlation, the size of δ, and the corresponding misrepresentation of responsiveness in analysis that only consider the general electorate.

The second problem with considering only responsiveness to general electorates occurs in interpreting the normative implications of the observed relationship of responsiveness. If elections are the mechanism that drives responsiveness, looking only at the general electorate when members must also contest primary elections does not acknowledge the institutional constraints that members actually face. To very roughly summarize previous empirical work, the results are usually that β is positive and statistically significant, but that the variation in y_i explained by x_i is less than what one might imagine in a strong representative relationship. This could lead to the conclusion that representation in America is not operating with high efficacy. However, if some of the variation in y_i is due to the unmeasured z_i, these conclusions may be premature. Consideration of both x_i and z_i to understand their relative influence through β and δ is an important step in evaluating representation in the U.S.

In my earlier analysis, I have included party fixed effects in my regression specifications. This is motivated by the potential for unmeasured influence on roll call voting that is more correlated with z_i than x_i. For example, if contributors or party leaders push members to vote more with the party line than they would otherwise, and if the preferences of the primary electorate z_i are more correlated with the party line than the preferences of x_i, my estimate of δ without some account for the party line will be too large. Thus in Table 1, I include a member party intercept for each

roll call vote as a way to control for the average influence of the party on that roll call. This fixed effect, however, will also pick up the average effect of primary and general electorates, and so inclusion of the intercepts may not be a full accounting for the total influence of primary and general electorates.

To make statements about the responsiveness of members to voters with these data, I reproduce the first four columns of Table 1 in Table 3 but exclude the party-specific intercepts. Instead, I have roll call-specific intercepts and include the preferences of the primary and general electorates, each normalized on each roll call vote to mean zero and variance one. Recall than in Table 1, the preferences of the primary electorate were normalized within each party. Now the coefficients on the preferences of the primary electorate measure the effect of a one standard deviation increase across all member primary electorates on their vote across the 20 roll calls. As you would expect, the magnitude of these effects is now larger. In column one, a one standard deviation increase in the general electorate's support or attitudes on a bill increases rate of member yea vote by 21 percentage points. In column two, a one standard deviation increase in the primary electorate's support or attitudes on a bill increases rate of member yea vote by 31 percentage points.

Column three of Table 3 is an estimate of the responsiveness of members of the House to primary and general election constituencies. The two coefficients should not be directly compared, as standard deviations in support are not equivalent in absolute terms. Two other results confirm the two problems I highlighted above about standard evaluations of responsiveness when only looking at the general electorate. First, the coefficient on the preferences of the general electorate (β) changes significantly when we include the preferences of the primary electorate (column one to column three). This suggests that omitted variable bias may be at play in existing regression models of representation.

Second, note that the adjusted R^2 from column one to column three increases from 0.67 to 0.77. This shows that responsiveness, if measured by the variance in roll call voting explained by the preferences of electorates, appears stronger when we consider the influence of the primary electorate. That is, an evaluation of how well members are representing the interests of their

constituents is more favorable when we measure the interests of the two sets of voters who vote the member into office. The primary electorate is an important influence on behavior.[28]

This section and the coefficients in Table 3 suggest that studies of representation and responsiveness may benefit from more careful consideration of the electoral institutions that candidates must navigate and more careful measurement of the preferences of the voters who participate in each election.

Concluding remarks

Recent analysis of congressional elections has often focused on electoral features such as geography, turnout, the economy, and partisanship. While surely important, member votes on political issues merit some return to the spotlight. I introduced this essay with two questions motivated by the electoral connection between constituent interests and representative votes on issues: To what extent do members represent their primary constituencies in addition to their general constituencies? And, what are the electoral costs if they do not? My novel estimates of the preferences of primary and general electorate voters in each House district across 20 roll call votes from the 111th, 112th, and 113th House allows me to provide some answers.

First, members represent both primary and general constituencies. I replicate previous research showing modest correspondence between the preferences of general electorates and member roll call voting. Holding party of representative fixed, a one standard deviation change across districts in general electorate preferences changes a member's probability of a yea vote by 5 percentage points. A novel finding is that a one standard deviation change across districts in the preferences of the party primary electorate corresponds to a 2 percentage point change in the member's probability of a yea vote, all else equal. While this magnitude may appear small, this holds fixed the party of member, through which some or most of responsiveness to primary and general electorate operates.[29] It is somewhat difficult to evaluate the absolute magnitude of this responsiveness (see, for example, discussion of this problem in Matsusaka, 2001). But, my results show that within

[28] The fourth column includes intercepts for each state-cross-roll call and is consistent with the findings noted here.
[29] Excluding party fixed effects yields a coefficient of 31 points (see Table 3).

each party caucus/conference in the House, members respond to variation in the preferences of their primary electorates.

My estimates also suggest greater marginal responsiveness to the general electorate, with the coefficient about 2.5 times the size of that on the primary electorate. This result varies by party, however, with Republicans about equally responsive to their primary and general electorates, and Democrats more responsive to their general. This result is consistent with the longer term pattern of Republican roll call voting being less responsive to district preferences than Democratic roll call voting (e.g. Ansolabehere, Snyder, Jr., and Stewart III, 2001; Clinton, 2006).

Regarding the second question, I find relatively large electoral penalties for voting against the preferences of the primary electorate. While members of the 111th and 112th House who usually vote with their primary electorates are seated in the next congress at a rate of 85 percent, members who vote against their primary electorate most often are seated at 56 percent. In models with statistical control (Table 2), I find that Republicans who vote against their primary electorates more than 25 percent of the time are 31 percent less likely to be seated in the subsequent congress, all else equal. Meanwhile, there is little relationship between rates of voting with the general electorate and reelection for Republican members. Republicans do not appear to pay an electoral penalty for voting against their general electorates.

In concert, these results suggest an explanation for asymmetric polarization in congress. I find that Republican members are more representative of their primary electorates than Democratic members are of theirs, and that Republican members who vote against their primary electorates at high rates are less likely to be reseated than Democrats are of theirs. This result suggests new questions. What about Republican primary elections demands greater accountability from their candidates than do Democratic primaries? Has this demand increased over the previous few decades, generating the asymmetry in polarized voting in congress? The mechanisms for such a connection are many: primary voters acting differently, primary challengers being more common or better funded (see Boatright, 2013, for some evidence against more challenges but for better funding), or external groups being more involved in primary elections. Future research should further explore

these questions to identify how primary elections may be influencing Republican members.

It is interesting to consider how these results may depend upon agenda control.[30] The majority party in the House is selective about what issues it allows come to a vote (e.g., Krehbiel, 1998; Cox and McCubbins, 1993), and surely part of responsiveness to constituents is through this agenda control. It would be interesting for future work to consider how constituent preferences shape what issues do and do not come up for a vote in the first place.

Many models of issue voting assume that voters want candidates to vote in their interest so that public policy reflects their interest. However, for many votes in congress, each individual legislator is not the pivotal actor determining whether or not the policy is or is not implemented. Mayhew (1974) discusses the member strategy of *position-taking*, which is more advertising shared interests than creating policy. I note that most of the votes I analyze are not pivotal with respect to policy. Thus, I do not know if members might have voted differently in a way that would differently represent their primary and general electorates had they cast these votes as pivotal members of the policy process. Of course, most other studies of legislative representation suffer from this problem, as well.

The results here suggest important new lines of research. With respect to responsiveness, both theoretical and empirical work might consider how to incorporate the interests of primary electorates into evaluations of representation. On the one hand, it seems likely that if the democratic institutions in place subject members to a nominating and a general election, we should consider both in evaluating how elections influence representation. On the other hand, there are broader definitions beyond the instrumental observation of electoral institutions. Different definitions of representation will lead to different conclusions, and theory and empirical work can help to fill in the conditions under which representation in America is appraised as more and less successful.

The electoral penalties I observe for members who vote more often against their primary electorates could be one mechanism driving polarization in preferences between the two parties in Congress, and especially the differential polarization for Republicans. More investigation of a

[30] Not to mention the selection process leading to the subset of roll calls of sufficient salience queried to respondents by the architects of the CCES.

longer time series of these elections seems a fruitful avenue to pursue when and where members may feel threatened by nominating elections and modify their behavior and issue positions accordingly. More broadly, members appear to respond to the voters who turn out in the elections for which they stand. To understand how elections influence representatives, and how well members of congress represent, we need to know more about what voters want and how these wants are distributed across those who participate in each election.

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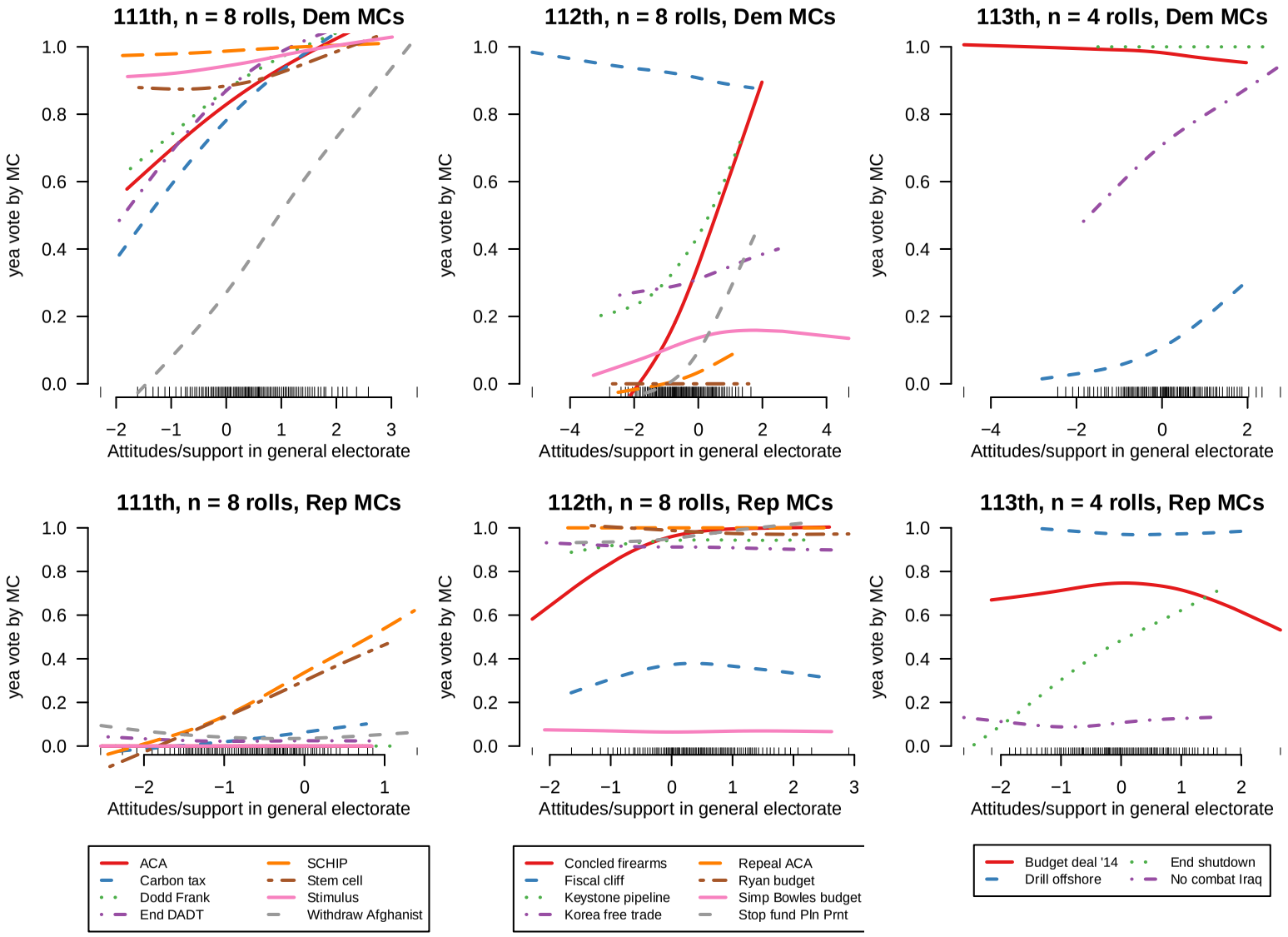
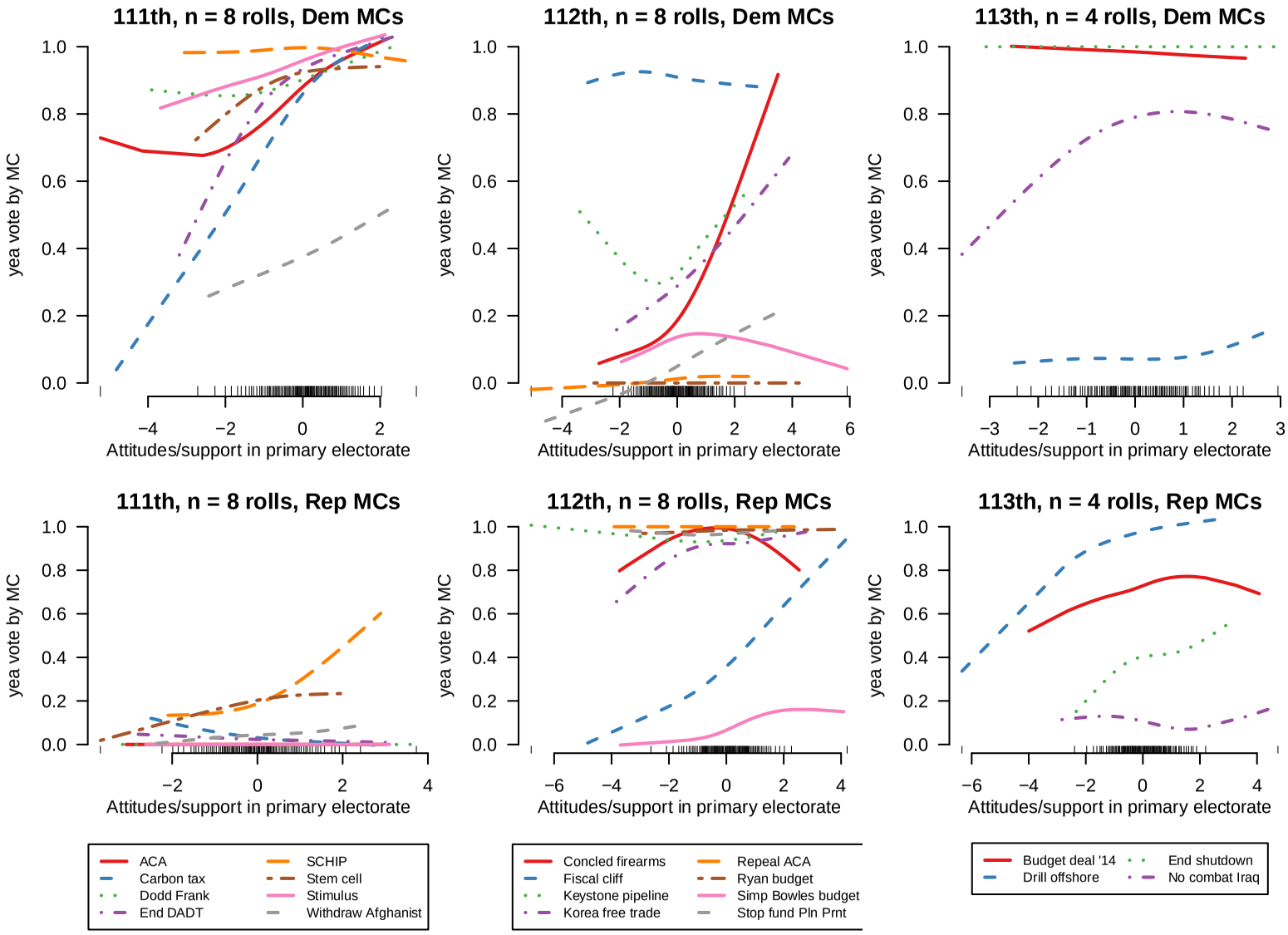
Figure 1: Relationship of representative vote to support in general electorate, by party



Note: The x-axis in each frame is the normalized support/attitudes in the house district among general election voters for each roll call. Lines are smooths of member vote on that same issue. District preferences estimated for validated general election voters in the 2010 and 2012 CCES.

Figure 2: Relationship of representative vote to support in primary electorate, by party



Note: The x-axis in each frame is normalized support/attitudes in the house district among primary election voters in the member's party for each roll call. Lines are smooths of member vote on that same issue. District preferences estimated for validated primary election voters in the 2010 and 2012 CCES.

Table 1: Preferences of general and primary electorates and roll call votes, 111th through 113th House of Representatives

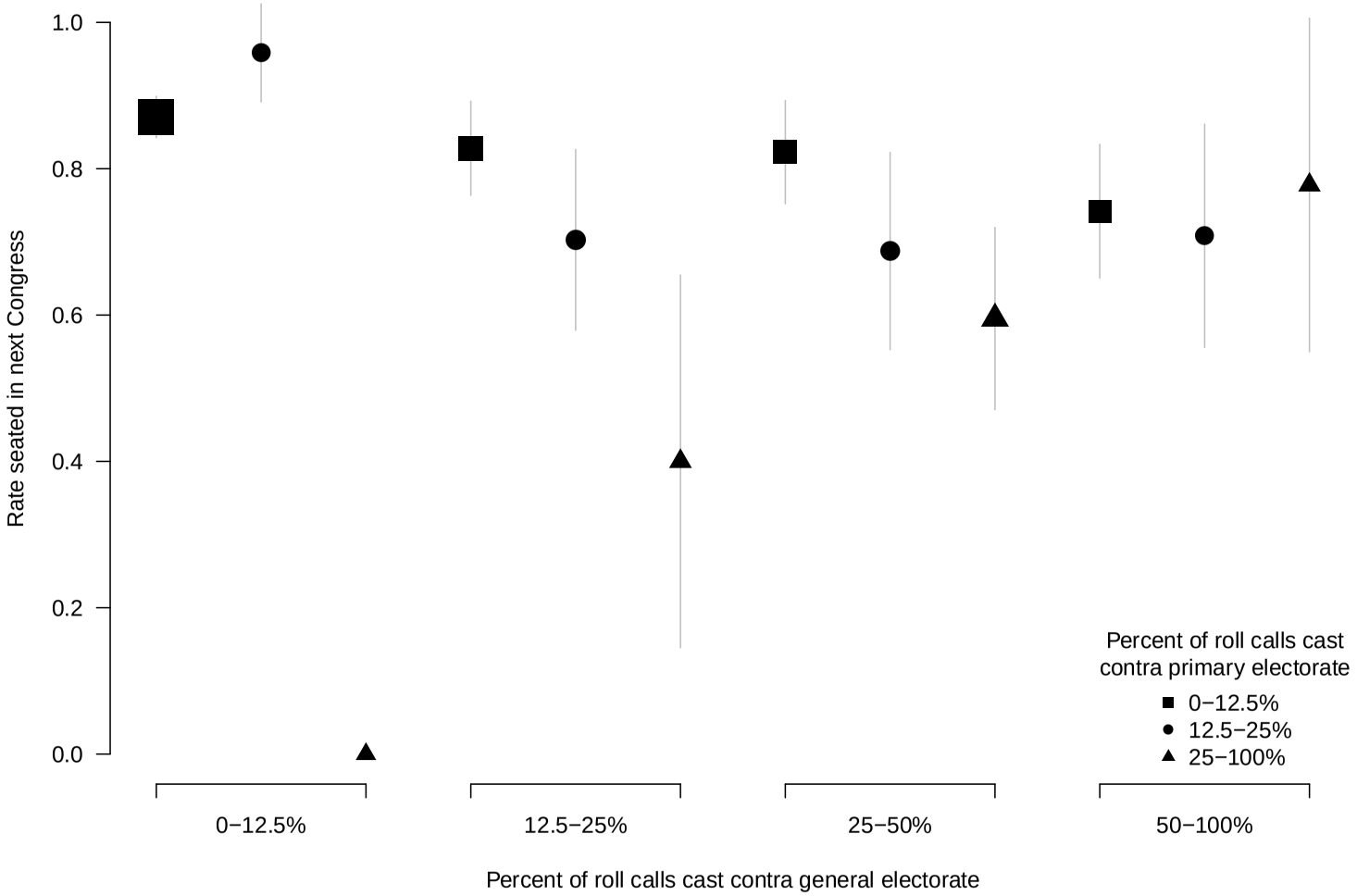
	1	2	3	State*Roll FEs	GOP only	Dem only
Avg attitudes/support in general electorate	0.05***	0.05***		0.03***	0.02***	0.06***
	(0.00)	(0.00)		(0.00)	(0.01)	(0.01)
Avg attitudes/support in primary electorate	0.02***		0.03***	0.01***	0.02***	0.02***
	(0.00)		(0.00)	(0.00)	(0.00)	(0.01)
N	7983	7983	7983	7983	3994	3989
R^2	0.85	0.85	0.85	0.88	0.85	0.85
adj. R^2	0.85	0.85	0.85	0.86	0.85	0.85
Resid. sd	0.29	0.29	0.29	0.28	0.28	0.30

Standard errors in parentheses

† significant at $p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$

Note: Dependent variable is yea vote. OLS regression coefficients with standard errors in parentheses. Models include eight roll call votes from the 111th House, eight roll call votes from the 112th House, and four roll calls from the 113th House. All models include separate intercepts for each roll call vote cross party. Column 4 includes intercepts for each roll call cross state. Attitudes/support normalized to mean zero, unit variance across districts, separately by issue.

Figure 3: Effect of voting against general and primary constituency on being seated in next congress



Note: Y-axis is the proportion of the pooled membership the 111th and 112th House of who served the entire term as only representative of that district that were seated in the subsequent congress. The x-axis separates members by how often they voted against the preferences of their general election constituencies among the set of 16 roll call votes analyzed above. Plotting symbol indicates how often the member voted against the preferences of their primary election constituencies. Point size is proportional to number of members in that intersection of categories and lines extend to 90 percent confidence intervals. The figure shows that among members who vote against their general election constituencies at approximately the same rate, the more often they vote against their primary constituency the less likely they are to be seated in the subsequent congress.

Table 2: Effect of voting against general and primary constituency on being seated in next congress

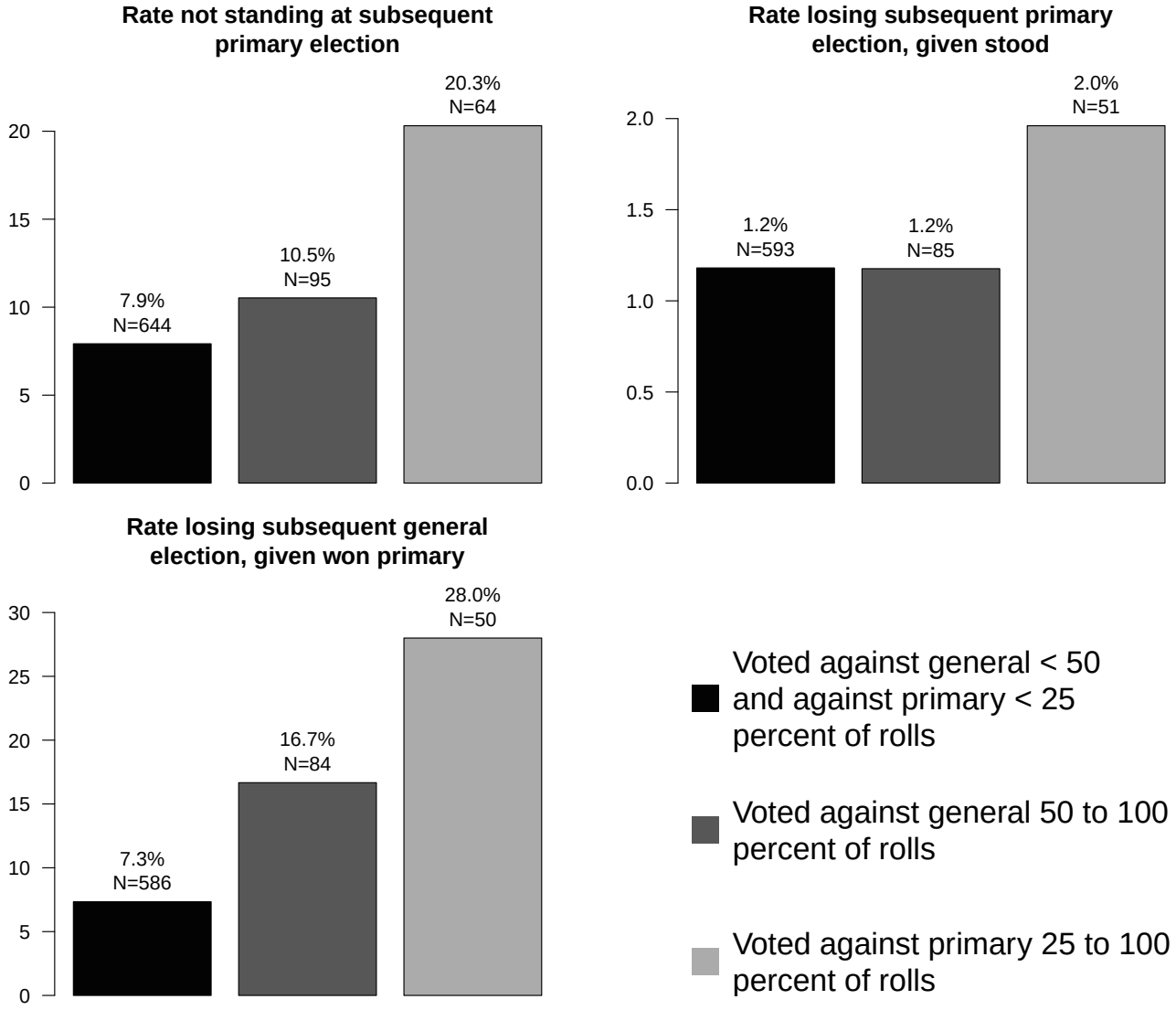
	Gen only	Pri only	Both	GOP only	Dem only
Against general 0-12.5%	0.79***		0.81***	0.88***	0.85***
	(0.03)		(0.03)	(0.03)	(0.03)
Against general 12.5-25%	0.68***		0.72***	0.88***	0.67***
	(0.04)		(0.04)	(0.05)	(0.06)
Against general 25-50%	0.65***		0.73***	0.90***	0.66***
	(0.04)		(0.04)	(0.05)	(0.06)
Against general 50-100%	0.65***		0.70***	0.94***	0.61***
	(0.04)		(0.05)	(0.06)	(0.06)
Against primary 12.5-25%		–0.09*	–0.05	–0.04	–0.06
		(0.04)	(0.04)	(0.06)	(0.06)
Against primary 25-100%		–0.26***	–0.22***	–0.31**	–0.16*
		(0.05)	(0.06)	(0.10)	(0.07)
112th Congress	0.11**	0.09*	0.10**	–0.03	0.13**
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Member Republican	0.15***	0.12**	0.13***		
	(0.04)	(0.04)	(0.04)		
112th Congress*Member Republican	–0.16**	–0.13*	–0.15**		
	(0.06)	(0.06)	(0.06)		
Intercept		0.78***			
		(0.03)			
N	794	794	794	389	405
R^2	0.82	0.05	0.82	0.86	0.79
adj. R^2	0.82	0.05	0.82	0.86	0.78
Resid. sd	0.39	0.38	0.38	0.35	0.41

Standard errors in parentheses

† significant at $p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$

Note: Dependent variable is the member being seated in the subsequent congress, 1=yes, 0=no. Analysis limited to those members of congress who served entire term as only representative of that district in the 111th and 112th House. OLS regression coefficients with standard errors in parentheses.

Figure 4: Points of exit from path to reelection for incumbents by rates of voting against preferences of general and primary electorates



Note: Each bar is the percent of incumbents from the 111th and 112th Houses matching that characteristic who did not stand for the primary, lost the primary having stood, or lost the general having won the primary. The figure shows that incumbents who vote against their primary electorate at the highest rates are less likely to stand in the next primary, are more likely to lose the primary if they do stand (though differences are on a low base rate), and more likely to lose the general election. Regression estimates with statistical control in Table 2.

Table 3: Preferences of general and primary electorates and roll call votes, 111th through 113th House of Representatives

	1	2	3	State*Roll FEs
Avg attitudes/support in general electorate	0.21***		0.04***	0.03***
	(0.00)		(0.00)	(0.01)
Avg attitudes/support in primary electorate		0.31***	0.28***	0.28***
		(0.00)	(0.00)	(0.01)
N	7983	7983	7983	7983
R^2	0.67	0.76	0.77	0.82
adj. R^2	0.67	0.76	0.77	0.79
Resid. sd	0.43	0.36	0.36	0.34

Standard errors in parentheses

† significant at $p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$

Note: This reproduces the results in columns 1 through 4 of Table 1 excluding party of member fixed effects. Dependent variable is yea vote. OLS regression coefficients with standard errors in parentheses. Models include eight roll call votes from the 111th House, eight roll call votes from the 112th House, and four roll calls from the 113th House. All models include separate intercepts for each roll call vote. Column 4 includes intercepts for each roll call cross state. Attitudes/support normalized to mean zero, unit variance across districts, separately by issue.