Do Moderate Voters Weigh Candidates' Ideologies? Voters' Decision Rules in the 2010 Congressional Elections

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Abstract: Models of voting behavior typically specify that all voters, regardless of their ideology, prefer candidates whose policy positions reflect the voter's policy viewpoints. We argue that moderate voters weigh candidates' policy/ideological positions far less than non-moderate voters, and we report analyses of survey data from a large-scale survey of citizens residing in 155 districts from the 2010 congressional elections that substantiate these arguments. Indeed we find no evidence that moderate voters prefer moderate congressional candidates, while we find that liberal and conservative voters strongly prefer candidates who share their ideologies. Simply put, moderate voters appear qualitatively different from liberals and conservatives, a finding that has important implications for candidate strategies and for political representation.

Spatial models of elections typically posit that all voters prefer candidates who share their policy beliefs, so that liberal voters prefer liberal candidates, conservative voters prefer conservative candidates, and moderates prefer moderate candidates. Research by political scientists and psychologists into the nature of attitudes, however, provides reason to question the assumption that all voters weigh candidate ideology equally.

We present theoretical and empirical analyses that moderate voters de-emphasize policy and ideology in their voting decisions, compared to non-moderate voters. Analyzing data in 155 House districts during the 2010 congressional elections, we find that while liberal and conservative voters heavily weigh the candidates' ideologies, self-identified moderate voters do not. We demonstrate, moreover, that these differences are not due to moderate voters' lesser political knowledge – these stark differences persist even when we limit our analyses to survey respondents who correctly identify the candidates' positions.

Our findings have implications for voting behavior, candidates' election strategies, and political representation. Our findings extend previous studies that conclude that politically-knowledgeable voters weigh policy more heavily than the less knowledgeable (e.g., Goren 1997), to argue that policy salience also depends on voters' policy positions (Warwick 2004).[1] With respect to candidates' strategies, our findings imply, first, that congressional candidates gain little general election support by promising moderate policies, because moderate voters do not reward candidates for policy moderation – a finding that undercuts the famous Downsian logic of candidate convergence due to the electoral "pull" of the center (Downs 1957). Second, and related, our results pertain to how competitive primary elections influence candidate strategies. The prevailing interpretation is that candidates face electoral trade-offs between appealing to their primary electorates – which are often composed of voters who hold non-centrist views – and appealing to more moderate general election voters (Adams

[1]We note that the proposition that voters' issue intensity correlates with their position is consistent with the directional model of issue voting (Macdonald, Rabinowitz and Listhaug 2007), which posits that citizens who self-place at the center of the policy/ideology scale are "neutral" and thus do not decide based on the parties'/candidates' positions on the focal issue. Warwick (2004) has argued that this intensity component of the model should be tested separately from the directional component. This is what we do here, where we evaluate whether citizens' positions correlate with intensity, within a proximity voting framework.

and Merrill 2008, Burden 2001, Owen and Grofman 2006, Uslaner 1999, Wright 1989). Our findings suggest that this dilemma is mitigated in that the general election benefits of congressional candidates' policy moderation are quite modest. With respect to political representation, our findings pertain to the growing policy polarization between Democratic and Republican congressional elites (e.g., Fiorina and Abrams 2008, Fiorina, Abrams and Pope 2004, McCarty, Poole and Rosenthal 2006, Poole and Rosenthal 1997). To the numerous explanations that scholars have advanced for elite polarization, including the influence of partisan media (Levendusky 2013), party activists, special interest groups, and primary voters (Bafumi and Herron 2010, Burden 2004), we add another factor: namely, that members of Congress have more leeway to compile sharply liberal or conservative legislative voting records because this does not alienate moderate voters.

Why Moderate Voters May Discount Candidates' Ideological Positions

Research in psychology and political science raises questions about whether all voters weigh ideology equally. Research by psychologists suggests that as individuals' preferences become more extreme, the intensity of their views increases (e.g., Allport 1935, Brim 1955, Cantril 1946, Key 1963, Krosnick and Schuman 1988). This finding has been replicated in many contexts, leading Suchman (1950) to conclude that the link between opinion extremity and intensity is universal. Similarly, research suggests that individuals' attitudes become more extreme with increasing involvement, as a consequence of thinking about the issue. For example, Tesser and his co-authors (Millar and Tesser 1986, Tesser 1978) show that the mere act of thinking about an issue tends to generate more extreme attitudes, so that to the extent that individuals spend more time thinking about dimensions they perceive as salient, attitude extremity should correlate with intensity. Additional research concludes that individuals who are preoccupied with an issue tend to screen out information that conflicts with their predispositions, which should facilitate holding non-centrist viewpoints (Sherif and Hoyland 1961).

A growing body of research shows that the link between attitude extremity and intensity applies to political ideology. Liu and Latane (1998, Table 1) report that college students' ideological extremity was significantly and positively correlated with the importance they attached to ideology. Van Houweling and Sniderman (2005) report experimental election results in which subjects who reported moderate ideologies discounted the candidates' ideologies compared to subjects who reported non-centrist positions. Related research concludes that many citizens are "motivated reasoners" who seek out information that reinforces their pre-existing political attitudes, and that the more intense their attitudes the stronger their tendencies to engage in motivated reasoning (see, e.g., Redlawsk 2002, Lodge and Taber 2000, Taber and Lodge 2006). Finally, research on group polarization suggests that discussing an issue as part of a group promotes more extreme attitudes, which may increase the salience of political issues and also push individuals towards more extreme viewpoints (Liu and Latane 1998). In this regard, cross-national research documents that citizens interact disproportionately with co-partisans (Huckfeldt, Ikeda and Pappi 2005), so that the information partisans receive via these political networks should push them towards more liberal viewpoints (for Democrats) or conservative viewpoints (for Republicans), while also increasing the salience of ideology.

Finally, research in comparative politics suggests that centrist voters differ systematically from non-centrists. Students of French elections, for example, conclude that self-reported ideological centrists are less influenced by parties' positions than non-centrist voters (see Converse and Pierce 1986, Deutsch, Lindon and Weill 1966, Pierce 1995). These authors report that French citizens who reported centrist policy and ideological positions were less politically knowledgeable than the general voting population, and, furthermore, that the voting decisions of low-information, centrist, survey respondents – a group that Deutsch, Lindon and Weill (1966) dubbed *le marais* (the swamp) – was unrelated to their reported ideologies.

The considerations outlined above prompt us to ask: are moderate voters responsive to

candidate ideologies in the same way as non-moderate voters?

Design and Measures

We analyze a survey of voters and expert informants in a random sample of 100 House districts from the 2010 congressional elections, supplemented with a purposive sample of 55 districts anticipated to be competitive.[2] Below we report results on all 155 districts, although our results replicate when we restrict the analysis to the random sample.

The voter survey comprised 20,000 respondents selected from registered voters in these 155 districts. The survey included a question asking respondents to place themselves on an ideological scale with the endpoints labeled "Very Liberal" (1) and "Very Conservative" (7). Respondents who placed themselves in the middle (at 4) are treated as "moderate." Respondents who placed themselves away from the middle (4) are treated as "non-moderate."

In addition to the constituent survey, we also surveyed groups of "expert" residents in each district to provide informed judgments about the candidates running in those districts. These experts included delegates to the 2008 national party conventions, state legislators, and others considered well informed about their district. The district experts were asked to place each congressional candidate on the same seven point liberal-to-conservative scale. The district-wide mean of these individual expert ratings provides a measure of the candidates' ideological placements.[3] We assume that the district experts' candidate placements are on a scale equivalent to the item used to place individual constituents.[4] Using district experts to place the candidates confers important benefits compared to most previous measures of candidates' policy positions that use either the average of respondents' placements of the

[2]The 2010 phase of the study was based on the same districts sampled in the 2006 study. For more information about the study, see the project website: [Identifying reference removed]

[3]Because the study surveyed experts in both political parties, one can correct for partisan bias in individual expert informants' candidate placements. Individual informants' ratings were corrected for partisan bias by regressing the candidate rating on the partisanship of the informant relative to the candidate ("same party" = 1; "independent" = 0; "opposite party" = -1), and then subtracting the resulting coefficient on partisanship from the individual informant's rating of the candidate.

[4]In assuming that the positions of mass and district-expert responses on the liberal-conservative scale are equivalent, we follow a long line of scholarship comparing the positions of activists and others with those of ordinary voters (Kirkpatrick 1975, McClosky, Hoffmann and O'Hara 1960, Miller and Jennings 1987).

candidates' positions, or respondent-specific candidate placements (e.g., Adams, Bishin and Dow 2004, Merrill and Grofman 1999), each of which present methodological issues relating to assimilation/contrast effects (see, e.g., Calvo, Hellwig and Chang 2012, Grynaviski and Corrigan 2006, Macdonald, Rabinowitz and Listhaug 2007). By contrast our design uses candidate placements external to voter placements and thereby avoids these otherwise serious measurement issues.

Elsewhere we have reported analyses supporting the reliability and validity of our district-expert candidate ideological placements [author cites]. Brown and Hauenstein (2005) present a method for assessing inter-rater agreement that compares the variation of informant responses to the maximum possible variation given the number of informants and scale of the items, and our expert-based measures of candidate positions are highly reliable given this approach ($a_{wg} > .80$). Alternatively, the Jones and Norrander (1996) and O'Brien (1990) method compares within- and across-district variation in informant responses. Using these authors' criteria, our expert-based measures of the candidates' ideological positions are highly reliable ($E\rho^2 > .70$). The validity of experts' perceptions is indicated by a correlation of 0.96 with a combined DW-NOMINATE and ADA measure.[5] For those unpersuaded by these arguments, however, we note that we have replicated the analyses we report below using rank-and-file survey respondents' mean candidate placements in place of the expert placements, and these analyses continue to support our substantive conclusions.

Our analysis focuses on the ideological self-identification question, which invites respondents to self-place on a seven-point scale ranging from "very liberal" (1) to "very conservative" (7) with self-identified moderates occupying the scale mid-point (4). This item is often referred to as measuring "symbolic ideology" because respondents summarize their preferences by associating with broad categories of "liberal" or "conservative." In contrast, "latent" or "operational" ideology measures (cf. Ellis and Stimson 2012, Jacoby 1991,

[5]This relationship is not due simply to partisan polarization: the correlation between the informant placements and a composite DW-NOMINATE/ADA ratings among Democratic incumbents is 0.70; among Republicans it is 0.56.

Jessee 2012) rely on respondents' answers to numerous issue items. While these measures are strongly correlated, the electorate appears somewhat more liberal (and features fewer moderates) when latent ideological measures are used. We analyze the self-identification or "symbolic" item because the modal preference for the "moderate" position in every national survey conveys an image of the electorate with strongly centrist preferences, even if the profile is "center-right" (based on the ideological self-placement item), or "center-left" (based on latent ideology measures). It is this implication of the centrist nature of the electorate that we evaluate.

Testing Moderate Voters' Behavior

Figure 1 plots the distribution of the survey respondents' ideological self-placements along with the average ideological location of Democratic and Republican candidates (based on the expert placements). First, note that twenty-seven percent of respondents self-place at the scale midpoint (4), which is the model category. Among non-centrist respondents, self-identified conservatives outnumber liberals by a roughly three-to-two margin, a pattern consistent with the patterns that appear in recent National Election Study surveys.

[Figure 1 here]

Second, in contrast to the voter distribution, the center of gravity for candidates, judged by district experts, is distinctly polarized. The average Democratic candidate location is 2.47 and the average Republican location is 6.10. In all districts, the Republican candidate was clearly to the right of the Democrat. Moreover, all Republican candidates were placed to the right of the midpoint and all but three Democrats to the left. The standard deviation for Democratic and Republican candidates was 0.56 and 0.34, respectively. The locations for Democrats ranged from 1.38 to 4.30, Republican locations from 4.88 to 6.72.

The distribution of voters and candidates in Figure 1 raises the question: If the modal voter is moderate, why do vote-seeking congressional candidates diverge sharply to the left

and the right? To explore this issue, Figure 2 compares self-identified moderate versus non-moderate survey respondents' political knowledge, the strength of their partisan attachments, and awareness of the candidates in their district. The figure also includes respondents who selected the "don't know" option when asked to self-place on the ideology scale. We see that compared to non-moderates, moderates display less political knowledge (on average) and weaker partisan attachments, are less likely to correctly place the candidates from their district, and more likely to place neither candidate.[6] But the figure also shows that self-identified moderates differ from respondents who were unable to place themselves on the ideological scale: Compared to those who say they do not know their political ideology, moderates are more politically knowledgeable, more likely to place the candidates correctly, and less likely to place neither candidate.

[Figure 2 here]

The following specification provides a test of whether moderate voters differentially weigh candidate locations, compared with non-moderates:

$$\begin{aligned}\Pr(\text{Vote Republican}) = \text{logit}^{-1}\{&\beta_0 + \beta_1(\text{Relative Proximity}) + \beta_2(\text{Non-Moderate}) \\ &+ \beta_3(\text{Non-Moderate} * \text{Relative Proximity}) + \varepsilon\} \qquad (1)\end{aligned}$$

The dependent variable is whether the respondent reported voting for the Republican congressional candidate, computed over the set of respondents who reported voting for a major party candidate. The key independent variable is the respondent's relative ideological proximity to the candidates, defined as the difference between the respondent's squared distance to the Democratic candidate and their squared distance to the Republican candidate.[7]

[6] Respondents were considered to have placed the candidates correctly on the liberal-conservative scale if they placed the Democratic candidate to the left of the Republican candidate. Political knowledge is measured using a battery of eight questions relating to the party in control of state and federal institutions (U.S. Senate, U.S. House of Representatives, state senate, and state lower house) and name recognition of state and federal representatives (U.S. Senators, governor, and U.S. House Representative). Respondents who answered all eight questions correctly are considered politically knowledgeable.

[7] Using a linear loss function ($|v_{ij} - D_j| - |v_{ij} - R_j|$) yields the same substantive results reported in this paper.

$$\text{Relative Proximity: } (v_{ij} - D_j)^2 - (v_{ij} - R_j)^2, \tag{2}$$

where v_{ij} represents the ideological self-placement of respondent i residing in district j, and D_j and R_j represent the (expert perceptions of) positions of the Democratic and Republican candidates running in district j, respectively. When $(v_{ij} - D_j)^2 < (v_{ij} - R_j)^2$ the Democratic candidate is closer to the voter and the expression is negative, while when relative proximity is positive the Republican candidate is closer to the voter. When relative proximity is zero, the voter is at the cut-point, i.e., the midpoint between candidates' policy positions.

First we estimated the parameters of Equation 1 excluding the interaction term (β_3) to determine whether voters, in general, weigh their relative proximity to the candidates. Then we estimated the full specification of Equation 1 to assess whether moderate respondents discount relative proximity, compared to non-moderates. In equation 1 the constituent term (β_1) denotes the extent to which moderate voters weigh relative proximity. The interaction between relative proximity and non-moderates (β_3) denotes whether non-moderate voters are more (less) responsive to candidate positioning than are moderates. If β_3 is positive this will indicate that non-moderate voters respond disproportionately to relative proximity.

The results reported in Table 1 indicate that moderate and non-moderate voters differ sharply in how they weigh candidate ideologies. As a baseline, Model 1 presents results where moderates and non-moderates are not estimated separately. The coefficient estimate on the relative proximity variable is positive and significant, indicating that voters prefer candidates more proximate to their ideological positions. But the results in Model 2 suggest that not all voters weigh ideological proximity. Including the interaction term drives the impact of the constituent term for relative proximity from positive to negative and from significant to insignificant. By contrast, the coefficient estimate on the interaction term (Relative Proximity $*$ Non-Moderate), $+0.284$, is positive and significant ($p < .001$), indicating that non-moderates are more responsive to candidates' ideological proximity than are non-moderates. Furthermore, the estimated overall effect of relative proximity on non-moderates'

voting decisions (which is the sum of the relative proximity coefficient, -0.087, and the interaction coefficient, +0.284) is +0.197 which is statistically significant ($p < .001$). In short, we find no evidence that moderate voters weigh the ideological locations of candidates, while our estimates imply that non-moderates prefer ideologically proximate candidates.

[Table 1 here]

Model 3 in Table 1 adds control variables that past research has shown influence voter choices in congressional elections. Republican spending advantage is measured as the Republican candidate's spending as a proportion of the Republican and Democratic candidates' spending in the district. Republican incumbency advantage is a trichotomous variable: -1 denotes a Democratic incumbent, 0 no incumbent, and +1 a Republican incumbent. Party identification is measured trichotomously with -1 denoting Democrats, 0 Independents, and +1 Republicans. Our estimates again provide no evidence that moderate voters weigh the candidates' ideologies (as seen by the insignificant coefficient for relative proximity), while the candidates' ideologies influence non-moderate voters' decisions (as seen by the significantly positive coefficient for the interaction term between relative proximity and non-moderates).

Robustness checks

While our computations support our hypothesis that moderate voters discount candidate ideology, compared to non-moderate voters, two factors may confound this conclusion. First, moderates may be less willing to place the candidates on the ideological scale, and moreover even those moderates who place the candidates are likely to locate them incorrectly – so that the differences between moderates and non-moderates may reflect the former group's inability to correctly locate the candidates' ideological positions (e.g., Abramson, Aldrich and Rohde 2012, Erikson and Tedin 2011). As displayed earlier in Figure 2, moderate respondents are indeed less able to place candidates than non-moderates, and moderates who place the candidates make more mistakes than non-moderates: 38 percent of non-moderates place the

Republican candidate to the right of the Democrat, whereas only 19 percent of moderates pass this (lenient) test.

To address the above issue we re-analyzed our data while limiting the analysis to respondents who placed the candidates correctly (defined as placing the Republican candidate to the right of the Democrat on the liberal-conservative scale). As reported in Model 1 in Table 2, when we re-estimated the coefficients of equation 1 above on this subset of respondents, the coefficient estimate on relative proximity, -0.051, is insignificant (and in fact has the wrong sign), so that there is no evidence that ideological proximity influences moderate respondents. Furthermore, the coefficient estimate on the interaction term (Relative Proximity $*$ Non-Moderate), +0.325, is positive and significant ($p < .001$), and the estimated overall effect of relative proximity on non-moderates' vote choices (i.e., the sum of the relative proximity coefficient, -0.051, and the interaction coefficient, +0.325) is +0.274, which is positive and significant ($p < .001$). The coefficient estimates reported for Model 2 in Table 2 demonstrate that these patterns persist when we control for party identification, incumbency effects, and candidate spending. Thus our substantive conclusion that moderates discount congressional candidates' ideologies, compared to non-moderate respondents, extends to the subset of respondents who correctly perceive the candidates' relative positions.

[Table 2 here]

A second possible confounding factor is that the moderate respondents in our data set were typically located roughly equidistant to the competing candidates' positions, and so they plausibly did not hold strong ideologically-based candidate preferences. As displayed in Figure 3, moderates were on average located much closer to the cut-point – i.e., the mid-point between the positions of the competing candidates in the district – than were non-moderates, and indeed no moderate respondent was located more than 1.21 units away from the cut-point. The lack of variance in moderate respondents' distances to the cut-point, combined with possible errors in our relative distance variable measure, may cause us

to under-estimate how candidate positioning affects moderate voters' decisions, compared to its impact on non-moderate voters.

[Figure 3 here]

To address the above issue we re-estimated our vote choice model on respondents located no more than 1.21 units from the cut-point (the maximum distance for moderates in our data set), and then further subdivided this sub-sample into respondents who were closer to the cut-point (respondents who located less than 0.54 units from the cut-point), and those further away from the cut-point (respondents who located between 0.55 and 1.22 units from the cut-point).[8] This procedure allows us to compare groups of moderate versus non-moderate respondents who displayed more nearly equal measured distances – and equal variances on these distances – to the cut-point.[9] Table 3 presents the coefficient estimates for equation 1 above, for these four groups of voters: moderates located within 0.54 units of the cut-point; non-moderates located within 0.54 units of the cut-point; and, moderates and non-moderates located between 0.55 and 1.21 units from the cut-point. For non-moderates, the coefficient estimate on relative proximity is significant and positive in both samples, i.e., there is strong evidence that non-moderates, even those located near the candidate cut-point, prefer proximate candidates. By contrast, we find no evidence that moderate respondents prefer ideologically proximate candidates: for moderates located between 0.55 and 1.21 units from the cut-point the coefficient on relative proximity is near zero and insignificant, while for moderates located within 0.54 units of the cut-point the relative proximity coefficient is in fact negative and statistically significant. While we do not make the nonsensical inference that moderates near the cut-point actually prefer spatially distant candidates, this estimate strongly implies that moderates do not *meaningfully* prefer proximate candidates. Suppose, for instance, that the true value of the relative proximity coefficient for moderates located

[8] 0.54 is the median unit distance from the cut-point for this subsample of respondents; therefore a 0.54-unit cut-off divides this sample into roughly equal-sized groups.

[9] For moderates in this subsample, the average distance from the cut-point is 0.23 units with a standard deviation of 0.42; for non-moderates in this subsample, the average distance from the cut-point is 0.79 units with a standard deviation of 0.41.

nearest the cut-point is three standard errors higher than the estimate we report. The value of this variable would then be +0.03, which would imply that – with the Democratic and Republican candidates located four units apart on the 1-7 ideological scale – a moderate respondent located 0.5 units closer to the Republican candidate than to the Democrat would increase her likelihood of voting Republican by less than two percentage points, compared to a moderate who was equidistant from the candidates. By comparison, our estimates imply that for this same scenario a non-moderate located 0.5 units closer to the Republican candidate would be roughly fifteen percentage points more likely to vote Republican, compared to a moderate equidistant from the candidates. Thus even if the true electoral effect of candidate proximity on moderate voters is far larger than our parameter estimates imply, these effects would still be minimal, and much weaker than our corresponding estimates for how non-moderates respond to candidate positioning.

In toto, our analyses provide strong, consistent evidence that non-moderate survey respondents weigh congressional candidates' ideological proximity more heavily than do moderate respondents, and indeed we uncover no evidence that moderates weigh ideological proximity at all. These findings extend to alternative voting models; to analyses limited to respondents who correctly placed the candidates' relative positions; and to analyses on subsets of moderate versus non-moderate respondents who were located at comparable distances to the candidate cut-point. In addition, as we noted earlier our substantive conclusions persist when we replicate our analyses using the survey respondents' perceptions of candidate positions, as opposed to the experts' candidate placements that we analyze here.

[Table 3 here]

Voter Heterogeneity and Election Outcomes:
Implications for Candidate Strategies

Our estimate that moderate voters discount congressional candidates' positioning suggests that candidates will gain few votes from policy moderation. To address this issue we use

the parameter estimates for two voting models – the homogeneous voter model which incorporates a single parameter on relative candidate distance (the parameters from Model 1 in Table 1), and the heterogeneous voter model where we estimate separate distance parameters for moderate and non-moderate respondents (the parameters from Model 2 in Table 1) – to compute the electoral effects of changes in the candidates' positions. For each candidate in each election, we first compute – for both the homogeneous and the heterogeneous voter models – the candidate's expected vote for alternative positions along the one to seven liberal-conservative scale. For these exercises we place no restrictions on candidate positioning, so that we even consider scenarios in which Democratic candidates take conservative positions and Republicans take liberal positions. We harbor no illusions that candidates can feasibly manipulate their ideological images in this manner, and it may be that only those estimates based upon "credible" positioning – e.g., simulations which place the candidates near their actual locations – provide reliable estimates of the electoral effects of candidate position-taking. In this spirit we proceed.

In the simulations we varied the focal candidate's location across the ideological spectrum, with the rival candidate fixed at her actual position (as perceived by our district experts). For each position we computed the candidate's expected vote by calculating each respondent's vote probability, and summing these probabilities across all respondents from the district, using the parameter estimates on the homogeneous and the heterogeneous voting models given earlier in Table 1.[10] The expected vote was recomputed as we held everything fixed except the focal candidate's position, which we adjusted from 1.0 to 7.0 in increments of 0.25. We performed these exercises for both the Republican and the Democratic candidate in each congressional district in our data set.

Table 4 summarizes computations for the entire set of congressional elections, for both

[10]For these computations we set the value of the relative proximity coefficient in Model 2 (the heterogeneous vote model) to zero, since if we relied on the actual coefficient estimate (-0.087) we would be specifying that moderate voters actually prefer spatially distant candidates. Given that the relative proximity coefficient in Model 2 is statistically insignificant, this seems a reasonable procedure. If we relied on the actual coefficient estimate then we would compute the centrist candidate positioning is even less electorally attractive than is suggested in the computations we report in Table 4 below.

the heterogeneous and the homogeneous voter models. Computations of the Democratic candidates' expected votes are presented for three alternative positional scenarios:[11] an "actual position" scenario, in which all Democratic candidates were located at their actual positions as perceived by the district experts (column 2); a "policy moderation scenario," in which all Democratic candidates were shifted to the mean district respondent's position (column 1)[12]; and a "policy polarization scenario" in which all Democratic candidates were shifted one unit in a liberal direction along the one to seven liberal-conservative scale, relative to their actual positions (column 3).[13]

For the homogeneous voting model, in which moderate and non-moderate voters attach significant (and equal) weights to the candidates' relative proximities, the mean expected Democratic vote share averaged across all the districts in our sample is 49.2%, computed using the parameter estimates for Model 1 in Table 1. By contrast, for the policy moderation scenario the expected Democratic vote rises to 56.7%, i.e., the average expected vote shares of the Democratic candidates increased by 7.5 percentage points when their positions were shifted unilaterally to the mean district voter position (see Table 4). By contrast, for the heterogeneous voter model (using parameter estimates from Model 2 in Table 1) the Democratic candidates' expected vote shares increased from 49.2% to only 51.0% when they were shifted unilaterally to the mean district voter position, an expected gain of only 1.8 percentage points and less than one quarter of the expected gain which we estimated for the homogeneous voter model. These computations suggest that accounting for our findings that moderate voters discount the candidates' ideologies dramatically weakens the "centripetal pull" that the general electorate exerts on vote-seeking House candidates. Furthermore, our computations on the effects of candidate polarization, in which all Democratic candidates were shifted one unit in a liberal direction along the one to seven liberal-conservative scale,

[11]Computations on the Republican candidates supported similar substantive conclusions.

[12]Research on spatial models with probabilistic voting (e.g., Enelow and Hinich 1984) conclude that the mean voter position is more electorally attractive than the median voter position. We note, however, that in most districts in our sample the mean and median voter positions are extremely similar.

[13]Democratic candidates whose actual positions (as perceived by the district experts) were located to the left of 2 on the 1-7 ideological scale were shifted to the liberal endpoint (1) of the scale.

relative to their actual positions (column 3 in Table 4), imply that these candidates' expected votes decline much less sharply when we account for the fact that moderate voters discount the candidates' ideologies: under the heterogeneous voter model the Democratic candidates' expected vote losses from policy polarization are only 2.9 percentage points, while for the homogeneous voter model these expected losses are eight percentage points.

[Table 4 here]

Conclusion

Political scientists and psychologists have long recognized that attitude intensity is linked to attitude extremity. However there exists little empirical research that applies this insight to voting behavior, or that explores its implications for election outcomes and candidate strategies. Our analyses of voting in 155 House districts from the 2010 congressional elections suggest that compared to non-moderate voters, moderates are much less influenced by the candidates' ideological positions; indeed we find no evidence that moderate voters reward moderate candidates at all. These findings enhance our understanding of individual-level voting, and they also imply that office-seeking politicians contesting general elections gain little from a strategy of ideological moderation. Simply put, while office-seeking candidates undoubtedly solicit moderate voters' support, our analyses suggest that candidates cannot attract this support by presenting moderate policies.

More generally, our results suggest that many of the alternative motivations that scholars ascribe to candidates – including policy-seeking goals, winning primary elections, and deterring entry by third-party candidates – are compatible with pursuing general election support. Each of these alternative motivations tends to draw candidates away from the center, and thus to the extent that such noncentrist positioning severely damages candidates' general election prospects, candidates must trade off these objectives against the desire to maximize their general election support. By contrast, our results suggest that noncentrist positioning has little impact on candidates' expected general election vote shares, and this

has a welcome implication for congressional candidates: namely, that in crafting their policy images candidates need not face a trade-off between maximizing votes in the general election and pursuing the alternative objectives that plausibly motivated them to run for office.

In future research we hope to extend our analyses from the U.S. House to senatorial and gubernatorial elections. In addition, we hope to evaluate whether moderate voters discount ideology in congressional primary elections, in the same way that they discount candidate positioning in the general election. To the extent that we find support for this effect, it may illuminate the findings of scholars who identify the phenomenon of "excess polarization," i.e., that the candidates in congressional and presidential elections at times take positions that are more extreme than those of their primary electorates (see, e.g., Bafumi and Herron 2010, Jessee 2010). This excess polarization conflicts with spatial modeling research on two-stage elections beginning with a primary, which predicts that office-seeking candidates will locate strictly between their primary and general electorates (e.g., Adams and Merrill 2008, Aranson and Ordeshook 1972, Owen and Grofman 2006). However if moderate primary voters discount candidate ideology, then the positions of those primary voters who weigh ideology are more extreme (on average) than the primary electorate as a whole, a consideration that may prompt candidates to adopt "excessively polarized" positions.

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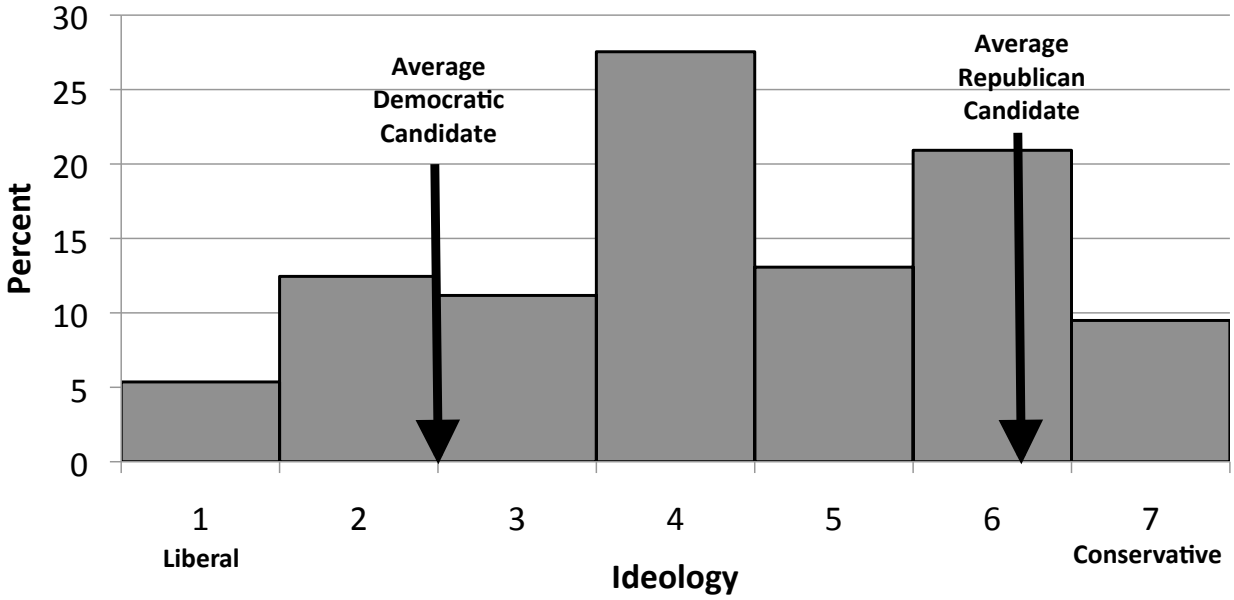
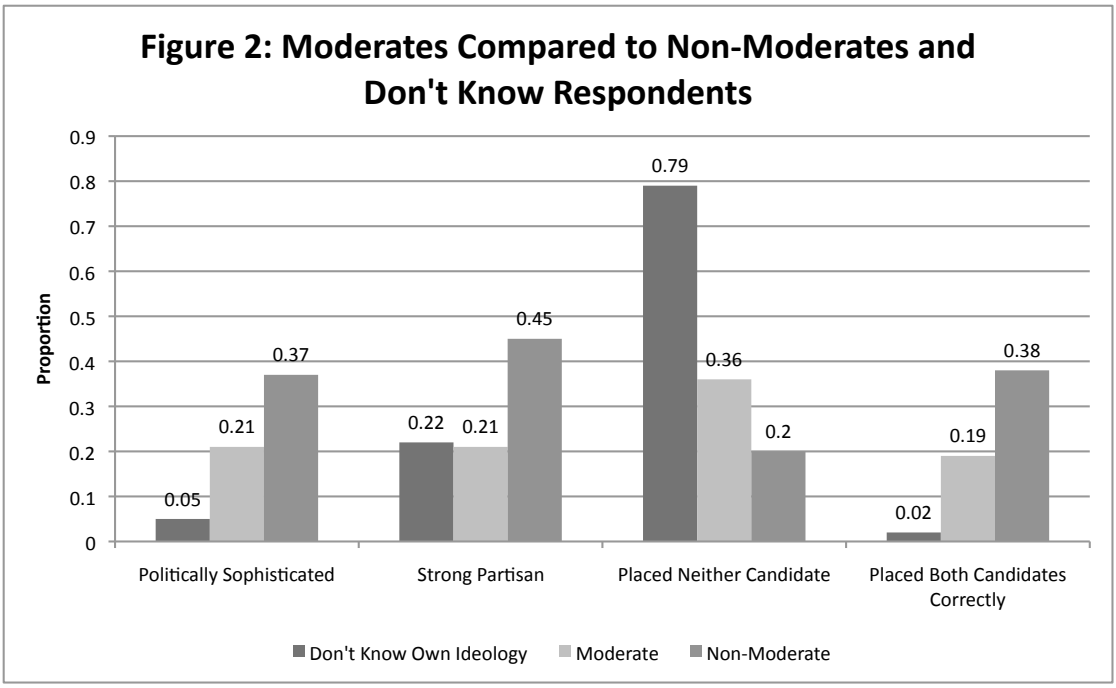
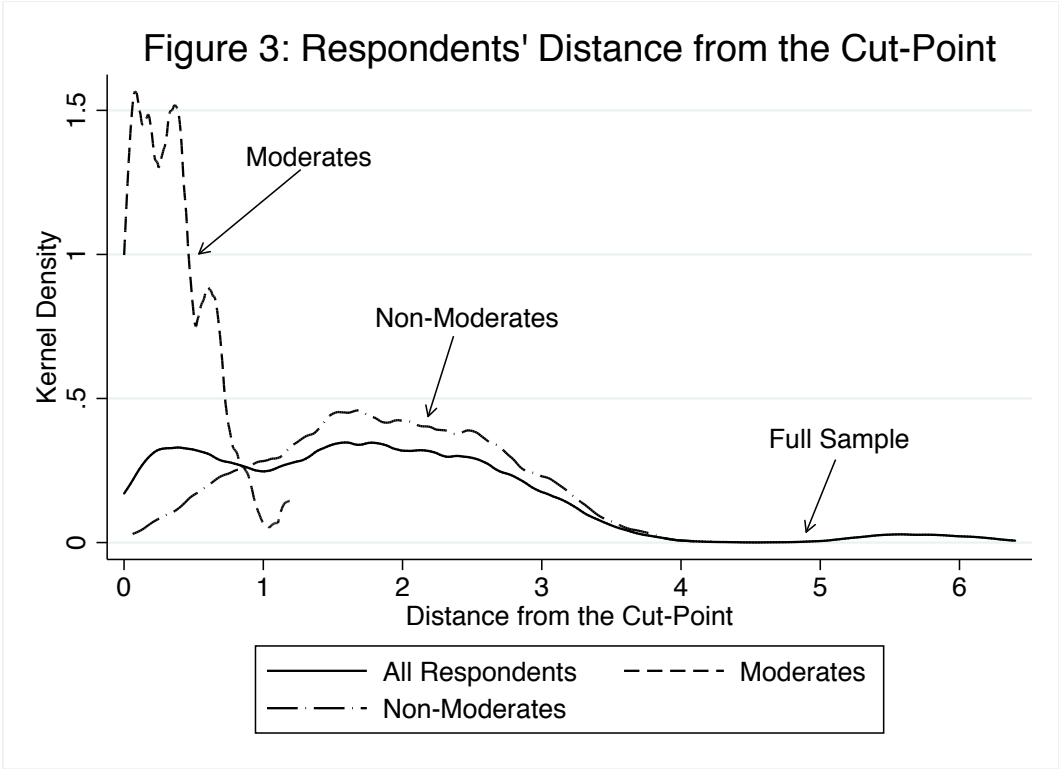
Figure 1: Ideological Placements of Voters



The figure displays the distribution of respondents' ideological self-placements in the mass-level survey of 155 congressional districts, along with the mean positions ascribed to the Democratic and Republican candidates averaged across these districts. The candidate positions are based on political experts' candidate placements from each district. Both the mass-level voter survey and the expert survey employed an identical 1-7 liberal-conservative scale. Both surveys are described in the text of the paper. The figure only includes respondents who placed themselves on the ideology scale.



The figure displays the proportions of survey respondents who were politically sophisticated; who were strong partisans; who were unwilling to place the congressional candidates in their district; and who placed the candidates correctly, computed over three different groups of respondents: those who were unwilling to place themselves on the 1-7 liberal-conservative scale ('Don't Know Own Ideology'); those who self-placed at the midpoint (4) of the ideological scale ('Moderate'); those who self-placed away from the scale midpoint ('Non-moderate'). Political sophistication is measured using a battery of eight political knowledge questions relating to the party in control of state and federal institutions (U.S. Senate, U.S. House of Representatives, state senate, and state lower house) and name recognition of state and federal representatives (U.S. Senators, governor, and U.S. House Representative). Those who responded to all eight questions correctly are considered politically sophisticated respondents. Strong partisans were defined as those who placed themselves at the extremes of the 1-7 party identification scale (1 or 7). Respondents were considered to have placed both candidates correctly if they placed the Republican candidate to the right of the Democratic candidate.



The figure displays the distribution of respondents' distances to the district cut-point, defined as the distance between the respondent's ideological self-placement and the midpoint between the ideological positions of the Republican and Democratic candidates in the district (where the candidates' positions are based on the placements of district experts). For these computations 'moderate' respondents were defined as those who self-placed at the midpoint (4) of the 1-7 liberal-conservative scale, while 'non-moderate' respondents were those who self-placed away from the scale midpoint.

Table 1: Relative Proximity, Moderates, and Vote Choice

	Vote Republican					
	Model 1		Model 2		Model 3	
Relative Proximity	0.192**	(0.01)	-0.087	(0.05)	0.003	(0.05)
Non-Moderate			0.737**	(0.15)	0.170	(0.15)
Relative Proximity * Non-Moderate			0.284**	(0.05)	0.106*	(0.05)
Republican Spending Advantage					5.181**	(1.09)
Republican Incumbency Advantage					0.294**	(0.09)
Party Identification					2.012**	(0.08)
Intercept	-0.023	(0.07)	-0.676**	(0.14)	-4.804**	(1.02)
N	12180		12180		12180	
Log-likelihood	-4063.28		-3960.09		-2537.56	
χ^2	761.36		714.40		1699.32	

Significance levels: * : 5% ** : 1%

For these computations the dependent variable was the survey respondent's self-reported vote choice in the congressional election (1=voted Republican, 0=voted Democrat). The coefficient estimates are based on logit analyses computed over the set of 12,180 respondents in our survey who were willing to self-place on the 1-7 liberal-conservative scale, and who reported voting for a major-party congressional candidate. The independent variables are defined in the text.

Table 2: Relative Proximity, Moderates, and Vote Choice for Those Who Correctly Place Both Candidates

	Vote Republican			
	Model 1		Model 2	
Relative Proximity	-0.051	(0.06)	-0.076	(0.07)
Non-Moderate	0.768**	(0.21)	0.289	(0.24)
Relative Proximity * Non-Moderate	0.325**	(0.06)	0.240**	(0.07)
Republican Spending Advantage			2.037	(2.56)
Republican Incumbency Advantage			0.088	(0.14)
Party Identification			1.791**	(0.12)
Intercept	-0.569**	(0.17)	-2.065	(2.37)
N	6334		6334	
Log-likelihood	-1187.48		-902.72	
χ^2	577.64		878.21	

Significance levels: * : 5% ** : 1%

For these computations the dependent variable was the survey respondents self-reported vote choice in the congressional election (1=voted Republican, 0=voted Democrat). The coefficient estimates are based on logit analyses computed over the set of 6,440 respondents in our survey who placed the Republican congressional candidate to the right of the Democratic candidate on the 1-7 liberal-conservative scale, and who moreover were willing to self-place on this scale and who reported voting for a major-party congressional candidate. The independent variables are defined in the text.

Table 3: Relative Proximity, Moderates, and Vote Choice for Respondents Close to the Cut-Point

	Moderates			
	Closer to Cut-Point		Further from Cut-Point	
Relative Proximity	-0.151*	(0.06)	0.062	(0.24)
Intercept	-0.672**	(0.14)	-0.145	(1.04)
N	1578		439	
Log-likelihood	-1161.63		-366.08	
χ^2	6.29		.07	
	Non-Moderates			
	Closer to Cut-Point		Further from Cut-Point	
Relative Proximity	0.300**	(0.09)	0.299**	(0.02)
Intercept	0.846**	(0.21)	-0.342**	(0.11)
N	452		1788	
Log-likelihood	-230.58		-691.08	
χ^2	12.13		232.10	

Significance levels: $*$: 5% $**$: 1%

Logit coefficient estimates and robust standard errors clustering on district in parentheses. Analysis limited to respondents whose distance from the cut-point is less than 1.22 units. Respondents in the closer to cut-point sample are those whose distance from the cut-point is less than 0.54 units; respondents in the further from cut-point sample are voters whose distance from the cut-point is between 0.55 and 1.22 units. Dependent variable is vote Republican.

Table 4: Democratic Candidates' Expected Vote Shares as a Function of Ideology, for Alternative Voting Models

	Policy Moderation Scenario[a] (1)	Democratic Candidate Fixed at Actual Position (2)	Policy Polarization Scenario[a] (3)
Heterogeneous Vote Model	51.0%	49.2%	46.3%
Expected vote gain/loss, compared to actual position	+1.8%	—	-2.9%
Homogeneous Vote Model	56.7%	49.2%	41.2%
Expected vote gain/loss, compared to actual position	+7.5%	—	-8.0%

[a]For the Policy Moderation scenario, each Democratic candidate's position was shifted to the mean district voter's position on the 7-point ideology scale. For the Policy Polarization scenario, each Democratic candidate's position was shifted one unit in a liberal direction, compared to the candidate's actual position (as perceived by the district experts). For these computations the Republican candidate's position was fixed at her actual position as perceived by the district experts. The Democratic candidates' expected votes are calculated using the parameter estimates for the homogeneous voter model (Model 1 in Table 1) in which all respondents are specified as attaching equal salience to the candidates' ideologies, and for the homogeneous voter model (Model 2 in Table 1) in which we estimated separate ideological salience coefficients for moderate and non-moderate survey respondents.