Ideology and the US Congressional Vote*

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Abstract

A large class of theoretical models posits that voters choose candidates on the basis of issue congruence, but convincing empirical tests of this key claim remain elusive. The most persistent difficulty is obtaining comparable spatial estimates for winning and losing candidates, as well as voters. We address these issues using candidate surveys to characterize the electoral platforms for winners and losers, and large issue batteries in 2008 and 2010 to estimate voter preferences. Questions that were answered by both candidates and citizens allow us to jointly scale these estimates. We find robust evidence that vote choice in congressional elections is both strongly associated with spatial proximity and that individual-level and contextual variables commonly associated with congressional voting behavior condition the magnitude of its importance. Our results have important implications for theories of voter decision-making and electoral institutions.

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1 Introduction

Scholarship on American congressional elections has adopted competing perspectives about the role of ideology in election outcomes. On the one hand, borrowing from spatial models of electoral competition (Downs 1957; Groseclose 2001), empirical research on candidate behavior emphasizes the ways in which candidates strategically choose electoral platforms so as to maximize their chances of winning election (Ansolabehere et al. 2001a; Burden 2004; Brady et al. 2007; Ansolabehere and Jones 2010; Stone and Simas 2010; Peress 2013). Research on party positioning in multiparty systems similarly finds evidence that party positioning is responsive to voter preferences (Adams and Glasgow 2004; Ezrow 2007). But on the other hand, research on voter behavior in congressional elections tends to emphasize everything *but* the importance of candidate ideology. As Mann and Wolfinger (1980, 624) conclude in their seminal work, "Voters appear to judge candidates, and incumbents in particular, on the basis of their perceived character, experience, and ties to the local community. Issues and ideology are subordinated to these personal and particularistic concerns." But if voters' evaluations of candidates are based on factors that are largely divorced from the candidates' ideological positions, why then do candidates choose platforms that are responsive to constituent preferences?

There are, of course, good reasons to doubt that candidate ideology plays much of a role, if any, in congressional vote choice. Congressional candidates suffer from low levels of name recall and recognition (Zaller 1992), and the relatively low salience of these contests suggest that most voters are unlikely to come into casual contact with information about the candidates' issue positions. And because the electorate tends to have little interest in or knowledge of the issues (e.g., Berelson, Lazarsfeld, and McPhee 1954; Campbell et al. 1960; Dalager 1996), it seems unlikely that most citizens will invest much effort in learning about congressional candidates' policy views. With such high levels of voter ignorance, perhaps

it comes as no surprise that congressional election outcomes are believed to result largely from factors such as partisanship (Mann and Wolfinger 1980), campaign spending (Jacobson 1990), and incumbency (Cover 1977; Erikson 1971).

We argue that previous scholarship on the determinants of individual-level vote choice in congressional elections suffers from a variety of limitations in evaluating the role of ideology in voter decision-making in congressional elections. In particular, comprehensive measures rarely exist for the platforms chosen by both candidates in the same congressional election. While roll-call voting records may be a reasonable substitute for characterizing the ideology of incumbents seeking re-election, comparable data for challengers are scarce. The use of ideological self-identification scales to measure citizen ideology further introduces concerns about measurement error and interpersonal comparability. And finally, even if good measures existed for both candidates and citizens, it is altogether unclear how to make direct comparisons between them. The combination of these limitations, therefore, has impeded efforts to determine how well citizens' vote choices in congressional elections reflect their ideological leanings.

This paper introduces new data to examine the relationship between candidate locations, citizen preferences, and vote choice in congressional elections. In doing so, we address each of the three limitations in previous research outlined above. First, we estimate citizen preferences using large batteries of policy-oriented questions that appeared on two large national surveys: the 2008 Cooperative Congressional Analysis Project and the 2010 Cooperation Congressional Election Study. Second, using survey data collected by Project Vote Smart, we assess the spatial locations of pairs of candidates in hundreds of U.S. House races. Third, and crucially for our purposes, we leverage the similarities in the questions that appeared on both the national surveys and the Project Vote Smart surveys to generate estimates of candidate and citizen ideology that can be directly compared. Thus, these data allow us to examine the relative importance of ideological similarity between candidates and citizens for

vote choice while also evaluating how factors identified in previous research—including partisanship, information, competitiveness, and campaign spending—condition this association.

Across both the 2008 presidential and 2010 midterm elections, we find, first, robust and substantial evidence that vote choice in congressional elections is strongly associated with the relative positions of the candidates. Even in these lower-information and down-ballot elections, voters tend to support candidates whose issue positions most closely match their own views. Second, while partisans are strongly biased toward their copartisan candidate, vote decisions among partisans and Independents are both strongly responsive to candidate positioning. Third, though ideological voting is strongest in competitive elections, candidate positions are also strongly associated with vote choice even in relatively uncompetitive districts. And fourth, increased levels of campaign spending are associated with increased reliance on spatial proximity, yet *disparities* in campaign spending between candidates do appear to weaken the importance of ideology. In sum, these findings revise traditional understandings of the role played by ideology in congressional elections and shed new light on how electoral outcomes reflect public preferences.

2 Ideology and Congressional Elections

Theoretical and empirical research on congressional elections reaches mixed conclusions about how ideology affects election outcomes. In describing the behavior of candidates, there is widespread agreement that candidates choose platforms that are responsive to the ideological preferences of the constituents they hope to represent. Borrowing from spatial models of electoral competition (Downs 1957; Enelow and Hinich 1984), scholars have developed models that specifically predict congressional candidates will choose some ideological position that maximizes their chances of winning elections (Adams et al. 2011; McCarty and Poole 1998).

Empirical research, meanwhile, finds a high degree of correspondence between the pref-

erences of a district and the candidates that seek to represent them. Ansolabehere et al. (2001a) and Burden (2004), using different measures of candidate ideology, both report that candidates' platform choices are responsive to aggregate district preferences, measured by presidential vote share. Canes-Wrone et al. (2002) report that incumbent members of Congress receive smaller vote shares when they accumulate ideologically extreme roll call voting records, which suggests electoral payoffs to strategic moderation. And in their study of primary elections, meanwhile, Brady et al. (2007) report that candidates position themselves closer to the preferences of their primary electorate rather than the constituency as a whole, which indicates that candidates' strategies are indeed motivated, at least in part, by ideological considerations.

These models of candidate competition are predicated upon a theoretical model of vote choice, in which voters choose candidates based on the ideological positioning of the candidates. The basic Downsian proximity model assumes that citizens support the candidate whose campaign platform most closely reflects their underlying preferences.[1] Subsequent scholars modified the Downsian model slightly by introducing random error terms in probabilistic models of voting (Adams 1999; Banks and Duggan 2005; Enelow and Hinich 1984; Fiorina 1981; Hinich and Munger 1994), and more significant extensions consider factors such as the inclusion of a valence dimension (Groseclose 2001), candidate ambiguity (Glazer 1990; Meirowitz 2005), and incomplete information (Banks 1990). All such models of sincere voting behavior in two-candidate elections share the key maintained hypothesis that citizens are more likely to vote for a particular candidate as proximity increases between the two.[2]

More precisely, proximity models of vote choice posit a decision rule whereby citizens use policy congruence to choose which candidate to support. A voter supports the Republican

[1]Throughout this paper we refer to the Downsian model as the "proximity" model in recognition of alternative spatial theories of vote choice that emphasize directional considerations.

[2]Even models that introduce multiple dimensions (whether or not the additional dimensions are concerned with policy considerations) or strategic voting (Austen-Smith and Banks 1988; Kedar 2005) still posit that voters place at least some weight on policy congruence.

candidate if the Republican candidate's platform is closer to the citizen's ideal point than the Democratic candidate's platform, and supports the Democratic candidate if the Democrat's platform is closer to the citizen's ideal point than the Republican candidate's platform.[3] This intuition can be formalized as follows:

$$\text{Vote for Republican if } |x_{ij} - x_j^D| > |x_{ij} - x_j^R|$$
$$\text{Vote for Democrat if } |x_{ij} - x_j^D| < |x_{ij} - x_j^R|,$$

where i and j index citizens and electoral districts, respectively, x denotes the ideal points or platforms of citizens and candidates, and the superscripts D and R indicate the partisanship of the candidate in electoral district j. Moreover, it is useful to point out that the quantity $|x_{ij} - x_j^D| - |x_{ij} - x_j^R|$ characterizes the Republican candidate's *proximity advantage* relative to the Democratic candidate, where positive values indicate that the Republican candidate is more proximate to the voter than the Democratic candidate, and negative values indicate that the Democratic candidate is more proximate to the voter than the Republican candidate. In a probabilistic model of vote choice, the probability a voter i will support the Republican candidate increases in the value of this quantity.

But though the literature is clear that ideological positioning is at or near the top of the electoral calculus used by candidates, most scholarly accounts of congressional elections seriously discount, or altogether reject, the applicability of the proximity model for vote choice. The behavioralist tradition, most closely associated with the Michigan model (Campbell et al. 1960; Miller and Stokes 1963), emphasizes the importance of party identification. Key (1959) refers to partisanship in a similar way as a "standing decision," in which voters support co-partisan candidates unless there is a strong reason to do otherwise. Summarizing this body of research, in their textbook, Polsby and Wildavsky (2000)(p. 17) write: "So

[3]In a strict proximity model, if the citizen is equidistant from both candidates, or if both candidates choose the same ideal point, citizens are likely not to cast a vote at all because the citizen suffers no loss in utility income from the election of either candidate.

while candidates matter sometimes and issues matter sometimes, and both are capable of affecting who wins, for most voters party matters almost all the time."

According to other scholarship, proximity voting may simply not be possible in congressional elections due to most voters' lack of information about the candidates' issue positions (e.g., Berelson, Lazarsfeld, and McPhee; Campbell et al. 1960). Hurley and Hill (1980) conclude that most people have poor knowledge of their representatives' policy positions, while Dalager (1996) shows that most voters could not recall the main issues that Senate candidates discussed over the course of the campaign. Mann and Wolfinger (1980) show that voters' evaluations of candidates were largely divorced from the candidates' positions on the major issues of the day. Research on public opinion, moreover, suggests that ideological voting does not occur in congressional elections because most citizens lack well-defined ideological views in the first place (Converse 1964; Zaller 1992). According to this view, then, ideological proximity may appear to be altogether uncorrelated with vote choice, because voters cannot relate their views to the candidates' if they possess no views of their own.

The absence of vigorous electoral competition in most congressional races casts additional doubt on the proposition that congressional vote choice is structured by ideological proximity. For instance, though spatial models commonly assume that elections occur in competitive environments, many congressional elections fail to meet this standard. Ten percent or more of congressional seats go uncontested, and most elections are won by impressively large margins. In uncompetitive electoral environments, Burden (2004, 213) writes that the dominant candidate's "advantages in skill, name recognition, campaign resources, and stylistic fit with the district tend to overwhelm voters' ideological considerations." Alternatively, the unequal distribution of resources in most electoral campaigns could distract most voters from a sober consideration of the ccandidates' issue positions. In addition, the extensive work on the incumbency advantage (e.g., Ansolabehere, Snyder, and Stewart 2000; Cox and Katz 1996; Erikson 1971) suggests that the force of incumbency may lead voters to support a popular

incumbent even when the incumbent's policy views conflict with citizen preferences.

The volumninous literature on campaign spending suggests that campaign finance overwhelms the importance of ideology in influencing vote choice in congressional elections.[4] Though most of this research does not focus on how spending affects individual voting decisions (Jacobson 1990 is an important exception), vote choice could be based largely on which candidate spends the largest amount of money and thus has the highest level of name recognition. Alternatively, spending could be used to obfuscate one's issue position (or that of the opponent), misinform or mislead the public, or shift the public's focus to other, non-policy attributes of the candidates.

Other research supports the proposition that vote choice in congressional elections is affected by ideology, but reports that these effects are limited to *national* issues (Abramowitz 1984). Jacobson and Kernell (1983), in their study of strategic candidate behavior and national conditions, conclude that "even those voters who are blissfully free of national political issues may, in voting on the basis of bumper stickers and billboards, contribute to a national election swing." (3)

On the whole, then, existing accounts implicate plenty of factors in vote choice in congressional elections, but the ideological content of the competing candidates' platforms do not play a prominent role in these explanations. The available empirical evidence appears to support this claim (see, e.g., Kinder 1998). Most models of candidate competition that assume sincere behavior by voters, however, rely on the maintained hypothesis that citizens choose candidates according to ideological proximity (Downs 1957; Enelow and Hinich 1984). Though previous work has examined the general relationship between candidate (Ansolabehere et al. 2001a; Burden 2004) and legislator (Canes-Wrone et al. 2002) ideology and

[4]Some research Jacobson (1978, 1990) finds that challengers receive more votes when they spend more money, but spending by incumbents has no effect. Green and Krasno (1988); Gerber (1998) find that both increase their vote shares by spending more money, while Levitt and Snyder (1995) concludes that campaign spending by either candidate has little if any effect.

general election performance, direct tests of this maintained hypothesis at the individual level have largely eluded empirical research.

However, while such aggregate evidence is consistent with the use of proximity voting at the individual-level, this body of work does not offer a direct test of the extent to which individual vote choices are sensitive to the positioning of the candidates. Ansolabehere et al. (2001a) employ midpoints between congressional candidates because they do not have measures of district-level opinion on the same ideological scale as their estimates for candidate locations; similarly, Burden (2004) uses presidential vote shares to measure district-level preferences, which also precludes direct comparisons between candidate locations and district ideology. While the findings from these studies are compatible with our theoretical perspective, this literature does not directly assess the ideological distance between districts and legislators, nor does it establish what factors may condition the importance of spatial proximity across electoral contexts or among individuals. This paper, therefore, represents an important contribution to the literature on elections and spatial voting because we directly model the locations of individual citizens and both candidates, enabling us to directly evaluate the ideological distances between voters and candidates and compare these distances with vote choices.

Addressing these challenges, however, Jessee (2009, 2010, 2012), in studies most similar to ours, finds strong evidence that citizens do in fact cast votes for *presidential* candidates that correspond well with proximity theory. However, whether these results apply similarly to congressional elections is less certain. Presidential contests last for months or years, and even disinterested political observers are likely to have some idea of where the presidential candidates stand on the major issues of the day. The lower salience and information levels in congressional races, their lack of competitiveness, the ability of incumbents to target distributive benefits to one's home district, all suggest that ideology and proximity voting may not play significant roles in congressional voting behavior.

In this paper, we examine how and when congressional vote choice is influenced by ideological proximity voting. We use the concept of *spatial bias* (Adams 2001; Adams et al. 2005; Jessee 2009, 2010; Persson and Tabellini 2000) to examine how the factors identified by previous scholars condition the impact of ideological proximity in congressional elections. In particular, we examine the how individual-level and contextual-level factors noted above either attentuate or augment the relationship between ideological proximity and a voter's support for a candidate. So doing, we leverage both the rich empirical literature on congressional elections and theoretical models of electoral competition to better understand when elections more effectively communicate the public's preferences. Table 1 below summarizes the hypotheses derived from existing literature about how the factors cited above affect the importance of ideological proximity in congressional elections.

Table 1: *Expected Relationships between Ideological Proximity and Individual-Level and Contextual Factors*

Factor	How Measured	Expected relationship with ideological proximity
Partisanship	Individual-level party identification	Lower among party identifiers
Competition	Pre-Election Toss-Up	Increased relative to uncompetitive districts
Competition	Parity in spending levels	Increases with parity
Spending	Total spending by candidates	Ambiguous

3 Empirical Tests of Proximity Voting

The requirements for a test of proximity voting in congressional elections can be compared to a three-legged stool. We need data on the policy preferences of voters, incumbents, and challengers, and these measures need to be in a common scale. Existing approaches fall short in one way or another. Ansolabehere et al. (2001a) and Burden (2004) have same-scale data on both candidates, but not voters. Bonica (2013) generates high quality common space estimates of candidates and donors using campaign finance data, but the donor estimates

do not characterize a representative sample of voters, nor are contributions linked explicitly to vote choice.

Research that characterizes a common ideological space for citizens and legislators enables scholars to test claims about representation (Bafumi and Herron 2010; Gerber and Lewis 2004; Warshaw and Rodden 2012), but does not provide information about the *losing* candidates in congressional races and thus does not permit tests of proximity voting. For all the work done in estimating latent preferences of elected political actors, very little has been done to examine the entirety of campaign platforms that congressional candidates present to voters−and thus fully characterize the electoral choices that are modeled in spatial theory. The reason is simple: while roll call data exist for candidates who eventually win, no similar record of policy preferences systematically exists for losing candidates. The electoral platforms for the latter remain a black box.

Yet even if we were to obtain good measures of candidate preferences, and the use of survey instruments resulted in perfect estimates of respondent preferences, only weak comparisons could be made between the two. The most painful limitation is that they cannot be compared to each other directly on the same scale. Responsiveness in representation could be assessed (Clinton 2006), but not congruence. Nor could proximity voting be evaluated, as no ideological distances between voters or candidates can be constructed.

The main tack to measuring both candidates and voters on the same scale relies on self-reported ideology and survey respondents' perceptions of candidate ideology (Alvarez and Nagler 1995; Erikson and Romero 1990; Merrill and Grofman 1999). However, these measures are likely to be extremely noisy. A measurement error approach (Achen 1975; Ansolabehere et al. 2008; Benoit et al. 2009) can address the noise issue but has no bearing on the common scale problem. Self-reports are also likely to be systematically biased (Conover and Feldman 1982). This is chiefly because survey respondents "understand the 'same' question in vastly different ways" (Brady 1985), which is closely related to what King et al.

(2003) term "differential item functioning." In short, citizens may disagree in a variety of ways about what it means to be "liberal," "moderate," or "conservative," and how these terms translate to self-placement scales. Stone and Simas (2010) and Buttice and Stone (2012) present a novel extension to this approach by asking experts to place the congressional candidates on the standard seven-point ideological scale, which are then aggregated and compared with survey respondents' self-reports. This approach still assumes that survey respondents used the seven-point scale in a common way and that experts' and individals' perceptions of the ideological continuum describes a common space.

We address these challenges by combining large-scale survey data with novel data on the platforms chosen by both winning *and* losing candidates in a large sample of U.S. House races in 2008 and 2010. We estimate candidates' platforms and citizens' preferences using scores of policy-based questions that were publicly answered (by candidates) or appeared on public opinion surveys (for citizens). Specifically, we adopt the framework of Shor and McCarty (2011), which uses questions from Project Vote Smart's candidate surveys. We exploit the similarities between these surveys of legislative candidates and items found in two large surveys as a solution to the challenges in studying the spatial model. Crucially for our purposes, many identical or otherwise substantially similar questions appeared in each data source. Thus, leveraging these similarities across altogether different data sets, we generate joint estimates of candidate and citizen ideology. Treating citizens as if they were legislators, we use standard ideal point estimation techniques to derive spatial location parameters for constituents and candidates jointly. To our knowledge, this is the most comprehensive study to date that jointly characterizes preferences between the public and candidates. By linking together survey respondents and their local congressional candidates, then, we examine the extent to which spatial proximity between candidates and voters is associated with citizens' voting decisions. In the next section, we detail that data collection and bridging effort.

4 Data and Methods

4.1 Individual Level Data

We employ data from two surveys: the University of Chicago module of the 2008 Cooperative Campaign Analysis Project (CCAP) (Jackman and Vavreck 2010), and the common content of the 2010 Cooperative Congressional Election Study (CCES). The CCAP module was administered to over 4,200 respondents, while the 2010 CCES included data for over 55,000 respondents. Using these surveys in combination enables us to evaluate vote choices in hundreds of U.S. House elections. Both surveys included large batteries of policy-oriented questions, which we use to characterize citizen preferences using a similar approach as that found in Ansolabehere, Rodden, and Snyder (2008). Moreover, the combination of these two surveys enables us to explore whether and how proximity voting varies across presidential and midterm election cycles.

We include those respondents from districts in which we have data for *both* major party candidates. This focuses our attention on a smaller subset−although still quite substantial−of the total number of respondents in these surveys. Though the races included in our sample do not comprise the entire universe of election contests in any electoral year, we find that these districts are quite representative of all contested races. In no year do districts in the sample differ in significant ways on major political and demographic variables (Appendix B online has these detailed comparisons).

Both surveys contained large batteries of policy-oriented questions that we use to characterize the ideological locations of the survey respondents.[5] This approach avoid problems with projection because the policy questions on the survey generally concern the major pol-

[5]We use only these policy-based questions in our construction of voters' preference estimates, in contrast to other work that also uses data on individuals' partisanship and vote choices. Thus we avoid using vote choice data to both characterize individuals' preferences and as the dependent variable in our subsequent analyses (Clinton 2007).

icy issues–for instance, abortion, same-sex marriage, and health care–and it seems unlikely that respondents adopt the issue position of their favored local House candidate on such significant issues. Virtually all of the policy-oriented questions on the CCAP and CCES were presented in dichotomous format. The sample sizes and the number of policy-based questions for each survey are summarized in table 2 below.[6]

Year	Survey	Respondents (N)	House Races (N)	Voter Questions (N)	Bridge Questions (N)
2008	CCAP	1412	179	76, 15, 103	76, 15, 103
2010	CCES	25833	312	40	18

Table 2: *Sample Sizes for Survey Respondents, House Candidates, and Policy Preference Questions. The 2008 survey combined samples from March 2008 with 76 NPAT questions (all bridge questions by designed), and two separate September 2008 samples with 15 and 103. Results are robust to dropping the 15 question sample.*

We use the National Political Awareness Test (NPAT) to characterize candidates' electoral platforms. This survey is administered each electoral cycle to state and federal candidates by the nonpartisan Project Vote Smart. The questions asked by the NPAT cover a wide range of policy matters, including national security, social issues, fiscal policy, environmentalism, and many more.[7] Virtually all of these questions present binary choice response options ideal for scaling. The other major advantage of the NPAT survey is that it includes responses from losing challengers, who do not compile subsequent roll call voting records. We describe the details of the candidate sample in Appendix A.

These measures of candidate platform locations correspond quite strongly with other related measures. Our incumbent scores correlate with purely roll call-based ideal points in the 0.90 range. The real test is in the challenger scores for whom far less information is available. We compared our challenger scores with those from Hollibaugh et al. (2012),

[6]Our summary measure of ideology obtains its stability both from the large of number of questions as well as the comprehensive range of issue areas covered by them.

[7]Other studies using these data include Ansolabehere et al. (2001a,b); Battista and Richman (2011); Richman (2011); Shor and McCarty (2011).

who estimates their ideology using the scaling procedure from Aldrich and McKelvey (1977) using survey respondents' estimates of candidates' positions. The correlation between the two challenger measures is 0.69 for 2008 (the only year of overlap). Bonica (2013) uses campaign finance data and a correspondence analysis estimation technique to derive ideal point estimates for both incumbents and challengers. The correlation between the two challenger measures is 0.75 for 2008, and 0.88 for 2010. The very high correlations with other measures that use entirely different data sources lends confidence to our assessment of platform locations.

4.2 Bridging

We use questions that appear on both the surveys and candidate questionnaires to generate a common ideological space for both voters and candidates. The bridging enterprise is simplest for the 2008 CCAP, whose survey instrument we wrote ourselves. We specifically asked our respondents exact replicas of questions from the NPAT survey. Moreover, respondents were asked many dozens of these questions that were under our direct design. In contrast, for the 2010 CCES, we use the substantive similarities between the survey items that appear on the candidate and constituent surveys to generate a common space. Other recent and related work has adopted a similar bridging strategy. For example, Tausanovitch and Warshaw (2013) use both identical and near-identical policy preference questions to bridge across many of these same surveys.

Questions that are unique to either the candidate or voter surveys do not aid in the bridging enterprise, but they do help us recover more precise estimates of preferences of these actors. The large number of items survey respondents answered ensures that their ideal points are estimated with a high degree of precision, especially compared to other recent work using similar approaches.[8] We employ dozens of such questions for respondents

[8]For instance, Jessee (2009) estimates survey respondent ideal points using 15 items, while Jessee (2010) employs 10 items and Bafumi and Herron (2010) use an average of 16 items per respondent.

and candidates.

4.3 Estimation

In generating measures of citizen and candidate locations, we follow the approach used in Jessee (2009, 2010) and other similar work. Ideal points are estimated using a Bayesian item-response model (Jackman 2000; Martin and Quinn 2002; Clinton et al. 2004; Jackman 2004), in which the model assumes that candidate and citizen preferences are characterized by quadratic utility functions with normally distributed errors, and that these errors are independent across both individuals and roll calls.[9] Each individual i decides whether to express support for ($y_{ij} = 1$) or opposition to ($y_{ij} = 0$) each survey item j. This specification results in a probit model, $\mathrm{P}(y_{ij} = 1) = (\beta_j \; x_i \text{ - } \alpha_j)$, where β_j is an item discrimination parameter that indicates how well item j distinguishes liberals and conservatives, α_j is the item difficulty parameter that describes the location of a respondent who is indifferent between supporting and opposing the proposal in item j, and x_i corresponds to candidate or citizen i's ideal point. The joint density of latent ideology and all model parameters α_j, β_j, and x_i are estimated from the data.[10]

For each respondent survey, we estimated unidimensional ideal point models using the survey data for both candidates and constituents. The estimated ideal points appear to characterize candidate and citizen preferences quite well. The overall classification success as well as the aggregate proportionate reduction in error (APRE)[11] for the joint estimation are quite comparable with that of Congress. Moreover, the improvement in fit afforded by

[9] Estimation is done with the `pscl` package (Jackman 2011) in `R`.

[10] Repeated iterations of the Markov chain Monte Carlo (MCMC) algorithm generate random samples from the joint posterior density of the latent traits, which characterizes the full distribution of each of the model parameters. The model is first run without imposing any identifying restrictions on the parameter estimates. Post-processing then constrains the estimates to have mean zero and unit variance. We reflect the data as needed, so that negative ideal points represent more liberal candidates/respondents and positive ideal points reflect more conservative candidates/respondents.

[11] The APRE measures the improvement in classification relative to a null model where all votes are cast for the winning side. This is a more realistic benchmark than classification success, where even the naive model can do well on.

a second dimension is minimal, and in common with recent work we henceforth rely on a single dimension.

A key assumption for the bridging enterprise to work is that respondent and candidate issue positions lie on a common dimension. To evaluate the reasonableness of this assumption, we adopt a technique from Jessee (2009). We conduct two separate analyses for each of the two surveys. In the first, we scale individual respondents alone, and then compare them to estimates from the joint respondent-candidate scaling. In the second, we scale candidates alone, and then compare them to the joint scaling estimates. If candidates' positions were structured very differently from those of individuals, we would expect attenuated relationships between scores from the two estimations. In fact, however, the scores are nearly identical: the average correlation between the two is above 0.98 for candidates, and above 0.96 for respondents; nearly exactly what Jessee (2009) finds. In combination, these checks provide confidence that we have appropriately characterized the preferences for both candidates and constituents, and that these measures for both sets of actors can be directly compared.

4.4 Evaluating the Common Space Estimates

Before proceeding, we assess the relationship between our estimated common space ideal points for individuals with other indicators widely used to measure citizen preferences—namely, self-reported ideology and partisanship. While we expect there to be some relationship between these measures, we anticipate that these relationships are far from perfect. After all, our key claim in generating these estimates is that the use of dozens of policy items to generate measures of citizen ideology allows us a more unobstructed and error-free view of citizens' preferences. As such, we would expect that the correlations between our measures and other more widely-used indicators are attenuated due to increased measurement error in the former set of variables.[12] Indeed, the average correlation of our ideal points with a three-

[12]On the other hand, a very weak relationship would make us suspicious of our new measures.

item party identification question is 0.61, and with the five-item ideological self-placement question at 0.60.

Descriptively, the common space estimates comport well with basic expectations about how preferences are distributed within the electorate, among candidates, and in Congress. Examining candidates elected to the 111th House (using the 2008 NPAT data), for instance, we find that candidate distribution is bimodal while the distribution of voter preferences is unimodal. The public's self-identified partisans have scores that are substantially more variable than Congress, perhaps as a consequence of party influence in candidate nominations. There is also considerably more overlap between the two parties in the population, and the tails are fatter. Congress represents average Democrats and Republicans in the population fairly well, but independents/moderates in the center and strong ideologues at the far left and right are represented less well.

As a final check before we turn to our analysis of proximity voting, we validate our common space ideal point estimates in standard models of vote choice. In particular, we examine how well our new measures of citizen ideology perform in predicting a vote for the Republican congressional candidate in the respondent's district in the election year in which they were surveyed. We first estimate a basic model where the main independent variable is party identification, a second model that includes self-reported ideology, and a third model that replaces the self-reported ideology measure with our new measure of citizen preferences. Race, sex and ethnicity are included as controls.[13] Our primary interest is in assessing how well our measure performs relative to the party identification variable compared with the self-reports, and whether our claims that our ideal points provide a less noisy measure of respondent ideology are borne out. The results are substantially similar in both years; the standardized coefficient (which allow comparisons of predictors on different scales within

[13]Party identification is the standard seven item scale and self-reported ideology is on a five-point scale. We explore models with demographics to account for historical ties between groups (such as women and African Americans) and ideology that may be mediated by partisanship.

models, but not across them) coefficient for our policy preferences measure is substantially larger than that of self-reported ideology, and approximately the same size as the coefficient for the partisan indicator in 2010 and just shy of it in 2008. Thus, even in congressional elections where information is considerably poorer on the issues, ideology−properly measured−is substantively important in individual voting decisions, even relative to partisanship. This was obscured with the more traditional measure of ideology.

Yet such models, while suggestive of the utility of better ideological measures, miss something major. Measurement error is the lesser problem for our measures. The larger one, which ideological indices can not do much about, is the common scale problem. They do not incorporate any information about the ideology of the candidates and thus these models do not allow us to examine proximity voting. We now turn to those tests.

5 Empirical Strategy

Our common space estimates for candidates and citizens enable us to characterize the spatial proximity between each respondent and the pair of House candidates in her district. Proximity voting predicts that the probability that a citizen supports the Republican candidate increases in the proximity advantage held by the Republican candidate relative to the Democratic candidate. Or, returning to the formalization we introduced above, the probability of a Republican vote should increase as $|x_{ij} - x_j^D| - |x_{ij} - x_j^R|$ gets larger. For negative values of this quantity, we expect voters to be more likely to support the Democratic candidate, and we expect voters to be more likely to support the Republican candidate for positive values.

The dependent variable is whether respondents reported voting for the Republican House candidate. From the formalization above, we constructed a variable, *Republican spatial advantage*, which characterizes the extent to which the Republican candidate is more spatially proximate to the voter than the Democratic candidate. We constructed these variables using

both linear and quadratic loss functions to characterize voter utilities, and found that both characterizations yielded identical results.[14] For ease of presentation we present the results using the linear loss characterization. Thus, to the extent that spatial proximity plays a role in vote choice, we expect coefficient estimates for *Republican spatial advantage* to be positively signed.

We characterize the level of electoral competitiveness with an indicator for whether the Cook Political Report characterized each congressional election as a "toss-up" race in the report issued closest to September 1 of that year.[15] We also collected data on campaign spending by the campaigns from the Federal Election Commission. Using the FEC data, we calculated the level of total spending (in millions of nominal dollars) and the degree of spending parity, which is measured by the absolute value of the difference between the Republican candidate's share of district spending and 0.50. If both campaigns spent similar amounts of campaign funds, this variable would have a value close to zero; however, as one candidate enjoys a spending advantage over the other, this variable increases, to a maximum of 0.50.[16]

To examine how electoral competitiveness and campaign spending condition the importance of spatial proximity, we estimate a logistic regression of vote choice on *Republican spatial advantage*, each of the indicators for these factors, and the interaction between each

[14]For instance, using the linear loss function, if the Republican candidate was two units away and the Democratic candidate was three units away, the Republican spatial advantage is $1(3-2=1)$. Using the quadratic loss function, it is recorded as $5(3^2-2^2=5)$.

[15]We use this in place of the margin of victory because this latter indicator is technically a "post-treatment" measure and could only be known after individuals had cast their votes. We prefer the "toss-up" indicator to other alternative measures, such as the margin of victory in the prior election, because of idiosyncratic factors, both locally and nationally, that may have been important in the prior election but did not play a role in the 2008 or 2010 elections. However, we note that we have obtained substantively similar results to those reported here when using this approach.

[16]We recognize that an extensive literature in political science investigates the strategic nature of campaign spending, which has led many scholars to study its relationship with election outcomes using strategies such as instrumental variables (e.g., Gerber 1998). However, we follow other research that studies how campaign spending is associated with the ways citizens experience political campaigns (Coleman 2001; Coleman and Manna 2000) and include the level of spending in the current election year. We note, though, that all our substantive results hold when we use spending data from the prior election.

of these factors and *Republican spatial advantage*. If congressional voters make decisions using the proximity rule, then we expect the coefficient for *Republican spatial advantage* to be positive and large in magnitude. The signs on the interaction terms, therefore, characterize the extent to which these factors strengthen or attenuate the relationship between spatial proximity and vote choice. For instance, positive values of the interaction term between *Republican spatial advantage* and the toss-up variable would indicate that spatial proximity is more strongly associated with vote choice in competitive elections, while negative values would indicate that the association between spatial proximity and vote choice decreases in more competitive elections. In all models, we include controls for partisanship and the incumbent's partisanship (+1 if Republican incumbent; -1 if Democratic incumbent; 0 if open seat). We used survey weights so the results are generalizable to the U.S. population. To account for intra-district correlations in the error terms, we clustered all standard errors on congressional districts.

Results

We begin first by examining voters' use of spatial proximity in congressional elections. To do so, we estimated a simple model of vote choice as a function of *Republican spatial advantage* and controls for respondent and incumbent partisanship. We then examined to what degree spatial proximity is conditioned by partisanship by interaction *Republican spatial advantage* with respondent partisanship.[17] The results for both 2008 and 2010 are shown in table 4 below.

The estimates in columns (1) are from a simple model that contains only *Republican spatial advantage* and measures of respondent and incumbent partisanship as covariates. Even when controlling for these partisan factors, however, the results show that *Republican spatial advantage* is strongly and positively associated with vote choice. Respondents with

[17]Following Keith et al. (1992), "leaners" are classified as partisans.

spatial locations more proximate to the Republican candidate (relative to the Democratic candidate) are increasingly more likely to have voted for the Republican candidate. At the same time, Republican identifiers are substantially more likely than either Democrats or Independents (the omitted category) to support Republican candidates, and Democratic identifiers are substantially more likely than either Republicans or Independents to oppose Republican candidates. Though the coefficients are not directly comparable across models, note that the relationship between the spatial advantage predictor and the other predictors is quite consistent across years.

The models in columns (2) explore these relationships in greater detail to examine the extent to which congressional vote choices exhibit partisan bias. *Republican spatial advantage* again is positive and statistically significant in both election years, indicating that Independent voters (the omitted category) make voting decisions that are strongly associated with spatial proximity vis-à-vis the candidates. The coefficients for the interaction between *Republican spatial advantage* and the indicators for Republican and Democratic identifiers, however, are all negative across both election years, suggesting that both Republicans and Democrats make voting decisions that are less sensitive to relative changes in the positioning of the candidates. However, none of these coefficients are statistically significant. Interestingly, then, the results produce less evidence of partisan bias in congressional elections than other researchers have found in the context of presidential elections (Jessee 2008, 2009). This finding is also somewhat surprising because partisans are usually regarded as more politically informed and interested than nonpartisans, and thus partisans may have been expected to exhibit *greater* responsiveness than Independents. At the same time, however, we note that, consistent with findings shown in Joesten and Stone (2014), partisans vote for the more proximate candidate at greater rates than Independents.

The substantive results of the models shown in columns (2) above are displayed below in figure 1. The plotted curves show the predicted probability of voting for the Republican

congressional candidate over the range of values of *Republican spatial advantage*. Republican identifiers are plotted in red, Democratic identifiers are plotted in blue, and Independents are plotted in black. The dashed lines show the 95 percent confidence intervals. Although the sample sizes are quite different across the two election years, resulting in much larger confidence intervals for 2008 than for 2010, the substantive patterns are quite similar. Republican identifiers are more likely than Democrats and Independents to vote for the Republican House candidate across the entire range of values of *Republican spatial advantage*, and Democratic identifiers are more likely than Republican and Independents to vote for the Democratic House candidate for any value of *Republican spatial advantage*. Independents, meanwhile, appear to make voting decisions that are most consistent with the proximity model. Though the intercept shifts for Independents between 2008 and 2010−reflecting the heavy Republican wave in the 2010 midterm elections−the slope is considerably steeper for Independents than it is for either partisan group, indicating that Independents' vote choices are most responsive to differences in the relative ideological positions of the candidates. For instance, compare the predicted probabilities of supporting the Republican candidate in the 2010 election among Republicans, Democrats, and Independents. When the Republican candidate's spatial advantage changes from -1 to +1, the predicted probability of voting for the Republicans increases from about 0.80 to 0.97 among Republican identifiers, and from 0.05 to 0.27 among Democratic identifiers. Among Independents, however, the predicted probability increases from 0.35 to 0.84. While it is the case that partisans and Independents both vote based on proximity, it is the latter that is of more interest, since they are more likely to switch their vote. In other words, it simply is less common that a candidate from the opposite party will have a sufficiently large proximity advantage to lead partisans to cross party lines.

We next use this approach to study the extent to which electoral competitiveness and

campaign spending conditions the importance of spatial proximity for vote choice.[18] For both 2008 and 2010, we estimate versions of the same models, in which we interact *Republican spatial advantage* with the competitiveness of the election (columns 1), total spending in millions (columns 2), and the imbalance between candidates in the amount of spending (columns 3). The results are shown in table 5 below.

Recall first that the coefficients cannot be directly compared across models or years. However, the patterns are strongly consistent across the two different election years. Columns (1) report results that focus on how electoral competitiveness conditions the use of spatial proximity. The main effect for *Toss-up district* is not statistically significant in either election year, indicating no systematic relationship between the level of electoral competitiveness and vote choice. However, in both election years the interaction term is positive and large in magnitude, indicating that the relationship between spatial proximity and vote choice increases in more competitive elections. This interaction term is statistically significant for 2010, but not for 2008; however, the considerably smaller sample size in 2008 is a likely factor.

Columns (2) show results for how campaign spending conditions the use of spatial proximity for vote choice. Across both election years, the main effect of campaign spending is small in magnitude and indistinguishable from zero. However, when evaluating the interaction between *Republican spatial advantage* and campaign spending, we find consistent results

[18] We recognize that studying the relationship between campaign spending and election outcomes is fraught with endogeneity. We have attempted to address this concern in supplementary analyses where we instrumented for campaign spending in the current election using spending patterns in the previous election. However, this approach has important limitations of its own. First, to the extent that spending in the previous election is correlated with the same factors that produce endogeneity between election outcomes and spending in the current election, this approach is subject to some of the same biases. Second, to our knowledge, standard methods of instrumental variables analyses do not permit the use of survey weights, which thus limits our ability to incorporate other sources of information that are important for our estimation. However, in performing these analyses, we find consistent patterns with the results reported below, although the results for our key interaction terms in 2008 fall short of statistical significance. The tables of results are available in Appendix C available online. Extending these results is an important task for future research.

across both election years. The coefficients for the interaction terms are both positive and statistically significant, or very nearly so. Thus, while campaign spending may have perverse effects on elections more generally, the findings here indicate that increased levels of total campaign spending *strengthen* the relationship between spatial proximity and vote choice. One potential explanation for this finding may be that increased levels of spending are associated with higher levels of information distribution. At the aggregate level, then, these findings suggest that higher levels of campaign spending may generate election outcomes that better reflect the views of voters.

While total campaign spending may strengthen the relationship between preferences and vote choice, column (3) show the results for whether parity in campaign spending conditions the use of spatial proximity. The coefficients on the interaction terms are negative and large in magnitude for both election years. These results indicate that greater disparities in campaign expenditures across competing candidates significantly reduces the association between spatial proximity and vote choice. Thus, while high levels of spending overall may increase the importance of spatial proximity, decreased parity in spending levels appears to have the opposite effect.

Across two election years, spanning both presidential and midterm electoral contexts, and while using different surveys, samples of House candidates, and methods of linking candidate and public preferences, we find that voters tend to support candidates whose platforms most closely resemble their individual policy preferences. *Where* these preferences come from, however, is less clear. Research on framing and priming suggests that voters may adopt the issue preferences of their preferred candidates. In an electoral system with strong parties where the top-of-the-ticket contest receives considerable attention, it is possible that these priming effects would also influence preferences and voting behavior in down-ballot contests. It seems improbable, however, that this would be the case among voters in U.S. House races. Moreover, if it were the case, we might expect to see an even stronger relationship between

issue preferences and candidate choice.

It is also worth discussing what the appropriate standard is for judging the results above. One null hypothesis could be that we would expect the slope for spatial advantage to be zero, because all Republican voters support Republican candidates, all Democratic voters support Democratic candidates, and Independent voters flip a coin between candidates. Indeed, this may have been a fairly accurate characterization at some period in American history, though it would seem to be less the case in contemporary American politics; the correlation between partisanship and ideology is extremely high, which suggests that partisan voting patterns are correlated with ideological voting patterns. Our results indicate that ideology is related to vote choice independent of partisanship, however, while Independent voters—*pure* Independents—do *not* appear to flip a coin when choosing candidates. Instead, their voting decisions are highly consistent with a simple proximity model of vote choice. Moreover, nearly 11 percent of our sample from the 2008 CCAP and 16 percent of our sample in the 2010 CCES cast ballots for a congressional candidate from party opposite to the presidential candidate they supported in 2008. In spite of the high correlation between partisanship and ideology, voters appear to make meaningful use of both criteria when casting ballots in congressional elections.

Table 3: *Spatial Proximity, Partisanship, and Vote Choice in House Elections*

Independent Variables	2008		2010	
	(1)	(2)	(1)	(2)
Republican spatial advantage	0.90	1.28	1.04	1.12
	(0.14)	(0.31)	(0.05)	(0.09)
Republican	2.37	2.53	1.97	1.96
	(0.27)	(0.30)	(0.10)	(0.11)
Democrat	−2.71	−2.60	−2.34	−2.43
	(0.29)	(0.32)	(0.10)	(0.12)
Republican spatial advantage × Republican		−0.47		−0.03
		(0.38)		(0.12)
Republican spatial advantage × Democrat		−0.55		−0.17
		(0.36)		(0.12)
Incumbent party (+=Republican)	0.43	0.43	0.48	0.48
	(0.12)	(0.12)	(0.07)	(0.07)
(Intercept)	−0.08	−0.21	0.94	0.94
	(0.20)	(0.24)	(0.10)	(0.10)
N	1475	1475	25833	25833
Clusters	179	179	312	312

Table 4: *Spatial Proximity, Partisanship, and Vote Choice in House Elections. Entries are logistic regression coefficient and standard errors, clustered by congressional district. The dependent variable is a reported vote for the Republican Congressional candidate. Data are weighted to national population parameters.*

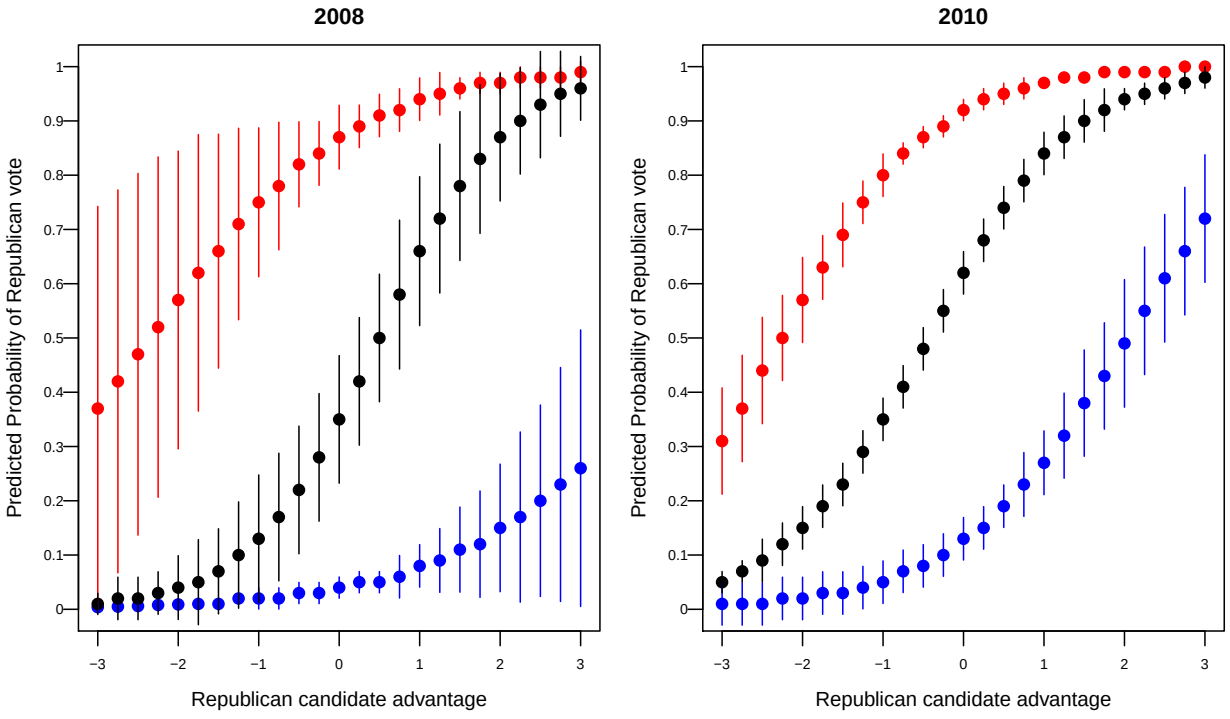

Figure 1: *Spatial Proximity and Partisan Bias in Congressional Elections. Plotted points show the predicted probability of voting for the Republican House candidate across the range of values of Republican spatial advantage. Republican identifiers are shown in red, Democratic identifiers are shown in blue, and Independents are shown in black. The vertical lines show the 95 percent confidence intervals.*

Independent Variables	2008			2010		
	(1)	(2)	(3)	(1)	(2)	(3)
Republican spatial advantage	0.83	0.52	1.97	1.00	0.87	1.26
	(0.15)	(0.20)	(0.34)	(0.05)	(0.09)	(0.09)
Toss-up district	−0.45	−0.18	−0.23	0.16	−0.02	−0.03
	(0.45)	(0.47)	(0.46)	(0.18)	(0.17)	(0.17)
Total campaign spending (millions)	−0.05	−0.13	−0.06	0.01	0.05	0.01
	(0.11)	(0.13)	(0.12)	(0.04)	(0.05)	(0.04)
Spending imbalance	0.07	0.05	0.80	−0.72	−0.75	−1.10
	(0.93)	(0.96)	(1.07)	(0.40)	(0.41)	(0.43)
Republican spatial advantage × Toss-up district	0.84			0.39		
	(0.37)			(0.12)		
Republican spatial advantage × Total campaign spending		0.23			0.08	
		(0.08)			(0.03)	
Republican spatial advantage × Spending imbalance			−2.86			−0.72
			(0.86)			(0.29)
Republican	2.41	2.43	2.43	1.98	1.97	1.97
	(0.27)	(0.27)	(0.27)	(0.10)	(0.10)	(0.10)
Democrat	−2.75	−2.74	−2.78	−2.34	−2.33	−2.33
	(0.28)	(0.29)	(0.29)	(0.10)	(0.10)	(0.10)
Incumbent party (+=Republican)	0.44	0.44	0.44	0.52	0.52	0.52
	(0.12)	(0.12)	(0.12)	(0.08)	(0.08)	(0.08)
(Intercept)	0.01	0.11	−0.27	1.10	1.05	1.24
	(0.51)	(0.53)	(0.59)	(0.18)	(0.19)	(0.19)
N	1475	1475	1475	23990	23990	23990
Clusters	179	179	179	288	288	288

Table 5: *Electoral Context, Spatial Proximity, and Vote Choice in Congressional Elections. Entries are logistic regression coefficient and standard errors, clustered by congressional district. The dependent variable is a reported vote for the Republican Congressional candidate. Data are weighted to national population parameters.*

6 Discussion and Conclusion

Scholarship on U.S. congressional elections exhibits disagreement about the role of ideology in election outcomes. At the aggregate level, candidates are said to fine-tune their campaign platform to maximize their electoral chances. Their stance on the issues is carefully calibrated to that constituency's opinions which they seek to represent. While this may not necessarily involve convergence to a district median (the result from only one class of models), the tools at hand are nevertheless ideological. At the same time, behavioral studies of voters consistently de-emphasize the role of issues at the ballot box, especially for congressional elections, where voters are thought to be largely innocent of understanding where candidates stand. The relatively low levels of information, attentiveness, salience, and competition that so often characterize congressional elections are said to lead voters to rely instead on their party affiliations or on the personal attributes of the candidates when deciding which candidate to support. The confusion comes from trying to piece these two stories together: why would candidates be strategic in using issues that voters largely ignore?

Our findings help resolve this disagreement by undermining the notion that ideology is at most a trivial motivation for most voters at the congressional level. We find that spatial proximity has a statistically significant and substantively important association with vote choice in U.S. House elections. This effect holds up even when accounting for many of the factors that congressional scholarship commonly asserts are critical influences on House election outcomes. Though our findings are consistent with Jessee (2009, 2010), our congressional context constitutes a tougher test of the role of ideology in elections. The barrage of media attention and daily updates over the course of presidential campaigns imply that everyone who wants to learn something about the candidates can do so at little cost. But how often do voters get to witness a debate between House candidates? These races rarely make the *New York Times*, and such candidates are usually not among the

guests included on Sunday morning political talk shows. Were there to be a federal election in which ideology matters little, House elections would be the prime suspect.

Though the decisions voters make in these elections are broadly consistent with the predictions of spatial voting models, our analysis uncovers evidence that several important factors−including partisanship, competitiveness, and campaign spending−do play a significant role in conditioning the strength of the relationship between spatial proximity and vote choice. At the individual level, we demonstrate that pure Independents make vote choices that are more consistent with spatial proximity than partisans. This is another surprising finding, given the large volume of research that casts doubt upon whether independents are "truly independent" and possess the knowledge and capacity to meaningfully discriminate between candidates.

We also showed how the electoral context influences vote decisions. Proximity exerts a stronger influence on vote choices in more competitive races. To the extent, then, that proximity voting is seen a normatively appealing standard for evaluating the quality of democratic decision-making, this finding is reassuring. Competitive races−those whose outcomes are less predictable and thus could turn on a small number of pivotal voters' decisions−appear to induce higher levels of voting along policy lines. Increasing electoral competition, then, could have the effect of increasing overall levels of proximity-based voting.

Finally, we present a novel set of findings regarding the effect of campaign spending on vote choice. Though many scholars and observers bemoan high levels of campaign spending which often manifest in a barrage of advertising, we find that campaign spending increases the association between citizen preferences and their candidate of choice. On the other hand, the association between proximity and vote choice is attenuated when campaign spending is highly unbalanced between candidates. High levels of campaign spending, then, might be desirable because it increases information flows (see also Coleman and Manna 2000) so long as campaign resources are distributed reasonably equitably across candidates.

The finding that the strength of proximity voting is correlated with more tightly contested elections has fascinating implications. In elections likely to be close, small vote shifts can shift electoral outcomes. Candidates in these contests, therefore, have increased incentives to advocate policies that reflect district preferences. Thus, these findings indicate that competitive elections may serve to strengthen the linkages between political elites and the mass public, precisely in the most competitive constituencies on which control of Congress frequently revolves.

Using our approach, future research could investigate additional influences, both on the individual and contextual levels, that are also associated with the extent to which voters make decisions based on policy congruence. Given the importance of information for the assumptions embedded in spatial models, additional research is necessary to better understand whether the relationships between citizen preferences and vote choices vary systematically with variation in information access across congressional districts. For example, variation in the competitiveness and quality of available media (newspaper, television, Internet) could conceivably moderate the ability of citizens to vote based on policy differences. Institutional differences across electoral contexts could matter as well. Primary reforms like the top-two system recently passed in California might amplify the ability of voters to consider issues more centrally than those in more traditional primary sytsems. And given the importance of party heuristics, investigation is warranted into quantifying the degree to which the increasingly polarized nature of political parties has affected the use of proximity voting by citizens. Polarized states like California, Arizona, or Washington might send a much clearer signal about the platforms of congressional candidates than do relatively unpolarized states like Louisiana or Rhode Island.

Our findings provide strong evidence for the association between voters' preferences and candidate choice in congressional elections. Though voters may not be encyclopedias about the specific policy positions contained in candidate platforms, many of them do seem to be

exposed to sufficient levels of information about the candidates to make reasonably informed decisions, or otherwise are adept at using heuristics that adequately inform their views of the candidates.

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