

# Issue Ownership and Representation: A Theory of Legislative Responsiveness to Constituency Opinion

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## Abstract

Scholars of politics have long endeavored to identify the conditions under which elected officials respond to citizens' preferences by enacting the public's preferred policies. But most of this work has failed to consider how such responsiveness might vary from one political issue to another. In this article, I show that the Democratic and Republican parties in the United States each enjoy long-term trust in their ability to handle specific issues that cannot be explained away by Americans' policy preferences. Incorporating this "issue ownership" in a simple model of electoral competition generates the prediction that representatives can exploit this trust advantage to be less responsive to citizen opinion on issues their party "owns." This prediction is confirmed with issue-by-issue analyses of roll-call voting in the U.S. Congress, which show that representatives from the issue-owning party are less than half as responsive to constituency opinion as those from the other party.

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The notion that elected leaders represent citizens' interests is at the core of our understanding of the democratic process. If with Robert Dahl (1971), we assume that a democracy is characterized by "the continuing responsiveness of the government to the preferences of its citizens, considered as political equals," we naturally seek to examine the nature and extent of that responsiveness. Do the decisions of elected officials correspond to the public's preferences? Do elected officials change their actions when these preferences change?

Political scientists have used both formal tools and empirical analyses to answer these questions with regard to the two-party system found in the United States, but this work has generally not explored in a satisfactory way how responsiveness might vary from one political issue to another. Formal models generally do not generate predictions about how responsiveness might differ by issue, and empirical analyses rarely compare the relationship between public opinion and public policy across issues. These questions are important, both normatively and empirically. The idea that citizens have more influence on their government regarding some issues than others may trouble those who value democratic ideals, while comforting others who think certain decisions should be left to experts. Empirically, if responsiveness varies across policy domains then related phenomena may also vary across issues, including the strategies undertaken by lobbying groups to influence legislators (Kollman 1998) and the relationship between roll-call voting and reelection (Canes-Wrone, Brady & Kogan 2004).

In this article, I empirically justify, develop and test a model of electoral competition predicting that legislators' roll-call votes are generally responsive to constituency opinion, but that they can and do deviate from the public's preferences on issues where the public believes the legislator's party has particular expertise. The model's innovation is the assumption that voters evaluate candidates on both their policy platforms and their ability to enact these platforms if elected. The basis of this assumption is the empirically documented phenomenon of "issue ownership" (Petrocik 1996): voters' consistent perceptions that the Republican and Democratic parties each have issue-specific policy expertise, and thus one is better than the other at handling complex issues like education, the environment, foreign policy, and taxation. This phenomenon has been documented across representative democracies (Budge & Farlie 1983); in the United States,

the Republican Party “owns” issues such as terrorism and crime while the Democrats own issues such as the environment and Social Security.

The stylized fact of issue ownership becomes the basis for a key assumption of a model in which candidates from two parties—one of which is considered by voters to be the “issue-owning” party—compete for a seat in a national legislature. Voters perceive the candidate from the issue-owning party as having the ability to make policy choices that deliver precise outcomes. The opposing candidate, by contrast, has less ability to make policy in the issue domain and thus delivers the outcome she promises in the campaign with random noise. The competency advantage associated with issue ownership leads some voters to support the issue-owning candidate, even if they prefer the outcomes promised by the opposing candidate. This in turn allows the issue-owning candidate to take a position that is unresponsive to the preferences of the typical voter. By contrast, the opposing candidate compensates for her lack of competency on the issue by making promises that closely track the preferences of the median voter. To the extent that an issue-ownership advantage exists, the parties’ positions diverge.

I explore the model’s implications with an empirical analysis that uses the unprecedented power of the 2000 National Annenberg Election Survey (NAES) to generate estimates of citizen opinion on 11 different issues in every Congressional district in the contiguous United States. An analysis of the relationship between constituency opinion and the key roll-call votes of members of Congress cast on the 11 issues supports the predictions generated by the model: on issues where Democrats have enjoyed a long-term issue-ownership advantage, Democratic representatives are significantly less responsive to district opinion than are Republican representatives. The opposite is true for Republican-owned issues.

Issue ownership thus makes it possible to explain observed variation in the responsiveness of politicians across issue domains. The analysis here also leads to fresh insights on the distinction drawn by Stokes (1963) between “position” and “valence” issues. Pure position issues are those on which citizens disagree over desired outcomes: should abortion be legal? Should gun ownership be restricted? By contrast, valence issues are those where most citizens agree about desired outcomes (a low crime rate; a nation safe from external enemies; a clean environment; a

well-educated citizenry) but they disagree about how to achieve these goals and which should have the highest priority.

But an additional distinction exists between position and valence issues that has heretofore gone unnoticed by political scientists. Valence issues require that policymakers have *expertise* in order to translate campaign promises into public policy in a way that position issues do not. The outcomes associated with the valence issues mentioned above (crime, national defense, the environment, and education) can only be accomplished with a complex set of public policies. By contrast, pure position issues like abortion or gun control do not require particular policy expertise. The expansion or restriction of access to abortion or guns can largely be accomplished by simply writing a law.<sup>1</sup> Therefore it is sensible that on valence issues, voters evaluate candidates with regard to both position (that is, the solution they propose to a particular public policy problem) and valence (the likelihood that they and their party will enact the solution should they be elected). Issue ownership thus provides an intuitive explanation for why a candidate or party would have a valence advantage by linking this advantage with candidates' ability to handle specific policies. In this conceptualization of a valence advantage, advantaged candidates are less responsive to constituency opinion only on issues they own. On pure position issues—where policy is not complex and thus the notion of issue ownership is irrelevant—both parties are equally responsive to constituency opinion.

I proceed with a brief discussion of formal and empirical studies by political scientists of policymakers' responsiveness to citizens' preferences. I then turn to an analysis of the notion of issue ownership, and use survey data to demonstrate the phenomenon's persistence over time and the concept's distinctiveness from the proximity of voters' preferences and party platforms. The model and empirics follow, and then I conclude with a consideration of the implications of these findings for the study of representation.

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<sup>1</sup>The need for expertise on valence issues is evidenced by the fact that each of the four valence issues mentioned here is associated with a specific discipline devoted to identifying solutions to these problems (specialized training is available in criminology, foreign affairs, environmental policy, and education policy). Analogous disciplines regarding the position issues listed here do not exist.

## **Formal models of electoral competition and representation**

Formal models of electoral competition are a broad family of analyses that make predictions about the policy platforms adopted by office-seeking candidates in representative democracies. The point of departure for this work is generally the model proposed by Downs (1957), who found that simple assumptions about two-party electoral competition yield the powerful prediction that candidate platforms should converge to the preferences of the voter located at the median of the distribution of all voters' preferences. The assumptions required to obtain this result are over the policy space (that it is one-dimensional), the electorate (that each citizen has single-peaked preferences in the policy space and that all citizens vote for the candidate located closer to them in the space), and the candidates (that they are motivated solely by winning office). As is well known, Downs' work was inspired by the models of firm location developed by Hotelling (1929) and of voting in committees by Black (1948).

The simplicity of Downs' model and the intuitiveness of his assumptions have led to the enduring appeal of the Median Voter Theorem (MVT). It is a critical component of many contemporary models of politics, including economic policy (Meltzer and Richard 1981, Persson and Tabellini 2000) and political transitions (Acemoglu and Robinson 2005). But its central prediction does not square with the fact that the platforms of political parties differ sharply from one another in most representative democracies. Much of the formal work on electoral competition following Downs has therefore focused on determining the changes to the MVT necessary to achieve the divergence of candidate platforms in equilibrium. Two important additions to the MVT—that candidates care about policymaking and that candidates do not know the preferences of the median voter perfectly—together generate the prediction that candidate platforms will diverge in ways similar to what is observed in actual campaigns (Calvert 1985; Wittman 1977, 1983). Further innovations—for example, the possibility of entry by a third party (Palfrey 1984), allowing for abstention by disaffected voters (Adams and Merrill 2003), and assuming that a party's platform is the result of bargaining among factions that make up its coalition (Roemer 2001)—have also generated predictions of platform divergence.

An additional line of research explains platform divergence with so-called “non-policy” fac-

tors. Scholars working in this vein begin with the notion that policy platforms are only one of many criteria voters use to evaluate candidates. A candidate may be viewed as more experienced, charismatic, or credible than her opponents and may thus enjoy an electoral advantage. Two recent papers have incorporated this “valence advantage” in models of electoral competition, and generate the counterintuitive result that the valence-advantaged candidate takes a relatively moderate position in equilibrium. A model developed by Ansolabehere and Snyder (2000) features candidates who are purely office-seeking and have perfect knowledge of voters’ preferences. It yields the prediction that the valence-advantaged candidate generally takes a moderate position in the policy space. By contrast, Groseclose (2001) proposes a model in which candidates are motivated by both policy and officeholding and have imperfect knowledge of voters’ policy preferences. He finds that under certain assumptions about the shape of voters’ utility functions, small increases in valence advantage lead the advantaged candidate to take more moderate positions. The intuition behind these unexpected results is that the valence-advantaged candidate seeks to highlight the differences between herself and her disadvantaged opponent. To the extent that she takes policy positions that are similar to her opponent, she leads voters to choose primarily on the valence criterion.<sup>2</sup>

The model developed here takes a different approach to motivating valence advantage: it ties such an advantage directly to candidates’ ability to deliver policy outcomes on a particular issue. In doing so, the model links valence and position together. In this conceptualization, any valence advantage is issue-specific: a candidate who is considered better able to handle environmental issues, for example, is not necessarily similarly advantaged on (say) foreign policy issues. As will be shown, the issue-specificity of this advantage—combined with the assumption that candidates care about policymaking as well as holding office—yields the prediction that the position of the issue-owning candidate is less responsive to public opinion than that of the opposing candidate. This is a result that differs from the predictions of the two papers discussed above.

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<sup>2</sup>See Groseclose (2001) for a full discussion of the literature on valence advantages.

## Empirical analyses of responsiveness and representation

Empirical scholars have found varying degrees of responsiveness to public opinion across time, jurisdictions, and policies. These studies explore the question of responsiveness with assessments of the relationship between citizen opinion (typically measured with data from sample surveys) and government action (in the form of roll-call votes or enacted policies). Omnibus studies (in which policies or roll-call votes on all issues are analyzed together) abound, and they are not reviewed here. But there is very little work that allows for comparison across issues. In their pioneering research examining the relationship between the policy attitudes of survey respondents and their congressional representatives, Miller and Stokes (1963) found that a significant relationship existed in the area of civil rights, but not so in social welfare or foreign policy. Subsequent work pointing out methodological problems in this research has revised these findings, and demonstrated less variation in responsiveness across issue domains (Achen 1977, 1978, Erikson 1978). Page and Shapiro (1983) find that responsiveness at the national level is higher on domestic issues than foreign policy issues, and argue that this is because domestic issues tend to be more salient with the mass public. Wlezien (2004) finds strong relationships between public preferences and budget appropriations on defense, welfare, and health programs—and significant, but weaker, relationships on education and environmental protection programs.

Additional research in this vein has largely been conducted on an issue-to-issue basis, making comparisons among issues very difficult. Perhaps surprisingly given Page and Shapiro's result, defense issues have been found exhibit high degrees of responsiveness. Bartels (1991) uses National Election Studies data and roll-call votes cast on the defense budget by House members to estimate that constituency demand for increased defense spending accounted for about 10 percent of the total 1982 fiscal year appropriation for the Pentagon. Additional studies have found relationships of varying degrees on environmental policy, taxation and health (for a review, see Burstein 2003).

Another line of research in this field—Lowi (1963), Wilson (1974), and Arnold (1990)—concludes that the structure of policies and the organized interests supporting various policy outcomes should affect the representation of public opinion by elected officials. For example, Arnold argues

that diffuse, unorganized interests can be victorious over concentrated, special interests when costs or benefits can be easily recognized by the public. This hypothesis corresponds somewhat with Carmines and Stimson's (1980) notion of "easy" versus "hard" issues—easy issues being those that are more symbolic than technical, deal with policy ends rather than means, and have long been on the political agenda. These theories complement the notion that government's responsiveness to public opinion should be greater when an issue is highly salient—although the empirical documentation of this claim is somewhat thin (Burstein 2003).

Perhaps the biggest gap in the research is that we still do not have strong theories that identify the policy domains on which we should expect more or less responsiveness by elected officials to public opinion. Should we expect politicians to care more about public opinion regarding tax policy or the environment? Defense spending or trade policy? Much of the finest work in this field consists of careful measurement of the relationship between opinion and policy, rather than tests of theoretically derived hypotheses about when this relationship might be weak or strong (Manza & Cook 2002, Burstein 2003).

## **The phenomenon of issue ownership**

The idea of issue ownership provides a promising place from which to better explore variation in the character of representation across policy domains. In the framework described by Petrocik (1996), parties each "own" a set of issues on which the public views the party as substantially better able to "handle" than the other party. In Petrocik's conceptualization, "handling" is "the ability to resolve a problem of concern to voters. It is a reputation for policy and program interests, produced by a history of attention, initiative and innovation toward these problems, which leads voters to believe that one of the parties (and its candidates) is more sincere and committed to doing something about them." (826) Issue ownership can be measured empirically by a commonly asked question on public opinion surveys: "Please tell me if you think the Republican Party or the Democratic Party could do a better job in each of the following areas... which party could do a better job of (dealing with/improving/etc.) [issue x]?"<sup>3</sup> On a wide range of issues, survey re-

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<sup>3</sup>This is the language used by the Pew Research Center. Another version of this question (used by the American National Election Studies and other opinion surveys) is, "Which party do you trust to a better job handling [issue x]?"



spondents say they trust either the Republicans or the Democrats to handle certain issues more than the other party, and sometimes by substantial margins.

The notion of issue ownership thus incorporates voters' assessments of the competency of parties to solve particular policy problems. While the origins and dynamics of issue ownership are beyond the scope of this article, we can intuitively locate the basis for issue ownership in the coalitions that contribute to parties' "history of attention, initiative and innovation" toward a particular issue domain. These coalitions are undoubtedly sources of policy expertise for issue-owning parties. They provide new ideas, research, and people who can staff the parties' key policymaking positions on the issue domain. These resources allow issue-owning parties to better achieve the outcomes they promise to the public.<sup>4</sup>

The issue-specific trust that is encapsulated by the notion of issue ownership would seem to have natural implications for the study of how politicians respond to public opinion across issue domains. But two questions must be answered before we can consider issue ownership as having an independent impact on the constituency-representative relationship. First, does issue ownership *persist* over time in the face of the parties' changing fortunes? Second, is issue ownership *distinct* from voters' perceptions that their policy preferences are aligned with those of the issue-owning party? The answer to both of these questions is "yes," as the following analyses show.

### *The persistence of issue ownership over time*

Survey data from the United States indicate that issue-ownership is a long-term phenomenon that is established over decades of accomplishments by political parties, and that the Democrats' and Republicans' specific issue strengths persist in the face of year-to-year change in the public's general assessment of the two parties. Table 1 displays an OLS analysis of aggregate responses to

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<sup>4</sup>Petrocik's work has inspired an extensive literature about the impact of issue ownership on political campaigns. Scholars have reached mixed conclusions regarding the extent to which candidates focus on the issues owned by their party. There are several examples of theoretical work predicting that candidates should emphasize different issues in campaigns (Hammond and Humes 1993; Riker 1996; Simon 2002) and empirical work concluding the same (Page 1978; Petrocik 1996; Simon 2002; Spilotes and Vavreck 2002). But other empirical research finds just the opposite: candidate messages converge on issues that are important to the electorate (Ansolabehere and Iyengar 1994; Petrocik, Benoit and Hansen 2003; Sigelman and Buell 2004; Damore 2004, 2005; Kaplan, Park and Ridout 2006; Sides 2006). This article is the first to consider how issue ownership affects governing rather than campaigning.

283 issue-ownership questions asked on eight issues between 1989 and 2008 by three prominent survey firms. Questions about each of the eight issues (crime, education, the environment, foreign policy, healthcare, Social Security, taxes, and terrorism) were asked at least 20 times over the course of this two-decade span. Each of the 283 questions is a unit of analysis. The dependent variable is the percentage of Americans assigning ownership of the issue to the Republican Party minus the percentage assigning it to the Democratic Party. The independent variables of interest are indicator variables for each of the issues, which take on the value one if the question addressed the issue and zero if not. As a control, the regression includes the annual mean of the Republican Party's advantage or disadvantage in party identification for the year in which the survey was conducted. The regression line is forced through the origin, making the coefficients on the indicator variables estimates of the Republican Party's long-term issue-ownership advantage (or disadvantage) on the eight issues.

[TABLE 1 ABOUT HERE]

The issues are ranked from the issue on which Republicans are most trusted (terrorism) to the issue where the party is least trusted (the environment). The estimates of long-term issue ownership are consistent with the expectations of those who follow American politics, and in many cases they are substantial: when the parties are at relative parity in American politics, Democrats typically enjoy a ten-point advantage on the environment, an eight-point advantage on healthcare, and three-point advantages on education and Social Security. For their part, Republicans are more trusted than Democrats by 15 points on terrorism, 11 points on foreign policy, eight points on crime, and five points on taxes. The regression also shows that general shifts in sentiment toward the parties affect issue-specific assessments. As estimated by the coefficient on the party identification advantage variable, a one percentage-point shift in party identification is associated with a 1.5-point change in the typical issue-ownership measure.<sup>5</sup>

This analysis demonstrates that issue ownership has played a significant and distinct role in the way Americans think about their two major political parties. Although issue ownership is

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<sup>5</sup>Similar results were obtained when (1) indicator variables for each survey firm conducting the polls were included in the regression to account for any "house effects" associated with particular firms; and (2) when indicator variables for the year of survey administration were substituted for the Republican party identification variable.

affected by change in the public's overall assessment of the two parties, they have nevertheless each held substantial, significant issue-ownership advantages that have persisted over a twenty-year span in American politics.

### *The distinctiveness of issue ownership from policy preferences*

Survey data that permit an exploration of the relationship between issue ownership and policy preferences shared by voters and parties are scarce, because issue-ownership questions are rarely asked in concert with policy preference questions on the same public opinion survey. The American National Election Studies did so in 1992, 1994, and 1998 on four different issue domains, and multivariate analysis of these survey data is presented in Table 2. If issue ownership is nothing more than policy congruence between voters and parties, then we would expect that it would be completely explained by this congruence and (as a control) party identification. In the analysis in Table 2, individuals' responses to issue-ownership questions were regressed on measures of their policy placements of the parties as well as their party identification. All variables were scaled -.5 to .5 (Democratic to Republican), with zero indicating a neutral position between the two parties. The intercept in each regression is thus the estimated issue-ownership advantage accorded to the Republican Party (or, if negative, the Democratic Party) that cannot be explained away by party identification or policy preferences. As shown in the table, the intercepts are of the expected sign and statistically significant on each of the four issues analyzed: Republicans are advantaged on the issues of foreign affairs and crime, Democrats on healthcare and the environment. On each issue, the advantage is of roughly the same absolute magnitude (.09 to .18): that is, the advantaged party enjoys a 9-to-18-point issue-ownership advantage among Independents whose policy preferences are equally distant from those of both parties.<sup>6</sup>

[TABLE 2 ABOUT HERE]

Thus the notion of issue ownership is distinct from any shared policy preferences between voters and parties. Plenty of voters who are "doves" on defense issues, and thus agree with

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<sup>6</sup>The dependent variable takes on three possible values (trust Democrats, trust both parties equally, trust Republicans) and could arguably be considered an ordinal, rather than interval level, measure. Analyses of the data using an ordered probit model produced substantively similar but less easily interpretable results than the OLS analyses presented here.

Democrats on those policies, ultimately believe that Republicans are better at (say) defending the country from a terrorist attack. Similarly, many voters who prefer the free-market approach taken to environmental regulation by Republicans nevertheless think the Democrats will actually do a better job at (for example) cleaning up toxic waste sites.

The data presented here make it clear that issue ownership is an important, consistent factor in how Americans think about the two major political parties which goes beyond mere policy congruence between voters and parties. In the following pages, I show how incorporating this notion in a model of electoral competition changes our expectations of how the parties respond to citizen opinion.

## The model

Two candidates,  $N$  (from Party  $N$ ) and  $O$  (from Party  $O$ ), compete to represent a legislative district by announcing binding platforms to write laws designed to deliver outcomes  $x_N$  and  $x_O$  in a one-dimensional policy space. The candidates have ideal points  $x_N^*$  and  $x_O^*$  over outcomes in this space. The election for the legislative seat is determined by an (odd-numbered) constituency of  $J$  voters, each of whom has an ideal point  $x_j^*$  in the policy space.

As is standard in models of electoral competition, all players are assumed to prefer outcomes that are as close as possible to their ideal points and they are assumed to be risk averse. These assumptions are incorporated by specifying that any player  $i$ 's utility from any outcome  $x$  is defined by the utility function  $u_i(x) = g(|x - x_i^*|)$ , where  $g(\cdot)$  is strictly concave in its argument. The profile of voter preferences is therefore single-peaked, and thus any outcome preferred by the voter whose preference is at the median of the distribution of all the voters' preferences will be preferred by a majority of the voters. Call this median voter  $V$  and his ideal point  $x_V^*$ . I assume that  $x_V^*$  is located between the two candidates' ideal points and (without loss of generality) that  $x_N^* < x_V^* < x_O^*$ . All players know one another's ideal points and utility functions.

### *Issue ownership and policymaking ability*

Unlike many models of electoral competition, I assume that some candidates are better than others at delivering the outcomes they promise during the campaign. Specifically,  $O$  has an issue-ownership advantage due to her party's superior ability to make policy. So while  $O$  is able to deliver her promised outcome  $x_O$  with perfect fidelity,  $N$  delivers the policy she promises with random noise such that the outcome experienced by voters if  $N$  is elected is  $x = x_N + \varepsilon$ , where  $\varepsilon$  is a random variable with mean zero and standard deviation  $\sigma$ . This in turn means that the outcome derived from any platform  $x_N$  proposed by  $N$  is a random variable with mean  $x_N$  and standard deviation  $\sigma$ . The size of  $O$ 's issue-ownership advantage is thus operationalized in the model by  $\sigma$ .

In deciding for whom to cast his vote,  $V$  compares the expected utility he derives from  $N$ 's platform to the utility he derives with certainty from  $O$ 's platform.  $V$ 's expected utility from any platform proposed by  $N$  is  $E[u(x_N)] = \int g(|x_N + \varepsilon - x_V^*|)dF(\varepsilon)$ . By contrast, the utility  $V$  derives from  $O$ 's platform is  $u(x_O) = g(|x_O - x_V^*|)$ . Therefore if the candidates propose platforms located an equal distance from  $V$ 's ideal point ( $|x_V^* - x_N| = |x_V^* - x_O| = l$ ),  $V$  compares the expected utility he derives from  $N$ 's platform,  $\int g(l + \varepsilon)dF(\varepsilon)$ , to the utility he derives with certainty from  $O$ 's platform,  $g(l)$ . In this context,  $\int g(l + \varepsilon)dF(\varepsilon)$  is known as a *mean-preserving spread* of  $g(l)$ . It is equivalent to say that an agent is risk averse and that he always prefers a given outcome to any mean-preserving spread of that outcome (Mas-Colell, Whinston & Green 1995). Thus even if  $N$  and  $O$  propose similar platforms,  $V$ 's utility from electing  $N$  will be less than that from electing  $O$ . This disparity increases as  $\sigma$ — $O$ 's issue-ownership advantage—increases.

### *Candidate preferences*

The candidates value outcomes as well as holding office. Following Groseclose (2001), I model the extent to which candidates value office holding over outcomes with the parameter  $\lambda \in [0, 1]$ . When  $\lambda$  equals one, candidates value winning office only, and when  $\lambda$  equals zero they value

outcomes only.  $O$ 's expected utility function is therefore:

$$\begin{aligned} E[U_O(x_O, x_N)] &= \lambda\Omega - (1 - \lambda) [\Omega u(x_O) + (1 - \Omega)E[u(x_N)]] \\ &= \lambda\Omega - (1 - \lambda) \left[ \Omega g(x_O^* - x_O) + (1 - \Omega) \int g(x_O^* - x_N + \varepsilon) dF(\varepsilon) \right], \end{aligned}$$

where  $\Omega$  is an indicator variable that takes on the value one if  $O$  wins the election and zero if  $N$  wins.<sup>7</sup> Similarly,  $N$ 's expected utility function is

$$E[U_N(x_O, x_N)] = \lambda(1 - \Omega) - (1 - \lambda) \left[ \Omega g(|x_O - x_N^*|) + (1 - \Omega) \int g(x_N - x_N^* + \varepsilon) dF(\varepsilon) \right].$$

### *Play of the game*

1.  $N$  and  $O$  simultaneously announce their platforms  $x_N$  and  $x_O$ . These are binding promises and the winning candidate must write a law to implement the platform upon which she campaigns.
2. An election is then held in which the median voter  $V$  elects one of the two candidates to office.  $V$  makes his choice by comparing the utility he expects to derive from the platforms promised by  $N$  and  $O$  and electing the candidate yielding the higher expected utility. I assume that if both candidates offer positions yielding equal utility,  $V$  breaks the tie by choosing  $O$ .<sup>8</sup>
3. The winning candidate  $i$  writes the law  $x_i$  that she promised during the campaign. If  $N$  is the victor, Nature draws the random variable  $\varepsilon$  from a distribution with mean zero and standard deviation  $\sigma$ .

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<sup>7</sup>For ease of exposition, these and subsequent mathematical expressions specify that candidates' platforms are always located between their ideal points and  $V$ 's ideal point, or  $x_N^* \leq x_N \leq x_V^* \leq x_O \leq x_O^*$ . It can be shown that this always occurs in equilibrium in the model.

<sup>8</sup>This assumption—which simplifies the explication of the model—is not essential to the results, which would be substantively similar if instead  $V$  were to flip a coin to determine his vote when the two candidates' positions offer equal utility.

4. Candidates and voters then realize utility from the resulting outcome  $x$ , where

$$\begin{aligned} x &= x_O \text{ if } O \text{ wins the election; and} \\ x &= x_N + \varepsilon \text{ if } N \text{ wins the election.} \end{aligned}$$

The game then ends. The solution concept employed is pure-strategy Nash equilibrium.

### **Results**

Whenever  $O$  has an issue-ownership advantage (that is, whenever  $\sigma > 0$ ), this game results in the candidates locating apart, with  $O$  proposing a platform that is further away from district preferences than is  $N$ 's platform but still ensures  $O$ 's election. Specifically, in equilibrium  $N$  proposes the platform  $x_N = x_V^*$ , the median voter's ideal point. In response,  $O$  exploits the fact that  $N$  cannot deliver her platform with certainty by proposing the *certainty equivalent* (CE) of  $N$ 's platform. The CE is the certain outcome that  $V$  values just as much as he values the uncertain outcome promised by  $N$ . The difference between  $x_V^*$  and its CE is called the *risk premium* (RP): it is the policy concession  $V$  is willing to make in order to obtain the sure outcome that  $O$  can deliver. In the case where the CE is to the right of  $O$ 's ideal point,  $O$  can do better than proposing the CE: she can simply propose  $x_O^*$ , which  $V$  still prefers to  $N$ 's risky proposal of  $x_V^*$ . Thus the game's equilibrium profile is  $\{x_N = x_V^*, x_O = \min\{CE(x_V^*), x_O^*\}\}$ , which can also be written  $\{x_N = x_V^*, x_O = x_V^* + RP(x_V^*), x_O^*\}$ . This result holds for any scenario where candidates value policy to at least a small degree (that is, where  $\lambda > 0$ ).

**Proposition 1** *If an issue-ownership advantage exists and candidates care at least to some degree about policy (i.e.,  $\sigma > 0$  and  $\lambda > 0$ ), then the profile  $\{x_N = x_V^*, x_O = \min\{CE(x_V^*), x_O^*\}\}$  (or equivalently,  $\{x_N = x_V^*, x_O = x_V^* + RP(x_V^*), x_O^*\}$ ) is this game's unique pure-strategy Nash equilibrium, where  $CE(x_V^*)$  is the right-most platform that is the certainty equivalent of  $x_V^*$ , and  $RP(x_V^*)$  is the risk premium  $V$  associates with  $N$ 's platform  $x_V^*$ .*

**Proof.** Proofs may be found in Appendix 1.

As an illustrative example, if players' utility functions are quadratic ( $u_i = g(|x - x_i^*|) = -(x - x_i^*)^2$ ), then in the unique pure-strategy Nash equilibrium,  $N$ 's platform is  $x_N = x_V^*$ .  $V$ 's expected utility from this platform is  $E[-(x_V^* - x_V^* + \varepsilon)^2] = -E[\varepsilon^2] = -\mu_\varepsilon^2 - \sigma^2 = -\sigma^2$ . Thus the CEs of  $x_N = x_V^*$  are the values of  $x$  that solve  $-\sigma^2 = -(x - x_V^*)^2$ , which are  $\{x_V^* - \sigma, x_V^* + \sigma\}$ . Therefore  $RP(x_V^*) = \sigma$  and  $O$ 's platform is thus  $\min\{x_V^* + \sigma, x_O^*\}$ .

### *Comparative statics*

Having specified the candidates' equilibrium platforms, I now consider how these platforms respond to changes in  $V$ 's policy preferences. The comparative static  $\frac{\partial x_i}{\partial x_V^*}$  (where  $x_i$  is the equilibrium platform of candidate  $i$ ) is a straightforward operationalization of the notion of candidate  $i$ 's responsiveness to public opinion. The quadratic case above is illustrative because  $O$ 's issue-ownership advantage ( $\sigma$ ) is equal to the risk premium. In the example, note how the value of  $\sigma$  affects  $O$ 's equilibrium platform in two ways: as  $\sigma$  increases,  $RP(x_V^*)$  increases, moving  $O$ 's equilibrium platform further to the right. But an increase in  $\sigma$  also *decreases* the range in which  $x_V^* + \sigma < x_O^*$ , which means there are more values of  $x_V^*$  for which  $O$ 's equilibrium platform is  $x_O^*$ . The following proposition states that the same holds true regardless of the form of  $g(\cdot)$ , as long as it is strictly concave.

**Proposition 2** *In equilibrium,*

$$\frac{\partial x_N}{\partial x_V^*} = 1 \quad \text{and} \quad \frac{\partial x_O}{\partial x_V^*} = \begin{cases} 1 & \text{if } x_V^* + RP(\sigma) < x_O^* \\ 0 & \text{if } x_V^* + RP(\sigma) \geq x_O^* \end{cases},$$

where the risk premium depends only on  $\sigma$  and thus is written  $RP(\sigma)$ . Because  $\frac{\partial}{\partial \sigma} RP(\sigma) > 0$ , the size of the region in which  $x_V^* + RP(\sigma) \geq x_O^*$  (and thus the region in which  $\frac{\partial x_O}{\partial x_V^*} = 0$ ) is increasing in  $\sigma$ .

The diagrams in Figure 1 illustrate how candidates' positions change as  $O$ 's issue-ownership advantage increases from zero to larger values (denoted  $\sigma$  and  $\sigma'$ ). As shown in the top panel of the figure, when no issue-ownership advantage exists the model degenerates to the MVT: both candidates propose a platform equal to  $x_V^*$ . The middle panel displays the consequences of a



modest issue-ownership advantage. In the region where  $x_V^* < x_O^* - RP(\sigma)$ ,  $O$ 's platform is less centrist than  $N$ 's but it is perfectly responsive to opinion. But in the interval  $[x_O^* - RP(\sigma), x_O^*]$ ,  $O$ 's position is completely unresponsive. In the bottom panel,  $O$  has a much larger ownership advantage. Her platform is now even less centrist, and the region where she is unresponsive has increased in size.

[FIGURE 1 ABOUT HERE]

In sum, this model predicts that a candidate from the issue-owning party becomes less responsive to voters' preferences when these preferences are located near the candidate's ideal point. Responsiveness becomes more diminished as the candidate's issue-ownership advantage increases. In contrast, the candidate from the other party is responsive throughout the entire policy space. This is a new insight about representation not found in previous work. Many models of electoral competition are solved with the assumption that candidates' ideal points are located equidistantly from that of the median voter (e.g. Groseclose 2001, Roemer 2001). This assumption can vastly simplify the mathematics, yielding closed-form solutions that would otherwise not exist in many models. But the analysis here shows a shortcoming of employing such an assumption: it may fail to illustrate how responsiveness can vary in different regions of the policy space.

I note here that the theoretical result relies on four key assumptions, three of which are commonplace in models of electoral competition. First, voters are risk-averse. Second, candidates care about policy to some minimal degree in addition to winning office. Third, candidates' platforms are binding. And fourth (the model's innovation), voters perceive one party as less capable than the other at delivering its campaign promises with precision.

## **An empirical analysis**

Consider now the implications of the model for the empirical study of the responsiveness of legislators to constituency opinion in the United States Congress. The typical approach is to assess the strength of the relationship between constituency preferences (that is, measures of  $x_V^*$  for each

district) and roll-call voting ( $x_N$  or  $x_O$ , depending on the legislator's party). Given that members of Congress (MCs) face strong incentives to vote with their party (as scholars such as Cox & McCubbins (1993), Rohde (1991), Smith (2007), and Snyder & Ting (2003) have shown), I assume that the ideal points of legislators from the same party ( $x_N^*$  and  $x_O^*$ ) do not vary across districts. If the model holds, on any given issue the relationship between constituency preferences and roll-call voting should be weaker for MCs from the issue-owning party than from the other party. On pure position issues where neither party has an issue-ownership advantage, this relationship should be equally strong for MCs from both parties. I explore these implications by examining the relationship between constituency opinion and the positions taken by members of Congress on 11 different issues between 1997 and 2002. The goal is to see whether members of Congress are more responsive to their constituencies on issues which their parties do not own than on issues which their parties do own. Specifically, we are looking to see whether scatterplots of constituency opinion and roll-call voting resemble the pattern found in Figure 1.

### *Source of opinion data: the National Annenberg Election Survey*

One of the barriers that traditionally stood in the way of thorough research on the responsiveness of legislators to constituency opinion has been the limited availability of appropriate survey data. The public opinion surveys employed by academic researchers usually have too few respondents per district to measure constituency opinion with any degree of reliability. In addition, the clustered sampling design of some surveys can lead to biased as well as unreliable district estimates. (For a discussion, see Stoker and Bowers 2002.) I avoid these problems by using the unprecedented power of the 2000 National Annenberg Election Survey (NAES) rolling cross-section study. The NAES interviewed a total of 58,373 American adults between December 1999 and January 2001. Among the questions asked of respondents was a battery of questions regarding a range of policies at the heart of the political debate during the 2000 presidential campaign. These included prominent issues—such as taxes, military spending, abortion, and gun control—as well as significant, but less salient issues such as crime, the environment, and foreign policy. Although the NAES was designed to obtain a sample of the preferences of the nation as a whole, the random-digit dialing procedure used by the survey makes it possible to generate unbiased estimates of

opinion at the congressional district level. The survey included respondents from every congressional district in the United States except those in Alaska and Hawaii, and averaged about 130 respondents per district. Not every policy question was asked of every respondent, but on many policy questions the number of respondents per district was 50 or more, yielding relatively precise estimates of constituency opinion. The size of the NAES sample, its breadth of policy questions, and its random digit design make it a far superior resource than any academic study to date for generating estimates of constituency opinion at the congressional district level and studying its effect on Congress (Clinton 2006).

I use responses from 11 of the NAES policy preference questions in this study. Responses to all questions were rescaled to range from liberal to conservative on a 100-point scale. The NAES underrepresented younger Americans and racial minorities; I therefore developed post-stratification weights on the basis of age and race using U.S. Census congressional district-level enumerations of these variables and weighted the NAES sample accordingly (U.S. Census Bureau, 1995). Details may be found in Appendix 2.

### ***Source of policymaking data: key roll-call votes in Congress, 1997-2002***

The NAES was conducted between December 1999 and January 2001. To measure policymaking I used votes cast in the House of Representatives from 1997 through 2002, the six years closest to the survey period that occurred before redistricting. To identify roll-call votes appropriate for analysis, I consulted the annual lists of significant votes compiled by two highly regarded resources on Congress: *Congressional Quarterly* (which lists what it calls “key votes”) (CQ Weekly 1997-2002) and the *National Journal* (which compiles a list to calculate annual “vote ratings” for each legislator) (Barone et al 1999, 2001, 2003). Both sources limit their lists to votes of substantial import or controversy. In order to be considered for inclusion in my analysis, a roll call vote had to be included on one of these two lists. To choose votes from this pool for analysis, I determined whether the subject matter of the vote could reasonably be deemed to be related to the subject matter of one of the issue domains under study. I did not use votes whose outcomes were lopsided in one direction or another. A total of 124 House votes on the 11 different issues were included in my analysis. A list of all of these votes and the policy questions with which they were paired can be

found in Appendix 2.

To determine how these votes translated into records established by members of the House of Representatives on each of the 11 different issues, I employed the Bayesian simulation ideal-point estimation technique developed by Clinton, Jackman & Rivers (2004) as implemented by Martin and Quinn (2006) in the *R* statistical package. This technique uses a Markov Chain Monte Carlo (MCMC) process to generate estimates of the location of each “aye” and “nay” vote in the roll-call analysis and, consequently, the location of each legislator’s ideal point in the space. I generated estimates of the ideal points all 529 representatives who served at least some time in the House between 1997 and 2002 on the 11 different issues.<sup>9</sup>

### ***Results: the responsiveness of legislators to district opinion***

Because my theory is that issue ownership should lead representatives from the two parties to vary in their responsiveness, I estimate a model with the member of Congress’ (MC’s) position as the dependent variable, and with district mean voter opinion, the member of Congress’ (MC’s) party affiliation, and an interaction between these two variables for all legislators *i* on each issue *j* as independent variables:

$$\begin{aligned} \text{MEMBER'S POSITION}_{ij} = & \beta_{1j}(\text{MEAN DISTRICT OPINION}_{ij}) + \beta_{2j}(\text{DEMOCRATIC MC}_i) \\ & + \beta_{3j}(\text{MEAN DISTRICT OPINION}_{ij} \times \text{DEMOCRATIC MC}_{ij}) + \varepsilon_{ij} \end{aligned}$$

If the relationship between mean district opinion and the MC position-taking is the same for both the issue-owning party and the opposing party, then  $\beta_{3j}$  should always be zero. But if the relationship between opinion and roll-call records differs substantially between issue-owning parties and non-issue-owning parties (as predicted in Figure 2), then  $\beta_{3j}$  should take on the same sign for all Democratic-owned issues and the opposite sign for all Republican-owned issues.

I performed a separate estimation for each of the  $J = 11$  policy domains in the study using

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<sup>9</sup>The results presented here are robust to other ideal-point estimation approaches. For example, I estimated legislators’ ideal points on each policy domain as the factor scores derived from the first eigenvector yielded by factor analyzing the roll-call votes in each policy domain. (This technique is similar to that employed by Heckman and Snyder (1997) in their paper on ideal point estimation.) These alternative estimates are highly correlated with the estimates used in the present analysis and in fact produce results that more strongly support my theory than those reported here.

OLS. The results are reported in Table 3. I rescaled both the ideal point estimates and the opinion variables from zero (most liberal) to 100 (most conservative). The coefficient  $\beta_{2j}$  (reported in the table as “Democratic MC”) indicates the *ceteris paribus* difference in legislators’ voting records (along a 100-point scale) between Republicans and Democrats. The coefficient  $\beta_{1j}$  (reported in the table as “District Opinion”) is an estimate of Republicans’ responsiveness—that is, the shift in voting record associated with a one-unit change in district opinion. The coefficient  $\beta_{3j}$  (reported as “District Opinion x Democratic MC”) is an estimate of the difference in responsiveness between Democrats and Republicans. The issue-ownership theory leads us to be keenly interested in this coefficient: on issues owned by Democrats, we expect Republicans to be more responsive to district opinion. On issues owned by Republicans, we expect the opposite. Finally, on issues about which there is no uncertainty about the translation of policies into outcomes (and thus neither party holds an issue-ownership advantage), both parties should be equally responsive to district opinion. Because all variables are scaled in the (Democratic/liberal) to (Republican/conservative) direction, this means  $\beta_{3j}$  should be negative on Democratic-owned issues, positive on Republican-owned issues, and have no discernable pattern on issues owned by neither party.

[TABLE 3 ABOUT HERE]

Table 3 shows this to be precisely the case. On the five issues owned by Republicans—intervention in civil wars, crime, military spending, the missile defense shield, and taxes—all the estimated coefficients on the interaction term take on the expected (positive) sign and two of the five are statistically significantly greater than zero. On the three issues in the analysis owned by Democrats—education, environment, and school vouchers—the interaction-term coefficient is negative (as expected), and in two of the three cases it is significantly less than zero. And on the three pure position issues owned by neither party—abortion, gay rights, and gun control—there is no pattern to the sign of the coefficients and all fail to reach statistical significance at the .05 level.

An assessment of the size of the impact of issue ownership is constrained by the fact that district opinion and roll-call voting scores have arbitrary scales. But a meaningful comparison can be made with an issue-by-issue examination of the ratio of the effects of district opinion for representatives from the two parties. On military spending, for example, Republican responsive-

ness is estimated to be .24: that is, a one-unit shift in district opinion on this issue is accompanied by a change in Republicans' roll-call votes of .24 points to the right (on a 100-point scale). By contrast, Democratic responsiveness to public opinion on this issue is estimated to be  $.27 + .24 = .51$ , meaning that Republicans are less than half ( $.24 / .51 = .47$ ) as responsive as Democrats. Similar calculations across the issues yield consistent results: representatives from the issue-owning party are typically less than half as responsive (the average ratio is .45) as those from the opposing party.<sup>10</sup> By contrast, the differences between the two parties' responsiveness on the pure position issues of abortion, gay rights and gun control are much smaller: the average ratio of the responsiveness of the less responsive party to that of the more responsive party is .74.

We can see graphically how the data square with the predictions of the model by examining scatterplots of district opinion and legislator records on four different issues (Figure 2). On the environment—an issue owned by Democrats—the owning party is much less responsive to district opinion than the opposing party. The same is true for military spending, an issue owned by Republicans. A comparison of these plots to the diagrams in Figure 2 shows how the actual relationship between opinion and position-taking in American politics is similar to the patterns of responsiveness predicted by the model. Finally, note in the bottom panel of Figure 2 that on two issues owned by neither party (abortion and gun control)—and thus for which issue ownership is irrelevant—legislators from both parties are equally responsive to district opinion, as indicated by the prediction graphed in the left-hand panel of Figure 1.

[FIGURE 2 ABOUT HERE]

## Conclusion

In this paper, I demonstrate how issue ownership contributes to our understanding of the nature of issues and how government responsiveness to public opinion varies across policy domains. First, I show that issue ownership is a persistent, important aspect of American politics that merits inclusion in models of electoral competition. I then develop a model that explicitly ties the notion

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<sup>10</sup>The calculations do not include the issue of education, where Democratic responsiveness to public opinion is estimated to be slightly negative (their roll-call votes become slightly more liberal as their districts become more conservative).

of issue ownership to the utility citizens expect to derive in an election featuring candidates with different levels of issue-specific expertise. Finally, I conduct a test whose results comport with the empirical implications of the model: elected representatives are less responsive to constituency opinion on issues their party is trusted to better handle by the public.

These findings suggest that political scientists need to refine our understanding of the relationship between voters' policy preferences and their evaluations of candidates. These decisions appear to be more complex than a simple assessment of the distance between ideal points in a policy space. Campaign promises, voters' evaluations of those promises, and consequently the policies enacted by elected officials—depend on candidates' policy expertise. Finally, this work helps explain why the two political parties often propose policies that are more extreme than voters want in the policy domains on which they have Americans' trust. Examples of this practice abound in contemporary politics, from the tax cuts and defense spending enacted by the Republicans during the presidency of George W. Bush to the over-reaching health care reform plan proposed during the Clinton administration. To better understand these dynamics, our empirical and formal analyses need to incorporate the long-term strengths and weakness of the parties on specific issues.

## Appendix 1

### *Proof of Proposition 1*

Suppose that instead of  $x_N = x_V^*$ ,  $N$  proposes  $\tilde{x}_N < x_V^*$ , a platform closer to her ideal point. (Because  $N$  prefers left policies, any platform  $\tilde{x}_N > x_V^*$  is strictly dominated for  $N$  by the platform located an equal distance to the left of  $x_V^*$ . A similar statement holds true for  $O$ .)  $O$ 's best reply to  $\tilde{x}_N$  is the platform closest to  $x_O^*$  that ensures  $O$ 's election. This is the point  $\tilde{x}_O$  that yields the same expected utility as  $\tilde{x}_N$ , making  $V$  just indifferent between the two candidates:

$$u_V(\tilde{x}_O) = E[u_V(\tilde{x}_N)].$$

Because this equation specifies the relationship between the utility of a certain outcome ( $\tilde{x}_O$ ) and that of an expected outcome ( $\tilde{x}_N$ ),  $\tilde{x}_O$  is by definition the *certainty equivalent* (CE) of  $\tilde{x}_N$ . The CE is the certain outcome that  $V$  values just as much as he values  $N$ 's platform in expectation. We can therefore write

$$\tilde{x}_O = CE[\tilde{x}_N].$$

Any  $\tilde{x}_N$  has two certainty equivalents, each located equidistantly to the left and right of  $x_V^*$ . Of these two points,  $O$ 's optimal platform is that located closest to  $x_O^*$  and thus the right-most certainty equivalent of  $\tilde{x}_N \equiv CE^+[\tilde{x}_N]$ . If  $CE^+[\tilde{x}_N] < x_O^*$ , then  $CE^+[\tilde{x}_N]$  is  $O$ 's best reply to any  $\tilde{x}_N$ . If  $CE^+[\tilde{x}_N] \geq x_O^*$ , then  $x_O^*$  is  $O$ 's best reply. We see immediately that any platform proposed by  $N$  can be defeated by  $O$ 's best reply. Because  $N$  would like the ultimate outcome to be as far to the left as possible, her optimal strategy is therefore to propose  $x_N = x_V^*$ , which forces  $O$  to propose  $CE^+(x_V^*)$ .

From  $O$ 's standpoint, responding to any  $\tilde{x}_N \leq x_V^*$  with any platform to the right of  $CE^+[\tilde{x}_N]$  allows  $N$  to win the election and implement  $\tilde{x}_N \leq x_V^*$ . This is an outcome that is inferior for  $O$  under any circumstances than proposing  $\min\{CE^+[\tilde{x}_N], x_O^*\}$ , which secures victory for  $O$  with a more favorable policy. Thus neither  $N$  nor  $O$  wishes to deviate from the profile  $\{x_N = x_V^*, x_O = \min\{CE^+(x_V^*), x_O^*\}\}$ , making it this game's unique pure-strategy Nash equilibrium. (In the body of the text, I simply notation by writing  $CE^+$  as simply  $CE$ .) The equivalent statement follows from the fact that in equilibrium  $x_O = x_V^* + RP(x_V^*)$ .  $\square$

### ***Proof of Proposition 2***

First calculate:

$$\begin{aligned} \frac{\partial x_N}{\partial x_V^*} &= \frac{\partial x_V^*}{\partial x_V^*} = 1 \\ \frac{\partial x_O}{\partial x_V^*} &= \begin{cases} \frac{\partial}{\partial x_V^*} x_O^* = 0 & \text{if } x_V^* + RP(x_V^*) \geq x_O^* \\ \frac{\partial}{\partial x_V^*} CE^+(x_V^*) & \text{if } x_V^* + RP(x_V^*) < x_O^* \end{cases}. \end{aligned}$$

To calculate  $\frac{\partial x_O}{\partial x_V^*}$  when  $x_V^* + RP(x_V^*) < x_O^*$ , note that the equilibrium condition  $x_O = CE^+(x_V^*)$



implies:

$$\begin{aligned}
 u_V(x_O) &= E[u_V(x_V^*)] \\
 g(x_O - x_V^*) &= \int g(x_V^* - x_V^* + \varepsilon) dF\varepsilon \\
 x_O &= x_V^* + g^{-1+} \left( \int g(\varepsilon) dF\varepsilon \right),
 \end{aligned}$$

where  $g^{-1+}(\cdot)$  is the greater of the two values taken on by the correspondence mapping  $g(\cdot)$  to its argument. Here the quantity  $g^{-1+}(\int g(\varepsilon) dF\varepsilon)$  is by definition the risk premium  $V$  associates with  $N$ 's proposal  $x_N = x_V^*$ . Because in equilibrium the size of the risk premium depends only on the variance of  $\varepsilon$ , we can write  $RP(\sigma) = g^{-1+}(\int g(\varepsilon) dF\varepsilon)$  and  $\frac{\partial x_O}{\partial x_V^*} = \frac{\partial}{\partial x_V^*} (x_V^* + g^{-1+}(\int g(\varepsilon) dF\varepsilon)) = 1$ .

To show that  $\frac{\partial}{\partial \sigma} RP(\sigma) > 0$ , we need to show that  $\frac{\partial}{\partial \sigma} g^{-1+}(\int g(\varepsilon) dF\varepsilon) > 0$ . For any strictly concave  $g(\cdot)$ ,  $\frac{\partial}{\partial \sigma} \int g(\varepsilon) dF\varepsilon > 0$  and  $g^{-1+}(\cdot)$  is increasing in its argument. Therefore  $\frac{\partial}{\partial \sigma} g^{-1+}(\int g(\varepsilon) dF\varepsilon) = \frac{\partial}{\partial \sigma} RP(\sigma) > 0$ .  $\square$

## Appendix 2

### Questions from the 2000 NAES Included in Analysis

		question type (mean $N$ per district)				
issue owned by	issue domain (direction of scale)	Seriousness of X as a problem	Should govt do X	How much effort into X	How much \$ on X	NAES var id
<b>Republicans</b>	military spending (increase)				127	BJ07
	intervention in civil wars (oppose)		57			BJ08
	crime (punishments too lenient)	125				BG12
	missile shield (support)				60	BJ03
	taxes (rates too high)	127				BB01
<b>Democrats</b>	education spending (decrease)				57	BD09
	environment (reduce gov't effort)			57		BS01
	school vouchers (support)		127			BD02
<b>neither party</b>	gay rights (reduce gov't effort)			123		BL05
	abortion (restrict)		125			BF02
	gun control (oppose)			126		BG06

## *Weights Used to Post-Stratify NAES Sample*

(averaged over all districts)

		<b>weight</b>
<b>Race</b>	Asian-American	1.23
	Black	1.38
	Hispanic	0.73
	White/other	0.98
<b>Age</b>	18 – 24	1.63
	25 – 34	1.3
	35 – 44	0.94
	45 – 64	0.78
	65 and over	1.09

## Roll Call Votes Included in Analysis

policy domain	year	roll call no.	policy proposal
<b>education spending</b>	1999	319	Increase funds for teachers
	2001	143	Reduce increase in education aid to localities
	2001	238	Funding for disabled students
<b>environment</b>	1997	108	Limit proposed waivers to Endangered Species Act
	2000	179	Use oil royalties to establish land conservation
	2000	280	Restrict designations of national monuments
	2000	305	Delay implementation of air quality standards
	2001	181	Bar offshore drilling near Florida
	2001	288	Bar delay of new arsenic standards
	2001	311	Increase CAFE standards for vehicles
	2001	317	Bar ANWR drilling
	2001	366	Reallocate farm subsidies to conservation
	2002	315	Prohibit funds for drilling off California coast
<b>school vouchers</b>	1997	569	Authorize states to use vouchers
	1999	521	Authorize voucher program for low-performing schools
	2001	135	Vouchers for students in poor-performing schools
<b>intervention in civil wars</b>	1997	233	Prohibit funds for Bosnia
	1998	58	Withdraw troops from Bosnia
	1999	49	Authorize Kosovo deployment
	1999	100	Prohibit ground forces in Kosovo without authorization
	1999	101	Remove U.S. forces from Kosovo
	1999	103	Authorize air operations in Kosovo
	1999	119	Bar funds for invasion of Kosovo by U.S. forces
	1999	183	Prohibit permanent Defense Department presence in Haiti
	1999	189	Strike provision to prohibit funding for Kosovo
	1999	266	Recognize achievement in Kosovo
	2000	89	Withhold funds for Kosovo
	2000	193	Require burden-sharing in Kosovo
	2001	246	Bar financial contributions to UN peacekeeping efforts
<b>crime</b>	1999	211	Increase juvenile gun penalties
	1999	215	Bar release of prisoners due to overcrowding
	1999	233	Authorize juvenile justice programs
	2000	115	Mandatory minimum sentences for using firearm in crimes
	2000	317	Reduce funding for truth-in-sentencing grants
	2001	242	Bar funds to deport aliens convicted of certain crimes
	2002	63	Require judges to file report when sentencing to life
	2002	64	Life imprisonment for repeat child molesters
<b>military spending</b>	1997	228	Cut funding for B-2 bombers
	1998	10	Override veto of defense construction spending
	1999	118	Reduce proposed supplemental defense spending increase
	2000	70	CBC budget resolution: defense to domestic spending
	2000	85	Increase supplemental defense spending
	2000	196	Terminate Trident II missile
	2001	172	Cut Air Force budget
	2002	141	Prohibit funding for nuclear earth-penetrator weapon
	2002	142	Repeal ban on developing low-yield nuclear weapons
	2002	158	Increase defense spending
2002	194	Supplemental military appropriation	

## Roll Call Votes Included in Analysis (continued)

policy domain	year	roll call no.	policy proposal	
<b>missile shield</b>	1999	58	Impose requirements on SDI	
	1999	59	Support deployment of SDI	
	2001	230	Praise success of SDI test	
	2002	145	Prohibit SDI funding	
	2002	157	Bar funds for nuclear SDI	
	2002	214	Prohibit debate on ABM treaty	
	2002	269	Cut funding for SDI missile silos	
<b>taxes</b>	1997	148	Budget resolution cutting taxes, Medicaid and Medicare	
	1997	245	Pass Clinton tax cuts	
	1998	102	Constitutional amendment requiring 2/3 vote to raise taxes	
	1999	90	Constitutional amendment requiring 2/3 vote to raise taxes	
	1999	331	Substitute Democratic version of a proposed tax cut	
	1999	333	Tax cuts, including estate tax phase out	
	1999	485	Provide tax breaks for medical savings accounts	
	2000	15	Eliminate marriage penalty tax	
	2000	73	Conservative budget resolution: larger tax cuts	
	2000	119	Constitutional amendment requiring 2/3 vote to raise taxes	
	2000	127	Abolish the tax code	
	2000	254	Repeal estate tax	
	2000	450	Repeal tax increase on Soc Sec beneficiaries	
	2000	458	Override veto of estate tax elimination	
	2001	42	Democratic substitute tax cut	
	2001	45	Tax cuts	
	2001	66	Progressive Caucus budget resolution	
	2001	68	GOP Study Group budget resolution	
	2001	75	Reduce marriage penalty	
	2001	84	Phase out estate and gift taxes	
	2001	87	Constitutional amendment requiring 2/3 vote to raise taxes	
	2001	104	Conference report on budget resolution	
	2001	149	Approve conference report for tax cuts	
	2001	404	Approve \$100 billion in tax cuts	
	2002	103	Make tax cuts permanent	
	2002	219	Make estate tax cuts permanent	
	2002	225	Constitutional amendment requiring 2/3 vote to raise taxes	
	2002	229	Make marriage penalty tax cut permanent	
	<b>abortion</b>	1997	65	Ban late-term abortions
		1997	362	Lighten proposed ban on funds to aid orgs that provide abortions
		1998	325	Override partial-birth abortion veto
		1999	184	Permit abortions at overseas military hospitals
		1999	261	Criminalize interstate transportation of minor for abortion
1999		301	Remove prohibitions on abortion coverage in federal health plans	
1999		349	Bar federal funds to foreign orgs that perform abortions	
1999		465	Make it a crime to injure or kill a human fetus	
2000		104	Ban late-term/partial-birth abortions	
2000		203	Allow abortions in military hospitals overseas	
2000		318	End ban on abortions for federal prisoners	
2000		373	Prohibit FDA tests of RU486	
2000		396	Remove ban on federal funds to foreign orgs that perform abortions	
2000		422	Allow coverage for abortion in federal health plans	
2001		88	Federal crime to attack pregnant woman	
2001		89	Criminalize killing of fetus	
2001		115	Support restrictions to int'l agencies providing abortions	
2001		235	End ban on abortions for federal prisoners	
2001		357	Permit abortions at overseas military hospitals	

## Roll Call Votes Included in Analysis (continued)

policy domain	year	roll call no.	policy proposal
<b>abortion</b> (continued)	2002	97	Criminalize transport of minor for abortion
	2002	153	Permit abortions in military hospitals
	2002	342	Require late-term/partial-birth abortion bans to consider health of mother
	2002	343	Ban late-term/partial-birth abortions
	2002	411	Federal grantees cannot withhold abortion services
	2002	412	Prohibit discrimination against federal grantees that refuse abortions
<b>gay rights</b>	2000	471	Broaden coverage of federal hate crimes to include gays
	2001	352	Bar funds for domestic partner benefits of DC employees
	2001	354	Bar funds for DC to enforce anti-discrimination law against Boy Scouts
<b>gun control</b>	1999	234	Require background checks at gun shows w/in 24 hrs
	1999	235	Require certain gun show dealers to run background checks w/in 3 days
	1999	236	Ban gun sales without safety devices
	1999	238	Ban juveniles from semiautomatic assault weapons
	1999	240	Repeal DC gun ban
	1999	244	Require background checks at gun shows
	2000	306	Block adding cities to HUD safe-guns program
	2000	324	Bar gun-safety agreement with Smith and Wesson
	2001	244	Bar funds to change FBI background checks on gun purchases
	2002	24	Exempt gun ads from campaign finance restrictions
	2002	292	Allow pilots to carry guns during flight

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## Tables

Table 1. Long-Term Ownership of Eight Issues, 1989-2008

Dependent variable: % of Americans trusting Republicans to handle issue - % trusting Democrats

Variable	Coefficient (SE)
<i>Long-term issue-ownership estimates</i>	
<b>terrorism</b>	<b>14.6</b> (1.1)
<b>foreign policy</b>	<b>10.4</b> (0.9)
<b>crime</b>	<b>7.7</b> (1.4)
<b>taxes</b>	<b>5.3</b> (1.2)
<b>Social Security</b>	<b>-3.2</b> (1.3)
<b>education</b>	<b>-3.4</b> (1.2)
<b>healthcare</b>	<b>-8.1</b> (0.9)
<b>environment</b>	<b>-9.9</b> (1.3)
<i>Republican party identification advantage at time of survey</i>	1.5 (0.2)
<i>N</i>	283
<i>R<sup>2</sup></i>	.75
<i>SEE</i>	5.8

source for data: Gallup, *Newsweek* and Pew Research Center polls  
(obtained from Roper Archive, University of Connecticut).

Table 2. Determinants of Issue Ownership on Four Issues, 1992-1998

Dependent variable: Party R trusts to handle issue.

Variable	issue (year of survey)			
	defense/ foreign affairs (1992)	crime (1994)	healthcare (1994)	environ- ment (1998)
party to which R feels closer on issue	.27 (.06)	.08 (.02)	.42 (.04)	.58 (.06)
R's party identification	.54 (.03)	.45 (.02)	.45 (.03)	.11 (.03)
<b>Republican issue-ownership advantage (intercept)</b>	<b>.18</b> (.01)	<b>.09</b> (.01)	<b>-.10</b> (.01)	<b>-.17</b> (.01)
<i>N</i>	1,710	1,480	1,418	886
<i>R</i> <sup>2</sup>	.28	.25	.34	.14
SEE	.34	.31	.32	.30

All variables scaled -.5 (in direction favoring Democrats) to .5 (in direction favoring Republicans).  
Cell entries contain OLS regression coefficients and (in parentheses) their standard errors.

source for data: American National Election Studies.

Table 3. Determinants of Issue Positions Taken by Members of Congress, 1997-2002

Dependent variable: MC's estimated ideal point on issue

Issues Owned by <b>Republicans</b>					
	intervene in civil wars	crime	military spending	missile shield	taxes
district opinion	.02	.22*	.24***	.11	.11
<b>district opinion x Democratic MC</b>	<b>.09</b>	<b>.03</b>	<b>.27**</b>	<b>.34***</b>	<b>.10</b>
Democratic MC	-52.6***	-41.4***	-54.8***	-65.2***	-53.1***
intercept	63.4***	69.6***	72.6***	81.7***	69.9***
<i>N</i> (number of MCs in analysis)	528	527	528	528	527
<i>R</i> <sup>2</sup>	.18	.88	.47	.24	.52
Number of roll-call votes	13	8	11	7	28
Rep. responsiveness/Dem. responsiveness	.18	.88	.47	.24	.52

Issues Owned by <b>Democrats</b>			
	education spending	environ- ment	school vouchers
district opinion	.34*	.50***	.15
<b>district opinion x Democratic MC</b>	<b>-.42*</b>	<b>-.32*</b>	<b>-.08</b>
Democratic MC	-33.5***	-31.4***	-57.5***
intercept	55.4***	44.9***	68.0***
<i>N</i> (number of MCs in analysis)	527	528	528
<i>R</i> <sup>2</sup>	.67	.54	.61
Number of roll-call votes	3	10	3
Dem. responsiveness/Rep. responsiveness	-.24	.36	.47

Issues Owned by <b>Neither Party</b>			
	abortion	gay rights	gun control
district opinion	.44***	.70***	.54***
<b>district opinion x Democratic MC</b>	<b>.17</b>	<b>-.18</b>	<b>.18</b>
Democratic MC	-53.5***	-40.6***	-36.9***
intercept	57.7***	40.4***	39.5***
<i>N</i> (number of MCs in analysis)	528	527	527
<i>R</i> <sup>2</sup>	.60	.62	.57
Number of roll-call votes	25	3	13

Opinion and ideal point variables scaled 0 (liberal to 100 (conservative)).

Cells contain OLS coefficients. \**p*<.05; \*\**p*<.01; \*\*\**p*<.001 (two-tailed test). Source for data: see text.

# Figures

Figure 1. The Effect of an Issue-Ownership Advantage ( $\sigma$ ) on Candidate Responsiveness

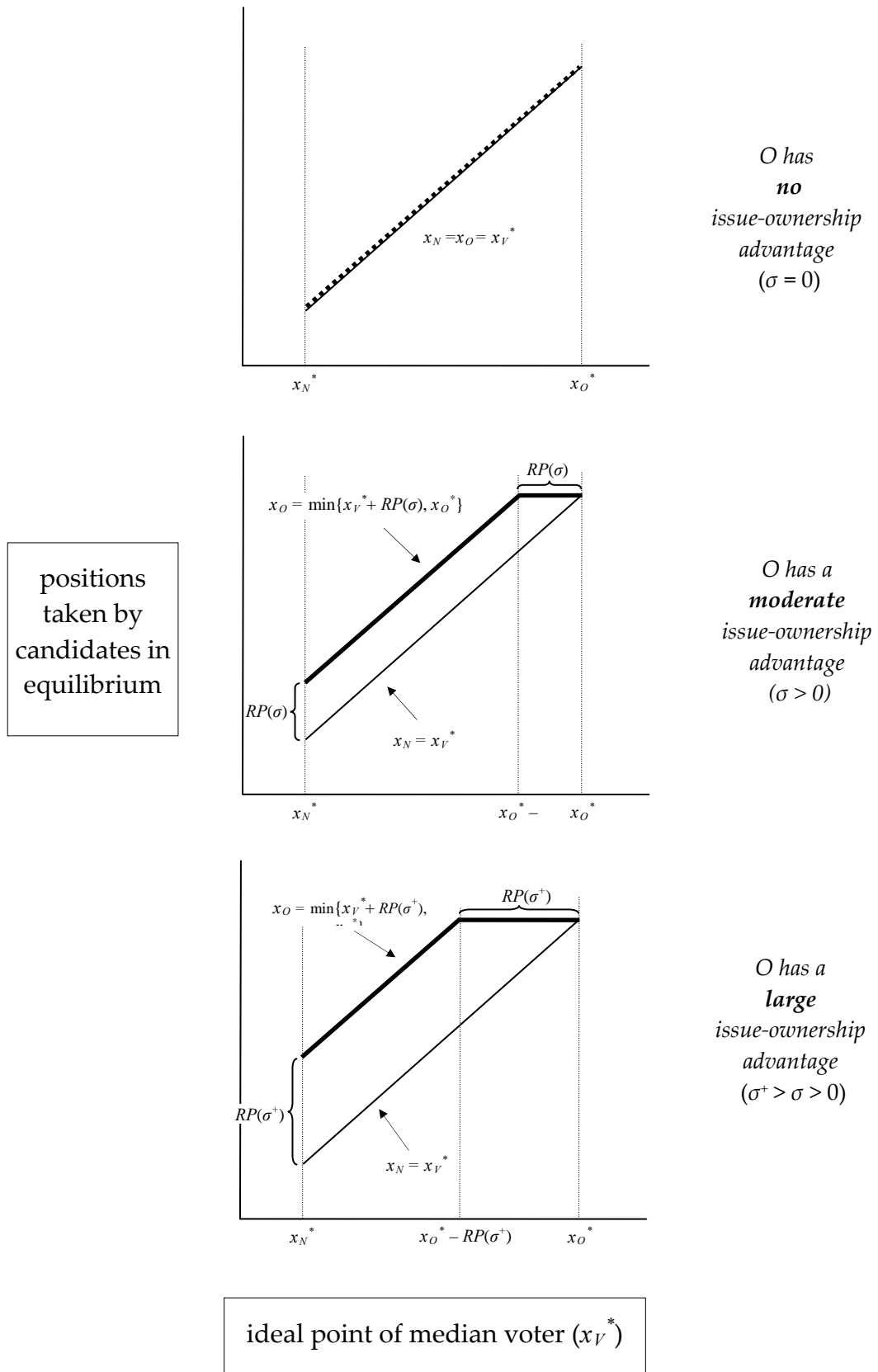
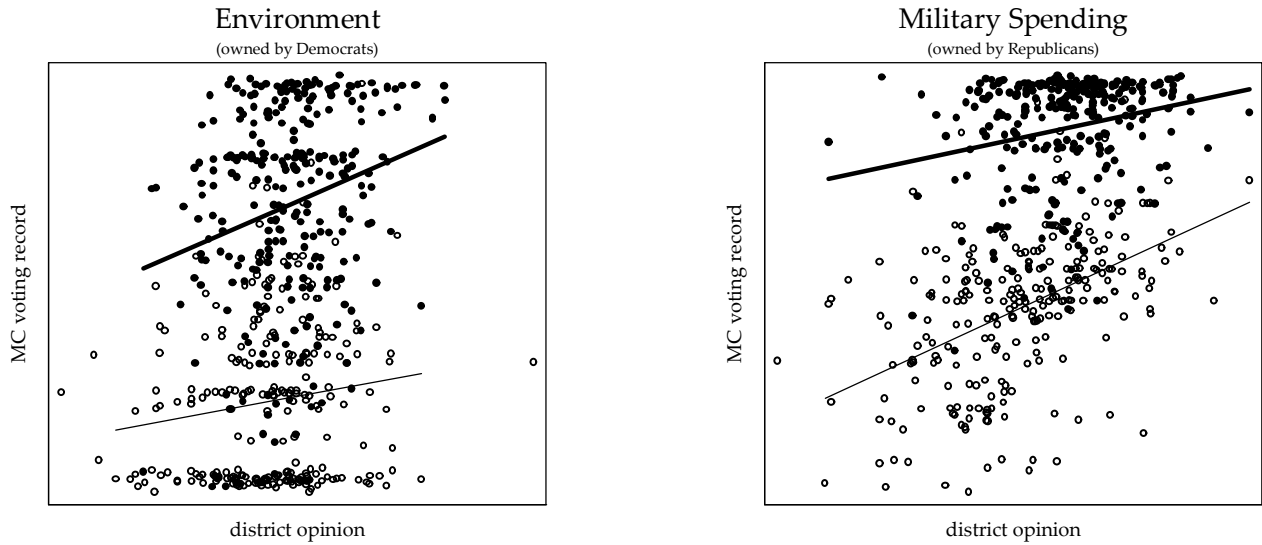
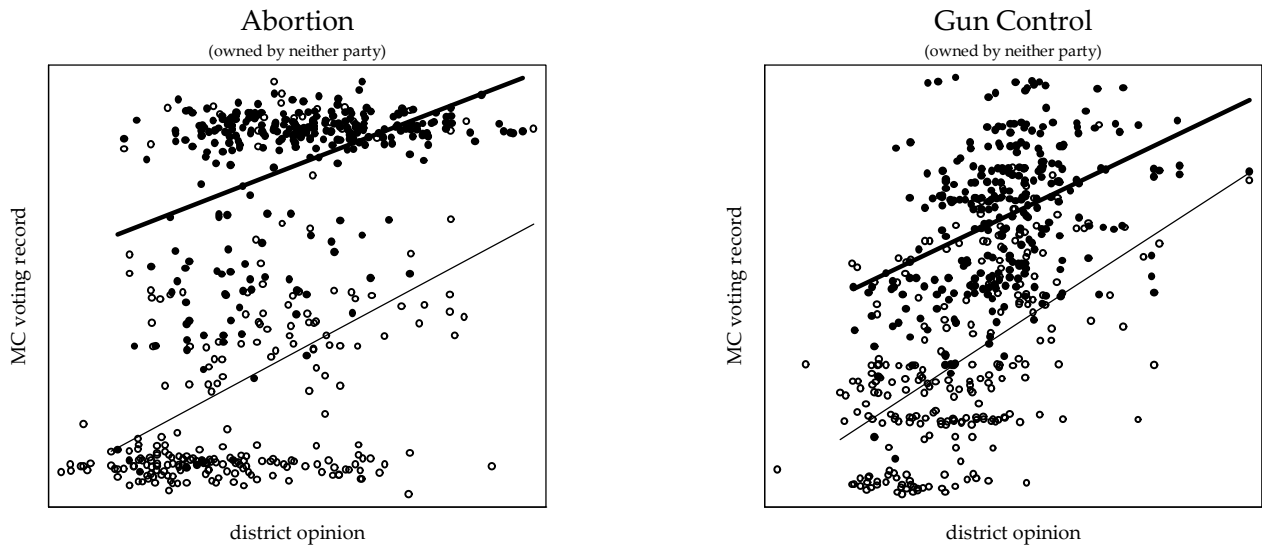


Figure 2. District Opinion and Congressional Roll-Call Records on Four Issues

Issues Owned by **Democrats or Republicans**



Issues Owned by **Neither Party**



Each point represents one member of Congress (MC).  
Republican MCs are depicted with solid circles, Democratic MCs with hollow circles. Source for data: see text.