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Issue Ownership and Representation

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Abstract

Empirical results indicate that politicians exploit issue ownership—the degree to which the public trusts a political party to better handle a particular public issue (as they do with the Democrats on the environment, or with the Republicans on defense)—to enact policy that is unresponsive to changes in public opinion. In this paper, I present empirical evidence of three possible mechanisms that might link issue ownership to non-responsiveness: the notions of issue ownership as (1) constituents' *shared preferences* with the issue-owning party, particularly in a context of policy uncertainty; (2) a party's relative *competence* at handling a particular issue; and (3) the greater degree of *consistency* of the positions taken by a party's politicians on the issues it owns. I then develop a theoretical model that incorporates all three of these candidate mechanisms. By identifying the conditions under which equilibria exist and generating comparative statics, I find theoretical evidence supporting the competence and shared preferences hypotheses, but poor evidence for the uncertainty and consistency hypotheses.

I. Introduction

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

These are enduring questions that have captured the attention of generations of political scientists who have carefully studied the relationships between the public opinion of citizens and the policies enacted by their governments. Since the pioneering work of Miller and Stokes (1963), scholars have found varying degrees of responsiveness to public opinion across time, jurisdictions, and policies. But they have generally failed to generate strong theories that explain this variation (Manza and Cook 2002, Burstein 2003). Many scholars have responded to these queries with a question of their own: how can citizens—who we know to be ill-informed about public affairs (e.g., Zaller 1992, Delli Carpini and Keeter 1997)—be knowledgeable enough about the policies enacted by elected officials to hold them accountable? Why should we expect much of a relationship between opinion and policy at all?

Researchers who study public opinion have advanced the notion of *cognitive shortcuts* as tools with which otherwise uninformed citizens can evaluate candidates and policies (Popkin 1991). Voters use these shortcuts—such as the endorsements by interest groups of ballot propositions (Lupia 1994) or the positions on public issues taken by liberal and conservative elites (Zaller 1992)—to construct attitudes. Although there is much debate about the extent to which such shortcuts help citizens, it is clear that their use is prevalent.

In this paper, I theorize that *issue ownership* is employed as a kind of cognitive shortcut by voters in evaluating the records of elected legislators. First identified by John

Petrocik (1996), issue ownership refers to the idea that the Democratic and Republican parties each “own” a set of issues which the public trusts the party as substantially better able to “handle” than the other party. Democrats are generally trusted more than Republicans on issues like the environment, health care and social security; Republicans are trusted more on foreign policy and taxation. Petrocik finds that the parties make labored efforts to emphasize their owned issues in presidential campaigns, and that they perform better to the extent that they succeed in doing so.

I claim that issue ownership also has an important implication for representation: on issues where one party enjoys a substantial advantage in issue ownership, legislators from the owning party are less responsive to change in public opinion. In other work (Egan 2005), I present empirical evidence for this claim by comparing survey data at the congressional district level with the roll-call votes cast by legislators. I find that on issues where one party enjoys a substantial advantage in issue ownership, its legislators are less responsive to change in public opinion across districts.

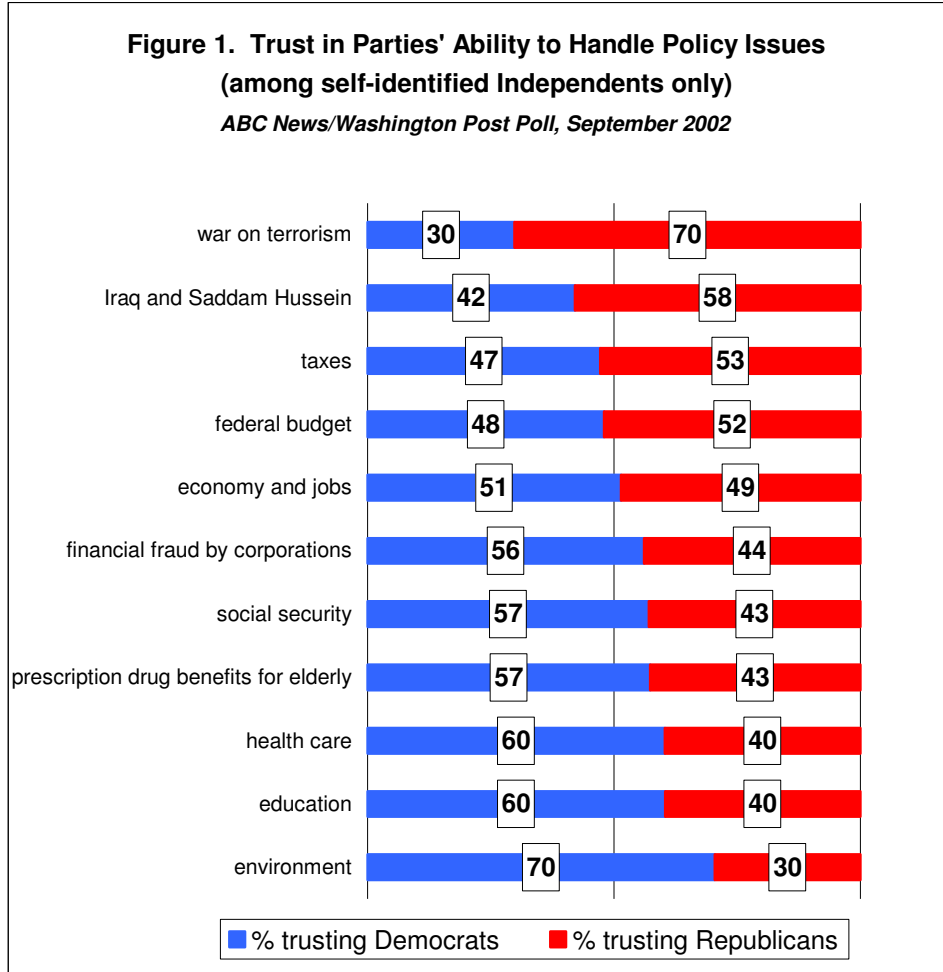
In this paper, I use formal theory to explore the mechanisms that might lead to this outcome of non-responsiveness. I describe the notion of issue ownership and present empirical evidence of three possible mechanisms that might link issue ownership to non-responsiveness. I then develop and analyze a theoretical model that permits adjudication among these three candidate mechanisms.

II. Conceptualizing issue ownership

The extent to which government decisions are representative of citizens’ preferences is a core concern of those who study democratic politics. The idea of issue ownership provides a promising place from which to better explore variation in the character of representation across policy domains. First identified by Petrocik (1996), issue ownership refers to the idea that 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.” (p. 826) Petrocik notes that on a wide range of issues, survey respondents said they “trusted” either the Republicans or the Democrats to “handle” those issues more than the other party, and sometimes by substantial margins. He finds further that parties make labored efforts to emphasize their owned issues in presidential campaigns, and that they perform better to the extent that they succeed in doing so.

Issue ownership can be measured empirically by a commonly asked question on public opinion surveys: “Which party do you trust to a better job handling [issue x]?” Petrocik’s data on this question came from the late 1980s and early 1990s. More recent data is shown in Figure 1, which is a graph of findings from an ABC/ Washington Post poll conducted in 2002. Because partisan respondents are highly likely to identify their own party as the trusted party on any given issue, Figure 1 includes only self-identified independents to better illustrate variation across issues.



The statistics in Figure 1 are generally in line with our expectations: voters appear to trust Republicans more on foreign policy issues and taxes, and Democrats on domestic issues. On newly-emerging issues that don't fit pre-existing frameworks (such as the corporate financing scandals that had just begun to break in 2002) there is little differentiation among the parties. A comparison of these current figures with those reported by Petrocik from the 1980s and 1990s shows that the relative ranking of issues owned by each party has remained steady over time.

III. The nature of issue ownership and issue trust

As described above, "issue ownership" is defined as the extent to which the public trusts a party to handle a particular issue. (To distinguish this issue-based notion of trust

from the generalized idea of “trust in government,” I will often refer to the trust accompanying issue ownership as “issue trust.”) Issue ownership has several components. It is a long-term phenomenon that is established over decades of position taking and accomplishments by political parties. Changes in the degree of issue trust assigned to one party or another are rare. Perhaps the most striking example of such a change is the “issue evolution” that occurred on race in the 1960s as documented by Carmines and Stimson (1990). Their findings can be reconceptualized in the issue-ownership framework as a shift in which party “owned” race issues among whites and blacks. The shift was precipitated by the dramatic change in the positions taken by the two parties on race. Until just prior to the Civil Rights Act of 1964, Democrats had the trust of whites on the issue of race and Republicans had the trust of blacks. The reverse was true by the close of the 1960s.

But such dramatic changes in the ownership of issues are unusual. Democrats have arguably owned Social Security since the program’s creation by the Roosevelt administration, and have owned health care since the inception of Medicare and Medicaid during the Johnson administration. Republicans’ ownership of the issue of taxation stretches back at least to the “tax revolts” of the 1970s, and the G.O.P. has owned the crime issue from the law-and-order campaigns of Richard Nixon onward. Issue trust has remained steady despite actions taken on issues by the owning parties that were clearly not desired by a majority of the public, including the disastrous Clinton healthcare reform plan of 1993-94 and the Iran-Contra scandal that clouded the Republicans’ foreign policy reputation in the late 1980s.

Second, issue trust is correlated with the extent to which voters agree with the party’s position on an issue. In practice, this means that a majority of the public tends to agree with the positions taken by a party on the issues it owns. Majorities of Americans not only trust Republicans over Democrats on taxation and defense; they also tend to share the Republicans’ preferences for lower tax burdens and a hawkish foreign policy. The reverse is true for the Democratic-owned issues of education and the environment. Table 1 displays two additional examples: on the Democratic-owned issue of healthcare,

a strong majority of Americans sides with the party on the issue of whether patients should have the right to sue HMOs. On the Republican-owned issue of crime, a substantial majority favors the death penalty for some crimes, a position taken much more frequently by Republican candidates than Democrats.

Table 1. Americans' Policy Preferences on Issues Owned by the Two Parties

Giving patients the right to sue HMOs		Death penalty sentences for some crimes	
favor	81.9	favor	74.7
oppose	18.1	oppose	25.3

source: 2000 National Annenberg Election Study.

However, issue ownership is a notion that is broader than simply one of shared policy preferences between voters and parties. It also incorporates voters' assessment of the competency of parties to solve particular policy problems. A voter may be a dove on defense issues and thus agree with Democrats on those policies, but he may ultimately believe that Republicans are better at defending the country from a terrorist attack. Another voter may prefer the free-market approach taken to environmental regulation by Republicans, but thinks the Democrats will actually do a better job on ensuring the cleanup of toxic waste sites. We can see some evidence for this from the data in Table 2, where nearly a third of Democrats think that the Republicans are the party that is better at handling terrorism, and the same proportion of Republicans think that the Democratic Party better handles the environment.

Table 2. Issue trust by party identification

“Which party do you trust to better handle...

...the environment?”

...the situation with Iraq
and Saddam Hussein?”

R party ID	trust Dems	trust Reps	R party ID	trust Dems	trust Reps
Dem	89.1	10.9	Dem	67.6	32.4
Rep	33.2	66.8	Rep	8.0	92.0
Ind	70.4	29.6	Ind	42.1	57.9
Total	64.0	36.0	Total	39.2	60.8

source: ABC News / Washington Post poll, September 2002.

Finally, the party that owns an issue is generally perceived to take more consistent stands on that issue. This is most likely due to the fact that politicians from the non-issue owning party strive to present moderate positions on issues they do not own during political campaigns. Examples of this abound from recent American presidential campaigns: George H. W. Bush declaring that he would be the “education president” in 1988; Bill Clinton’s well-publicized criticism of the rapper Sister Souljah and his travel home to witness the administration of the death penalty in Arkansas in 1992; and John Kerry’s attempt to use his status as a veteran to appear hawkish on defense.

Survey data bear out this observation. The 2004 NES asked respondents to place the positions of the parties on two policy issues owned by the Democrats (services and spending, and the environment) and two issues owned by the Republicans (defense and aid to blacks). Table 3 displays the mean and standard deviation assigned by respondents to the parties on standard seven-point scales on these four issues. In each case, respondents’ placements were less dispersed for the party that owned the issue.

Table 3. Issue Ownership and Party Position Placements on Seven-Point Scale, 2004

	Issue	Party	Mean Placement of Party	Standard Deviation of Placements
owned by Democrats	services/spending	Democrats	5.06	1.46
		Republicans	3.35	1.55
	environment*	Democrats	4.19	1.55
		Republicans	4.29	1.66
owned by Republicans	defense	Democrats	3.61	1.41
		Republicans	5.42	1.27
	aid to blacks	Democrats	3.20	1.46
		Republicans	5.05	1.37

source: National Election Studies.

*Placements of presidential candidates. The NES did not include a party placement question on the environment.

In sum, we have evidence that issue ownership is a long-term reputation established by parties with voters who (1) share to some degree the policy preferences with the trusted party on the issue, (2) have some confidence in the trusted party’s competency to execute policy on the issue, and (3) perceive the party as taking a more consistent stand on the issue than the other party. Given the strong, consistent nature of issue ownership and its evident importance to election campaigns and outcomes, an intuitive hypothesis emerges about the influence of issue ownership on representation: because voters trust parties more on issues they own, incumbents from the owning party should have more latitude in deciding how to vote on roll-calls on the issue that come before them in Congress.

This hypothesis has been explored to some degree in the formal literature in a piecemeal way. Bianco (1994) develops a model in which constituents “trust” representatives to the extent that they are unsure about the expected output of the policy proposal and that they believe the representative shares their preferences. Bianco shows that representatives who earn this sort of trust are granted “voting leeway”—the freedom to vote contrary to how constituents themselves may have voted on the same policy proposal. Ansolabehere and Snyder (2001) model how candidates position themselves

when voters evaluate them on not only policy, but also “valence”—a concept that incorporate competency, charisma, or a number of other positive attributes. Their analysis yields the conclusion that equilibria can exist where valence-advantaged candidates exploit this advantage to enact policies more extreme than that favored by moderate voters.¹ The third aspect of issue ownership—parties taking more consistent stands on issues they own—has not been explicitly addressed in the formal literature. However, we can imagine a simple Bayesian game along the lines of Snyder and Ting (2002, 2003) in which the ideal points of politicians from the issue-owning party are distributed with a small variance relative to those from the other party. The smaller variance of the issue-owning party’s ideal points provides a more informative “prior” to voters than those from the other party. When voters use roll-call records to update their beliefs about a legislator’s private policy preferences, they thus weigh the record of an incumbent more heavily if she comes from a party whose politicians’ ideal points are widely dispersed, leading to more responsiveness.

How might all three of these aspects of issue ownership— (1) issue-specific *shared preferences in the face of uncertainty*; (2) issue-specific policy *competence*, and (3) the *consistency of party positions* taken on an issue—work in tandem to affect responsiveness? Or might they be at odds? In this paper, I explore these questions with a model that borrows from the literature discussed above to incorporate all three of these notions.

IV. The Model

Setup. An incumbent member of Congress, I , represents a district median voter, V . Both I and V have preferences (ideal points) over a one-issue policy space that are denoted i and v respectively. Both actors are risk averse and the utility they derive from the outcome x of any enacted policy is quadratic: $U_A(x) = -(x - a)^2$ for $A \in \{I, V\}$, $a \in \{i, v\}$. Ideal points take on one of three values: conservative (c), moderate (m), or liberal (l),

¹ Groseclose (2001) specifies a model of candidate location when one candidate has a valence advantage and comes to a somewhat different conclusion.

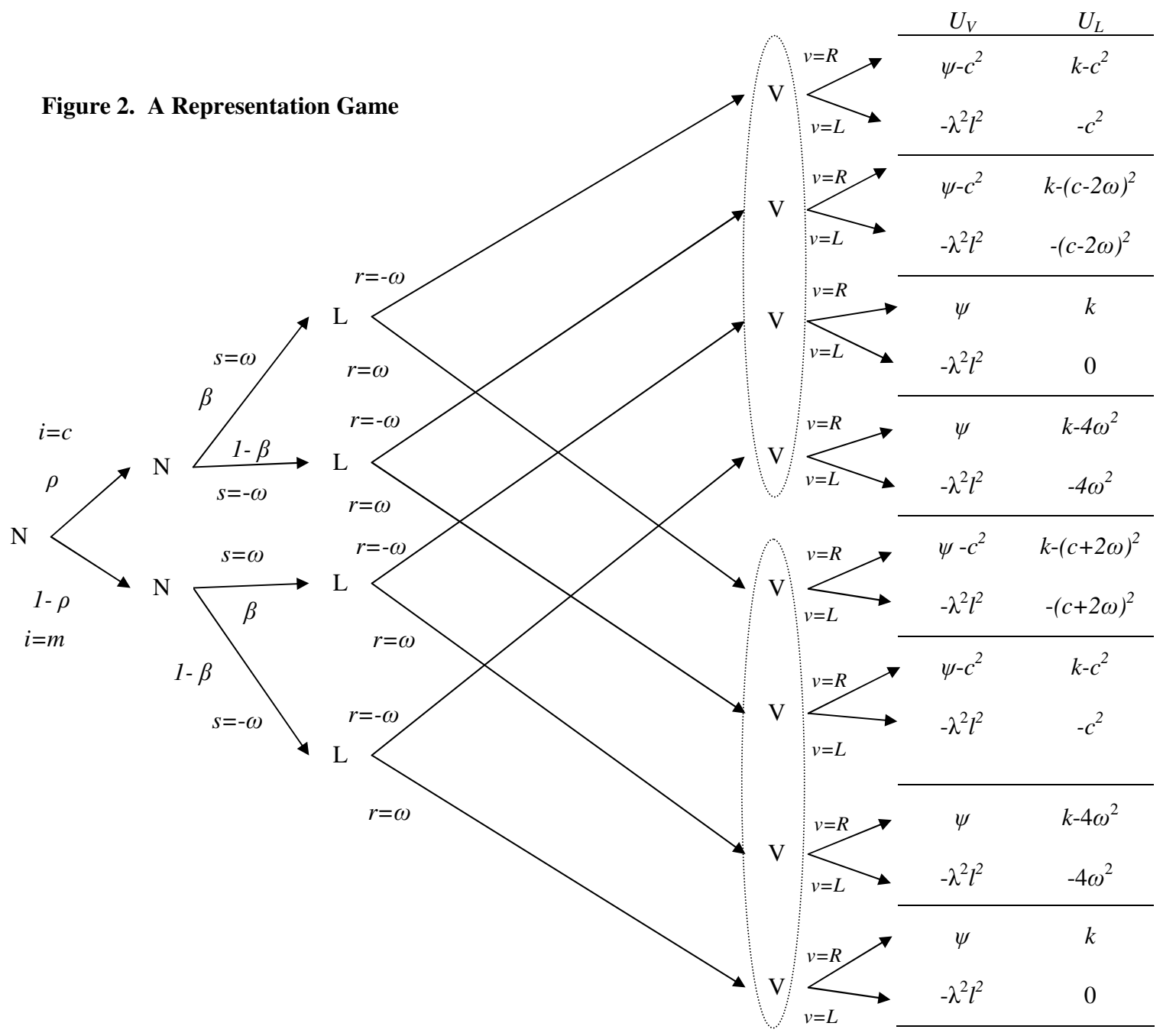
with $l < m < c$ and $m = 0$. Without loss of generality, we assume that the median voter's ideal point $v = m = 0$.

In addition to utility from policy, politicians also derive utility k from holding office. I assume that politicians are motivated more by officeholding than by policy, and thus $k > c^2$ and $k > l^2$. Politicians are affiliated with one of two political parties, party L or party R , which compete in the national legislature. Without loss of generality, we assume that I is affiliated with party R . V does not know the value of i , but he does know how the ideal points of each party's politicians are distributed. Politicians from party L (the "left" party) have an ideal point equal to l with probability λ , and an ideal point $m = 0$ with probability $1 - \lambda$. Politicians from party R (the "right" party) have an ideal point equal to c with probability ρ and an ideal point $m = 0$ with probability $1 - \rho$. I make the assumption that $\lambda > .5$ and $\rho > .5$ (i.e., that there are more liberals than moderates in party L and more conservatives than moderates in party R).

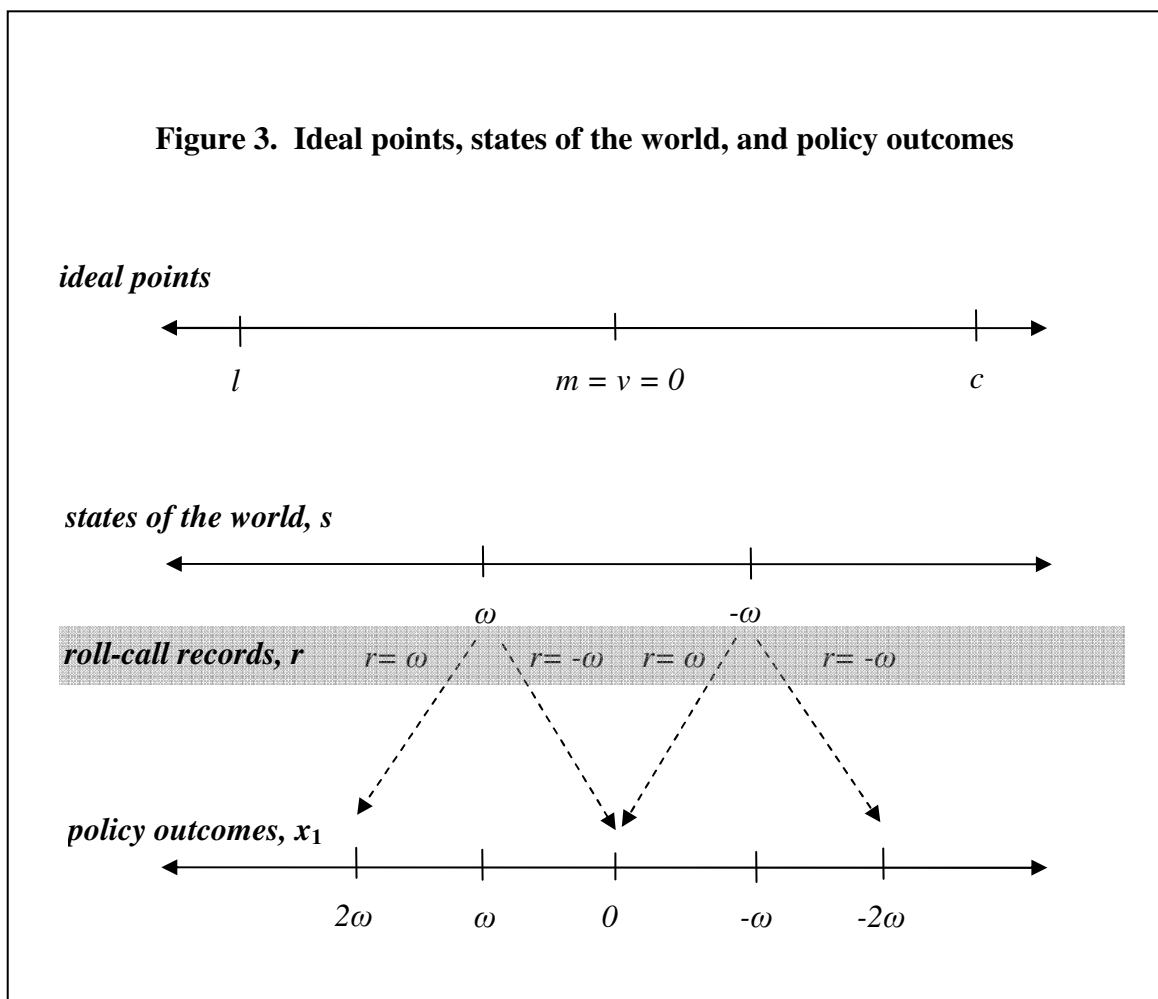
Finally, I assume that the voter assigns a "valence" value ψ to the incumbent candidate. To the extent that V considers party R more competent on the issue compared to candidates from party L , V 's utility derived from any policy outcome is offset by ψ if R is in office. (The parameter ψ can take on a negative value if party R is considered less competent on the issue than party L .)

Timing. The game is a simple signaling game with two periods, as shown in Figure 2. In the first period, Nature determines I 's type, which is defined by her ideal point, i . As I is from party R , $i = c$ with probability ρ and $i = m$ with probability $1 - \rho$. Nature then makes another move: it determines the "state of the world," $s \in \{\omega, -\omega\}$. With probability β , the state of the world is ω , and with probability $1 - \beta$ the state of the world is $-\omega$. I observes the value of both i and s ; V observes neither. I assume that the conservative members of party R and the liberal members of party L each prefer policy outcomes that are more extreme than possible states of the world, and thus $c < -2\omega$ and $l > 2\omega$.

Figure 2. A Representation Game



I then establishes a roll-call record, $r \in \{\omega, -\omega\}$. The outcome, x_1 , from which both I and V derive utility is simply the sum ($r + s$). Thus $r = -\omega$ is a “conservative” record that moves policy in a rightward direction and $r = \omega$ is a “liberal” record that moves policy in a leftward direction. If the initial state of the world is $s = \omega$, both moderate and conservative incumbents prefer $r = -\omega$. But if the state of the world is $s = -\omega$, moderates prefer $r = \omega$ while conservatives prefer $r = -\omega$. Figure 3 shows how roll-call records (r) map states of the world (s) to outcomes (x_1).



V observes r , uses this signal to update his beliefs about i , and then votes to either re-elect I from party R ($v = R$) or to replace her ($v = L$) with a challenger from party L . (I

assume that if V finds both candidates equally favorable, he reelects I .) The challenger is a “dummy” player in the game: she cannot send any signals about her type to the voter, who can rely only on his knowledge about the distribution of ideal points in party L in making a voting decision. Thus should V decide to elect the challenger, he is choosing to replace the incumbent with a politician whose ideal point is random draw from the distribution of party L 's distribution with expected value $\mu_L = \lambda l$.

After the election, the first period of the game ends. In the second period, the candidate who is elected establishes a policy, x_2 . The game then ends.

Solution concept. As this is a dynamic game of incomplete information, the solution concept used is perfect Bayesian equilibrium (PBE). PBE requires that (1) all actions at all information sets be optimal given a player's beliefs and other players' strategies (sequential rationality); (2) beliefs at information sets on the equilibrium path be determined by Bayes' rule and the players' equilibrium strategies; and (3) beliefs at information sets off the equilibrium path be determined by Bayes' rule and the players' equilibrium strategies where possible (Gibbons 1992, 180).

Because there is no election at the end of the second period, the candidate who wins the election at the conclusion of the first period can establish a roll-call record that is equal to her ideal point with impunity in the second period. Thus V 's task is to use his knowledge of the distribution of the candidates' ideal points and the incumbent's record (r) to elect the candidate he believes is most likely to be a moderate. V 's strategy thus maps a vote to the roll-call record established by I and is denoted $v(r)$. I 's task is to maximize her utility derived from enacting policy and holding office. I 's strategy thus maps from her type i and the state of the world s to a roll-call record r and is denoted by $r(i, s)$. Potential equilibria are therefore specified by the profile $\{(r(i=c, s=\omega), r(i=c, s=-\omega), r(i=m, s=\omega), r(i=m, s=-\omega)), (v(r=\omega), v(r=-\omega)); y, z\}$, where y denotes the probability with which V believes I is conservative given $r = \omega$, and z denotes the probability with which V believes I is conservative given $r = -\omega$.

Specification of issue-ownership concepts. This model incorporates the three aspects of issue ownership discussed above in the following ways:

1. Issue ownership as shared preferences in the presence of policy uncertainty. In the model, voters are more uncertain about policy outcomes as β is in the vicinity of .5. As β approaches zero or one, voters are more certain about the true state of the world, s . The extent to which voters share preferences with politicians in the model is captured in two ways. First, the absolute values of c and l determine how close the right- and left wings of parties R and L are to the median voter's ideal point of zero. Second, ρ and λ indicate the proportion of each party's politicians that belong to the right and left wings, respectively. Thus a comparison of V 's utility derived from the ideal point of a politician randomly drawn from each of the two parties—that is, $-\lambda^2 l^2$ and $-\rho^2 c^2$ —indicates which party better shares the voter's preferences.

2. Issue ownership as valence advantage. The model captures the notion of issue ownership as valence advantage with the parameter ψ . As indicated previously, ψ will be large to the extent that party R is considered more competent on the issue.

3. Issue ownership as consistency of party positions. If we assign liberals and conservatives a score of one and moderates a score of zero, the distributions of ideal points of each party's politicians can be described by a Bernoulli distribution with the following parameters:

$$\begin{aligned}\mu_L &= \lambda, & \sigma_L^2 &= \lambda(1-\lambda) = \lambda - \lambda^2 \\ \mu_R &= \rho, & \sigma_R^2 &= \rho(1-\rho) = \rho - \rho^2\end{aligned}$$

Because I make the assumption that $\lambda > .5$ and $\rho > .5$, the variance of the ideal points of a party's politicians is decreasing in λ (for party L) and ρ (for party R). Thus the party with a higher value of λ or ρ takes more consistent stands than does the other party.

V. Identifying equilibria

I simplify calculations of utilities in two ways that do not impact the game's substantive conclusions: I do not include V 's utility from first-period policy when calculating his utility, and I also do not discount utility obtained in the second period. Thus V 's utility is calculated as $U_V = \psi - (x_2 - v)^2$, and I 's utility is calculated as $U_I = -(x_1 - i)^2 - O[(x_2 - i)^2 + k]$, where O is an indicator of whether I wins the election. Because $v = 0$, and $x_2 = i$ if I is reelected, the utility functions simplify to:

$$U_I = -(x_1 - i)^2 + kO$$

$$U_V = \begin{cases} \psi - i^2 & \text{if } v = R \\ -j^2 & \text{if } v = L \end{cases}$$

(To save on notation, I refer to x_I as simply x from this point onward.) The game is solved by identifying sets of strategies and determining whether the strategies are best replies to one another given the requirements of a PBE. In this paper, I explore PBE that Snyder and Ting label “maximally-sincere equilibria”: those in which all legislator types vote as sincerely as possible.²

In this game, a candidate for a maximally-sincere equilibrium would be a strategy profile where incumbents of both types always vote for the policy they prefer given the state of the world. Because I values reelection over policy, V 's strategy must be to reelect I regardless of r for a strategy profile to be a PBE—or else types of I who do not get reelected will have the incentive to deviate. Consider the profile $\{(-\omega, -\omega, -\omega, \omega), (R, R), 0, z\}$. In this candidate equilibrium, conservative types always vote for conservative policies (i.e., $r(i=c) = -\omega$), regardless of the state of the world. By contrast, moderate types vote for policies that result in the moderate outcome they prefer. When V sees the signal $r = \omega$, he believes with probability $y = 0$ that I is conservative. When he sees $r =$

² There may be other equilibria present in this game. They will be identified and explored in future versions of this paper. Maximally-sincere equilibria are a natural point of departure for this research, as they may better reflect the natural advantage a single incumbent legislator has over a district's voters, who are handicapped by collective action problems and coordination challenges.

$-\omega$, he believes with probability z that I is conservative, calculated as follows using Bayes' Rule:

$$\begin{aligned}
z &= \Pr(i = c \mid x = -\omega) \\
&= \frac{\Pr(i = c) \Pr(x = -\omega \mid i = c)}{\Pr(i = c) \Pr(x = -\omega \mid i = c) + \Pr(i = m) \Pr(x = -\omega \mid i = m)} \\
&= \frac{\rho(1)}{\rho(1) + (1 - \rho)(\beta)} \\
&= \frac{\rho}{\rho + \beta - \beta\rho}
\end{aligned}$$

In order for the candidate equilibrium to hold, V 's expected utility of voting for the incumbent must be greater than or equal to that of voting for the challenger:

$$\begin{aligned}
E[U_v(v = R \mid r = -\omega)] &\geq E[U_v(v = L \mid r = -\omega)] \\
\psi + \left(\frac{\rho}{\rho + \beta - \beta\rho} \right) (-c^2) &\geq -\lambda^2 l^2 \\
\frac{\rho c^2}{\rho + \beta - \beta\rho} &\leq \psi + \lambda^2 l^2 \\
\frac{c^2}{\psi + \lambda^2 l^2} &\leq 1 - \beta + \frac{\beta}{\rho} \tag{1}
\end{aligned}$$

Inequality 1 has several interesting implications for our notions of issue ownership. First, we note that if the conditions are met for this strategy profile to be a PBE, it is a very unresponsive equilibrium indeed: the incumbent always votes in accordance with her policy preferences, but she never gets thrown out of office. We thus are very interested in how changes in the values of parameters in Inequality 1 that are linked with issue ownership affect the feasibility of this very unresponsive strategy profile being a PBE. First, the profile is more likely to be an equilibrium, *ceteris paribus*, as party R 's valence advantage on the issue (parameterized by ψ) increases. It is also

more likely to be a PBE as the quantity $\lambda^2 l^2$ —a measure that increases as party L becomes less likely to share V 's interests—increases. A PBE is also more likely as β —the probability with which s takes on the value ω —increases. Note that this statement is true for the entire range of β , and thus has nothing to do with uncertainty *per se* (as V 's uncertainty about policy outcomes is at its greatest when $\beta = .5$). What matters instead is how likely r is to be an informative signal of i . For example, if β equals one, then the state of the world is always ω . Both types of I thus always play $-\omega$, which means that V learns nothing from r about I 's type. In this case, the equilibrium fails to hold unless $\rho c^2 - \lambda^2 l^2 \leq \psi$ —that is, that party R 's valence advantage makes up for the extremeness of its views relative to party L . Finally, all things being equal, the profile is a PBE to the extent that party R takes *less* consistent stances on the issue than party L .

Thus the three aspects of issue ownership discussed previously have varying implications for the feasibility of a pure-strategy maximally-sincere profile holding as a PBE. This incumbent-friendly, non-responsive equilibrium is *more* feasible to the extent that the incumbent party has a valence advantage and that the out-party has views that are distant from those of the median voter's. But the equilibrium is *less* feasible as the incumbent party takes more consistent stances on the issue. And voters' uncertainty about how legislation maps to policy outcomes, *per se*, has nothing to do with whether the equilibrium is feasible.

If Inequality 1 fails to hold, a maximally-sincere equilibrium may exist in mixed strategies—that is, strategy profiles in which moderate incumbents always establish moderate roll-call records, but conservative incumbents randomize between moderate and conservative records.³ In determining whether mixed-strategy PBE exist in this game, we start with the observation that moderate incumbents never wish to play a mixed strategy, as they would always rather send a pure, costless signal that they share V 's policy preference of $m=0$. Therefore any mixed strategy will only be played by a conservative incumbent, who will leverage V 's uncertainty about her type to establish a roll-call record that is as close as possible to her ideal point without being thrown out of office.

³ Equilibria in which V adopts a mixed strategy may also exist, but I do not focus on those here.

A mixed strategy for type $i = c$ is the probability $\pi = \Pr(r = \omega | i = c)$ that creates beliefs $y = \Pr(i = c | r = \omega)$ that make V indifferent between $v = R$ and $v = L$. When V observes $r = \omega$, he uses Bayes' Rule to calculate the likelihood that the incumbent is conservative:

$$\begin{aligned} y = \Pr(i = c | r = \omega) &= \frac{\Pr(i = c) \Pr(r = \omega | i = c)}{\Pr(i = c) \Pr(r = \omega | i = c) + \Pr(i = m) \Pr(r = \omega | i = m)} \\ &= \frac{\rho\pi}{\rho\pi + (1-\rho)(1-\beta)} \\ &= \frac{\rho\pi}{\rho\pi - \rho + \beta\rho - \beta + 1} \end{aligned}$$

Thus the value of π that makes V indifferent when $x = c$ is found as follows:

$$\begin{aligned} U_V(v = R | r = \omega) &= U_V(v = L | r = \omega) \\ \Pr(i = c | r = \omega)(\psi - c^2) + \Pr(i = m | r = \omega)(0) &= -\lambda^2 l^2 \\ \frac{\rho\pi}{\rho\pi - \rho + \beta\rho - \beta + 1}(\psi - c^2) &= -\lambda^2 l^2 \end{aligned}$$

Solving for π :

$$\begin{aligned} \frac{\rho\pi}{\rho\pi - \rho + \beta\rho - \beta + 1}(\psi - c^2) &= -\lambda^2 l^2 \\ \rho\pi(\psi - c^2) &= -\lambda^2 l^2 \rho\pi + \lambda^2 l^2 \rho - \lambda^2 l^2 \beta\rho + \lambda^2 l^2 \beta - \lambda^2 l^2 \\ \lambda^2 l^2 \rho\pi + \rho\pi(\psi - c^2) &= \lambda^2 l^2 \rho - \lambda^2 l^2 \beta\rho + \lambda^2 l^2 \beta - \lambda^2 l^2 \\ \pi &= \frac{\lambda^2 l^2 \rho - \lambda^2 l^2 \beta\rho + \lambda^2 l^2 \beta - \lambda^2 l^2}{[\lambda^2 l^2 \rho + \rho(\psi - c^2)]} \\ \pi &= \frac{\lambda^2 l^2 (\rho - \beta\rho + \beta - 1)}{\rho(\lambda^2 l^2 + \psi - c^2)} \end{aligned}$$

Our focus on representation leads us to be very interested in the value of π . This is because as π increases, conservative incumbents are more likely to establish moderate roll-call records that are in accordance with their district's wishes. Thus *ceteris paribus*,

the higher π is, the more responsive an incumbent legislator is to district opinion. In particular, we are interested in how π responds to changes in the parameters linked to issue ownership. By inspection, we see that π is decreasing in ψ , the valence advantage enjoyed by the incumbent party. We can see how responsiveness changes with uncertainty by calculating how π changes with respect to β (the probability that the state of the world is ω):

$$\frac{\partial \pi}{\partial \beta} = \frac{\lambda^2 l^2 (1 - \rho)}{\rho(\lambda^2 l^2 + \psi - c^2)} \begin{cases} < 0 \text{ if } \psi < c^2 - \lambda^2 l^2 \\ > 0 \text{ if } \psi > c^2 - \lambda^2 l^2 \end{cases}$$

The effect of β on π depends on whether party R 's valence advantage is large compared (roughly) to how extreme party R is compared to party L . Where party R 's valence advantage is relatively large, responsiveness increases in β . Where the valence advantage is small (or party L is valence-advantaged), then responsiveness decreases in β . As previously, uncertainty *per se* does not appear to give the incumbent any "leeway" to vote contrary to her constituency's wishes. Instead, β is only important to the extent that V is able to extract meaningful information from I 's roll-call record.

We can also check to see how responsiveness increases with the average distance party L candidates take from the median voter by calculating:

$$\frac{\partial \pi}{\partial (\lambda^2 l^2)} = \rho - \beta \rho + \beta - 1 - \frac{\rho}{\lambda^4 l^4}$$

This quantity is negative for all feasible combinations of values of ρ and β , indicating that responsiveness decreases as the out-party's distribution of ideal points becomes more distant from the median voter.

Finally, we can examine how responsiveness changes as the consistency of positions taken by the incumbent's party increases by calculating:

$$\begin{aligned}
\frac{\partial \pi}{\partial \rho} &= \frac{[\lambda^2 l^2 - \beta \lambda^2 l^2][\rho(\lambda^2 l^2 + \psi - c^2)] - \lambda^2 l^2 (\rho - \beta \rho + \beta - 1)(\lambda^2 l^2 + \psi - c^2)}{\rho^2 (\lambda^2 l^2 + \psi - c^2)^2} \\
&= \frac{\rho(\lambda^2 l^2 - \beta \lambda^2 l^2) - \lambda^2 l^2 (\rho - \beta \rho + \beta - 1)}{\rho^2 (\lambda^2 l^2 + \psi - c^2)} \\
&= \frac{\lambda^2 l^2 (\beta \rho - 2\beta + 1)}{\rho^2 (\lambda^2 l^2 + \psi - c^2)}
\end{aligned}$$

The numerator of this ratio is always positive (as $\beta \rho - 2\beta + 1 > 0$), and so:

$$\frac{\partial \pi}{\partial \rho} \begin{cases} < 0 \text{ if } \psi < c^2 - \lambda^2 l^2 \\ > 0 \text{ if } \psi > c^2 - \lambda^2 l^2 \end{cases}$$

The effect of issue consistency on responsiveness depends on whether party R 's valence advantage is large compared to how extreme party R is compared to party L . If the incumbent's party has a large valence advantage, issue consistency causes responsiveness to district opinion to increase. The opposite is true if party R has a small valence advantage—or if party L has a valence advantage: in this case, issue consistency is accompanied by a decline in responsiveness.

VI. Conclusion

This paper began with the observation that issue ownership is accompanied by lack of responsiveness to change in constituency opinion, and then offered empirical evidence for three mechanisms for why this might be the case. By developing a formal model, determining the conditions under which equilibria might exist, and examining comparative statics, I find theoretical evidence supporting the competence and shared preferences hypotheses, but no evidence for the uncertainty hypothesis—and evidence contrary to the consistency hypothesis. (See Table 4.) Further theoretical and empirical exploration of these hypotheses is needed, but this model presents a first take at adjudicating several possible mechanisms that explain the link between issue ownership and non-responsiveness.

Table 4. Theoretical evidence for three mechanisms linking issue ownership to non-responsiveness

Aspect of issue ownership	Hypothesized effect on responsiveness	Theoretical evidence
1. Shared interests between issue-owning party and constituents in the face of uncertainty	decrease	<ul style="list-style-type: none"> • supports shared interest hypothesis • fails to support uncertainty hypothesis
2. Valence advantage for issue-owning party	decrease	<ul style="list-style-type: none"> • supports hypothesis
3. Consistency of stance taken on issue by issue-owning party	decrease	<ul style="list-style-type: none"> • finds evidence contrary to hypothesis

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