Leaders who fail to vote as their constituents would risk defeat in subsequent elections. Two key assumptions underlying this basic formulation of representative democracy are that (A) citizens know how their elected officials vote in the legislature and (B) they base their electoral support on that knowledge. However, scholars studying the degree to which legislators act in the public interest often use measures that make it hard to judge the extent to which representation occurs in this manner and they do not consider whether citizens have the information needed to hold leaders accountable. Drawing upon a large national survey with detailed knowledge and opinion measures, we find that representation is rewarded when citizens are politically knowledgeable. Across seven issues spanning domestic politics and foreign affairs, respondents base their electoral decisions on both correctly stating how their Senator voted on major legislation and their perceived agreement with the Senator’s votes. Furthermore, we show that state-level variations in the amount of media coverage devoted to legislative behavior influences the degree to which citizens hold their representatives accountable. These findings underscore the important role of public knowledge in securing political representation.
Does being knowledgeable enhance democracy? Many studies outline the contours of knowledge and suggest that it structures political reasoning (e.g., Althaus 2003; Delli Carpini and Keeter 1996; Gomez and Wilson 2001). Yet, the vote of any single citizen is unlikely to be pivotal and for many people it is simply not worth the effort to become informed about political matters (Downs 1957; Hardin 2009). Perhaps most of all, even though political knowledge has undergirded the study of political behavior for more than fifty years, there is no clear sense that possessing political knowledge facilitates representation.

This is important because democratic theory, at a rudimentary level, speaks to the relationship between elected representatives and their constituents. Ideally, legislators ought to enact policies consistent with the will of the people they represent (Dahl 1963; Pitkin 1967; cf. Burke 1774). For many years the normative ideal of representation enjoyed empirical support. Beginning with the landmark investigation of constituency influence in Congress by Miller and Stokes (1963) and continuing over the following three decades, study after study showed high degrees of democratic responsiveness across issues and institutions (e.g., Bartels 1991; Page and Shapiro 1983; Monroe 1979; Stimson, MacKuen, and Erikson 1995; Wlezien 1995; for reviews see Manza and Cook 2002 or Burstein 2003).

From this impressive body of work one might be tempted to conclude that public opinion is a reliable predictor of public policy. However, recent trends suggest responsiveness may be on the decline (Monroe 1998; Jacobs and Shapiro 2000) or that it may have severe upper-class biases (Bartels 2007; Gilens 2005; Jacobs and Page 2006; cf. Soroka and Wlezien 2010). In light of these findings, and given the significance of the topic more generally, it seems important to ask whether citizens reward representation or punish deviations from it. Ultimately, democratic responsiveness hinges on an electoral mechanism. When legislators act in opposition to the views of their constituency they risk removal from
office. But it is an open question as to whether citizens actually support politicians who represent them well and remove the ones who do not.

True electoral accountability however, would seem to require two things of the public: 1) citizens must have opinions on the issues, and 2) citizens must know what their representatives are doing in the legislative chamber. Of course, people are not especially well informed about most aspects of politics (e.g., Delli Carpini and Keeter 1996; Bennett 2003) and the extent to which they hold meaningful attitudes has been questioned (Converse 1964). Furthermore, not everyone agrees with such stringent requirements; heuristics can sometimes transcend such deficiencies and improve citizen competence (Sniderman, Brody, and Tetlock 1991; Lupia 1994). But when the electorate has informed opinions, democracy ought to work well. More specifically, in theory constituents should retain politicians who serve their interests and they can punish those who act contrary to their preferences.

But does democracy function this way? That is, are citizens informed about the actions of representatives and does this knowledge translate into support for representatives who support their viewpoints? This paper tests the representation-electoral linkage using a national survey from 2006. We find that most citizens in America know how their Senator voted, and that this knowledge, particularly when coupled with policy agreement on that specific issue, increases the likelihood of supporting the incumbent. Perhaps most importantly, toward the end of the paper we show how the media information environment helps, or in some cases hinders, political representation by providing information and strengthening the relationship between responsiveness and electoral support.

**Representation and Political Information**

Research on representation typically follows one of two paths. The first, sometimes known as “dyadic” representation, seeks to examine representation at a single point in time (Achen 1978; Bartels
Works in this area attempt to compare the preferences of the district (through questions of vague policy preferences across domains) and the legislative choices of their representatives.

A closely related second approach, often termed “congruence” or sometimes “dynamic” representation, examines changes over time in constituent preferences and the resulting changes in public policy (Monroe 1979; Page and Shapiro 1983; Stimson, MacKuen, and Erikson 1995; Weissberg 1978; Wlezien 2004; Hill and Hurley 1999). Scholars working in this area make use of public opinion questions and “feeling” thermometers or other ideological measures to determine how public policy preferences shift over time. The constituent measures are then linked to changes in government policies.

What both variants of the responsiveness literature have in common is a focus on agreement. That is, they examine the extent to which the opinions of citizens guide congressional behavior or public policy.¹ Agreement will be considered here, but in a much more specific way than in the past. One of the major limitations of agreement-based studies is that they lack specificity. Often scholars reduce specific policy preferences to very general liberal-conservative measures such as policy mood (Stimson 1999) and sometimes they employ ideology measures (Bartels 2007). What this means, however, is one cannot connect public preferences to specific pieces of legislation, which is how generic issues become public policy. For example, otherwise conservative citizens might prefer a liberal policy solution in some domains (e.g., conservatives who support Medicare spending). If their elected representatives consider only the ideological make-up of their districts they will not be faithfully transmitting the views of their constituents.

¹ Causality is not always certain (Page 1994) so it might be more apt to speak of the extent to which policies and opinions cohere or correlate.
Collectively we refer to this as the “agreement” theory. When citizens and their representatives agree on policy choices, citizens ought to be more likely to vote for them in the next election. This hypothesis is not especially new; the logic has formed the basis of vote choice studies for more than a half century (Downs 1957). There are doubts as to whether issue-based voting is directional or proximal (Rabinowitz and Macdonald 1989) and even some question about whether it happens at all (Lewis and King 1999). However, policy agreement alone is only part of the story. As we discuss in the next subsection, citizens must know they agree with their representative for accountability to operate in a meaningful way.

_Accountability-Relevant Knowledge_

While scholars working in the responsiveness literature compare constituency goals to policy outcomes, they seldom test whether constituents are aware of legislative actions and how this knowledge impacts their choices in elections. There are studies of how votes in the Clarence Thomas confirmation affected turnout (Hutchings 2001), but missing in this body of work is a direct assessment of whether voters know how their legislators voted and whether constituents use this knowledge to punish or reward at the ballot box. Such an omission might be expected since citizens have incentives to be rationally ignorant (Downs 1957; Somin 2006). Moreover, to suggest that citizens must know any particular fact strikes some as elitist (Lupia 2006).

However, others working in the responsiveness literature have made a more direct case for the importance of knowledge. They might agree with Wlezien’s (1995, 981) statement that, “Democratic accountability requires that the public be reasonably well-informed about policy.” And as Wlezien continues, “The integrity of representation rests on this expectation; after all, if the public did not notice
and respond to changes in policy, then politicians would have little incentive to represent what the public wants” (pgs. 981-982; also see Soroka and Wlezien 2010).

The problem is that knowledge, particularly of legislative behavior, is not widespread. For example, in their pioneering article, Miller and Stokes (1963, 47) wrote that, “Americans are almost totally uninformed about legislative issues in Washington.” Thus, the type of knowledge at the forefront here is accuracy regarding legislative behavior and it is likely to be in short supply. To be sure, political knowledge factors into models of vote choice (e.g., Basinger and Lavine 2005; Nicholson, Pantoja, and Segura 2006; Macdonald, Rabinowitz and Listhuag 1995), but typically it is knowledge not directly related to the actions of the legislator; more often than not, knowledge takes the form of standard questions in the American National Election Studies (ANES) such as recognition of the Chief Justice or the percent of votes needed to override a veto in Congress. It is not clear how knowledge of these topics should to be related to incumbent support.

To the extent that citizens have accurate impressions regarding how their legislators vote, this should impact their likelihood of voting for the incumbent. But this is only half of the story. When citizens are both accurate about their representative’s vote and they agree with those positions, they should be especially likely to vote for the incumbent. This is the main hypothesis tested here—that citizens will reward representation when they know it exists (H1: Accuracy X Agreement → support for the incumbent). It is built upon the other factors prominent in the literature, namely accuracy and agreement, but it demands a more specific set of measures than has been used in the past.

**Competing Theories and Contextual Variation**

Knowledge, of course, is not the only important factor in voting decisions. It is important to acknowledge some competing theories and perspectives. Despite the fact that democracy seems to rest
on an informed citizenry willing to act on that knowledge, citizens often fall short from an informational perspective. However this bodes poorly for the very logic of representation. As Miller and Stokes (1963, 51) wrote, “The constituency must in some measure take the policy views of candidates into account in choosing a Representative.” They conclude that party identification and platforms are the tools that constituents use to bridge the gap in information. Thus, partisanship might be a short-cut for knowledge. Studies have pointed to the importance of partisanship for decades (Campbell et al. 1960). Yet, even party heuristics require some knowledge (Delli Carpini and Keeter 1996). More specifically, to employ partisan affiliation as an informational short-cut, citizens must know the partisanship of their elected official. When citizens and officials have the same partisan leanings and citizens know are aware of the match, they should be especially likely to vote for elected officials.

Our investigation will focus on the degree to which citizens are accurate and agree with their elected officials. To the extent that this takes place, it should support the knowledge-based theory of electoral representation. After examining that basic relationship, our attention shifts to the systematic factors that hinder or help this type of electoral reward mechanism. Specifically, the relationship specified in the first hypothesis should be sensitive to the media environment. We should be more likely

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2 While the mean for political knowledge is low, the variance can be quite high (Converse 1990, 372). However, citizens sometimes show great domain-specific awareness and knowledge (Gilens 2001; Iyengar 1990; Price and Zaller 1993), especially when the media cover the topics (Barabas and Jerit 2009; Jerit, Barabas, and Bolsen 2006). Yet, scholars working in this area have not linked knowledge or media coverage of knowledge items to representation.

3 Of course, partisanship often appears on the ballot so the political world supplies this information readily. Later we will consider whether there are variations in media provision of incumbent partisan positions as well.
to observe the electoral rewarding/punishment in states with media sources that provide information on where elected officials stand. In that sense, the interactive accuracy-agreement relationship should vary as a function of the environment (H2: Media Coverage → Accuracy X Agreement). With both hypotheses, the emphasis is on political knowledge, particularly whether citizens have it and the degree to which the system provides it. Evidence in support of both hypotheses should help shed light on the degree to which political representation functions well.

**Methods and Data**

To determine whether responsiveness is rewarded electorally, we focus on the constituent. In particular, once legislators cast votes in a legislature, we would want to study the process by which constituents develop impressions of those decisions. Once impressions are formed, then constituents choose whether to reward representatives with their vote or punish incumbents by voting against them. In other words, we seek to study the extent to which voters are accurate and agree with their representatives (H1), and how the mass media alter this basic relationship (H2).

To evaluate this multi-step process, we analyzed the Common Content portion of the 2006 Cooperative Congressional Election Study (CCES). This national survey was run by Polimetrix with the Massachusetts Institute of Technology as the lead organization. The survey included modules from dozens of research groups around the country, but a standard set of questions was used on the common content portion the questionnaire which yielded a dataset of more than 30,000 cases. Respondents were selected through representative sampling designed to match the target population of America and were
asked in October and November 2006. Our analysis draws upon respondents living in states that had a Senator up for re-election in 2006.4

Seven Issues in the U.S. Senate

The 2006 CCES differs from other political surveys in that respondents were questions about specific legislative bills as well as their knowledge of how their representative voted. In contrast, most other surveys like the American National Election Studies (ANES) or General Social Survey (GSS) typically measure general feelings towards a particular policy domain. Those questions, while useful for measuring increases or decreases in public support a particular policy do not provide a solid basis for us to compare how respondents would vote on a particular bill, as well as how they believe their representative voted on that particular bill.

CCES asked respondents about seven votes before the Senate: (1) the ban on partial-birth abortions, (2) the Central American Free Trade Agreement, (3) increasing the federal minimum wage, (4) extending the capital gains tax cuts, (5) pathways to citizenship for illegal immigrants, (6) planned phased withdrawal from Iraq, and (7) federal funding for stem cell research. Naturally, these issues received varying amounts of coverage from the media, which is a feature that we will include in our analysis later. Moreover, the topics covered a wide variety of social and economic issues relevant to the electorate.

On each issue respondents were read some introductory text that captured both sides of a real policy debate, asked how they would have voted on the particular bill, and then asked how they believe

4 Four states (Maryland, Minnesota, Tennessee, and Vermont) had Senators who retired prior to the election. Lacking an incumbent senator we dropped them from the analysis. Similarly, Indiana was also dropped because there was no major party challenger for the seat.
their Senator voted. This enables us to compare beliefs about actual Senate votes with the actual votes. The details of the seven bills and question wording appear in the appendix. After each question introduction, respondents were asked, “What do you think? If you were faced with this decision, would you vote for or against...” the bill in question. After that, participants in the survey were asked, “How about <Senator>? Do you think <he/she> voted for or against…” the bill in question.

*Operationalization of Key Concepts*

From these questions we generated variables to determine first whether the respondent was accurate in their perception of how their Senator voted, then second whether the respondent agreed with their perception of how their Senator voted. These variables were named Accuracy(Issue) and Agreement(Issue) where issue represented the seven issues used for our study. If a respondent was correct (or agreed) they were coded as a “1” while everyone who was incorrect (or did not agree) or did not know were coded as a “0.” To test our theory we then created the interaction term Accuracy X Agreement(Issue).

These variables bring the key concepts of Accuracy and Agreement into our model. However it is important to incorporate other important variables into our model as well. Miller and Stokes (1963) find party identification as a key factor for determining support, and we likewise include that variable in our model. Respondents were asked their own party affiliation as well as the party affiliation of their senator. Following the same procedures used for Accuracy(Issue) and Agreement(Issue) described above we created Accuracy(Party) and Agreement(Party) as well as the interaction term Accuracy X Agreement(Party) to account for the impact of party affiliation. Raw counts and percentages for these variables are presented in Table 1.
As shown in Table 1, most respondents possess some knowledge about the legislative choices of their Senators. The average accuracy was nearly 56 percent, ranging from a minimum of 36.6 percent (on CAFTA) to a maximum of 63.8 percent (on Iraq). For agreement the overall average was much less (only 34 percent), ranging from a minimum of 22.6 percent (also on CAFTA) to a maximum of 41.5 percent (on MinWage). Party agreement seems to occur at about the same rate as issue agreement (35% vs. 34%) however party accuracy is much higher at an outstanding 92.1 percent.

The next step involved creating our dependent variable to show how the electoral mechanism in representation is used. Respondents were asked who they planned on voting for in the upcoming election. If their choice was the incumbent Senator IncumbentVote was coded as a “1” while if they selected any other candidate they were coded as a “0.”

For our individual-level controls we created variables to represent some key demographic and social factors. These were age, education, income, gender, and race. Each of these was rescaled to present as a range from 0 to 1. To do so the lowest age was subtracted from each observation in our dataset (17) and then each value was divided by the highest remaining value in our dataset (77). Income was stratified by amounts starting from less than $10,000 to $150,000 or more. Education ranged from no high school degree to a post-graduate degree in .2 increments. We also included dichotomous control variables for gender (Female) and race (Black).

Review of Hypotheses, Operationalization, and Statistical Model

When people possess accurate information regarding their representative’s voting record and that legislative behavior agrees with their personal views, they will be more likely to vote against the challenger and support the incumbent. Restated more formally:

- **H$_1$:** If citizens can accurately recall how their representative has voted in the legislature and they agree with that position, then they will be more likely to vote for the incumbent.
Consistent with the measures discussed earlier, our main hypothesis necessitates a focus on the product term of two variables—Accuracy(Issue) and Agreement(Issue). We believe that the coefficient on an interaction term for Accuracy X Agreement(Issue) should be positive. Furthermore we expect this result even though we include Accuracy X Agreement(Party) (which should also be significant and positive) as well as controls for education, age, income, race, and gender.  

$$\text{IncumbentVote}_{ij} = \beta_0 + \beta_1 \text{Accuracy X Agreement}(\text{Issue})_{ij} + \beta_2 \text{Accuracy}(\text{Issue})_{ij} + \beta_3 \text{Agreement}(\text{Issue})_{ij} + \beta_4 \text{Accuracy X Agreement}(\text{Party})_{ij} + \beta_5 \text{Accuracy}(\text{Party})_{ij} + \beta_6 \text{Agreement}(\text{Party})_{ij} + \beta_k \text{Controls}_{ij} + \epsilon_{ij}$$

Our second hypothesis pertains to how the accuracy perceptions are conditioned by the media environment. In particular, the amount of news coverage on any given issue will alter the relationship between Accuracy X Agreement(Issue) and their choice in the election. Restated more formally,

- \(H_2\): As citizens encounter more (or less) information concerning how their representative has voted in the legislature, it should strengthen (or weaken) the relationship between recall and agreement with that position.

To operationalize this hypothesis, we begin with the original model and then unpack each of the terms by allowing them to vary randomly. Assuming there is sufficient variation, our prediction is that news coverage will explain that variation (i.e., additional news coverage should strengthen the basic

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5 These controls are discussed more thoroughly in the political knowledge literature however for relevant studies see Delli, Carpini, and Keeter (1996) and Gilens (2001) among others. Also, the order of the variables deviates from conventions by placing the interactions first followed by the constituent terms since the main hypothesis concerns \textit{Accuracy X Agreement(Issue)}. 

relationships we specified). This hypothesis and the empirical model will be discussed in more detail later in the paper.

**Empirical Results**

Because our dependent variable *IncumbentVote* is dichotomous, the initial regression uses logit clustered by state.\(^6\) Table 2 displays the results of this model for each particular issue. As we can see from the results, the interaction term of *Accuracy X Agreement(Issue)* is significant and positive across all seven issues even with all of our controls. This is highly consistent with the first hypothesis. For example, the coefficient in the first row of the first column (abort) is 2.664 with a standard error of .273 (p < .001). This suggests that as respondents know how their senator voted on the abortion issue and they personally agreed with that position, then they are more likely to vote for the incumbent. The pattern seen on abortion characterizes each of the other six issues as well as the model shown in the last column which combines all seven issues into a proportion.\(^7\)

We also see that the coefficients for *Accuracy(Issue)* are consistently negative across all seven issues. This coincides with our theory nicely since this represents the support for the incumbent when *Accuracy(Issue)* is “1” and *Agreement(Issue)* is “0” (that is when the respondent accurately knows the

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\(^6\) The logic behind clustering is that the observations are independent across states, but not necessarily within states due to common political culture, media, campaign ads, candidates etc. Later we adopt other specifications (i.e., multilevel) to confront the clustering issue in a different fashion.

\(^7\) We discuss the construction of the variables in the final column of the model estimates later in this subsection, but the general idea is to study the effects of *Accuracy X Agreement* across all issues simultaneously.
position of the Senator but does not agree with that position).\(^8\) While the positive and significant interaction term signals consistent rewarding for constituency representation, the negative terms here indicate that citizens punish incumbents who they know have gone against their preferences.

While \(Accuracy(Issue)\) and \(Accuracy \times Agreement(Issue)\) perform as expected, \(Agreement(Issue)\) is a bit more erratic. Though it is negative in the abortion regression, for every other issue it is consistently positive – however unlike \(Accuracy(Issue)\) and \(Accuracy \times Agreement(Issue)\) the significance of \(Agreement(Issue)\) varies dramatically from significance at the \(p < .01\) level for CAFTA to insensitivity at even the \(p < .10\) percent level for Iraq and Stem. The opinion-policy congruence literature suggests that the impact of \(Agreement(Issue)\) when \(Accuracy(Issue)\) is “0” should be positive (that is, agreement itself should lead to votes for the incumbent) however that literature does not differentiate individuals by their knowledge levels concerning specific bills. Finding that the lack of accuracy in constituent perceptions can sometimes have a significant impact on how they vote fits with the theory presented earlier. It should be clear however that this is not a dismissal of opinion-policy congruence literature but rather a call for better measurements.

Similarly \(Accuracy \times Agreement(Party)\) finds strong positive significance in every regression. Not surprisingly \(Accuracy(Party)\) likewise follows with strong negative significance for every issue. However, interestingly, \(Agreement(Party)\) diverges from the pattern that we find in the Issue section. It finds continued strong positive significance for all issues. From the perspective of our model this means that though \(Agreement(Issue)\) without accuracy is erratic in predicting support for the incumbent, \(Agreement(Party)\) without accuracy is not. This could be for a variety of reasons. Party identification has long been considered a key determinant of support for politicians dating back to Miller and Stokes

\(^8\) For more on interpreting the constituent terms of the interactions see Brambor, Clark, and Golder (2005).
(1963l also see Campbell et al. 1960). However since our regressions focus on specific issues, the impact of agreement may vary across issue types. All four instances of significance in \( \text{Agreement(Issue)} \) occur in issues that have a direct economic impact. \( \text{Agreement(Issue)} \) may have more of an impact in issues that are more complicated and are not as clearly polarized and well-defined about their ramifications. There also may be concerns of issue importance among respondents.

To remedy these concerns we created an eighth model in Table 2 that combines accuracy and agreement for all seven issues. \( \text{Accuracy(Issue)} \) for this model is the summation all issues where the respondent was accurate at perceiving the vote choice of their Senator divided by all applicable issues.\(^9\) \( \text{Agreement(Issue)} \) is the summation of all issues where the respondent agreed with their perception of their Senator’s vote, divided by all applicable issues. For example, a respondent could have been accurate for CAFTA, the capital gains tax, and the minimum wage, while inaccurate for the other four bills. They would receive a score of \( .429 \) (three divided by seven).

We find that in this eighth model, \( \text{Accuracy X Agreement(Issue)}, \text{Accuracy(Issue)}, \text{Accuracy X Agreement(Party)}, \) and \( \text{Agreement(Party)} \) maintain their statistical significance and direction. However the consistent negative significance of \( \text{Accuracy(Party)} \) seems to be reduced to no impact in the Overall regression. This variable did not change so interpreting this coefficient is the same as it is in each of the issue-specific regressions. The negative impact of not agreeing with the party of the incumbent, while accurately being able to label their party, is reduced when a larger number of bills are considered. Conversely, issue agreement jumps from erratic significance in single issue regressions to strong positive significance. This finding would seem to support the opinion-policy congruence literature.

\(^9\) This is important in the cases of respondents who left questions blank, as well as respondents whose senator was not in the Senate at the time of the bill being presented (New Jersey for Abort, CAFTA, and MinWage), and respondents whose senator abstained from a vote (Connecticut for CAFTA).
However our new Accuracy and Agreement coefficients are somewhat more difficult to interpret on their own since both terms are no longer dichotomous but are proportions ranging from 0 to 1. Interpreting Agreement(Issue) in the absence of Accuracy(Issue) is the same as considering a respondent who would agree with their perception of their senator’s votes, while being inaccurate on every vote. While they are highly likely to support the incumbent, these particular circumstances are not substantively interesting. For more interesting substantial impacts we calculated the first differences of this model, as well as each of the issue-specific regressions.

For all first differences we set Age, Education, and Income to their mean values. We also set Female, Black, Accuracy(Party), Agreement(Party), and Accuracy X Agreement(Party) to their median values. Then for the issue-specific first differences we estimated the impact of a change from 0 to 1 in Accuracy(Issue), Agreement(Issue), and Accuracy X Agreement(Issue). However for the Overall model, instead of comparing a change from 0 to 1 for our proportions we instead estimated the change from the 10th to 90th percentile in Accuracy and Agreement (as well as the corresponding product for Accuracy X Agreement). Further we estimated the first difference of a change from 0 to 1 in Accuracy(Party), Agreement(Party), and Accuracy X Agreement(Party) for the Overall model. These first differences (and their confidence intervals) are in presented Figure 1.

10 We set Accuracy X Agreement(Party) to the product of its constituent terms which in this case is the same as the median.

11 A change of 0 to 1 for these proportions would represent a change from inaccuracy on all issues to accuracy on all issues. Instead we opted for a somewhat more conservative change from 0 to 0.73469395102041 on Accuracy X Agreement, .1428571 to .8571429 on Accuracy, and 0 to .8571429 on Agreement.
As Figure 1 displays, we find strong positive significance for our first differences of each issue-specific regression even when considering all of our controls. This is consistent with H1. For example we see that the change in first differences between a respondent who inaccurately perceives how their senator voted on stem, and disagrees with this inaccurate perception to a respondent who accurately perceives their senators vote and agreed with this choice results in an estimated average increase in likelihood of voting for the incumbent of 33.9 percentage points. Beyond this however we do see substantial variation across our issues however. For example, CAFTA (.113) and Abort (.136) are our smallest estimates however they both also seem to have the least dispersion among the data. Since our issues are ordered from the least recent bill to most we also notice a pattern emerging in the date the bills were presented. More recent bills seem to have more significant impact on incumbent support (with the exception of immigration).

The last model for the overall specification contains the strongest coefficient in support of knowledge-based representation. A change from the 10th to the 90th percentile for both accuracy and agreement (and the corresponding interaction term) for a proportion of issues results in a large increase in the likelihood of voting for the incumbent. At the p < .05 level the impact of this is even stronger than the impact of the first difference of \textit{Accuracy X Agreement(Party)}. Substantially this implies that increasing accuracy and agreement for these proportions has more of an effect than changing a respondent from being inaccurate about the party of the incumbent and disagreeing with their perceived party to knowing the incumbent’s political party and being a member of that party.

\textit{The Role of the Mass Media}

To test H2 we must consider environmental-level variables on the impact of individual-level variables. One of the ways Bowers and Drake (2005) suggest to deal with these concerns is to run a
regression for each separate cluster (i.e., state) and compare the variation of the coefficients of interest to considered environmental-level variables. Figures 2 represents the coefficients of Accuracy X Agreement(Issue) for three of the seven issues for some of the states. For the sake of space we only selected three issues which represent social, economic, and international concerns, and we only presented a small number of states.\textsuperscript{12}

These figures show the variation of both the significance of the coefficients and the dispersion of the data (due primarily to cluster sizes). As we can see there is a consistent trend of positive significance on Accuracy X Agreement(Issue) that varies with the amount of news stories published concerning the issue. However there are some deviations that include strong negative significance such as Texas in the stem regression. These would seem to be inconsistent with the argument presented earlier. As such it is worth taking a closer look at some of these particular deviations.

Party platforms correlate with general policy goals. When a constituent sees him or herself as a member of that party they more than likely will agree with some of the policy positions of that party. When Senators cross party lines to vote on particular issues then, they are more likely to be supported by people who by definition do not agree with many of their other choices. In the language of our model, in cases of crossing party lines on voting we will see people who are coded a 1 on Accuracy X Agreement(Issue) but who are very likely to disagree with other viewpoints of the Senator. In the case of Texas, Senator Kay Hutchison (R-TX) voted with forty-four Democrats and eighteen other Republicans to expand federal funding of stem cell research. This received negative news coverage because of the strong pro-life constituency in Texas.

Some other examples become evident as well. Senator Bill Nelson (D-FL) voted with two other Democrats and the majority of Republicans on approving the extension of the Bush tax cuts. This was

\textsuperscript{12} Contact the author for a complete display of figures and coefficients.
almost a straight party vote. He also voted with ten other Democrats to ratify CAFTA, which was a significant goal of the Republican administration. In both circumstances \( \text{Accuracy} \times \text{Agreement(Issue)} \) in Florida is negative and significant regardless of the amount of news stories published. Similarly, both Senators Mike DeWine (R-OH) and Rick Santorum (R-PA) voted for increasing minimum wage. This blow was somewhat softened in both of those states because of economic troubles.

Similarly if both the candidate and the incumbent support the same position on a particular policy, respondents will be comprised of both groups – ones who will likely support the incumbent on some issues, and support the challenger on others. Along the same vein Santorum and his challenger Bob Casey Jr. were both strongly pro-life and the significance of \( \text{Accuracy} \times \text{Agreement(Abort)} \) is tempered by this in Pennsylvania.

Those circumstances aside, across every issue respondents’ accuracy and perceived agreement with Senate roll call behavior strongly predicts votes for the incumbent. This fits in with the basic model of rewarding representation. To the extent that a citizen perceives a Senator as voting consistent with their preferences, they should be more likely to vote for that Senator. We also find consistent variation with \( \text{Accuracy} \times \text{Agreement(Issue)} \) and the number of news stories published. However, one of the major problems with this approach is the inability to combine the data across states and compare variations of key variables. It is unwieldy (twenty-eight different states and seven different issues) and unfortunately it lacks the ability to examine variation at a higher level than the state. It is also susceptible to increased variation due to small clusters size. To remedy that, we follow with our multilevel model.
Environmental-level Model

To include an explanation of the environmental-level information available across states we created a variable reflecting how often the vote record of the incumbent Senator was portrayed in the news. This variable was created through InfoWeb NewsBank and the Audit Bureau of Circulation. The top two circulated newspapers13 for each state (that were available through InfoWeb NewsBank) were searched for one week before and after the bill was voted on in the Senate, as well as the two weeks before the general election. For example, to chart variation in coverage of the abortion vote we used the term “abortion” along with the name of each senator for the state newspapers from March 3, 2003 to March 20, 2003 and from October 24, 2006 to November 7, 2006. Similar procedures were used for the other issues, but the search terms were “CAFTA,” “minimum wage,” “capital gains tax,” “immigration,” “Iraq,” and “stem cell” with the dates corresponded to the appropriate bill.

We included every story that effectively told the policy position of the incumbent Senator. In some cases these were stories about the specific bill, but in others they stated the policy position of the incumbent on these issues. These were hand-coded and reviewed by a second coder to ensure reliability.14 The total after reviewing all articles was around five hundred stories. Since these five hundred stories are separated by twenty-eight states with two newspaper per state and seven issues we grand mean centered the variable to prevent the number of zeros in our dataset from limiting the impact of our variables.

13 Two states, Hawaii and Delaware only had one major newspaper listed in InfoWeb’s NewsBank. Because of this factor we opted to use an average amount of stories for each category.

14 Agreement between the coders on a sample (10%) of the total number of stories exceeded 85 percent. Both coders reviewed and resolved discrepancies to produce unanimity on the measures.
Similarly to include information available about the party affiliation of the incumbent we searched the same time periods of all issues. To guide our search we used the terms “Democrat,” “Democratic,” “(D),” “-D,” and “D-” if the incumbent was a Democrat; we used “GOP,” “Republican,” “(R),” “-R,” and “R-” if the incumbent was a Republican. Rather than hand-code the almost seven thousand results we hand-coded a representative sample (10 percent) and correlated the outcome with the results of the pure Boolean search. The agreement between the hand-coded sample and the Boolean results was 89 percent. The party affiliation news variable was grand-mean centered for symmetry with our other news variables. To create our state-level controls we generated Incumbency as the number of years in office for the candidate. We also used the Cook Political Report\textsuperscript{15} to generate a variable ranging from 1 (low) to 4 (high) tracking the competitiveness of the election, named Competition.

For this model we start with our initial hypothesis, but through two-stage formation transform it into a multilevel model.

\[
\text{IncumbentVote}_{ij} = \beta_0 + \beta_{1j}\text{Accuracy X Agreement(Issue)}_{ij} + \beta_{2j}\text{Accuracy(Issue)}_{ij} + \beta_{3j}\text{Agreement(Issue)}_{ij} + \beta_{4j}\text{Accuracy X Agreement(Party)}_{ij} + \beta_{5j}\text{Accuracy(Party)} + \beta_{6j}\text{Agreement(Party)} + \beta_{kj}\text{Controls} + \varepsilon_{ij}
\]

By allowing the coefficients of our key terms to vary with respect to the amount of news coverage we introduce random variation of our coefficients and introduce state-level variables.

\[
\begin{align*}
\beta_0 &= \gamma_{00} + \gamma_{01}\text{NewsIssue}_j + \gamma_{02}\text{NewsParty}_j + \gamma_{0k}\text{Controls}_j + v_0_j \\
\beta_{1j} &= \gamma_{10} + \gamma_{11}\text{NewsIssue}_j + v_{1j} \\
\beta_{2j} &= \gamma_{20} + \gamma_{21}\text{NewsIssue}_j + v_{2j} \\
\beta_{3j} &= \gamma_{30} + \gamma_{31}\text{NewsIssue}_j + v_{3j} \\
\beta_{4j} &= \gamma_{40} + \gamma_{41}\text{NewsParty}_j + v_{4j} \\
\beta_{5j} &= \gamma_{50} + \gamma_{51}\text{NewsParty}_j + v_{5j} \\
\beta_{6j} &= \gamma_{60} + \gamma_{61}\text{NewsParty}_j + v_{6j}
\end{align*}
\]

This yields the equation given below.

\textsuperscript{15} Report on competitiveness of elections released September 20.
IncumbentVote$_{ij} = \gamma_00 + \gamma_01\text{NewsIssue}_j + \gamma_02\text{NewsParty}_j + \gamma_0k\text{Controls}_j + \nu_0_j + (\gamma_{10} + \gamma_{11}\text{NewsIssue}_j + \nu_1_j)\text{Accuracy X Agreement(Issue)}_{ij} + (\gamma_{20} + \gamma_{21}\text{NewsIssue}_j + \nu_2_j)\text{Accuracy(Issue)}_{ij} + (\gamma_{30} + \gamma_{31}\text{NewsIssue}_j + \nu_3_j)\text{Agreement(Issue)}_{ij} + (\gamma_{40} + \gamma_{41}\text{NewsParty}_j + \nu_4_j)\text{Accuracy X Agreement(Party)}_{ij} + (\gamma_{50} + \gamma_{51}\text{NewsParty}_j + \nu_5_j)\text{Accuracy(Party)}_{ij} + (\gamma_{60} + \gamma_{61}\text{NewsParty}_j + \nu_6_j)\text{Agreement(Party)}_{ij} + \beta_{jk}\text{Controls} + \varepsilon_{ij}

The goal is to account for variation in individual voting for the incumbent, but we are using upper level information so this transformation is necessary. Ignoring the multilevel nature of our data may lead to an increase in Type 1 errors (i.e., falsely rejecting the null hypothesis of no effect) and tilting the scales in favor of finding significant results (Steenbergen and Jones 2002). Employing a multilevel specification also allows us to include state-level controls for characteristics of Senate elections. Lastly it accounts for the different sizes of states by adjusting estimates (i.e., borrowing strength in states with many respondents such as California to obtain better estimates for small states like Wyoming).16

Focusing first on these individual-level covariates in Table 3, in accordance with H1 we expect to find the effect of Accuracy X Agreement(Issue) to be positive and Accuracy(Issue) to be negative in the absence of News(Issue) (or more plainly, in the absence of any news stories). Table 3 shares many similar patterns with our logit issue-specific regressions. Across each issue regressions some specific behavior is evident. For abort Accuracy X Agreement(Issue)’s coefficient is 2.475 with a standard error of .301 (p < .001), while Accuracy(Issue)’s coefficient is -1.667 with a standard error of .167 (p < .001). As expected these trends follow across all issues. Similarly we see the same patterns in Table 3 that were shown in Table 2 concerning the impact of Accuracy X Agreement(Party) with consistent positive significance for p < .001 and Accuracy(Party) with consistent negative significance for p < .001. Also it is evident that Agreement(Party) is significant and positive (unlike Agreement(Issue) which has varied impacts across issues, albeit positive where significant).

16 For more on this subject see Bowers and Drake 2005.
Moving to the environmental-level variables, only two of our triple interactions – immigration and abortion – are statistically significant at the p < .10 level or better. As mentioned previously, however, coefficients for interaction terms can be misleading, especially in the case of the triple interaction used here (e.g., Brambor, Clark, and Golder 2005). A better evaluation of the second hypothesis uses the first differences of Accuracy X Agreement X News(Issue). These are displayed in Figure 4.

As Figure 4 shows there is variation across the issues consistent with both the number of stories and how recent the bill was voted upon. Abortion received a moderate amount of news coverage but the bill was passed three years prior to the survey and consequently ends up with the lowest first difference. CAFTA was voted on almost a year and a half prior to the survey and received a minimal amount of news coverage across our states. This pattern holds fairly steady with slight deviations for immigration (very recent with a high number of stories and slightly less impact than CapTax which has fewer stories and was earlier) and stem cell (very recent with a high number of stories but still slightly less than Iraq). Each of these still maintains far larger impacts than CAFTA and abort. This provides strong support for H2 despite the inconsistency of our environmental-level interactions.

The estimates presented in Table 3 and Figure 4 are limited in that they represent the effect of agreement and accuracy on voting for the incumbent for each issue separately. In examples shown in our individual-level model, one issue is not necessarily the best way to look at the impact of Accuracy X Agreement X News(Issue). However, because of the nature of the variable News(Issue), creating a proportional variable similar to that in Table 2 is not practical. Instead Figure 5 shows the first

17 First difference of a combined change to NewsIssue from the 10th percentile to the 90th percentile while changing AccAgree from 0 to 1, and all constitutive terms.
differences for a comprehensive multilevel model that includes all of the issues simultaneously in the regression. Because of the amount of independent variables (i.e., more than sixty variables predicting incumbent support), this regression is available in the supplemental appendix.\textsuperscript{18}

Insert Figure 5 here.

As the figure shows, the first differences vary considerably when including all issues. This relationship seems somewhat contingent on the date of the bill as well as the number of stories covering the position. It is interesting to note that the first difference of all issues combined is slightly larger than that of party identification. But for every issue except CAFTA, there is strong support for H2. The strength of the Accuracy X Agreement(Issue) coefficient depends on the level of news coverage in the state. As citizens are given more information, they are better able to reward Senators who champion their interests in Congress and punish those who do not.

It is worth commenting on other aspects of the model. In particular, the first difference of party identification is strongly positive and significant at slightly greater than thirty percentage points. That is to say the coefficient of Accuracy X Agreement(Party) changes considerably as more information appears about the partisanship of the Senator. Given the strength of party identification, it is even more encouraging to see that citizens take issue responsiveness so seriously and use it in their voting calculus.

Conclusion

In democracies, voters elect politicians to represent their interests. In theory, they will remove representatives who not. That means the calculus of representation requires an electorate that can judge politicians based on their actions in office. Despite the centrality of such issues, there has been surprisingly little research on this topic. We find that voters often possess representation-relevant

\textsuperscript{18} First difference of a combined change to \textit{NewsIssue} from the 10$^{\text{th}}$ percentile to the 90$^{\text{th}}$ percentile while changing \textit{AccAgree} from 0 to 1, and all constituent terms.
knowledge and they use it to reward leaders who act in their interests. Furthermore, this basic relationship—between being accurate and agreeing with leaders—increases in states where media coverage of elite actions is plentiful.

Even though we documented these relationships on seven major national issues, before generalizing it is important to remember that the election in 2006 was a year that saw incumbents removed from office. In fact, the Republicans lost control of Congress, and a variety of other factors (corruption, wartime conditions, etc) may have altered the decision-making calculus that people employed in this particular election. Furthermore, a key assumption was that Senatorial races we studied which included challengers did not differ substantially from those without challengers. The same assumption of homogeneity applies to the states we studied, which were roughly randomized due to the constitutional provision electing one-third of the Senate every two years. Lastly, we attempted to control for quality of the incumbent (e.g., years in office for the incumbent as well as competitive of the race), but dynamics in some races (i.e., poor campaigns or resources from the national parties) might have influenced the vote choices of individuals.

Perhaps the most definitive way of acknowledging that there is “more out there” than what we studied is that the variance components in our multilevel models are consistently significant even after adding the factors we show to be important. That is, likelihood-ratio tests for all components are significant (p < .001) for all versions of the accuracy and agreement interactions on the issue and party terms. These terms, along with the significant random intercept, suggest that although our model explains some variation, there is still more work to be done.

These concerns aside, we find that constituents use their knowledge of elite behavior in voting. We also show that rewards for representation increase as substantive news coverage increases. Both findings highlight the importance of information in a democracy and the media’s role in providing it.
References


Appendix

Partial-birth Abortion Ban (shortened to "Abort" hereafter): Passage of the bill would amend the Federal criminal code to prohibit any physician or other individual from knowingly performing a partial-birth abortion, except when necessary to save the life of a mother whose life is endangered by a physical disorder, illness, or injury. Senate Bill 3 in the 108th Congress passed the Senate 64 votes for it versus 33 votes against (the party totals were Republicans 48 for vs. 3 against, Democrats 16 for vs. 30 against) on March 13, 2003.

Survey respondents were read the following introduction and then asked two questions: “First, we'd like to ask about a proposal in Congress to ban a type of late-term abortion sometimes called ‘partial-birth abortion.’ Some argue that late-term abortion is a barbaric procedure and should be banned. Others argue that late-term abortions are extremely uncommon and used only in exceptional circumstances best determined by a doctor, not the Congress. The proposed legislation could also be the opening to a broader ban on abortion.”

Central American Free Trade Agreement (“CAFTA”): Passage of the bill would implement a free trade agreement between the United States and Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and the Dominican Republic. It also would eliminate customs duties on all originating goods traded among. Senate Bill 1307 in the 109th Congress passed the Senate 54-45 (R 43-12, D 11-33) on June 30, 2005.

Respondents were read the following question: “This year Congress also debated a new free trade agreement that reduces barriers to trade between the U.S. and countries in Central America. Some politicians argue that the agreement allows America to better compete in the global economy and would create more stable democracies in Central America. Other politicians argue that it helps businesses to move jobs abroad where labor is cheaper and does not protect American producers.”

Minimum Wage Increase (“MinWage”): Passage of the amendment would increase the minimum wage to $5.70 six months after the bill's enactment and to $6.25 one year later. A three-fifths majority vote (60) of the total Senate is required to waive the Budget Act. Senate Amendment 2063 to House Resolution 3058 in the109th Congress (the “Kennedy Amendment”) was rejected by the Senate 47-51 (R 43-12, D 11-33) on October 19, 2005.

Respondents were read the following: “Congress considered a proposal to increase the federal minimum wage from $5.15 to $6.25 within the next year and a half. Some politicians argue that the wage should be increased because it hasn't changed since 1997 and many workers still live in poverty. Other politicians argue that raising the wage might force small businesses to cut jobs and would hurt the economy. What do you think? If you were faced with this decision, would you vote for or against increasing the minimum wage?”

“How about <Senator>? Do you think <he/she> voted for or against increasing the minimum wage?”

Capital Gains Tax (“CapTax”): Passage of the bill would extend about $70 billion in tax cuts over a five-year period. Reduced tax rates on capital gains and dividends would be extended through 2010. It would extend through 2009 a tax provision that allows small businesses to write off up to $100,000 in capital investments in the year they are made. It would extend for one year and set higher alternative

Respondents were read the following: “We'd like to ask about cutting taxes on the money people make from selling investments, also referred to as capital gains. This past year the Senate considered a bill to extend capital gains tax cuts passed in 2001. Some politicians argue that these tax reductions make the economy strong and encourage people to invest more. Others argue that the plan would mostly benefit people who are already rich and that any tax cuts should be shared more fairly among all taxpayers.”

**Immigration Reform (“Immi”):** Passage of the Comprehensive Immigration Reform Act of 2006 that would overhaul U.S. immigration policies and offer a path to citizenship for most illegal immigrants in the country. It would subdivide illegal immigrants into three groups based on how long they had been in the United States. Illegal immigrants in the country more than five years would be able to stay and earn citizenship; those here between two and five years would have three years to file paperwork for a temporary work visa, after which they would be eligible for permanent legal residency; and those here less than two years would have to return to their native country and go through normal channels if they want to return. It would create a guest worker program that could accommodate an additional 200,000 immigrants a year. It also would authorize increased border security and enforcement provisions, including a requirement for businesses to verify documents of all prospective employees through an electronic system managed by the Department of Homeland Security. Senate Bill 2611 in the 109th Congress passed the Senate 62-36 (R 23-32, D 39-4) on May 25, 2006.

Respondents were read the following: “Another issue is illegal immigration. One plan considered by the Senate would offer illegal immigrants who already live in the U.S. more opportunities to become legal citizens. “Some politicians argue that people who have worked hard in jobs that the economy depends should be offered the chance to live here legally. Other politicians argue that the plan is an amnesty that rewards people who have broken the law.”

**Iraq Troop Redeployment (“Iraq”):** Passage of the amendment would express the sense of Congress urging the president to begin phased redeployment of U.S. troops from Iraq starting in 2006 and to submit to Congress by the end of 2006 a plan with estimated dates for continued phased withdrawal. Senate Amendment 4320 to Senate Bill 2766 in the 109th Congress (the “Levin Amendment”) was rejected by the Senate 39-60 (R 1-54, D 38-6) on June 22, 2006.

Respondents were read the following: “Congress also debated a proposal that the president begin phased redeployment of U.S. troops from Iraq starting this year and submit to Congress by the end of 2006 a plan with estimated dates for continued phased withdrawal. “Some politicians argue that setting out a plan to withdraw would make Iraqis take responsibility for their country and become more independent of the U.S. Others argue that it is too early to start withdrawing, and that doing so would make terrorists grow bolder.”

**Stem Cell Research Enhancement (“Stem”):** Passage of the bill would permit federal funds to be used to support medical research into therapies derived from embryonic stem cells. Funds would be restricted to research on human embryos slated to be destroyed by fertility clinics. Senate Bill 471 in the 109th Congress passed the Senate 63-37 (R 19-36, D 44-1) on July 18, 2006.
Respondents were read the following: “Now we’d like to ask you about whether the federal government should fund stem cell research. Some in Congress argue that this research may lead to cures for diseases and disabilities affecting large numbers of Americans, and should be funded. Others argue that a potential human life has to be destroyed in order to use these cells, and funding it would be unethical.”
Table 1: Levels of Accuracy, Agreement, and Accuracy X Agreement

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Note: In each column of the table, 1 indicates accurate perceptions of Senatorial voting patterns (for accuracy), agreement between the citizen and their Senator (for Agreement), and the combination of accuracy and agreement (Accuracy X Agreement). The zero categories represent inaccuracy, disagreement, or a lack of accuracy and agreement.
Table 2: Issue Specific Logit Models of Incumbent Support

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Note: Robust standard errors, clustered by state, are presented in the parentheses

***p < .01; ** p < .05; * p < .10 (one-tailed).
Figure 1: First Differences of Accuracy X Agreement for Issue Specific Model of Incumbent Support.

**First Differences for Logit Model of Incumbent Support**

Note: The black dots represent the mean estimate. Confidence intervals (95%, two-tailed) are shown in gray shading.
Figure 2: The Relationship between Media Coverage and the Size of the Accuracy X Agreement Coefficients for State-Specific Models

Panel A: Immigration

Panel B: Stem Cell

Panel C: Minimum Wage

Note: The number of stories appears next to each state abbreviation in parentheses. The black dots represent the coefficient estimate. Confidence intervals (95%, two-tailed) are shown in gray shading.
Table 3: Issue Specific Multilevel Logit Models of Incumbent Support

<table>
<thead>
<tr>
<th>Individual Variables</th>
<th>Abort</th>
<th>CAFTA</th>
<th>MinWage</th>
<th>CapTax</th>
<th>Immi</th>
<th>Iraq</th>
<th>Stem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy X Agreement(Issue)</td>
<td>2.475 ***</td>
<td>.934 ***</td>
<td>2.283 ***</td>
<td>3.362 ***</td>
<td>1.319 ***</td>
<td>3.564 ***</td>
<td>2.834 ***</td>
</tr>
<tr>
<td></td>
<td>(.301)</td>
<td>(.179)</td>
<td>(.475)</td>
<td>(.505)</td>
<td>(.225)</td>
<td>(.463)</td>
<td>(.549)</td>
</tr>
<tr>
<td>Accuracy(Issue)</td>
<td>-.167 ***</td>
<td>-1.178 ***</td>
<td>-.821 ***</td>
<td>-.979 ***</td>
<td>-1.324 ***</td>
<td>-2.064 ***</td>
<td>-.734 ***</td>
</tr>
<tr>
<td></td>
<td>(.192)</td>
<td>(.103)</td>
<td>(.256)</td>
<td>(.246)</td>
<td>(.162)</td>
<td>(.273)</td>
<td>(.286)</td>
</tr>
<tr>
<td>Agreement(Issue)</td>
<td>-.140</td>
<td>.779 **</td>
<td>.620 **</td>
<td>.377 *</td>
<td>.758 ***</td>
<td>-.256</td>
<td>.169</td>
</tr>
<tr>
<td></td>
<td>(.130)</td>
<td>(.124)</td>
<td>(.280)</td>
<td>(.256)</td>
<td>(.108)</td>
<td>(.224)</td>
<td>(.305)</td>
</tr>
<tr>
<td>Accuracy X Agreement(Party)</td>
<td>1.507 ***</td>
<td>1.808 ***</td>
<td>1.489 ***</td>
<td>1.164 ***</td>
<td>1.644 ***</td>
<td>1.546 ***</td>
<td>1.554 ***</td>
</tr>
<tr>
<td></td>
<td>(.270)</td>
<td>(.245)</td>
<td>(.276)</td>
<td>(.272)</td>
<td>(.506)</td>
<td>(.271)</td>
<td>(.257)</td>
</tr>
<tr>
<td>Accuracy(Party)</td>
<td>-.558 ***</td>
<td>-.644 ***</td>
<td>-.545 ***</td>
<td>-.454 ***</td>
<td>-.859 ***</td>
<td>-.444 ***</td>
<td>-.547 ***</td>
</tr>
<tr>
<td></td>
<td>(.143)</td>
<td>(.110)</td>
<td>(.152)</td>
<td>(.135)</td>
<td>(.268)</td>
<td>(.136)</td>
<td>(.170)</td>
</tr>
<tr>
<td>Agreement(Party)</td>
<td>1.818 ***</td>
<td>1.777 ***</td>
<td>1.881 ***</td>
<td>1.878 ***</td>
<td>2.172 ***</td>
<td>1.619 ***</td>
<td>1.763 ***</td>
</tr>
<tr>
<td></td>
<td>(.241)</td>
<td>(.249)</td>
<td>(.238)</td>
<td>(.241)</td>
<td>(.456)</td>
<td>(.237)</td>
<td>(.249)</td>
</tr>
</tbody>
</table>

| Environmental Variables               |           |           |            |            |           |           |          |
|Accuracy X Agreement X News(Issue)     | .340 *    | -.268     | .000       | -.231      | .399 ***  | -.130     | .026     |
|                                       | (.254)    | (.393)    | (.596)     | (.865)     | (.101)    | (.177)    | (.209)   |
| Accuracy X News(Issue)               | -.211     | .141      | .196       | -.363      | -.112 *   | .072      | -.003    |
|                                       | (.166)    | (.249)    | (.329)     | (.445)     | (.073)    | (.100)    | (.109)   |
| Agreement X News(Issue)              | -.014     | .106      | .129       | .030       | -.223 *** | -.080     | .056     |
|                                       | (.098)    | (.269)    | (.325)     | (.443)     | (.055)    | (.098)    | (.116)   |
| News(Issue)                          | -.336 *** | -.037     | -.097      | -.159      | -.079     | .114      | -.136 ***|
|                                       | (.127)    | (.177)    | (.206)     | (.236)     | (.074)    | (.040)    | (.056)   |
| Accuracy X Agreement X News(Party)   | .001      | .001      | .000       | .001       | .000      | .000      | -.002    |
|                                       | (.003)    | (.003)    | (.003)     | (.003)     | (.003)    | (.003)    | (.003)   |
| Accuracy X News(Party)               | .001      | .001      | .001       | .001       | .002 *    | .002      | .002     |
|                                       | (.002)    | (.001)    | (.002)     | (.002)     | (.002)    | (.002)    | (.002)   |
| Agreement X News(Party)              | -.002     | -.003     | -.003      | -.002      | -.003     | -.001     | -.001    |
|                                       | (.003)    | (.003)    | (.003)     | (.003)     | (.003)    | (.003)    | (.003)   |
| News(Party)                          | .000      | -.002     | -.002      | -.002      | -.001     | -.004 *** | -.001    |
|                                       | (.002)    | (.001)    | (.002)     | (.002)     | (.002)    | (.002)    | (.002)   |

| Variance Components                  |           |           |            |            |           |           |          |
|Accuracy X Agreement(Issue)           | 1.193 *** | .455 ***  | 2.073 ***  | 2.226 ***  | .858 ***  | 2.199 *** | 2.496 ***|
|                                       | (.267)    | (.155)    | (.342)     | (.387)     | (.174)    | (.339)    | (.405)   |
| Accuracy(Issue)                      | .801 ***  | .310 ***  | 1.176 ***  | 1.147 ***  | .697 ***  | 1.326 *** | 1.336 ***|
|                                       | (.186)    | (.125)    | (.203)     | (.192)     | (.132)    | (.212)    | (.229)   |
| Agreement(Issue)                     | .037      | .246 **   | 1.028 ***  | .992 ***   | .294 ***  | .903 ***  | 1.153 ***|
|                                       | (.692)    | (.114)    | (.206)     | (.203)     | (.109)    | (.159)    | (.243)   |
| Accuracy X Agreement(Party)          | .257 **   | .000      | .337 **    | .272 **    | .313 ***  | .275 **   | .000     |
|                                       | (.126)    | (.271)    | (.148)     | (.120)     | (.120)    | (.151)    | (.825)   |
| Accuracy(Party)                      | .382 ***  | .173 *    | .433 ***   | .316 ***   | .407 ***  | .315 ***  | .567 *** |
|                                       | (.115)    | (.126)    | (.125)     | (.118)     | (.131)    | (.097)    | (.123)   |
| Agreement(Party)                     | .000      | .361 ***  | .000       | .004       | .000      | .236 *    | .168     |
|                                       | (.287)    | (.126)    | (.474)     | (.279)     | (.364)    | (.304)    | (.168)   |
| Constant                              | .438 ***  | .231 ***  | .519 ***   | .527 ***   | .610 ***  | .352 ***  | .440 *** |
|                                       | (.093)    | (.075)    | (.108)     | (.098)     | (.117)    | (.084)    | (.102)   |
| Observations                          | 14586     | 14268     | 14533      | 15035      | 15051     | 15057     | 15043    |
| Clusters                              | 27        | 26        | 27         | 28         | 28        | 28        | 28       |
| \(\chi^2\)                           | 367.4 *** | 83.5 ***  | 383.0 ***  | 628.0 ***  | 501.5 *** | 692.9 *** | 551.1 ***|

Standard Errors in paranthesis. Control variables omitted for space.

*** \(p < .01\); ** \(p < .05\); * \(p < .10\) (one-tailed).
Figure 4: First Differences of Accuracy X Agreement X News(Issue) for Multilevel Issue Specific Model of Incumbent Support.

Note: Number of news stories in parentheses with the date of the bill beneath.
Figure 5: First Differences of Accuracy X Agreement X News(Issue) for Multilevel All Issue Model of Incumbent Support.

Note: Number of news stories in parentheses with the date of the bill beneath.