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Extremity in Congress: Communications versus Votes

I propose a theory of legislator-to-constituent communication that describes a relationship between the types of votes a legislator reveals and the partisan composition of her constituency. To test this theory, I use an original data set of 40,000 official communications containing 30,000 vote revelations from the 111th Congress. I find evidence substantiating this theory; the extent to which a legislator endeavors to appear more ideologically extreme in communications varies systematically with the relative amounts of different types of voters in her district. This result is contrasted with an analysis of voting extremism where I find that the ideological preferences of donors better explain voting patterns.

If all we knew about a legislator was what she told us, would our understanding of her ideology differ from what we would learn from relying on direct observation of voting behavior? Do different factors correlate with how legislators vote versus how legislators decide to selectively communicate some of those votes to constituents? The answers to these questions are important for our understanding of democratic accountability as strategic communication techniques may alter voters' ability to assess the ideological positions of their representatives. To better hold legislators accountable, voters need an accurate understanding of legislator ideology. If legislators attempt to shift perceptions of their ideology by selectively revealing votes, voters may end up falsely feeling more informed, even though this information may be strategically skewed.

In this article, I present a theory of strategic vote revelation that yields a testable hypothesis about how differently situated legislators present their votes. Put simply, when deciding whether to reveal a vote that splits a legislator's constituents, a legislator faces a choice of whom to alienate. A long line of research, starting with Cox and McCubbins (1986), indicates that the relevant and most likely voters for each legislator can be divided into two camps: base and swing voters. Given this division, I hypothesize those legislators who anticipate a higher marginal

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risk of vote abstention or defection associated with alienating base voters will tend to omit votes in which they more likely sided with the preferences of swing voters and vice versa. The aggregate effect of this self-censoring is for legislators to present an ideological version of self in communications that may differ systematically from that suggested by their voting behavior. I situate my theory of strategic communication against literature analyzing ties between financial donors and legislator voting behavior to assess likely sources for the potential divergence of voting and communicating (Bartels 2008; Bonica, McCarty, and Rosenthal 2013; Gilens 2009). I seek to provide answers to the following questions: (1) Do legislators engage in systematic attempts to shift ideological perceptions of their policy preferences in their communications? (2) If so, which factors are most related to voting strategy, and which are most related to communication strategy?

To test my theory, I analyze an original data set of over 40,000 legislator-to-constituent communications sent during the 111th Congress, using a methodological innovation building on the ideal-point-estimation technique of Clinton, Jackman, and Rivers (2004).[1] During this period, 95% of Representatives and 85% of Senators sent official electronic messages to constituents. Using the votes a legislator reveals in her communications, I estimate a communicated ideal point (CIP) and compare this to her behavioral ideal point (BIP), which is based on her full voting history. It is useful to study these communications because, unlike media reports, broadcast interviews, or floor speeches—all of which are subject to external constraints, i.e., different agenda setters, specific interview questions, and time limits that may compel certain types of speech—official messages are optional, and the scope of each message is at the discretion of the sender.[2] Strategic vote revelation may have consequences for voter knowledge as somewhere between 14 and 19% of US adults report they have subscribed to official congressional communications at some point (Ansolabehere and Schaffner 2012).

I find that there is a positive correlation between CIP and BIP estimates, but this relationship is not perfect, and, on average, the measures are distinct. Second, I observe an overall leftward ideological shift, with CIP estimates being more extreme for Democrats and more moderate for Republicans than BIP estimates. Third, I find that the likelihood that a legislator presents a CIP that is more extreme than her BIP is conditional on district characteristics, most importantly the ratio of base-to-swing voters. Fourth, I confirm findings that relate donor ideological extremity to voting extremity. I conclude with a discussion of why different factors likely contribute to voting strategy versus communication strategy and the implications of this divergence.

Overall, the direction of ideological shift is consistent with my theoretical expectation that a legislator will attempt to appear more ideologically similar to whichever subset of voters—base or swing—that she considers more important for re-election. This is the case even when accounting for other possible factors thought to influence communication choices of a legislator. In contrast, I find that a distinct set of explanatory variables better account for voting behavior, suggesting that legislators choose voting and communication strategies with different influences in mind.

Constituent Communication Expectations

Most research on legislator ideology focuses on roll-call votes; yet since the 1970s, researchers have posited that legislators strategically communicate information to constituents in an effort to enhance re-election prospects, with the most detailed description of this effort being Fenno's notion of legislator "homestyle" (Fenno 1978; Fiorina 1977; Mayhew 1974; Vavreck 2009). The strategy often outlined by strategic communications research largely focuses on the touting of pork directed to the home district or efforts on behalf of an important constituent industry. However, no one argues voters use a decision rule based simply on the amount of money ostensibly brought back to the district by incumbents to inform their voting decision; voters likely also care about the political ideology of their legislators.

There are a few lines of research to consider when forming expectations of how a legislator will approach constituent communications regarding voting decisions. Research about how a legislator ought to vote to optimize re-election chances and how a legislator ought to communicate to optimize re-election chances does not always come to the same conclusion. We have far more empirical research on voting strategies, but there is a growing body of work that attempts to empirically test communication tactics of legislators. Most work on communication relies on small samples because collecting and coding such vast corpora is time consuming and was previously computationally unfeasible (Grimmer and King 2010).[3] Thus, despite great interest in congressional research, we know surprisingly little about the strategic communication efforts of legislators.

The out-of-step, out-of-office theory based on voting behavior argues that there is an electoral penalty for extremism (Canes-Wrone, Brady, and Cogan 2002). If this were the case for political communication, we would expect that legislators would never try to appear more extreme in communications than in reality. Yet a quick perusal of the

types of votes legislators choose to write about to constituents indicates that there is more text dedicated to contentious bills that split parties and sometimes divide parties internally than on unanimous votes that are more likely to be moderate in nature.

Additionally, recent work finds that excessive polarization is common in Congress, and in some realms legislators are more extreme in their voting than even their primary constituencies (Kastellec, Lax, Maleki, and Phillips 2014). Unless this empirical claim is wrong, then why would it ever be optimal for a legislator to present an ideological image that is more extreme than her vote-based ideological image? Work on online campaigns—while not totally analogous to online in-office official communications—offers some insight. When campaigning online legislators tend to send reinforcing messages to their target audiences, mobilizing activists and strengthening partisans' views (Bimber and Davis 2003; Foot and Schneider 2006). But a legislator fearful of losing an upcoming primary to a more extreme candidate faces incentives to try to woo more extreme primary voters and thus may want to vote or communicate in a more extreme manner.

Another consideration that informs what to expect of these communications is that of the target audience. A study of electronic message recipients from state-level campaigns indicates that recipients tend to be more extreme than the general population (Herrnson, Stokes-Brown, and Hindman 2007). To find out how many and what types of people sign up for federal official e-newsletters and RSS feeds, I placed a question on the 2012 Cooperative Congressional Election Study (CCES).[4] Approximately 19% of respondents reported signing up for official messages from their Representative and 14% from their Senators at some point in their lives.[5] Table 1 displays some differences of interest between subscribers and nonsubscribers.

Those who indicated they had subscribed to such communications are, on average, older, more educated, wealthier, more politically active, slightly more politically extreme, are more likely to vote in primary elections, more likely to approve of their incumbent legislators, and more likely to think higher of Congress in general than nonsubscribers. A fear of losing a primary to a more extreme candidate coupled with the knowledge that people who subscribe to political e-newsletter communications tend to be more extreme offers some basis for the idea that legislators may attempt to appear more extreme.[6]

Despite the finding that subscribers tend to be more ideologically extreme than nonsubscribers, there is no consensus that legislators are writing specifically to either base or swing voters. It is also not clear if one group of voters is more or less likely to change voting intention

TABLE 1
Average Differences between E-Newsletter Subscribers and Nonsubscribers = CCES 2012

	Subscribers	Nonsubscribers	Difference
Voted in a Primary Election	68%	41%	17%*
Age	53	46	7*
Female	46%	53%	7%
Education Attainment	3.65	3.11	0.54*
Registered Voter	92%	77%	15%*
Family Income Level	19.84	16.28	3.56
Conservative Ideology	4.42	4.19	0.23
Representative Disapproval	2.36	2.4	0.04
Senator 1 Disapproval	2.32	2.51	0.19
Senator 2 Disapproval	2.14	2.47	0.33*
Congressional Thermometer	3.11	3.61	0.50*
Contact Elected Official	73%	23%	50%*
Attend Political Meeting	44%	21%	23%*
Boycott Politically	59%	32%	27%*
Attend March or Rally	17%	8%	9%*
Post Opinion Online	81%	47%	34%*
Distribute Political Info	52%	19%	33%*
Donate Money	50%	23%	27%*
Use Twitter	24%	21%	3%
Use Other Social Media	75%	68%	7%
N	259	741	

Note: Data and question wording available at http://projects.iq.harvard.edu/cces/home.
*$p < 0.05$.

based on vote revelations. Unlike campaign communications, which are sometimes quite recipient specific in their content as a result of microtargeting efforts (Issenberg 2012; Nickerson and Rogers 2014), official communications are nearly always the same regardless of the receiver. The only potential for constituents of the same district to see different official messages arises if a legislator asks subscribers to select different topics of interest to limit the types of messages that each subscriber receives. This does not threaten the analyses here for three reasons: (1) very few legislators (7%) have this option; (2) even when legislators have such an option, many eschew writing specific category letters and instead just compose and send general letters that all subscribers receive; and (3) if a legislator has such a system, I subscribed to all categories.

In the middle of the 111th Congress, I was able to conduct two phone interviews with press secretaries of sitting Representatives—both desired to remain anonymous; one worked for a Republican and one for

a Democrat. Neither press secretary indicated that the e-newsletters were crafted for certain types of voters. Because the messages are textually recorded, and legislators encourage recipients to forward the messages to their families and friends, the anticipated audience is understood to be broader than just base voters.

In an early study of political communication, Mayhew (1974) distinguishes three types of communication tactics: credit claiming, advertising, and position taking. Credit claiming is a relatively well-studied behavior that includes the promotion of particularized benefits to constituents ostensibly obtained by a legislator. This tactic has been expertly analyzed by Grimmer (2013). Advertising, as defined by Mayhew, has not been subject to much scholarly interest because it simply involves an attempt to increase name recognition of an incumbent. Position taking, which is characterized by the stating of policy or ideological preferences, has been attended to in various manners (Box-Steffensmeier, Arnold, and Zorn 1997; Highton and Rocca 2005; Koger 2003), but the specific focus on vote revelation as a constituent communication strategy has not yet been explored in the literature. Vote revelation, which I address in this article, is a subset of position taking as it relies on communicating a specific vote associated with a position, rather than simply stating an ideological preference.

Despite the lack of a literature on strategic vote revelation, a considerable theoretical literature aims to explain different facets of strategic information revelation. While not explicitly considering vote revelation, this research provides guidance on what actions election-minded legislators will take. A legislator will attempt to influence her constituency's understanding of her position and should send a message only when there is a true belief in the possibility of persuading her audience (Austen-Smith 1992; Landa and Meirowitz 2009). Second, a legislator will attempt to reveal information aligned with the wishes of her electorate (Gratton 2010; Heidhues and Lagerlof 2003). Thus, a legislator will communicate with an expectation of influence over voter perceptions and, as such, the methods she uses to accomplish this goal are worthwhile indicators of intent and deserving of academic attention.

A Heuristic Model of Strategic Vote Revelation

In this section, I describe the considerations that should lead differently situated legislators to reveal certain types of votes. The basic intuition is as follows: each legislator has a constituency made of base (copartisan) and swing (independent) voters.[7] These voters can be theoretically characterized by the median ideological preference of each

group. For a legislator, publicizing a vote can alienate both groups, please both, or alienate one while pleasing the other. The willingness to publicize a vote in the third case will vary according to the marginal benefit of pleasing one group compared to the cost of alienating the other. Over time, the aggregate result of such legislator calculations generates a kind of selection bias in which a legislator can appear more extreme or more moderate than her full voting history suggests.

Assumptions

Base voters are those who will likely vote for an incumbent by virtue of party labels or previous commitments, but they may abstain. Swing voters may support an incumbent, but they may also support a challenger or abstain. I—noncontroversially—hold that the median base voter is more ideologically extreme than the median swing voter. I assume a voter prefers a legislator who is ideologically closer to him, ceteris paribus, and the legislator knows this (Downs 1957). I also assume a voter's ability and willingness to expend resources to accurately learn legislator ideology is small (Delli-Carpini and Keeter 1996). Lastly, I assume that voters are not negatively introspective, meaning that voters do not make inferences about legislator ideology from the absence of communication (Dickson, Hafer, and Landa 2008).

I assume legislators wish to be re-elected above all other goals (Mayhew 1974). I also assume that legislators vote sincerely but communicate strategically to maximize electoral prospects. Of course, the assumption that legislators vote sincerely in every circumstance is unrealistic (Poole and Rosenthal 1997). It is meant to capture, in reduced form, the idea that while a host of influences—including donors, party pressures, agenda control, as well as the legislator's personal ideology and that of her broader electorate—may affect her vote choice, the decision of how to communicate is predominantly about appealing to voters. I estimate models of both communicating and voting to assess the plausibility of this assumption.

Knowing voters are in a costly information environment, a legislator will attempt to influence perceptions to remind her base to vote for her, convince swing voters to choose her, and generally serve to lower information costs associated with voting for all potential supporters (Aldrich 1995). Vote revelation content is verifiable, and I assume a legislator will not lie about her vote.[8] Lastly, I assume that sending each vote-revealing message is associated with some small cost made up of staff time used drafting a message and the opportunity cost of not talking about some other issue.

Hypothesized Legislator Strategy

Consider a one-dimensional ideological space with the left-most end representing liberal and the right-most end representing conservative. To keep matters simple, think of an incumbent Democrat situated between her median base and median swing voters occupying one-half of the spectrum. While variations in legislator and constituent median positions are possible for any given vote, this is the most likely arrangement for the overall organization of voters and incumbents across policies. The assumption that a legislator is between her median base and median swing voters is justifiable. If an incumbent is more extreme than her base—unless the base is a 50%+1 of all voters—it is unlikely that she would continue to be electorally successful; the same is true if she were more moderate than the median swing voter.[9] Empirically, during the 111th Congress, self-identified Democrat voters are an absolute majority as opposed to self-identified Republicans and independents in only 14% of districts and self-identified Republicans hold an absolute majority in only 6% of all districts.[10]

On the one-dimensional ideological continuum, each legislator has her nonobservable personal ideal point (PIP). What is observable, estimable, and most often studied is voting behavior, which can be summarized by an ideal point based on the full nonunanimous voting record of a legislator. I call this the *behavioral ideal point* or (BIP). As contrasted to the BIP, the *communicated ideal point* or (CIP) is the ideological position voters would perceive if only the votes a legislator reveals are used in generating an ideological estimate.

For each bill that is considered for a vote in Congress there is a "cutpoint" or a place on the ideological continuum that splits people who prefer the bill outcome from those who prefer the status quo (Poole and Rosenthal 1985). For each vote that splits the median base and swing preferences, a legislator must decide if the benefit of publicizing her vote—which sides with the preferences of just one part of the constituency—outweighs the potential cost of alienating voters who disagree with her. Over the series of votes a legislator takes, if a legislator perceives her base as more important than her swing voters in her attempt to get re-elected, she will present a CIP that is more extreme than her BIP. Conversely, if a legislator perceives swing voters to be more important electorally, she will present a CIP that is more moderate than her BIP.

Lastly, to assess the importance of her competing constituencies, a legislator must have a sense of the size and likelihood of voting for both base and swing voters. There is no a priori reason for assuming the likelihood of receiving and reacting to messages is higher for either part of the

constituency, and there is no completely reliable way of knowing who is more likely to vote. This means a legislator must rely on past elections to inform her decisions about the relative size of each voting constituency.

Data and Empirical Strategy

To measure vote revelation, I use all the official e-newsletters and Real Simple Syndication (RSS) feeds sent in the 111th Congress from August 2009 through the end of the term, for a total of 40,957 messages. The messages are from an original data set collected from every Representative and Senator who sends official e-newsletters and/or RSS feeds. In order to generate the specific measures of vote revelation, I first ran a computer sweep over every message to identify all messages containing a potential vote revelation based on a search of key terms detailed in Appendix A in the online supporting information. Second, I read each flagged message to confirm a vote from the 111th Congress was actually revealed. This resulted in 15,690 messages that were read by a highly trained research assistant or myself and a specific vote was recorded.[11] To be clear, a legislator must describe how she intends to vote or did vote on a given bill, not just merely mention a bill in order to be included in the estimation of CIP.

Some legislators tend to be more verbose and others more reticent. While a full analysis of which types of legislators tend to communicate more frequently than others is the topic of a different project, generally speaking, I find that legislators who are older or have more seniority are somewhat less likely to send e-mails in the first place and send fewer e-mails than their younger, more junior colleagues. Additionally, black and Hispanic members send fewer messages than white members, and conservatives tend to send more messages than liberals.

To measure the likely relative importance of different constituencies for each legislator, I use ratio measures of the party identification of voters who turned out in the 2008 general election. Ratios best capture the phenomena identified in the theory, but many other measurement strategies are possible, and each results in substantively similar results.[12] Data on the composition of each electorate are from the 2008 National Election Pool Exit Polls conducted by Edison Research (2008).[13] For each district and state, I create a ratio measure of Democrat identifiers (base) to independents (swing) as the relevant constituencies for Democratic legislators and a ratio of Republican identifiers (base) to independents (swing) for Republican legislators.[14] Table 2 displays the average voter ratios by party of the incumbent. By only using data from actual as opposed to registered voters, I can better estimate the relevant

TABLE 2
Ratio of Partisans to Independents: 2008 National Exit Polls

Ratio Measure	Minimum	Max	Mean	(SE)	N
Democrats to Independents					
All Legislators	0.39	5.93	1.56	−0.90	346
Rep. Legislators	0.39	5.20	1.41	−0.83	158
Dem. Legislators	0.47	5.93	1.69	−0.93	188
Republicans to Independents					
All Legislators	0.11	5.00	1.32	−0.73	346
Rep. Legislators	0.51	5.00	1.63	−0.77	158
Dem. Legislators	0.11	3.35	1.05	−0.57	188

constituencies for re-election—actual voters—from the entire constituency a legislator is responsible for representing.

While the 2008 exit polls are conducted in each state, not every congressional district has enough respondents to release the crosstabs on partisanship. Of the 88% of districts and states that have legislators who sent vote revelations, there are exit poll data for 346 districts. This data missingness should be orthogonal to legislator strategy, so while it is regrettable, it should not bias the estimated parameters or change the expected values of any estimated quantities of interest.[15] The analyses reported here have also been conducted using Catalist voter file data of party identification via vote registration and the 2008 CCES data of self-reported party ID to estimate the copartisan to independent ratios. Results remain substantively similar, but state and district coverage is greatest with exit poll data.

Empirical Implementation

To test my hypothesis, I need two measures for each legislator: a behavioral ideal point (BIP), based on all the roll-call votes a legislator takes, and a communicated ideal point (CIP), based only on the votes a legislator reveals to constituents. To estimate these quantities, I employ a modification on the standard two-parameter IRT voting model pioneered by Clinton, Jackman, and Rivers (2004) to estimate latent ideal points for legislators from their observed voting and communicating behavior. I perform standard two-step Bayesian ideal point estimation and then add an additional step to incorporate the restricted subset of revealed votes. After setting reasonable starting values, bill parameters are estimated using legislator BIP values, then these bill parameters are used to

fine-tune the legislator BIP estimates and then the cycle begins again using the values estimated in the last iteration and so on for 10,000 iterations. For the additional step used to estimate CIP, I use the bill parameters that are estimated based on the full voting history to generate a set of CIP estimates; a detailed explanation is in Appendix B in the online supporting information.

Results: The Effect of Constituency Composition on Communicated Ideology

Owing to the newness of these data, I first describe the frequency of vote revelation and the basic relationship of BIP to CIP estimates. I subsequently test my theory of strategic vote revelation and present the results.

Despite recent reports arguing that Democratic campaigns are much more technologically advanced than Republican campaigns (Rutenberg 2013), I find that members of each party have set up official e-mail and RSS feeds at rates that are not significantly different: 94% of Republicans and 91% of Democrats send messages. However, in terms of the quantity and content of the messages, there are significant differences.

There is considerable heterogeneity in the number of votes revealed, ranging from 0 to 172. Of legislators who choose to send any messages, the mean number of messages sent from Republicans is 89, and from Democrats it is 73. Despite sending more messages, Republicans are less likely to reveal votes within those messages. Democrats reveal 19 unique votes on average while Republicans reveal 15; both differences are statistically significant at the $p < 0.05$ level. Additionally, the percentage of messages that involve vote revealing is also significantly different: 47% of all messages sent by Democrats contain vote revelations, but only 41% of Republican-sent messages do. As Democrats controlled the 111th Congress and therefore the agenda, they likely had more votes they wished to write about to constituents. Republicans, however, wrote more frequently to constituents oftentimes decrying what Democrats were attempting to accomplish in Washington. These differences speak to the specific contours of the 111th Congress and should serve to remind readers of a necessary precaution in extrapolating the findings reported here to other Congresses.

While we will never know of all the reasons that a legislator chooses to talk about some votes, the raw data do provide insight into what types of votes legislators are more likely to write about to constituents. I break down vote revelations by whether or not a bill passed and whether

the revealer voted Yea or No. I find that 68% of all revelations are from legislators who voted Yea and the bill passed, which can be considered successful position touting; 25% of all revelations are from legislators who voted No and the bill passed anyway, which is likely legislators indicating they sought to block policy but could not; 5% of revelations are from those who say they voted for a bill and it failed, signaling an attempt; and 2% are when a legislator voted against a bill and it failed, signaling a successful block. Taken together, it seems that legislators prefer to speak about their votes when bills are successful in passage—at least in their chamber—and they also prefer to discuss legislation that succeeds regardless of their position, rather than tell constituents about bills that fail.

The Relationship of Communicated Ideal Points to Behavioral Ideal Points

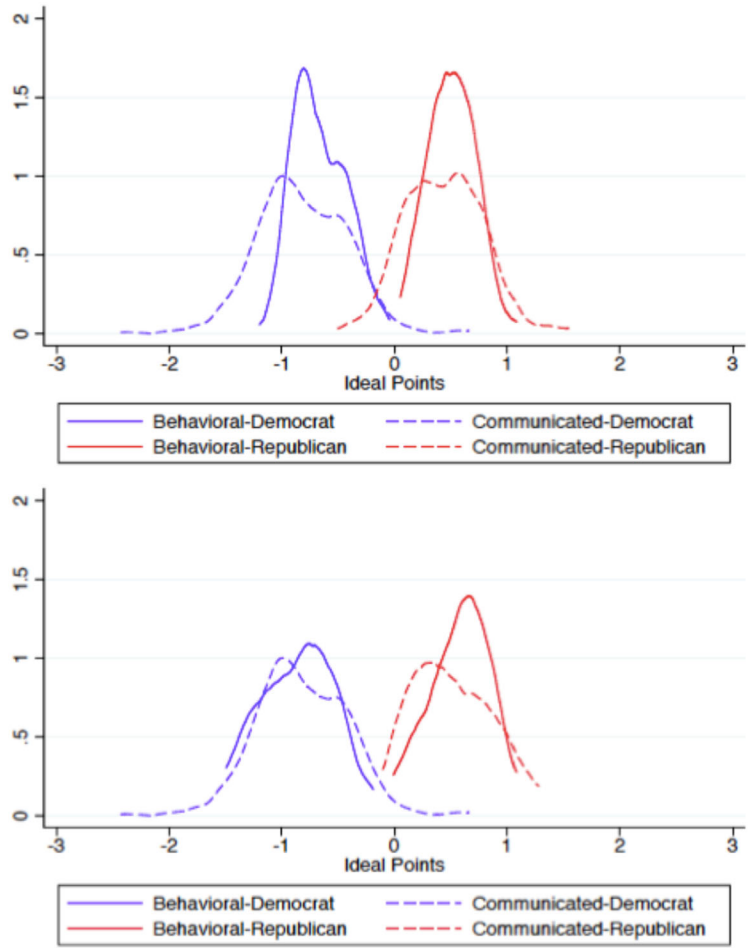
Behavioral ideal points (BIP) and Communicated ideal points (CIP) are related but not perfectly correlated. The correlation coefficient for these two measures is 0.89 in the Senate and 0.88 in the House. In examining the correlations, I find that not all legislators try to appear more moderate or extreme, and there is a good deal of variation in the direction and level of ideological shift that characterizes legislator communications.

Figure 1 depicts kernel density plots of CIP and BIP by party. This analysis confirms research that BIP estimates are quite polarized, as indicated by the higher peaks and distinct valleys between the two parties. The CIP estimates, on the other hand, are spread much more evenly, with many legislators filling the middle gap. Also apparent is the greater difference between CIP and BIP distributions in the House than in the Senate.

Table 3 provides a breakdown of the average direction and magnitude of ideological shifts by party. The majority of Republicans present CIPs that are more moderate than their BIPs, and the majority of Democrats present more extreme CIPs than BIPs. This amounts to an overall leftward shift. The magnitudes of these differences are not trivial. Given the range of observed BIPs for Republicans, the average leftward shift is roughly 24% of the scale; for Democrats the average leftward shift is 22%.

This finding, while not posited by my theory, plausibly fits expectations if Democratic legislators tend to come from districts with a higher ratio of base-to-swing voters and Republicans tend to come from districts with lower ratios of base-to-swing voters, and this is all that matters when

FIGURE 1
Kernel Densities of Communicated and Behavioral Ideal Points: 111th House



crafting a communication strategy. It could also be that other factors contribute to messaging strategy decisions, and a focus simply on the base-to-swing voter ratio omits some forces at work. Or yet another possibility is that while the base-to-swing ratio is important for all legislators, it may affect one party more than the other because additional influences such as party pressures to talk about certain

topics that may moderate the raw influence of the theorized relationship between a legislator's electorate and her communication strategy. Looking at Table 1, there is evidence that Democratic legislators tend to have higher base-to-swing ratios than Republicans, but this difference is quite small.

Before constructing a larger model, I ran a simple model regressing an indicator outcome variable signaling that a legislator presented a more extreme CIP than her BIP on the base-to-swing ratio, a party indicator, and an interaction of the two. To be clear, for Democrats the variable is 1 when the CIP estimate is to the left of the BIP estimate, and for Republicans the variable is 1 when the CIP estimate is to the right of the BIP estimate. After predicting the likelihood that a legislator would present a more extreme CIP than her BIP, I find some support for the notion that, while the ratio of base-to-swing voters matters for both Democrats and Republicans, members of different parties exhibit different sensitivities to the measure. Figure 2 plots the predicted values from this regression by party.

Figure 2 shows an important partisan difference to consider. There is a positive relationship between the ratio of base-to-swing voters for both parties, but the starting likelihood of presenting a more extreme CIP and BIP are different for Democrats and Republicans. The baseline probability that a Democrat will present a more extreme CIP than BIP at the lowest observed values of the ratio measure is over 50%, indicating that this strategy is more likely used by Democrats than Republicans regardless of constituency makeup. Republicans are more likely to present a more extreme CIP once the base-to-swing ratio reaches roughly 3:1. This may explain why the shifts reported in Table 3 are leftward for both Democrats and Republicans.

As a second test I eschew the ratio of copartisans to independents measure and instead run three probit models with the outcome variable being 1 if CIP is more extreme than BIP and 0 otherwise. From my theory, I should find that (1) as the proportion of copartisans increases, so too does the likelihood that CIP is more extreme than BIP; (2) as the proportion of independents increases, the likelihood that CIP is more extreme than BIP decreases; and (3) a sort of a placebo test—the theoretical rationale assumes that legislators are nonresponsive to out-partisans, which implies as the proportion of out-partisans increases, CIP is unchanged. Table 4 displays the results. Each version of the model confirms the theoretical expectations outlaid above.

Part of the scattering and overlapping effects in the initial figures is due to the increased error in estimating CIP points because there are

TABLE 3
Ideological Shifts by Party: 111th Congress

Type of Ideological Shift	Republicans	Avg. BIP-CIP	Democrats	Avg. BIP-CIP
More Extreme CIP than BIP	32%	0.24	66%	−0.32
More Moderate CIP than BIP	68%	−0.26	34%	0.26

more missing observations.[16] This may give rise to a concern that CIP is just a noisy BIP measure and not actually indicative of different underlying phenomena. If 50% of legislators present a more extreme CIP and 50% a more moderate, this would not necessarily be interesting because such a result could be due to chance and measurement error. For a few reasons, I do not think this is the case. First, by using a paired *t*-test across all legislators, I find the average difference between the CIP and BIP to be roughly 0.10, and I can reject the null that they are the same, on average, with a *p*-value of 0.00. Second, it is in the ability to predict which legislators choose which strategy that makes a stronger case for different behavior by legislators and further supports the theory that BIP and CIP estimates are not random or unduly marred by measurement

FIGURE 2
Predicted Probabilities by Voter Ratio, by Party:
111th Congress

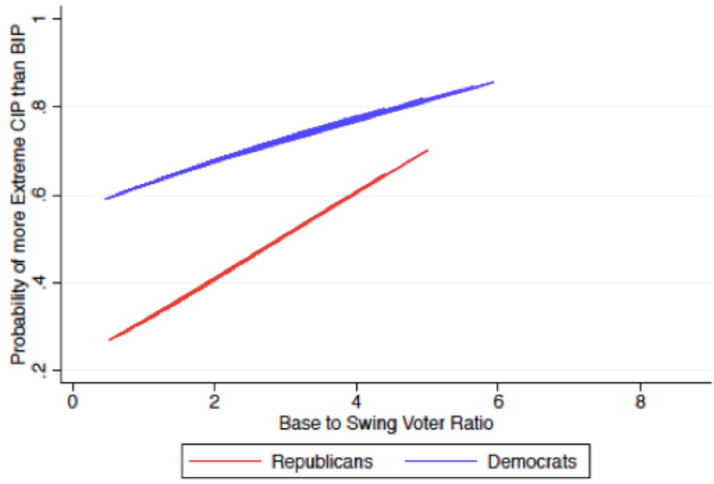


TABLE 4
Relationships between the Percentage of Copartisans, Independents, and Out-Partisans and the Likelihood of Presenting a CIP That is More Extreme Than BIP

Model	(1)	(2)	(3)
Copartisans	1.57*		
(SE)	(0.62)		
Independents		−1.26	
(SE)		(0.92)	
Out-Partisans			−1.05
(SE)			(0.66)
Constant	−0.61	0.37	0.41
N	346	346	346

*$p < 0.05$. Reported White standard errors.

error. In the next section, I present a full model incorporating many controls and find that different measures are related to communicating versus voting, bolstering the idea that these are likely driven by different considerations.

Full Model Specification

To test the hypothesis relating the composition of a constituency to a legislator's CIP, I estimate a probit model where the dependent variable is an indicator that is 1 when her CIP is more extreme than her BIP. An indicator rather than a distance measure is theoretically preferable because a legislator ought to know that she is attempting to look more extreme or more moderate, but precise knowledge of how much more moderate or extreme would be a far more difficult strategy for a legislator to implement.[17] Since no one member has control over the agenda, specific fine-tuning is much less realistic than the decision to shift one's perceived ideology in either direction. A simple model, with no controls, indicates that the ratio of base-to-swing voters is significantly related to the likelihood of presenting a more extreme CIP than BIP ($p = 0.02$).

As a more rigorous test of my theory that addresses potential alternate explanations for vote revelation and voting strategies, I perform two additional regression analyses. First, I estimate the probit model described above on the electorate ratio measure as well as a series of variables that are likely related to communication strategies. Second, to contextualize the results from the first regression, I model extremism in

voting as measured by the mean-centered BIP squared on the same explanatory variables. Here I employ ordinary least squares (OLS) owing to the continuous nature of the dependent variable. This analysis allows me to explore the possibility that different influences contribute to how a legislator votes versus communicates. As before, additional different modeling strategies and results are presented in the online appendix.

The first control in the full model is the ideology of financial donors. I use Bonica's (2013) Campaign Finance Scores to quantify the ideology of each legislator's donors. A second control is a measure of overall electorate ideology that comes from Tausanovitch and Warshaw (2013), who use multilevel regression with poststratification to estimate the ideological preferences in each district and state by pooling surveys. While my theory—and previously cited work—argues the relevant set of voters for a legislator to consider is her base-to-swing voters, some argue that the composition of the overall electorate is what legislators ought to consider. In the analyses, constituent ideology and finance scores are included in their raw form, and they are both mean-centered and squared to capture extremity.

I use another set of controls measuring the variety of audiences for each legislator from the 2000 Census. I include the percentage of the voting-age population that is under the poverty line, the percentage of black and Hispanic residents in each district, and the median age of each district. Legislators from districts with larger minority populations or those from poorer or older districts may choose to emphasize different types of voting decisions than those from more homogeneously white districts, wealthier, or younger districts.

I use race, sex, seniority, leadership, and previous election margin as legislator-specific controls. Rocca and Sanchez (2008) find that racial minorities tend to sponsor and cosponsor bills less than their white male counterparts; perhaps these members also adopt different communication strategies. The control for legislator seniority is grounded in the finding that junior members tend to put in more upfront time on constituent contact and may therefore also use different communication tactics (Cover 1980; Fenno 1978). There is an indicator signaling that a legislator is a party leader because these individuals, by definition, have a more public role that likely influences their communication strategies. The previous margin measure is included to control for the fact that legislators who win close races may adopt different communication strategies than those who face less of a challenge. Additionally, I include an indicator signaling whether a legislator ran for re-election in 2010 to check against the

possibility that retiring legislators may communicate in a manner different from colleagues seeking re-election.

There are also various institutional settings that may affect communication strategies. Different qualities of state-maintained voter-file data could influence how a legislator presents herself; as the quality of data increases, a legislator can have more certainty about her perceptions of the electorate (Hersh 2001). Understanding this, I include a series of dummy variables indicating different types of voter-file data kept by each state.[18] I use a primary type indicator as closed primaries are generally more partisan and may therefore contribute to legislator communication strategies, with an expectation that closed systems are correlated with more extreme communication. Lastly, I include party and chamber indicators. Table 5 presents the results.

Column 1 of Table 5 contains the results for the test of my theory that as the ratio of base-to-swing voters increases, so does the likelihood that a legislator will present a more extreme ideology in her communications than reflected in her full voting history. The coefficient on the ratio measure is positive and significant, providing support for the expected relationship. Three other measures display significant relationships with this communication strategy: the percent of Hispanic residents in the district, chamber, and party. As a legislator's district includes more Hispanic residents, she is more likely to appear more extreme in communications than in voting. The reasons for this are not entirely clear, but it could be that legislators from more heavily Hispanic districts may have greater pressures to discuss votes on topics such as immigration reform, which are almost always highly polarizing votes and therefore lead to a presentation of self that is extreme. I find that being a Democrat is related to presenting a more extreme CIP. This result follows from the simple analyses from before and could either speak to an overall party messaging and vote-focusing strategy employed by legislators broadly or may be linked to similar constituent assessment strategies of Democratic legislators. Lastly, being in the Senate versus the House is associated with lower likelihood of presenting a CIP that is more extreme than BIP; this is expected as the House tends be more polarized. Further tests that split the sample by chamber and party do not indicate that there is something particular about the House Democrats in the 111th Congress. Indeed in seven out of the eight possible subsamples by party and chamber, the relationship between the constituent ratio measure and the likelihood that a legislator has a more extreme CIP than BIP remains positive and significant. In order

to visualize the relationship, Figure 3 plots the marginal effects estimates and an attendant 95% confidence interval over various observed measures of base-to-swing voter ratios.

In stark contrast, the results in column 2 of the model of extremism in voting behavior do not show a significant relationship between the base-to-swing ratio measure, and instead donor ideology, overall district ideology, poverty levels, whether a legislator is Hispanic, seniority, and chamber better account for voting. I set my analysis of communication against voting with anticipation that I would find a baseline relationship between donor ideologies and voting as reported in the previously cited literature that would likely be absent in communication strategies. The other variables that exhibit significant relationships with voting, however, coincide with previous research and add some nuance to our understanding of voting. I find that as a donor base is more extreme, so too is a legislator's voting. Additionally, I find that there is a relationship between voting extremity and donor conservatism. A similar relationship links the overall electorate's preferences and voting extremism; the more extreme the overall electorate is, the more extreme voting pattern a legislator has. I also find that Hispanic legislators have more extreme voting records than non-Hispanic legislators, and those with higher poverty rates in their districts tend to be more moderate in their voting. As the 111th Congress occurred right after the emergence of the "Tea Party" movement, it is perhaps unsurprising that Democrats tend to have less extreme voting than Republicans. The relationships of chamber and seniority are somewhat unexpected, as much of the research on polarization indicates that the House hosts more extreme members than the Senate, and it is not clear that senior members tend to be more extreme than junior members, especially in the recent Congresses where polarization is thought to increase via replacement when new members take seats from senior, more moderate members. A detailed pursuit of why these institutional variables appear to be related to voting in this manner is beyond the scope of this work, and instead I now turn to simulation analyses to better interpret how predicatively useful are the key variables of interest.

To interpret the impacts of voter ratios on communications, I estimated each model and then simulated 10,000 values of the resultant parameters, sampling from the estimated distribution each time using CLARIFY (Tomz, Wittenberg, and King 2003). I set all independent variables to their means and then manipulated the base-to-swing voter ratio in order to assess the conditional effect of this explanatory variable on the likelihood that a legislator has a CIP that is more extreme than her BIP.[19] Going from one standard deviation (0.86) below the mean of the

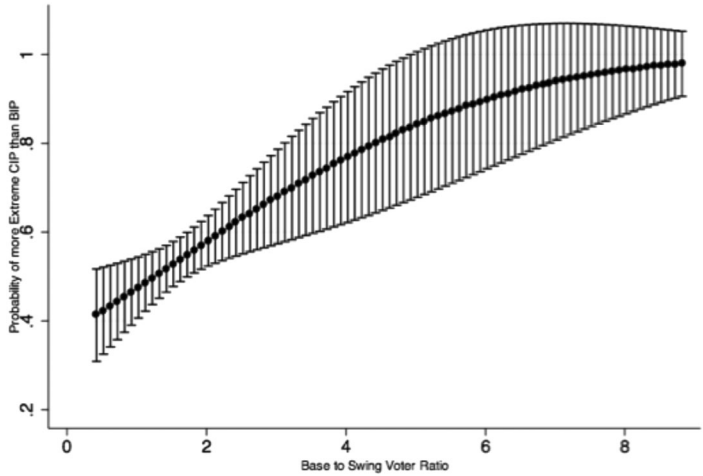
TABLE 5
More Extreme CIP vs. BIP Points Hypothesis and Voting Behavior: 111th Congress

	More Extreme Communication (Probit)	s.e.	More Extreme Voting (OLS)	s.e
Base-to-Swing Voter Ratio	0.31*	0.12	0.03	0.02
Campaign Finance Score	−0.17	0.35	0.56*	0.08
Campaign Finance Score^2	−0.06	0.14	0.23*	0.03
Overall District Ideology	−0.14	0.59	−0.00	0.11
Overall District Ideology^2	−0.36	0.95	0.55*	0.15
Percent under Poverty Line	0.01	0.03	−0.01*	0.00
Median District Age	−0.07	0.04	0.01	0.01
Percent Black in District	−0.01	0.01	0.00	0.00
Percent Hispanic in District	0.03*	0.01	0.00	0.00
Black Legislator	−0.33	0.51	0.06	0.07
Hispanic Legislator	−0.74	1.06	0.24*	0.08
Female Legislator	0.16	0.21	−0.02	0.04
Seniority	−0.01	0.01	0.01*	0.00
Party Leader	1.19	0.66	−0.03	0.07
Previous Margin	−0.01	0.01	0.00*	0.00
Running in 2010	−0.17	0.33	0.01	0.08
Primary Ballot Voter Data	0.32	0.24	−0.01	0.04
Partisan Registration Voter Data	0.00	0.27	0.02	0.05
Partisan Registration and Primary Ballot Voter Data	0.00	0.25	0.05	0.05
Democrat	0.75*	0.37	−0.06	0.08
Senate	−0.45*	0.21	0.26*	0.05
Closed Primary System	−0.12	0.23	−0.07	0.04
Constant	2.41	1.6	−0.45	0.33
(Pseudo) R^2	0.14		0.50	
N	316		316	

Note: White standard errors in parentheses.
*$p < 0.05$.

base-to-swing voter ratio (1.66) to one standard deviation above corresponds to a substantial increase in the likelihood that a legislator presents herself as more extreme than her voting history. At one standard deviation below the mean of the base-to-swing ratio, the likelihood that CIP is more extreme than BIP is 24% (SE 0.08). At one standard deviation above the likelihood jumps to 76% (SE 0.08). These findings suggest that legislators tailor messages to their electoral audiences in an attempt to better match relevant voters and are especially compelling because

FIGURE 3
Marginal Effects—Base to Swing Voter Ratio on Likehood of More Extreme CIP to BIP (95% C.I.s)



other measures found to be strongly related to voting—donor ideology and district ideology—do not exhibit a significant relationship with communication strategy, ceteris paribus. In the next section, I discuss how my findings are situated amongst previous work and how they can inform future research on the divergence between voting and communication strategies, representation, electorate awareness, and legislator accountability.

Discussion: Voting versus Communicating

The preceding analyses and results substantiate the theory that a legislator will communicate an ideology that diverges from her behavioral ideology in a manner that makes her appear better aligned with the most electorally valuable faction of her constituency. I also find that different factors contribute to actual roll-call voting versus communicating to constituents about votes.

Previous work finds that donors influence voting behavior (Bonica, McCarty, and Rosenthal 2013), but there has been virtually no work on how a legislator attempts to temper the perception of her votes to constituents via strategic communication. Because of their size and intense interest in policy, donors are more likely and more able to hold

legislators accountable for votes than the average voter. When communicating to constituents, legislators can craft an image that may be virtually free from donor pressures. It is reasonable to expect the large moneyed influences on roll-call voting will be pleased with the actual roll-call votes and understand that strategic communicative posturing is merely used to attract voters. In my last estimates presented in Table 5, I find support for this explanation. How a legislator wishes to be perceived in her district is significantly related to the ratio of base-to-swing voters and not donor ideology. However, when looking at the extremism of actual votes cast, donor and overall district ideology play a much stronger part.

Political Representation

Comparing BIP and CIP estimates across the whole Congress, I find that there are significant differences between the two. What does this mean for political representation? One implication is that the frequency and direction with which ideological shifts occur signal that the effort is likely intentional. This is not to say the only thing that defines why CIP and BIP are different is the intent of legislators to shift perceptions but that the evidence indicates that this likely plays a role. The intent behind creating a different ideological image and what this looks like across the Congress is worthwhile to consider. Assuming each legislator is rational and election minded, some ideological shifts should not shock readers, but the pattern found here might be surprising.

I conjecture that when asked what type of ideological shift one would expect from a legislator, the majority of political observers would either answer that both parties would moderate in an attempt to appeal to the most voters or that legislators would try to appear more extreme if the understanding is that base voters make up the bulk of e-newsletter and RSS feed readership and more extreme primary challengers are a worry. Instead of all legislators moving either towards the extremes or running to the center, I find that there is a pattern associated with constituency makeup that better describes reality.

It is not the case that Democrat and Republican legislators come from widely different types of districts in terms of base-to-swing voter ratios. It is also not true that one party responds to the base-to-swing voter ratio and the other party does not; when only considering base-to-swing voter ratios, I find legislators of both parties are receptive in selecting what types of votes to reveal. It could be that the assumption that places a legislator between her base-to-swing medians is incorrect and that most Democratic legislators are actually more moderate than the

voters they perceive as most important to secure re-election and that most Republican legislators are actually more extreme, which accounts for the overall leftward shift I observe for CIP versus BIP.

If this assumption was incorrect, finding that legislators across the spectrum try to appear more liberal makes perfect sense, as everyone would just be chasing their supporters. By squaring the measure of behavioral ideology to gauge legislator extremity and squaring the overall electorate estimates of each district from Tausanovitch and Warshaw (2012) to measure overall district extremity, there may be some support for this supposition. Republican legislators have an average extremity score of 0.54 while Democrats have an average score of 0.34, which makes for a statistically significant difference with Republicans being more extreme. Constituents show a reversed statistically significant difference with Democrat constituents more extreme than Republicans constituents on average (0.10 to 0.05). The problem with this quick comparison is that constituents and legislators are not measured on the same scale, and a true test of this theory is beyond the scope of this article. However, this is a plausible explanation given this first cut, and a broader empirical investigation could be used in the future to refine our understanding of why communication and voting strategies tend to diverge systematically.

Conclusions

In a world full of political information, a legislator has a unique opportunity to craft a specialized image in the minds of voters that may not always align with the reality of her voting history by using direct communications. This study offers a theory of how differently situated legislators will selectively reveal certain votes and omit others. I argue that a legislator will selectively reveal votes to appear to be a better fit to the most electorally relevant parts of her constituency.

Using a new data set, I am able to test this theory and answer empirical questions previously left to the realm of theoretical or casework analysis. I find that most legislators use the opportunity to communicate with citizens directly using e-newsletters and RSS feeds. I also find that there are partisan strategies in using these communications, with Republicans sending more messages on average and Democrats revealing more votes on average. Overall, Democratic legislators attempt to appear more liberal and Republican legislators attempt to appear more moderate. The number of legislators that engage in ideological misrepresentation, the differences between communicated and behavioral ideal points, as well as the finding that donor ideology strongly influences

roll-call voting but not communicating, leads me to conclude that the distinction in how a legislator communicates versus votes is intentional. With an innovative analytical technique, I measure vote revelation content of official messages. I find that the votes that a legislator reveals and the ideological implication of those choices differ significantly from the full voting history of a legislator. Specifically, as the ratio of base-to-swing voters increases so does the probability that a legislator will present a communicated ideology that is more extreme than her behavioral ideology.

This data set holds potential for many research areas. Political scientists have long supposed that members of Congress present themselves in a way that may not accurately reflect their acts in office, but for the most part this supposition remains untested for lack of systemic data. Having a running text of what a legislator tries to communicate to her constituents offers a powerful and increasingly easier to analyze data set. As this data set accrues roughly 80 new messages per day, the potential to study topic trends, vote-revelation strategy, and presentation of self is great. The analysis presented here touches just one part of strategic political communication and provides a small step in fulfilling the hope that political scientists "spend a little less of our time explaining votes and a little more time *explaining explanations*" (Fenno 1978, 141).

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NOTES

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1. Specific communications analyzed here are e-newsletters and Real Simple Syndication (RSS) feeds. Official communications are those sent from a member of Congress's .gov email address or RSS feeds from the house.gov or senate.gov websites. I subscribed to each e-newsletter and RSS feed with a dummy e-mail account. For each legislator who did not have both forms of communications at the initial time of collection, I checked once a month to add to the subscription list. My institution's Internal Review Board has approved this collection as exempt. There are now well over 200,000 communications in the database, and they are available upon request and will be made publicly available upon publication of research using the data. For the 111th Congress analyzed here, the data are from August 2009 to January 2011. Roughly 25% of e-newsletter subscriptions require

an in-district zip code; for 15% of those subscriptions the messages are made publicly available on official websites; therefore, 10% of the subscriptions rely on a false zip code, which is the first zip code listed for a legislator's district office. No RSS feeds have any subscriber restrictions. There may be some concern about combining e-newsletters and RSS feeds to make a combined measure, regarding the different potential audiences. For this research, the combination is both theoretically justifiable and technically necessary. Theoretically, e-newsletters and RSS feeds are the two ways a legislator can get communications directly into a constituent's inbox and therefore represent a unique path of information from legislators to constituents. Technically, in order to accumulate enough revealed votes to scale legislators, a combined measure is necessary. Lastly, whether a vote was revealed in an RSS feed or e-newsletter, both are public signals from a legislator's official position, and because the scaling technique only uses unique votes, double counting of a vote revealed in both media does not pose a problem.

2. Save for restrictions on soliciting donor money, explicitly encouraging constituents to vote for a specific candidate, and re-election black-out dates.

3. Studies employing the universe of a given communication media include Grimmer (2013), Grimmer and King (2010), and Adler, Gent, and Overmeyer (1998). In addition, there are many well-done studies using sampled texts: Wigley (2011), Sellers (2010), Neiheisel and Niebler (2010), Ludwig (2010), Gulati (2008), Trammell and Williams (2004), Lipinski (2004), and Yiannakis (1982).

4. The CCES draws from a nationally representative survey population for the full survey. The specific question posed to a randomly selected 1,000 respondents was, "Have you ever subscribed to email updates such as an e-newsletter or Real Simple Syndication (RSS) feed from any of the following elected officials?" followed by the name of their Representative, junior Senator, and senior Senator.

5. It is unlikely that 19% of a district subscribes to e-newsletters and RSS feeds at the same time. The question asks respondents if they have ever signed up for these types of communications. Interviews with press secretaries put the upper-bound estimation for the amount of subscribers at a given time around 10%.

6. For an analysis of extreme voting sans communications and the results of primary elections that concludes the opposite way, see Ansolabehere et al. (2010).

7. There is another segment of the constituency that will not support an incumbent legislator. These voters are not in the relevant set of constituents when evaluating likely re-election votes.

8. I never observe lying in the data set. Constituents occasionally write into their local papers, and papers have published accounts of inaccuracies in e-communications effectively deterring such actions (Rock 2008).

9. Given that political elites tend to be more extreme than average voters, this assumption may not be fully met in every instance. However, the electoral calculation posited above, in addition to recent research on mass citizen preferences by party ID, indicates that there is often a substantial gap between the preferences of the median Democrat, Republican, and independent in each state, and therefore this assumption is reasonable (Tausanovitch and Warshaw 2013). The theoretical predictions remain the same if the legislator is more moderate than both base and swing medians. If the legislator is more extreme than both medians, the predicted outcomes change slightly, and I leave pursing this possibility to a future project.

10. 2008 National Election Pool Exit Polls. Knowing that 20% of all districts have a one-party voter majority does not necessarily imply that legislators from such districts are more extreme than their median base voter. In fact, if a legislator is in such a district, her optimal ideal point strategy will be close to the median base voter and may therefore be slightly more moderate or slightly more extreme, but not radically more extreme.

11. Jeff Lewis and Keith Poole compiled roll-call vote data for 111th Congress at voteview.com.

12. For a full discussion of every other specification considered, see the online supporting information.

13. These data are from the individual data sets for each of the 50 states and the District of Columbia. Sample sizes are between 800 and 2,000 for each state.

14. Respondents who identified as "other" (4%) are treated as independents because there is no a priori reason to assume they are irrelevant. Results remain consistent if such respondents are eliminated altogether.

15. Correlations between a dummy measuring missingness and the dependent variable indicating whether a legislator's CIP is more extreme than her BIP indeed demonstrate that there is no discernible relationship. The coefficients for Democrats: −0.0034, Republicans: −0.0037.

16. The average standard error associated with BIP is 0.032; the average for CIP is 0.321.

17. When using a standard OLS regression of the distance, I find results are substantively similar.

18. Indicators signify if a state has (1) no partisan data in the voter record, (2) primary ballot selection data, (3) partisan registration, and (4) partisan registration and primary ballot selection data.

19. I use an average hypothetical legislator for the simulations. This is a Democratic Representative from a district with a citizen ideology of 0.05 and a squared citizen ideology of 0.06, a campaign finance score of −0.06 and squared CF score of 1.61, with both primary ballot and partisan registration voter data, an open primary system, 11% of the voting-age population below the poverty level, a median district age of 36, 11% black citizens, 7% Hispanic citizens, is white, non-Hispanic, and a male who has served for 10 years, revealed 18 votes, and is running for re-election. The average Republican has a district with a citizen ideology of 0.18, 10% of the voting-age population below the poverty level, a median district age of 36, 9% black citizens, 6% Hispanic citizens, is white, non-Hispanic, and a male who has served for 10 years, with a previous election margins of 66%, is running for re-election, and is not a party leader.

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Supporting Information

Additional supporting information may be found in the online version of this article:

Appendix A. Text Coding Information
Appendix B. Technical Details