

# A Strategic Ideological Vote

Raymond M. Duch  
raymond.duch@nuffield.ox.ac.uk  
Nuffield College  
University of Oxford  
OX1 1NF Oxford UK

Jeff May  
jbmay@uh.edu  
Department of Political Science  
University of Houston  
Houston, TX 77204-3011

David A. Armstrong II  
david.armstrong@politics.ox.ac.uk  
University of Oxford  
Dept of Politics and International Relations  
Manor Road  
Oxford OX1 3UQ

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### **Abstract**

Ideology is widely considered to be an important factor in shaping policy outcomes and in influencing election outcomes. This essay confirms the importance of ideology in explaining vote choice, based on 245 voter preference surveys world wide, from 30 countries, and over a 25 year period. We also demonstrate, though, that the importance of ideology in the vote function varies quite significantly across countries and, within countries, over time. We propose a theory of the strategic ideological vote to explain this variation. The argument suggests voters anticipate the post-election bargains negotiated amongst members of the governing coalition and these anticipated policy agreements inform their vote choice. Our analysis confirms that voters exercise a strategic ideological vote and that it frequently differs from what would be predicted using sincere ideological voting models.

“However, many Danes are now worried by the power of the People’s party and the racist attitudes of some of its supporters. Mr. Khader hopes to win votes by promising to rebalance politics, with his own party acting as the fulcrum. “*Blok politik* is not Danish,” he says. “The majority should be around the centre. The veto power must be taken away from the People’s party.”

## 1 Introduction

This description of the 2007 Danish election illustrates a pervasive phenomenon in countries with coalition governments: strategic ideological voting. In this particular case, Mr. Khader’s New Alliance party gained considerable support from voters who favored the centre-right coalition but were concerned that the conservative influence of the People’s Party over coalition policy (immigration policy in particular) needed to be counter-balanced in a more centrist direction. It became quite clear early in the campaign that New Alliance had a very high probability of entering a post-election cabinet that would be lead by the centre-right Venstre party (FT November 13, 2007, page 16; FT November 7, 2007, page 8). Accordingly, voters who wanted to shift the governing coalition’s policy position in a more centrist direction, particularly on immigration policy, had an incentive to vote strategically – for example abandoning their sincere preference for the centre-right Venstre in favor of the New Alliance which would ensure a government with a more centrist policy agenda.

The Danish example illustrates two features of the vote calculus that are pervasive in democratic contexts: First, vote choice conforms to a variant of the classic Downsian model (Downs 1957) in which voters locate themselves and candidates in a salient issue space and make choices based on their proximity to the issue positions of competing candidates (Enelow and Hinich 1994). And second, the left-right ideological continuum is arguably the most important policy dimension shaping vote choice. These observations build on a literature suggesting that ideology plays a central role in contemporary democratic politics. There is overwhelming evidence that the left-right continuum shapes party competition (Laver and Budge 1993, Budge and Robertson 1987, Huber and Inglehart 1995, Knutsen 1998, Adams et al. 2004); that it determines

legislative voting (Poole and Rosenthal 1997) and government spending priorities (Blais, Blake and Dion 1993); and that it affects coalition outcomes (Warwick 1992, N.d.). Most importantly we know that the ideological vote is important in certain countries (Kedar 2005, Adams, Merrill and Groffman 2005, Merrill and Groffman 1999, Blais et al. 2001, Westholm 1997, Inglehart and Klingemann 1976). Nevertheless, we do not have comparative evidence from a large number of countries confirming our intuition about 1) the magnitude of the ideological vote; and 2) the pervasiveness of ideological voting across democratic contexts. We propose to address this lacuna in this essay.

The Danish example above raises a second interesting theoretical and empirical question regarding the ideological vote: If voters are behaving in a rational instrumental fashion, ideological voting of a proximate kind should *not* be pervasive – voters in some contexts should strategically abandon the parties to which they are ideologically proximate. And since we know that these strategic incentives are strong in some contexts and non-existent in others, the magnitude of the *proximate* ideological vote should vary across contexts. A second major contribution of this essay is to demonstrate, based on a large number of cases, considerable contextual variation in sincere ideological voting.

Our expectation is that the proximate ideological vote varies considerably across contexts because features of these different contexts lead instrumentally rational voters to condition their ideological vote on the coalitions, and their ideological compromises, that form after an election. And we have evidence of contextual variation in the importance of ideology for political behavior (Inglehart and Klingemann 1976). More recently, scholars have explored institutional explanations for this variation. Kedar (2005), in particular, finds that voters in contexts with coalition governments engage in compensational voting, i.e., certain voters will vote for more extreme parties with the goal of shifting the policy position of governing coalitions closer to their ideal points. And there have been recent findings in individual countries suggesting that voters do respond in an instrumentally rational fashion to the strategic incentives associated with post-election coalition formation possibilities – Gschwend (2007), Bowler and Karp (2006), Blais and Levine (2006). Similarly, there is evidence that voters engage in vote discounting whereby voters support more extreme candidates because they anticipate the moderating impact of the

legislative process on policy outcomes Tomz and Houweling (2007), Adams, Bishin and Dow (2004), Merrill and Groffman (1999), Alesina and Rosenthal (1995). The third contribution of this essay is to 1) propose a theory of the strategic ideological vote that builds on these recent contributions; and 2) test empirically these theoretical propositions with a unique data base that includes 245 voter preference studies.

We begin with a theory of the ideological vote that suggests how voters condition their ideological vote on strategic incentives associated with coalition formation after the election results are announced. The second part of the essay describes how we empirically estimate the strategic ideological vote. We then summarize the results of our estimation: first comparing estimates of sincere versus strategic ideological voting; and then comparing our strategic ideological estimates with those generated by discounting and directional models of the ideological vote.

## 2 Theory

Our theoretical point of departure is Down's (1957) notion that individuals make vote choices based on their comparison of expected utilities for each of the competing parties. Voters are instrumentally rational which implies that voters are motivated to select parties that are ideologically proximate. This translates into the conventional characterization of the ideological vote in terms of Euclidean distance,

$$u(j_i) = U - (x_i - p_j)^2 \tag{1}$$

where  $x_i$  represents the ideological position of voter  $i$  and  $p_j$  represents the ideological position of party  $j$  and  $U$  is the upper bounds of  $(x_i - p_j)^2$  to ensure the lower bound of utility is zero and the utility is positive. A smaller Euclidean distance translates into more utility and hence contributes to the likelihood that a voter would vote for that party. This is what we characterize as sincere ideological voting. If all voters adopt this proximate ideological voting decision rule, we would find homogeneity in the importance of ideology in explaining vote choice across all democratic contexts. And we entertain this possibility that the ideological vote is similar across

political contexts; think of this as a our null hypothesis.

But of course this simplicity is rarely the case. Downs (1957, 146) points out that one of the factors complicating the voter's decision calculus is coalition governments. Since rational voters should only look upon elections as a means for selecting *governments* they should anticipate the likely policy compromises that are negotiated after the election and they should cast a vote that will ensure a coalition policy outcome that is most proximate to their ideal point. Downs (1957) in fact was less than sanguine about the average voters ability to undertake these calculations (Downs 1957, 256). If voters in coalition contexts ignore these second-order strategic considerations, they effectively invite serious agency loss because parties have weakened incentives to respond to voter preferences. Our intuition here is that Downs may have underestimated the typical voter.

In these coalition contexts, coalitions form after elections as a result of bargain amongst parties over the policies to be enacted by the government (Austen-Smith and Banks 1988, Persson and Tabellini 2000). Policy outcomes in coalition government reflect the policy preferences of the parties forming the governing coalition weighted by their legislative seats (Indridason 2007, Duch and Stevenson 2008).<sup>1</sup> We believe that in coalition contexts voters anticipate these policy outcomes and they use these to condition their ideological vote calculus represented in Equation 1.<sup>2</sup> Strategic voters, concerned with final policy outcomes (as opposed to party platforms), condition their vote choices on coalition bargaining outcomes that occur after the election (Austen-Smith and Banks 1988). In multiparty contexts with coalition governments, Austen-Smith and Banks (1988) argue, sincere ideological voting is not rational. The implication of the Austen-Smith and Banks (1988) insight here is that the link between ideology and vote choice is conditioned by rational voters engaging in strategic voting. Voters anticipate the

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<sup>1</sup>An alternative, and in our view less plausible, perspective is that the policy outcomes adopted in multiparty contexts reflect the weighted preferences of all parties elected to the legislature (Ortuno-Ortin 1997, De Sinopoli and Iannantuoni 2007). This of course significantly reduces the second-order strategic incentives for voters.

<sup>2</sup>This anticipation of post-election policy compromises is not restricted to multiparty coalition contexts. Alesina and Rosenthal (1995), for example, suggest that voters in the U.S. context exercise a policy balancing vote, anticipating the policy differences between Congress and the President. Kedar (2006) makes a more general claim suggesting that this occurs in all Presidential regimes. Adams, Bishin and Dow (2004) analyze individual and aggregate-level data related to U.S. Senate elections and find support for the argument that voters anticipate the moderating effect of the legislative process and hence vote for candidates with more extreme positions. Although they are careful to point out that their data could not distinguish this discounting argument from a directional voting explanation.

likely coalition formation negotiations that occur after the election and they condition their vote choices accordingly in order to maximize the likelihood that a coalition government forms that best represents their policy preferences.

These formal statements that link coalition outcomes and vote choice present a challenge: How do we precisely characterize this voter calculus that anticipates coalition outcomes after the election? Grofman (1985) proposed a modification to the proximate ideological model that takes into consideration what politicians are actually able to accomplish after an election. Voters in the Grofman (1985) *discounting* model anticipate that candidates, if elected, will be able to move policy only part way from the status quo position to their bliss point. This intermediate distance between the candidates ideal point and the status quo is determined by a common discounting factor shared by all voters. Hence, rather than the voters assessing the Euclidean distance between their ideal point and  $p_j$  in Equation 1, they employ a discounted version of  $p_j$ , i.e.,  $p_j * d$  where  $d$  varies between 0 and 1. When  $d = 1$  we have a simple proximate ideological model and when  $d$  approaches 0, Euclidean distance does not matter.

A related line of reasoning regarding the vote calculus suggests that voters focus on the direction of policy movement. Voters in these *directional* models of ideological voting implicitly understand that there is a status quo bias in the post election policy making process. Hence, as Matthews (1979) argues, voters prefer candidates who move policy from the status quo toward their ideal point. In a uni-dimensional policy world where left-right self identification is the only policy dimension determining vote choice, the candidate's location relative to the status quo point is the only consideration that matters to voters – intensity does not come into play.

Rabinowitz and Macdonald (1989) explicitly add intensity to their directional model of vote choice. The voter utility function is a scalar or dot product of the vectors representing the policy positions of voters ( $\mathbf{V}$ ) and candidates ( $\mathbf{C}$ ):  $U(\mathbf{V}, \mathbf{C}) = \mathbf{V} \cdot \mathbf{C} = \sum_{i=1}^n v_i c_i$ . If we assume that vote choice is determined by a single left-right ideology dimension then the vote utility is simply the product of the voter and candidate's ideal points, both calculated relative to the neutral point. Take the case where there are two conservative parties located to the right of the neutral point on a left-right continuum. Voters to the right of the neutral point will give all of their votes to the conservative party with the most extreme location to the right of the neutral

point – the other conservative party would receive none of the votes of voters to the right of the neutral point.

Adams, Merrill and Groffman (2005) and Merrill and Groffman (1999) convincingly argue that voters employ mixed strategies of discounted and directional voting that likely vary by context. Clearly voters are conditioning their ideological vote on their expectations regarding post-election policy outcomes. But the nature of voter expectations in both the directional and discounting models resembles a relatively naive heuristic: Voters anticipate political and institutional resistance to changing the status quo and therefore vote for parties that are "directionally proximate" but have more extreme ideal points.

Voter reasoning may be somewhat more informed than simply discounting or voting directionally; they may be reasonably well-informed about post-election coalition formation outcomes and this may condition the ideological vote. Kedar (2005) argues that the rational voter focuses on policy outcomes and hence on the issue positions that are ultimately adopted by the coalition government that forms after an election. And she demonstrates that in political systems with coalition governments this leads to "compensational voting", rather than ideological proximity voting, aimed at minimizing the policy distance between the policy compromises negotiated by the governing coalition and the voters ideal policy position.

Duch and Stevenson (2008) develop a contextual theory of economic voting in which voters anticipate the likely coalitions that form after an election and they assess the impact of their vote choice on the likelihood of different coalitions coming to power after an election. And this information is used by instrumentally rational voters to weight the importance of an economic competency signal in their vote choice function. Hence, parties that are certain to enter a governing coalition (i.e., perennial coalition partners) should, all things being equal, get no economic vote since a vote for this party has no impact on the coalition that ultimately forms. Both Kedar (2005) and Duch and Stevenson (2008) go to considerable length to formalize how post-election coalition formation enters into the vote choice function. Building on these works, we propose a model of the ideological vote in which voters anticipate the coalitions that form after the election – what we call the strategic ideological vote.

To capture the impact of this post-election coalition formation bargaining on the ideolog-

ical vote we propose Equation 2 which is a significantly modified version of Equation 1 that incorporates two critical theoretical terms: One of these is  $\gamma_{c_j}$  which represents the formation probability of each possible coalitions into which party  $j$  could enter. The second term is  $Z_{c_j}$  which, for each possible coalition, represents the sum of each participating party's ideological bliss point weighted by its historical share of portfolios in coalitions of this particular type.

$$u(j_i) = \lambda \left\{ \beta \left[ \left( U - \sum_{c_j=1}^{N_{c_j}} (x_i - Z_{c_j})^2 \gamma_{c_j} \right) - U \left( 1 - \sum_{c_j}^{N_{c_j}} \gamma_{c_j} \right) \right] + (1 - \beta) [U - (x_i - p_j)^2] \right\} + (1 - \lambda) \Psi_i \quad (2)$$

Equation 2 represents the utility that voter  $i$  derives from party  $j$ . The first right-hand term in large parentheses in Equation 2 incorporates these two strategic components,  $\gamma_{c_j}$  and  $Z_{c_j}$ . For any party there will be  $N_{c_j}$  coalition permutations that could include party  $j$  as a member where  $c_j$  describes the possible coalitions including party  $j$ . And  $\gamma_{c_j}$  is simply the probability associated with each of these coalitions forming after the election. Given that the  $\gamma_{c_j}$  terms exhaustively partition the government experience of party  $j$ ,

$$\sum_{c_j}^{N_{c_j}} \gamma_{c_j} = \begin{cases} 1, & \text{if } j \text{ has ever been in government;} \\ 0, & \text{if } j \text{ has never been in government.} \end{cases}$$

The second important theoretical term in Equation 2 is  $Z_{c_j}$  which is the sum of the seat-weighted ideological positions  $p_j$  of each party  $j$  in the coalition  $c_j$ .

$$Z_{c_j} = \sum_{j \in c_j} p_j h_{jc_j} \quad (3)$$

where  $h_{jc_j}$  is the share (proportion) of seats held by party  $j$  in coalition  $c_j$ . Hence voters are assumed to be knowledgeable about how parties typically share portfolios in the cabinets they enter. And the Euclidean distance is between the voter's left-right ideal point and that of the seat-weighted sum of the left-right locations of coalition parties. Note that this is a simplification of the vote calculus in that we do not incorporate into the model the coordination dilemma confronting voters; specifically, that voters should not simply use historical information about

coalition formation but also anticipate how other voters will use this information about post-election coalition bargaining. Voters in these models anticipate how the strategic ideological vote of other voters will affect post-election coalition outcomes and vote accordingly (McCuen and Morton (2000) is one of the few efforts to our knowledge that addresses the modeling challenges posed by such behavior).

To ensure that parties with no governing experience,  $\sum_{c_j}^{N_{c_j}} \gamma_{c_j} = 0$ , gain no utility from the strategic part of the model, we subtract  $U \left( 1 - \sum_{c_j}^{N_{c_j}} \gamma_{c_j} \right)$ . This acts as a switch that makes  $\beta[\dots] = 0$  in Equation 2, for parties with no governing experience. Finally, note that the full strategic component of the model that falls within the square brackets is weighted by  $\beta$  which indicates the importance of strategic considerations and is assumed to vary between 0 and 1.

Equation 2 also includes the sincere ideological expression that we saw earlier in Equation 1. Note that this “expressive” Euclidean distance term is weighted by  $1 - \beta$ . As  $\beta$  gets large, i.e., voters put more weight on strategic ideological considerations, this expressive component of the ideological vote gets smaller. Hence voters in this model can give varying weight to ideological considerations that are entirely expressive (or sincere) which is captured by the standard Euclidean distance term weighted by  $1 - \beta$ .

The decision to vote for a particular political party is of course not simply guided by the voter’s perceived left-right spatial distance from the party. Accordingly, we include in  $\Psi_i$  to control for the range of other factors that typical enter into a voter utility function.<sup>3</sup> We add a  $\lambda$  term, that varies from 0 to 1 which represents the weight of the ideological vote overall (both strategic and sincere) in the voter preference function. This implies that the relative importance of other factors,  $\Psi_i$ , in the vote utility function is captured by the weight  $1 - \lambda$ .

The voter utility function sketched out in Equation 2 is a precise statement of how ideology enters into the voter preference function: Voters in this model can give varying weight to ideological considerations that are entirely expressive (or sincere) which is captured by the standard Euclidean distance term weighted by  $1 - \beta$ . On the other hand, a large  $\beta$  term implies

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<sup>3</sup>The inclusion of  $\Psi_i$  here makes sense on both theoretical and methodological grounds (see Adams, Merrill and Grofman (2005) who make a strong case for the inclusion of such non-policy variables in spatial models of vote choice). The  $\Psi_i$  is a vector of factors that varies by individual, but not across parties. Further, the effects of these variables within country do not vary either by party or by individual.

that voters condition their ideological vote on strategic considerations related to post-election coalition formations. We suggest that there are two key elements to this strategic calculus:  $\gamma_{c_j}$  which represents the probability of each possible coalitions into which party  $j$  could enter; and  $Z_{c_j}$  which represents the sum of each participating party's ideological bliss point weighted by its historical share of portfolios in coalitions of this particular type. Finally, the vote utility function includes the host of other non-ideological factors,  $\Psi_i$ , that enter into the vote calculus – the importance of these factors in vote choice, relative to ideological considerations, is captured by the  $1 - \lambda$  term. Our theory suggests that, in general, ideology matters for vote choice; hence  $\lambda$  for some important number of cases is non-zero. It also suggests that there are contexts in which the strategic components of our model have a significant impact on the vote calculus – that  $\beta$  is non-zero in many contexts and that we have correctly captured the strategic calculus with the two terms  $Z_{c_j}$  and  $\gamma_{c_j}$ . We now turn to these empirical efforts in the next section.

## 2.1 Coalition Partners( $\gamma_{c_j}$ ), Administrative Responsibility ( $h_{jc_j}$ ) and the Party Ideological Vote

The  $\gamma_{c_j}$  term in Equation 2 represents the likelihood of different possible coalitions forming with party  $j$ . We assume that voters know the historical frequency with which all possible governing coalitions have occurred. Hence, when a party that has no chance of participating in a post-election government, i.e.,  $\gamma_{c_j} = 0$  (for  $c_j = 1, 2, \dots, N_{c_j}$ ) its ideological voting is entirely sincere and therefore determined by the weight  $(1 - \beta)$ .<sup>4</sup>  $(1 - \beta)$  captures the utility that voters get from simply expressing an ideological preference for a political party.

Note that when  $\beta$  is zero or when all the elements of  $\gamma_{c_j} = 0$ , we get the same result – proximity voting. There is a subtle difference though: If in fact  $\beta$  is zero then no parties should receive a second-order strategic ideological vote. The situation when  $\gamma_{c_j} = 0$  for  $c_j = 1, 2, \dots, N_{c_j}$  implies a different set of outcomes. Clearly for a subset of our sampled countries, there will be some parties for whom  $\gamma_{c_j} = 0$  (no chance of participating in a governing coalition) and hence

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<sup>4</sup>Meffert and Gschwend (2007a) speculate that median voters might support extreme parties in order to force major parties, more proximate to the median voter, into a coalition government. This is motivated by concerns other than ideology though – it seems more motivated by a taste for grand coalitions – and in fact generates exactly the opposite prediction to the one in our model.

the ideological vote they receive will be entirely expressive. But in any political system with multi-party governing coalitions there will be at least two parties with a non-zero probability of participating in the governing coalition i.e., ( $\gamma_{c_j} > 0$  for some combination of parties  $j$ ) and this should make it possible to distinguish empirically between whether the absence of strategic ideological voting is the result of  $\beta = 0$  or  $\gamma_{c_j} = 0$  for all combinations of  $j$ .

Voters use this historical information regarding participation in governing coalitions to establish the probabilities that parties will participate in the government after an election. Hence, we assume that voters are knowledgeable about  $\gamma_{c_j}$ , i.e., the likelihoods of different combinations of parties making up the governing coalition that forms after an election. And there is evidence to suggest in fact that they are quite knowledgeable about these probabilities (Bargsted and Kedar 2007, Duch and Stevenson 2008, Irwin and van Holsteyn 2003).

The  $h_{j_{c_j}}$  term in Equation 2 represents party  $j$ 's share of the portfolios in a governing coalition – what we have labeled administrative responsibility. Voters are informed about the likely contribution of each party to governing coalitions into which the party typically enters.<sup>5</sup> Hence, for example, voters know that the People's Party for Freedom and Democracy (VVD) in the Netherlands typically commands about 65 percent of the portfolios when it enters a governing coalition with the Christian Democratic Appeal (CDA). This is important in our theory because shares of portfolios essentially determine the contribution of each governing party to the government's policy positions. The left-right policy compromise amongst the coalition partners ( $Z_{c_j}$ ) is determined by the sum of their ideological positions weighted by each party's share of the cabinet portfolios. This "contribution" of a party's left-right position to the coalition compromise on the left-right continuum will affect the size of its ideological vote.

Voters in our theory are expected to incorporate both  $h_{j_{c_j}}$  and  $\gamma_{c_j}$  (the likelihood of a coalition government between  $j_1$  and  $j_2$  forming) into their vote utility function. Figure 1 illustrates the effect on a voter's utility for Party 1 of variations in the voter's assessment of the likelihood of the party entering into a governing coalition with Party 2 ( $\gamma_{1,2}$ ) or Party 3 ( $\gamma_{1,3}$ )

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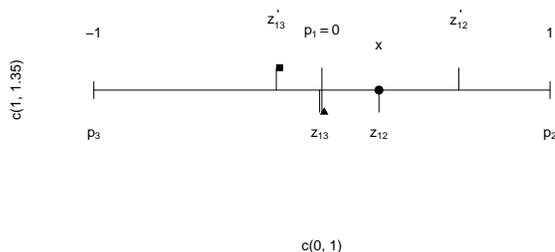
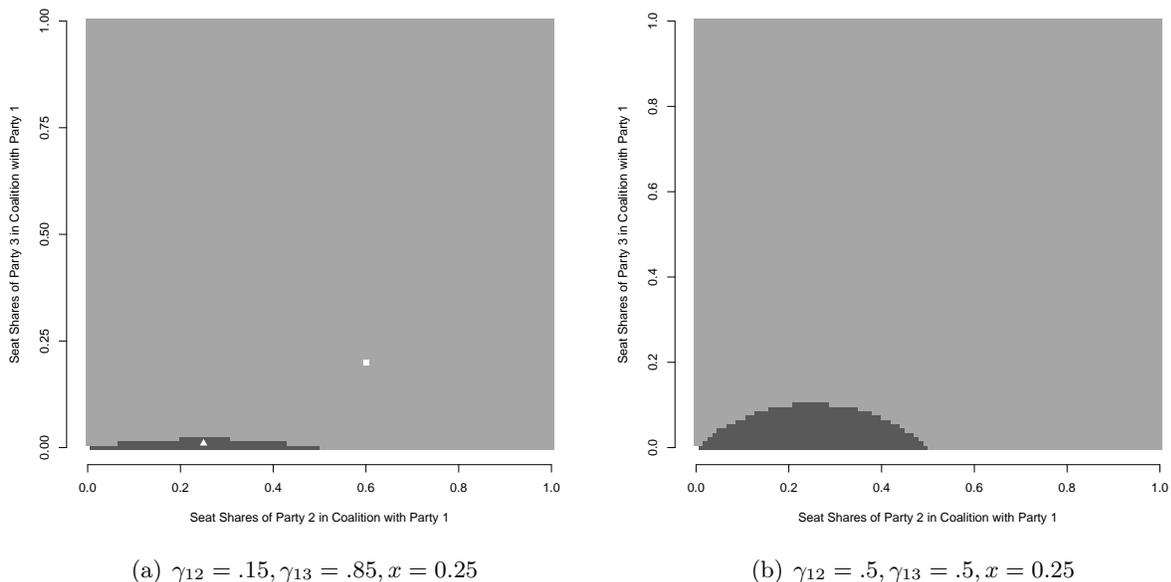
<sup>5</sup>Our assumption here is that voters have a fairly simple mental mapping of likely coalition outcomes that is based on a weighted sum of historical portfolio allocations. An alternative approach, not explored here, is to assume voters anticipate portfolio allocations based on the "pivotalness" and formateur status of competing parties at the time these surveys are conducted (Snyder and Ansolabehere 2005, Morelli 1999).

and variations in  $j_2$  and  $j_3$ 's share of cabinet portfolios. These two variables have interactive effects on the voter's utility – for example, if Party 2 has a very small expected share of the cabinet portfolios then the impact of variations in  $\gamma_{1,2}$  on the voter's utility for Party 1 will likely be quite small.

In order to illustrate this interactive effect, each panel in Figure 1 corresponds to a different value of  $\gamma_{1,2}$  and  $\gamma_{1,3}$  for a voter located at 0.25 on the left-right continuum. Recall that Party 1 is located at 0; Party 2 at 1.0; and Party 3 at -1.0. Within each of the first two panels we illustrate how the voter's utility for Party 1 varies with the seat share Party 1 is expected to concede if it is in coalition with Party 2 versus Party 3. The light-gray shading represents the area where the sincere utility for Party 1 (i.e., ignoring the impact of sharing administrative responsibility on polity outcome) is greater than the strategic utility for Party 1. The area represents ideological compromises with Party 2 and Party 3 that generate utility for our voter that is lower than she would realize if Party 1 governed on its own. The dark-gray shading represents the area where the strategic utility for Party 1 is greater than the sincere utility for Party 1.

In Figure 1a,  $\gamma_{1,2} = .15$ , suggests there is a small chance that Party 1 would govern with Party 2. On the other hand there is a very high probability that Party 1 would govern with Party 3. In this particular case, our voter's ideological bliss point is between Party 1 and Party 2 and hence her utility is positively related to an increasing  $h$  term, i.e., likely seat allocations to Party 2 in a Party 1 and Party 2 governing coalition. The dark gray area extends along the horizontal axis to 0.5 suggesting that our voter's utility for a Party 1 and Party 2 coalition is higher than the utility of a simple sincere ideological calculation up until the point where Party 2's cabinet portfolio allocation exceeds those of Party 1. Note that in this first frame the probability of Party 1 entering a coalition with Party 3 is high, 0.85; and of course any coalition between Party 1 and Party 3 would result in an ideological compromise that would be significantly less attractive than if our voter was simply evaluating Party 1 in terms of sincere ideological distance. In this frame, our voter gains the most utility from exercising a strategic ideological vote when Party 2's seat share is 25 percent (and in fact this maximum holds across changes in  $\gamma$ ).

Figure 1: Utility for Party 1 as  $\gamma_{1,2}$ ,  $\gamma_{13}$ ,  $h_{2,12}$  and  $h_{2,13}$  Change\*



(c) Spatial Representation of Figure 1a

\* The light-gray shading represents the area where the sincere utility for Party 1 is greater than the strategic utility for Party 1. The dark-gray shading represents the area where the strategic utility for Party 1 is greater than the sincere utility for Party 1.

In Figure 1b we have increased the probabilities of Party 1 forming a coalition with Party 2 by making it equally likely that Party 1 would enter a government with either Party 2 or Party 3. As expected, the range of seat share possibilities that favor strategic ideological voter utility increases. Because of the increase in the likelihood of a Party 1-Party 2 coalition ( $\gamma$  is now .5 for both coalition possibilities) our voter is willing to tolerate a higher likely seat allocation in a Party 1-Party 3 coalition and as a result the strategic area expands over a greater range of seat

allocations to Party 3. The light versus dark gray areas of the two panels in Figure 1 indicate in effect whether coalitions possibilities are likely to move ideological outcomes closer or further away from the voter's ideal point.

In Figure 1c we illustrate these two different effects for the political context described in Figure 1a. We represent the left-right issue space for a coordinate within the dark gray area (the white triangle) and one within the light gray area (the white square). Above the issue space line is the example of the light gray area in which Party 1's coalition possibilities result in ideological distances that are further from our voter's sincere ideological distance. First, note that  $Z'_{1,2}$  and  $Z'_{1,3}$ , are determined by the coordinates corresponding to the white square. The black square in Figure 1c corresponds to the weighted location of Party 1 on the left-right continuum. As we would expect, the ideological distance between our voter  $x$  and this weighted ideological outcome is greater than our voter's sincere ideological distance. And it is the case that for any combination of coalition seat shares for Party 2 and Party 3, corresponding to this light gray area, our voter can expect ideological outcomes that result in less utility than would be the case if Party 1 were to govern on its own. The weighted ideological locations for Party 1, corresponding to any coordinates in the light gray area, will be further from  $x$  than  $p_1$  is from  $x$ .

The coordinates corresponding to the white triangle in the dark gray area of Figure 1a generate  $Z_{1,2}$  and  $Z_{1,3}$  are located below the left-right continuum line in Figure 1c. And the black triangle in Figure 1c corresponds to the weighted location of Party 1 on the left-right continuum. Note that the black triangle falls within the indifference area around  $x$  defined by  $x \pm (x - p_1)$ . In general, the weighted ideological locations for Party 1, corresponding to any coordinates in the light gray area, will be closer to  $x$  than  $p_1$  is to  $x$ .

The spatial analysis in Figure 1c nicely illustrates how the vote choice calculus, that incorporate ideological distance, could be quite sensitive to expected coalition outcomes. A model of the vote choice illustrated by  $Z'_{1,2}$  and  $Z'_{1,3}$  that included sincere ideological distance,  $(x_i - p_1)^2$ , rather than the distance between  $x$  and the weighted ideological location of Party 1 (i.e., the black square), would exaggerate the voter's ideological affinity for Party 1. The spatial analysis corresponding to the white triangle coordinates illustrates exactly the opposite problem: A

model of the vote choice illustrated by  $Z_{1,2}$  and  $Z_{1,3}$  that included sincere ideological distance,  $(x_i - p_1)^2$ , rather than the distance between  $x$  and the weighted ideological location of Party 1 (i.e., the black triangle), would underestimate the voter's ideological affinity for Party 1. And this underestimation or overestimation of ideological outcomes can lead to an inaccurate representation of the vote choice calculus and an incorrectly predicted ideological vote, although this depends on where the other parties and their likely coalition partners were located in the issue space.

Our ability to empirically distinguish between the sincere and strategic ideological models requires that voters and parties locate themselves such that strategic and sincere predictions are quite distinct. Whether these strategic incentives materialize in any particular context or for any group of political parties of course depends on the coalition history of parties and the location of parties and voters in the ideological space. We can see this by referring back to Figure 1c. The ideological distance between  $x$  and  $p_1$  is actually quite a bit smaller than the distance between  $x$  and the weighted ideological outcome. But this may have no consequences for  $x$ 's vote choice. Lets assume the weighted ideological outcomes associated with all other coalition possibilities fell somewhere outside of the space between the black box square and  $x$ . In this case calculating ideological distance sincerely or strategically will result in the same vote choice since both result in a vote choice for Party 1. Moreover, it will frequently be the case that the vote choices predicted by the sincere and strategic models will be identical. Hence, the conditions for the separating equilibria are actually quite restrictive. Nevertheless, our expectation is that there are sufficiently numerous cases in which the strategic incentives dictate a vote choice distinct from that predicted by a sincere ideological model and hence we expect to see the net superiority of the strategic model when we compare the two model predictions over a large number of parties and political contexts. Note though that it is virtually impossible to assess these two models in a rigorous fashion without a large number of cases. Hence, drawing conclusions about how ideology shapes vote choice based on a small number of cases is almost certainly to result in misleading conclusions.

## 2.2 Empirical implications of the strategic ideological vote model

Any effort to empirically test our theoretical claims about how ideology shapes vote choice must include observations that vary over  $x_i$ ,  $p_j$ ,  $\gamma_c$ , and  $h_{jc_j}$ . The first two requirements are quite standard: there needs to be variation in the self-placement of voters on the ideological continuum and parties need to vary along this same continuum. The other requirements are somewhat more demanding: parties need to vary considerably in terms of their probability of participating in a governing coalition; and there needs to be variation across parties and over time in the allocation of cabinet portfolios to different parties in the governing coalition. Further, the functional form of the empirical model has to be specified such that it generates estimates for the parameters  $\beta$  and  $\lambda$ . If any one of these is excluded from the empirical model because of a deliberate model specification decision or because of insufficient variation then one very likely will draw misleading conclusions about how ideology shapes vote choice.

One strategy for ensuring appropriate variation is through experimental treatments. Meffert and Gschwend (2007b), for example, employ experiments to demonstrate that voters are capable of making strategic voting decisions that anticipate post-election coalition formations and the relative policy weights of parties in these coalitions. Tomz and Houweling (2007) implement an online experiment demonstrating that voters can make sophisticated policy balancing decisions as part of their vote choice and that this is particularly the case with centrist voters.<sup>6</sup> The other strategy is to estimate the model in Equation 2 using a large number of voter preference surveys from countries with very different political and institutional contexts. This is the strategy we adopt in this essay. But before moving to the empirics, we briefly explain what we can learn – or not learn – about the parameters in Equation 2 from estimating this model of the ideological vote in different national contexts.

*Case 1: The Absence of an Ideological Vote ( $\lambda = 0$ ).* There may be political contexts in which ideology does not shape, in any significant fashion, vote choice. Hence some of the contextual variation in ideological voting may simply result from the fact that  $\lambda \approx 0$ ; in which case, voter utility for a party is entirely accounted for by  $\Psi_i$  which are factors other than ideological self-placement. Cases in which  $\lambda \approx 0$  have two important implications for our theory of the

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<sup>6</sup>Other experimental advances in this regard include Claassen (2007), Lacy and Paolino (2005).

strategic ideological vote. First, a non-zero  $\lambda$  term is a necessary condition for the existence of strategic ideological voting. To the extent that our sample of contexts are overwhelmingly dominated by cases in which  $\lambda \approx 0$ , we would have little confidence in the existence of any kind of ideological voting. Second, an under-specified model that does not include both the strategic and sincere components of the ideological vote, plus the vector of control variables,  $\Psi_i$ , will be unable to distinguish between cases where  $\lambda \approx 0$  (no ideological voting) versus those where  $\beta > 0$  (strategic ideological voting).

*Case 2: Ideological voting in contexts with single-party governing coalitions ( $\lambda > 0$ ) ( $\beta = 0$ ) ( $\gamma = 1$ ).* Note from Equation 2 that if  $\gamma_{c_j} = 1$  for  $c_j = j$  we have the case in which party  $j$  only serves in single-party governments. When this is the case, Equation 2 reduces to the conventional proximity ideological vote expression in Equation 1. Hence our theory predicts that parties with no coalition governing experience should receive a strong conventional proximate ideological vote. These particular cases will not be very helpful empirically in distinguishing between the relative importance of sincere versus strategic ideological contributions to vote choice because the strategic component of the utility function is undefined for non-coalition governing parties.

*Case 3: Ideological voting for parties with no governing experience ( $\lambda > 0$ ) ( $\beta = 0$ ) ( $\gamma = 0$ ).* Political parties that never participate in government are also predicted to receive no strategic ideological vote. Again, for these parties the strategic component of Equation 2 reduces to zero because ( $\gamma = 0$ ) and hence only proximate ideological voting (along with non-ideological factors) shapes vote choice. Because the strategic component of the utility function is undefined, these cases provide no empirical leverage for distinguishing between the importance of the strategic versus sincere ideological vote.

*Case 4: Strategic ideological voting ( $\lambda > 0$ ) ( $0 < \gamma < 1$ ) ( $\beta > 0$ ).* Finally, there are a group of cases in our sample of party ideological votes that are particularly important for testing our theoretical contention that the ideological vote is strategic. These are cases in which  $\lambda > 0$ , i.e., ideology is important, in general, for vote choice, and where ( $0 < \gamma < 1$ ), i.e., parties have a history of serving in coalition governments. For these parties both the strategic and sincere components of Equation 2 are defined and, at least in principle, we should be able to assess the

relative importance of these two theoretical terms.

The problem here is that we have relatively poor information for calibrating the magnitude of  $\beta$ . First, a large number of contexts provide no information about the strategic component of the ideological vote because, as we pointed out earlier,  $\beta = 0$  by definition, i.e., there are no opportunities for voters to exercise a strategic ideological vote. Second, even for those cases in which there are opportunities to exercise a strategic ideological vote, the predictions from a model in which  $\beta = 1$  versus a model in which  $\beta = 0$  will be identical for a large number of voters. This frequently happens because, given the ideological self-placement of voters, the optimal vote choice, taking into consideration post-election coalition compromises, is the same as one that simply considered the ideological proximity of parties. This makes it difficult to assess the independent contribution of the strategic and sincere components of Equation 2 by simply estimating an empirical model that includes both terms.

While it is difficult to get a precise estimate of the magnitude of  $\beta$ , we can gain some insight here by comparing two empirical model specifications: one with ideological distance represented in its sincere form compared to a specification with ideology represented as a weighted strategic term. Our hypothesis is that 1) ideological distance in its weighted strategic form will have a more important impact, measured by the coefficient on the distance measure, on vote choice than in its sincere form; and 2) the model with the strategic ideological specification will better predict vote choice than the sincere specification. To the extent that both tests favour the strategic ideological model, we can be reasonably confident that this is a better net representation of the voter calculus in multi-party coalition contexts.

We have described the strategic ideological voter as being fully informed about the relative electoral strengths of the parties; their likelihood of entering a governing coalition; their location on a left-right continuum; and their likely portfolio allocation if they enter a governing coalition. Equation 2 indicates how voters incorporate information about post election coalition formation into their expected utility for a particular party. The empirical test of our theory is whether these expected utilities generate better predicted vote choices than a sincere model of ideological voting. The next section presents the results of this straight-forward empirical exercise.

### 3 Estimating the Strategic Ideological Vote

Our theory summarized in Equation 2 suggests that ideology enters the voter preference function in some combination of strategic ( $\beta \sum_{c_j=1}^{N_{c_j}} (x_i - Z_{c_j})^2 \gamma_{c_j}$ ) and sincere ( $((1 - \beta)(x_i - p_j)^2)$ ) reasoning. Most empirical models of the ideological vote include the sincere component but exclude the strategic component. Frequently this is of no consequence because the two terms are highly correlated and in fact are identical in many contexts where there is a history of single party governments. Our theoretical argument in favor of a strategic ideological vote 1) presumes that there are in fact a large number of contexts in which these two terms are different; and 2) implies that in these cases the strategic representation of the ideological vote better predicts vote choice. We now review the data employed to estimate the parameters in Equation 2.

In order to obtain reliable estimates of the parameters in Equation 2, our estimates are based on data from 245 election studies. These include studies from a number of comparative voting studies: from the Central and Eastern Euro-Barometer, Comparative Study of Electoral Systems (CSES and CSES2), Euro-Barometer, Afro-Barometer, Latino-Barometer, and World Values Survey. These cover 30 countries<sup>7</sup> from the years 1981-2006. Each survey includes, at a minimum: 1) the respondent's intended vote (or reported vote for a handful of post-election surveys); 2) the respondent's left-right self-placement; and 3) the appropriate control variables for estimating a vote choice model in each country.

We will estimate the underlying utility of respondents for each competing party by estimating a conditional logit function with vote preference over competing political parties as the dependent variable. The vote preference question in the surveys we analyze is typically of the form, "if an election were held today which party would you vote for?".

The vote choice questions differed in their relationship to the election for which the vote applied: surveys conducted directly after elections simply ask respondents to report their vote choice in the preceding election; surveys that were conducted just before an election ask respondents for whom they intend to vote for in the upcoming election; and surveys that were not

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<sup>7</sup>Albania, Australia, Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Sweden

proximate to an election ask the voter about a hypothetical election (“If there were a general election tomorrow, which party would you support?”).<sup>8</sup> All the surveys we used allow the voter to express whether they did not vote or do not intend to vote. Further, most allow the voter to indicate if she cast (or intends to cast) a blank ballot. Where these studies differ is in how they elicit the information that the respondent does not intend to vote. While this is a readily apparent difference in the way the vote choice question is asked in different surveys, it is unlikely to be consequential in our analysis, since (for other reasons) we decided to ignore non-voters in our analysis.

The left-right self placement measure used for the Euclidean distance terms in Equation 2 is based on questions that were worded similarly to: “In political matters, people talk of ‘the left’ and ‘the right’. How would you place your views on this scale? 1=Left 10=Right.” The left-right scales were of different ranges across the surveys (some were 10-scale, others 7-scale, etc.) but were all standardized to have mean zero and unit variance to facilitate comparisons across surveys.<sup>9</sup>

Empirically, the more problematic element in the Euclidean term is the measure of party placements,  $p_j$  from Equation 2. We measure party placement with the mean of the left-right placement of the voters for party  $j$ . Using this measure we were able to estimate ideological distance for all of the voter preference studies in our sample. It also has the advantage of avoiding endogeneity bias that some claim is associated with measures of party placement that are based on respondents locating parties on the left-right ideological continuum (Macdonald and Listhaug 2007, Merrill and Adams 2001).<sup>10</sup>

Only if we have accounted for all the important influences on the vote will we be confident that our estimates reflect the true relationship between ideological self-placement and vote

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<sup>8</sup>The key question for our analysis is whether these differences introduce systematic biases into our estimates of the strength of economic voting that will make them less comparable. Our analyses suggest that they do not.

<sup>9</sup>A detailed description of the surveys and question wording of items used in the analysis is available on the authors’ web site: [www.raymond duch.com/ideologicalvote](http://www.raymond duch.com/ideologicalvote).

<sup>10</sup>Rehm (2007) provides a detailed discussion of the merits and disadvantages of employing the constituency-based strategy for estimating party positions, including comparisons with the other methods for locating parties in policy space. We replicate the results reported below using two other methods: party placements that are the mean for all respondents identifying with each party; and party placements based on questions asking respondents to locate parties in the ideological space. These methods generate essentially the same findings as those reported below. Results using these other two methods are available on the authors’ web page: [www.raymond duch.com/ideologicalvote](http://www.raymond duch.com/ideologicalvote)

choice in the population to which the relevant survey applies. Hence, our statistical models for each survey include variables that are known to be important in voting in the particular country and time – the  $\Psi_i$  term in Equation 2. We identify those variables from the literature on comparative voting behavior and on the country specific literatures on voting in each country.<sup>11</sup>

It is the  $\gamma_{c_j}$  and  $h_{jc_j}$  (through the  $Z_{c_j}$  term) in Equation 2 that distinguish strategic from sincere representations of the ideological vote. The  $\gamma_{c_j}$  represents the voter’s assessment of the likelihood of all possible coalition permutations in which party  $j$  could participate. We employ an historical approach to measuring voter beliefs about the likelihood of participating in each possible coalition permutation. Specifically, we calculate, for each party (at the time of the survey), the months since 1960 that the party has been in the cabinet and discounted versions of this measure that gives more weight to more recent experience.

Each party  $j$  is involved in some number of coalitions  $N_{c_j}$ , where  $c_j \in \{1_j, 2_j, \dots, N_{c_jj}\}$ , if  $N_{c_j} > 0$ . Each survey is taken at month  $m$ .  $t_{c_j}$  assumes a value of 1 for the first month in which party  $j$  participated in a particular coalition  $c_j$ , a value of 2 for the second month, and  $M_{c_j}$  represents the month in which the coalition terminated, so  $t_{c_j} = \{1, 2, \dots, M_{c_j}\}$ .

$$\gamma_{c_j} = \left( \sum_{c_j}^{N_{c_j}} \sum_{t_{c_j}}^{M_{c_j}} 0.98^{m_e - t_{c_j}} \right)^{-1} \left( \sum_{t_{c_j}}^{M_{c_j}} 0.98^{m_e - t_{c_j}} \right) \quad (4)$$

We discount past observations using an exponential weighting function,  $\delta^{m_e}$ , where  $m_e$  is the number of months between the current election survey month (for which a score is being calculated) and the month in the past that is under consideration. We choose  $\delta = .98$ , which means that service five years in the past is discounted by about one half and ten years in the past by about a third.

The strategic ideological term in Equation 2 replaces each party’s location on the ideological continuum with  $Z_{c_j}$  which is the left-right position of each party in the coalition weighted by its historical share of the cabinet portfolios in the cabinet ( $h_{jc_j}$ ). These data contain information on the number of ministries held by each party in each month from 1960 to the present (which is defined as the date of the survey) and they identify the party of the prime minister and all of the

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<sup>11</sup>Details on these model specifications is available on the authors’ web site: [www.raymond Duch.com/ideologicalvote](http://www.raymond Duch.com/ideologicalvote).

parties in the governing coalition. These data on cabinet portfolios were compiled by the authors and a detailed description of the sources is available at [www.raymondduch.com/ideologicalvote](http://www.raymondduch.com/ideologicalvote).

To calculate a party  $j$ 's seat shares in a particular coalition  $c_j$ , we simply sum the cabinet portfolios held each month ( $t_{c_j}$ ) by that party for all of the months the coalition was in power  $M_{c_j}$  which results in  $s_{jc_j}$ . We then divide this sum by the sum of all portfolios, again over all of the months of the coalition, held by all coalition partners in that particular coalition  $c_j$ . This, of course, gets repeated for all parties over all possible coalitions that occurred from 1960 until the date of the survey.

$$h_{jc_j} = \left( \sum_{j \in c_j} \sum_{t_{c_j} \in M_{c_j}} s_{jt_{c_j}} \right)^{-1} \sum_{t_{c_j} \in M_{c_j}} s_{jt_{c_j}} \quad (5)$$

Here,  $s_{jt_{c_j}}$  represents the number of seats held by party  $j$  in month  $t$  of coalition  $c_j$ . Then, using Equation 3, we calculate the  $Z_{c_j}$  for each coalition as the sum of the seat-share-weighted party-placements.

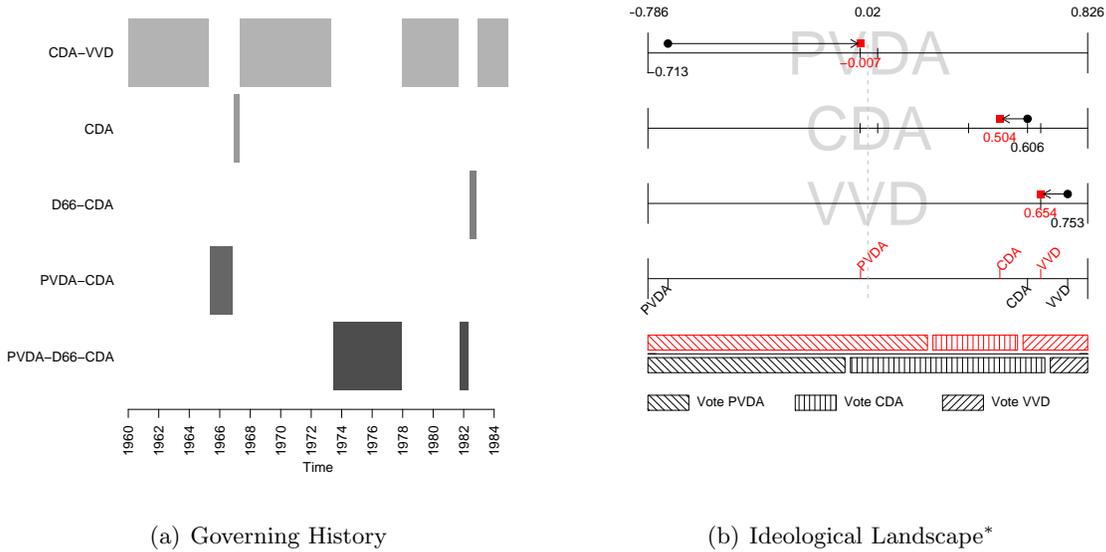
For each of the 245 voter preference studies in our sample we estimate a sincere version of the ideological voting model that includes the sincere component of Equation 2 along with the  $\Psi_i$ , i.e., the appropriate control variables for a vote choice model in each country. We also estimate a strategic ideological version that replaces the sincere with the strategic ideological component of Equation 2. Only cases that have complete data on the two variables mentioned above and on the control variables are included in the estimation. Finally, we only use those parties that have at least 50 complete observations intending to vote for them in order to prevent over-fitting parties with very few observations. This leaves us with 892 estimated party vote preferences for 182 distinct parties based on 142,794 respondents.

### 3.1 Example: The Netherlands, 1985

Note that in Equation 2 there are two party specific terms,  $\gamma_{c_j}$  and  $Z_{c_j}$ , that need to be measured for all 182 parties in our sample of 245 voter preference studies. To illustrate how these are constructed we consider the case of the Labour Party (PvdA) in the Netherlands. The  $\gamma_{c_j}$  terms are calculated as follows. First, we identified all of the coalitions in which the

PvdA participated and also when they took place. Figure 2(a) is a graphical representation of the periods during which the PvdA was in government and with which parties it was in coalition. Out of the total 82 months during which the PvdA was a governing party, it spent 63 (77%) in coalition with the Christian Democratic Appeal (CDA) and Democrats 66 (D66), and 19 months (23%) in coalition with the CDA. We can use Equation 4 to calculate the  $\gamma_{c_j}$ s for PvdA. For the two coalitions that PvdA participated in we obtain the following results:  $\gamma_{PvdA,CDA,D66} = 0.98$  and  $\gamma_{PvdA,CDA} = 0.02$ . Note the discounting term significantly reduces the likelihood of PvdA serving in a coalition with only the CDA because this coalition outcome occurred almost 20 years prior to this 1985 survey.

Figure 2: The Netherlands 1985



\* The red squares, text and predictions represent those calculated with the strategic voting calculus discussed above. The black points, text and predictions represent those generated with the sincere calculus. The ideological landscape for each study is available at [www.raymond Duch.com/ideologicalvote](http://www.raymond Duch.com/ideologicalvote).

Recall from Equation 5 that to calculate seat shares, we simply sum the seats held each month by each coalition partner  $s_{jtc_j}$  and divide each sum by the sum of all seats held by all coalition partners. And to generate the coalitions ideological placement,  $Z_{c_j}$ , we simply sum the party-placements weighted by  $h_{jc_j}$ .

$$Z_{c_j} = \sum_{j=1}^{N_{\text{party}}} p_j h_{j c_j} \quad (6)$$

For the PvdA, we calculate these as follows:

$$Z_{\text{PvdA,CDA,D66}} = -0.71 \times 0.41 + 0.61 \times 0.48 = 0.001 \quad (7)$$

$$Z_{\text{PvdA,CDA}} = -0.71 \times 0.42 + 0.61 \times 0.58 = 0.06 \quad (8)$$

Notice in Equation 7 that the term for the D66 is set to zero because D66 had fewer than our 50 case threshold. This is not a cause for concern because parties we are leaving out have relatively small seat shares and thus contribute little to the overall weighted ideological placement.

Next, we generate a weighted distance based on the  $Z_{c_j}$ 's and  $\gamma_{c_j}$ 's based on the theoretical model. For the PvdA, this is:

$$dw_{\text{PvdA}i} = (x_i - 0.001)^2 \times 0.98 + (x_i - 0.06)^2 \times 0.02 \quad (9)$$

where  $x_i$  represents the left-right self-placement of each individual in the voter survey. The calculated values  $dw_{\text{PvdA}i}$  are then used as distances in the statistical model discussed below. Note that now for any individual in this particular voter preference survey the PvdA has a weighted location in the left-right ideology space that is determined by its coalition history. We can use Equation 9 to calculate the distance between any individual and the PvdA's weighted location. But given that it is a complicated function of the  $Z_{c_j}$ 's and  $\gamma_{c_j}$ 's, we don't know the weighted location of PvdA on the left-right continuum. But we can use the logic of Equation 9 to retrieve this location. First, we find the left-right score of the most right-wing individual, in the Netherlands in 1985; it is 2.04. Then we take the distance between that person and this new weighted combination, in this case it is 4.21. If we take this as the squared difference between the most right-wing individual and the new PvdA position, we can solve:

$$4.21 = (2.04 - p'_{\text{PvdA}})^2 \quad (10)$$

$$-\left(\sqrt{4.21} - 2.04\right) = p'_{\text{PvdA}} \quad (11)$$

$$p'_{\text{PvdA}} = -0.011 \quad (12)$$

We recover these strategically weighted ideological locations of the 892 parties in our data set.<sup>12</sup> Figure 2(b) shows the political landscape in the Netherlands in 1985 for all three parties. The strategic point locations are represented by the red squares and the sincere point locations are represented by black circles. The tick marks in the individual party dimensions represent the location of the  $Z_{c_j}$ 's. In this particular context, the strategic reconfiguration is consequential. The CDA should expect to get considerably fewer votes under strategic considerations and the PvdA and VVD would get more. We contend that this strategic representation of parties in the left-right issue space – i.e., the red squares in Figure 2(b) – represents a more accurate understanding of how ideology enters into the vote utility function.

### 3.2 Assessing the Strategic Ideological Voting Model

Equation 2 suggests that the Euclidean distance between voters and the red squares in Figure 2(b) contribute significantly to the voter's utility for political parties. We will establish this is the case by comparing the results of estimated vote choice models that include sincere versus strategic representations of the Euclidean distance between the left-right placement of voters and parties. We start by estimating a sincere voting model, "Model 1.". Here, we use a conditional logit (Maddala 1983) to estimate the utility for each party and predict vote choice.<sup>13</sup> Party ideological distance is represented as a choice-specific characteristic, so only one parameter is estimated for for this variable. Along with ideological distance between respondents and the parties, the model includes the control variables represented by  $\Psi_i$  in Equation 2.

<sup>12</sup>These are available on the authors' web site: [www.raymond Duch.com/ideologicalvote](http://www.raymond Duch.com/ideologicalvote).

<sup>13</sup>Some, most notably Alvarez and Nagler (1998), argue for the use of multinomial probit (MNP) by showing that in some situations the violation of the IIA assumption has observable, nontrivial consequences for inference. Extensive investigation has shown that for the quantities of interest here - namely correct model predictions, the two models produce nearly identical results. Further, estimating a multinomial probit model for these 245 datasets is computationally expensive. We see no particular reason to prefer MNP under these circumstances.

Our goal here is to contrast a model incorporating strategic ideological reasoning to that of Model 1 which assumes sincere ideological reasoning. This is done in two steps. Recall from Equation 2 and Figure 2(b) that parties can experience two distinct types of movements in the ideological space as a result of strategic reasoning. First, they can simply drop out of the strategic voter’s utility calculation. If all of the  $\gamma_{c_j}$  terms for a particular party are zero then the strategic component of Equation 2 falls out and there is no strategic voting for that party. Our theoretical prediction is that voters who are proximate ideologically to these parties should nevertheless vote for parties that are ideologically more distant but that are in contention to participate in a governing coalition.

Our second model, “Model 2”, isolates this particular aspect of the strategic ideological voter’s calculation. To do this we estimate Model 2 that includes only those parties that have had government experience in the past (i.e., have some element of the vector  $\gamma_{c_j}$  that is non-zero). This systematically eliminates some parties from the analysis. In essence we are comparing the results here to the null model (Model 1) where every individual’s vote is cast based on Euclidian distance (and the other factors in the model). So, if individuals who were wrongly predicted in Model 1 to vote for the “non-viable” parties that were closer to them and are rightly predicted in Model 2 to vote for a viable party that is further away, this is evidence in favor of our theory. We estimate exactly the same sincere ideological model as Model 1, but exclude parties that are unlikely to govern.

Our next estimation step is to replace the sincere Euclidean distance term, identified in Equation 2, with the weighted term. In this model, “Model 3”, both strategic components are in play: strategic voters are predicted not to vote for parties that have no chance of entering government (i.e., the vector  $\gamma_{c_j}$  is all zeros) and ideological distance enters the vote calculus weighted by the likely coalition participation of parties.

The difference between Model 1 and Model 2 represents the gain in predictive power for particular parties by simply removing from consideration the parties that are unlikely to be in government. The difference between Model 2 and Model 3 is the gain in predictive power for parties by placing the parties at locations that reflects their contribution to coalition policy outcomes. The theory suggests that there will be significant differences between Models 1 and

2 as well as between Models 2 and 3.

## 4 Results: The Extent of Strategic Ideological Voting

Our theory suggests that ideology is universally important in shaping vote choice; there will be contextual variation in the importance of ideology in the vote calculus; and a model of strategic ideological voting is a better representation of how ideology enters the vote utility function, i.e.,  $\beta$  is large.

We begin by presenting empirical results that address our first contention, that the ideological vote is universal. Here we rely entirely on the Model 1 sincere ideological vote specification. Recall that we estimate fully specified conditional logit vote choice models for 400 voter preference surveys conducted in 57 countries. Hence we have 400 parameter estimates for the sincere ideological distance term.<sup>14</sup> Figure 3(a) shows a dot-plot of these coefficients with a 95% confidence interval imposed and with the lowest coefficient magnitudes at the top of the figure and highest at the bottom. Most countries have votes that are cast on ideological grounds. Note that the precision and statistical significance of coefficients varies quite considerably. Recall that for any country we will have multiple estimates of the ideology coefficient because we have on average four studies per country, although the average for the more developed democracies is actually closer to seven (you can see the number of studies associated with each country in Panel (c)). Panel (b) shows the range of the estimated coefficients for each country - the minimum and maximum coefficients estimated in the conditional logit models in each country. The modal distance coefficient is approximately -0.5 and in fact the country distribution of modal coefficient values is actually quite skewed with most countries clustering around this value; only a handful of countries exceed this -0.5 value (i.e., have weaker ideological voting); but a reasonably large number of countries registering quite high ideological voting with modal coefficient values less than -1.0.

Finally, panel (c) shows the proportion of coefficients in each country that are *not* statisti-

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<sup>14</sup>There are only 245 of these 400 surveys for which we have data on coalition portfolios, thus for Models 2 and 3, we only use that subset of the data presented in Figure 3. However, given the large number of data sets compiled, we thought it would be beneficial to present all of the information across all surveys here.

cally different from zero. Three countries were certain to have insignificant ideology coefficients – Peru, Panama and Guatemala. And nineteen other countries had probabilities exceeding 0.10 of having insignificant ideology coefficients. Thirty-five countries, or 60 percent of the total, were certain **not** to have insignificant coefficients. All of the non-significant countries with three notable exceptions can be considered transition democracies. Ireland is one of the exceptions and this is not unexpected given the importance of other more salient cleavages in the country (Inglehart and Klingemann 1976). Our results for the United States, the second exception, supports Fiorina (2006)’s recent observation that the American voters ‘are not very well-informed about politics, do not hold many of their views very strongly, and are not ideological’ (p. 19). The other exception is Luxembourg.

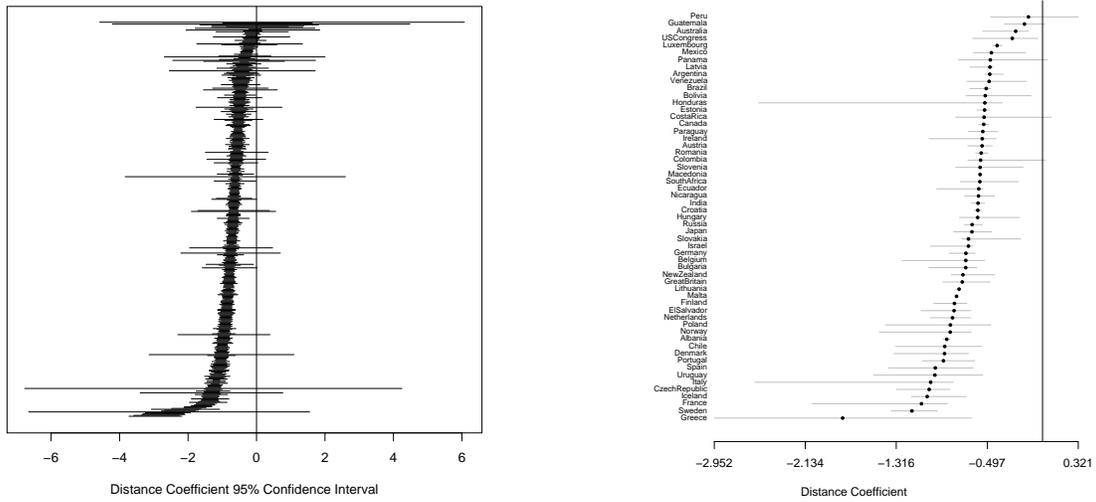
Ideological voting occurs, at least with some frequency, in virtually all countries in the world: there are only three countries where we never see a significant ideological vote; about 15 countries where we frequently see no ideological voting; and almost two-thirds of the countries in our sample always have ideological voting. There are some potentially interesting differences between those countries that always have an ideological vote and those where it is more variable, if not absent. Transition democracies, but more particularly Latin American countries, are most likely to have insignificant ideological distance coefficients. Of the Latin American countries, only Chile, El Salvador and Uruguay fall in the category of countries always having a significant ideological distance coefficient. The other 13 Latin American countries either have no ideological vote or one that varies between significance and insignificance. This tendency for less-mature democracies to exhibit lower ideological votes confirms a similar pattern documented by Huber and Inglehart (1995). All of the Western European countries (with the exception of Luxembourg) always have a significant ideological vote. Interestingly, virtually all of the transition democracies from East and Central Europe also fall in this category.<sup>15</sup>

We expect to see contextual variation in the ideological vote and this is confirmed by Panels

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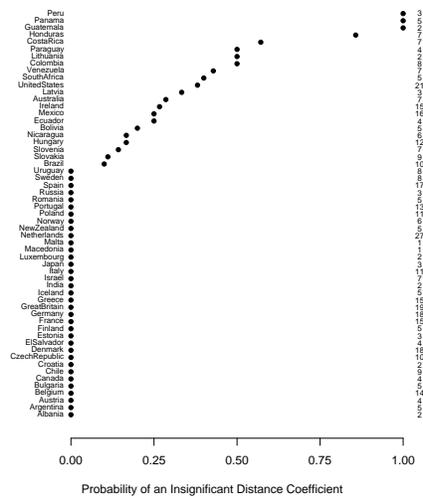
<sup>15</sup>Given that the data come from various different sources (such as the Euro-Barometer, Latino-Barometer, CSES, etc.) we considered the possibility that some data sources might generate, on average, different inferences for the same country-years. Of the 54 country-years that had surveys in the field from multiple organizations, only 12 showed inconsistency in the inferences made about the distance coefficient; that is, one study showed a significant distance coefficient and another did not. The p-value for the  $\chi^2$  statistic on the table of data sources and inconsistencies is 0.09 suggesting that there is no statistically significant relationship between the data source and inconsistency of results.

Figure 3: Distance Coefficients in Conditional Logit Models\*



(a)

(b)



(c)

\* Panel (a) shows the 95% confidence interval of the distance coefficients from each of 461 conditional logit models (we use all available datasets here, not only the ones for which we have data on cabinet seats as below). In panel (b), the bars represent the range of the estimated distance coefficients for each country. For panel (c), the points represent the proportion of distance coefficients for a given country that were not significantly different from zero. The number on the right gives the total number of surveys for each country.

(a) and (b) in Figure 3. Some countries appear to have dramatically more ideological voting than others – this appears to be the case for Greece, France, the Czech Republic and Iceland, for example. Panels (a) and (b) also make clear that the magnitude of this ideological vote varies quite significantly within any particular country, and hence from one time point to the next. Some of this variation results because in certain contexts our  $\lambda$  term is low – considerations other than ideology dominate the vote choice decision. But some of this observed variation in the sincere ideological vote results because voters are engaging in strategic ideological voting. If voters are conditioning their ideological vote on post-election strategic considerations then the distance coefficient on sincere Euclidean distance should perform better in some contexts than others which it does. We now attempt to tease out of these data an indication of the importance of strategic ideological voting.

Again there are two strategic models: The strong test of our theory is embodied in Model 3 where we weight party locations according to the strategic term in Equation 2. Our theory would be less convincing if we were to find that our strategic result was dominated by the Model 2 specification – i.e., simply dropping parties that had no history of serving in government. One test of the strategic model is to determine whether it generates significantly stronger (more negative) distance coefficients than those estimated for the sincere model.<sup>16</sup>

In Figure 4 we compare the magnitudes of the distance coefficients for Models 1-3. Panel (a) presents the results of subtracting the distance coefficient generated by Model 2 from the distance coefficient estimated for Model 1 – these are generated for all 245 voter preference studies along with their 95% confidence intervals.<sup>17</sup> Negative values here favour the strategic Model 2 over the sincere Model 1. On balance most of the significant differences are decidedly in favour of the sincere model (93) as opposed to the strategic Model 2 (9). Hence simply constraining the vote choice to parties that are likely to participate in the post-election governing coalition does not improve on a sincere model of the ideological vote that includes these parties.

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<sup>16</sup>Since we're moving points around, the variance of the distance variable is likely to change potentially changing the coefficient without having really changed inferences. To prevent finding a spurious relationship like this, we normalize both the distances to have unit variance.

<sup>17</sup>For distance coefficients  $b_n$  and  $b_t$  from the sincere and strategic models, respectively;

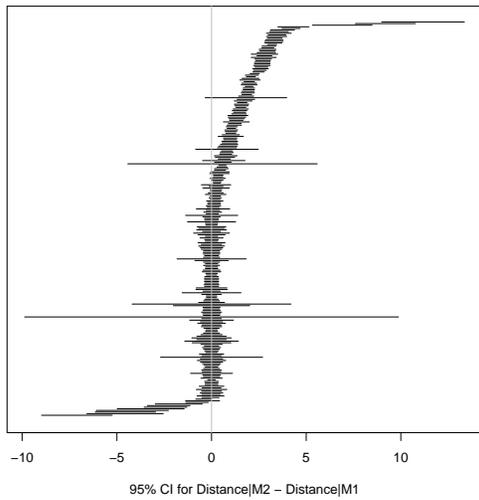
$$\hat{\sigma}_{b_n+b_t} = \sqrt{\hat{\sigma}_{b_t}^2 + \hat{\sigma}_{b_n}^2}$$

To the extent there is a strategic ideological vote it is not simply the abandoning of parties with  $\gamma_{c_j}$  terms that are all zeros.

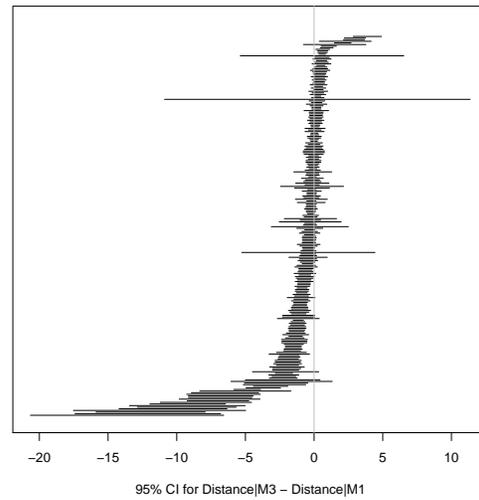
Model 3 incorporates the richer component of the strategic ideological vote identified in Equation 2: Voters' re-position parties in the ideological space consistent with their expectations as to how these parties will influence post-election coalition policy compromises. Panel (b) in Figure 4 presents the difference in coefficient magnitudes between this Model 3 specification and the Model 1 sincere ideological vote specification. Model 3 has significantly more negative distance coefficient than Model 1 and in only 18 cases do we see the reverse. These results are confirmed in Panels (c) and (d) that provide a tally of countries where the strategic model has a significantly more negative coefficient than the sincere model. This is the number of surveys within each country that had a significantly more negative coefficient for distance divided by the total number of surveys in that country. Hence, a value of 1 in Panel (c) indicates that all of Model 2's predictions were significantly more negative than those of the sincere Model 1; a value of 0 indicates that none of Model 2's predictions were more negative than Model 1. In Panel (c) only 5 of 30 countries have a significantly more negative distance coefficient in Model 2 as compared to Model 1, confirming the results in Panel (a). On the other hand, in Panel (d) around half of the countries have some probability of having a significantly more negative distance coefficient in Model 3 as compared to Model 1. This indicates that there is a stronger relationship between ideological distance and vote choice in vote models that incorporate a richer specification of strategic ideological incentives than is the case with the standard Euclidean ideological distance term that is typically found in vote choice models.

The crux of our theoretical claim is that the  $\beta$  term in Equation 2 is non-zero. We do not claim that  $\beta$  is universally non-zero. First, there are a large number of contexts in which the strategic ideological component of Equation 2 is zero by construction, i.e., there is no history of coalition governments. Second, we entertain the possibility that there is an expressive component to the ideological vote, i.e.,  $1 - \beta$  is non-zero. Accordingly, the empirical test of our theory consists of demonstrating that there clearly are contexts in which, and parties for which, the strategic formulation of the ideological vote does a better job than the sincere model of explaining vote choice. We believe the empirical evidence presented in this section clearly

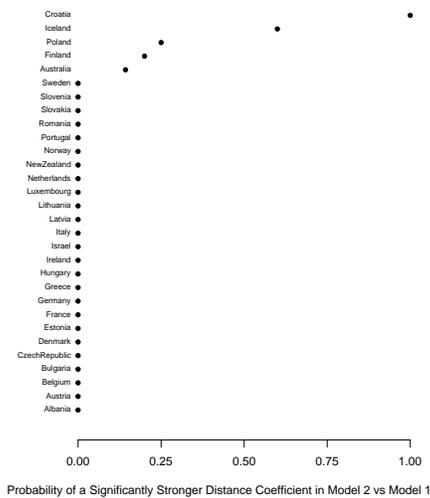
Figure 4: Differences between Strategic and Sincere Coefficients



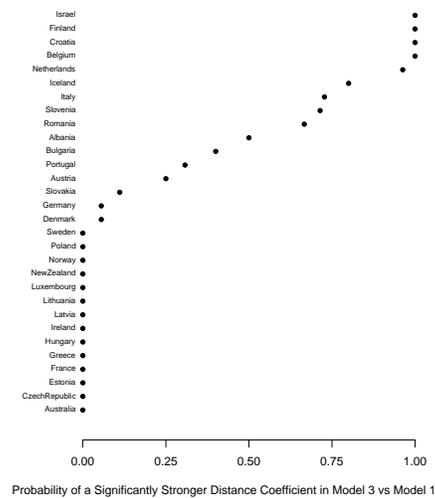
(a)



(b)



(c)



(d)

establish this is the case.<sup>18</sup>

<sup>18</sup>This raises a number of interesting questions regarding cross-national characterizations of the left-right ideological space that we do not address here but will in future research. One might expect, for example, that party placements are more uncertain in contexts where there is significant deviations between our weighted ideological placement of parties and sincere ideological placements.

## 4.1 Predicting Vote Choice

The previous section established that our strategic ideological model frequently performs better with respect to the coefficient on the ideological distance term. A more demanding test of our theory is whether, over a large number of cases, Model 3 in fact does a better job of predicting actual vote preferences. This is a demanding test because even in contexts in which the  $\beta$  is non-zero, the strategic ideological model will generate vote predictions that are identical to those of the sincere ideological model. Nevertheless we expect that in many contexts the strategic ideological will generate more accurate vote predictions for competing political parties. Hence in this section we present the frequency with the strategic ideological model generates more accurate predictions; and describe the contexts in which strategic ideological voting appears to be more common.

Predicted votes associated with each of the three models are based on simulations that included 182 parties from 30 countries and 245 distinct data sets - a total of 892 predicted party votes.<sup>19</sup> The performance of each of the three models is assessed by the difference in correctly predicted votes between either Model 2 or Model 3 and Model 1. On average there are more negative values than positive ones (favoring the sincere model). Over all of the cases in our data, the sincere voting model outperforms Model 2 for 394 parties (44 percent of the cases) and Model 3 for 368 parties (41 percent) – these are cases that have differences less than -5% (344 and 315 significantly different from zero, respectively). The sincere model outperforms both Model 2 and Model 3 in about 60 percent of the cases. Note that parties with no government experience will very likely show significant differences in favor of the sincere model because the strategic model will predict 0 correct votes by construction. If the sincere model correctly predicts on average even a few of those parties' votes, there will be significant positive differences.

In roughly forty percent of the cases Model 2 or Model 3 outperform the sincere ideological model. Some of this deviation from sincere ideological voting is consistent with our theory. Recall that Model 2 identifies that aspect of the strategic ideological vote decision that simply results from voters abandoning parties with no history of governing. To the extent that this is the

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<sup>19</sup>We only used data sets where we had data on the partisan breakdown of cabinet or ministry level positions and where at least one government formed in the past had a coalition. Given that the results of the strategic and sincere models would be identical for those countries without coalition history, this seems reasonable.

only incremental contribution of our model to explaining party vote choice then our contribution to vote choice theory would be relatively limited. Model 3 on the other hand captures the more novel aspect of the theory whereby voters reposition parties in ideological space conditional on their likely participation in the governing coalition. The strong test of this novel component of our theory is the extent to which Model 3 generates more accurate predictions of a party's vote. Our simulated predictions indicate that in about half of the cases, predicted to deviate from sincere ideological voting, Model 3 performs better than Model 2. Model 2 generates differences great than 5% for 206 parties (23 percent) while Model 3 generates differences greater than 5% for 197 parties (22 percent), with around 140 significantly different from zero in both cases.

Our second goal here is to identify the contexts in which our model of the strategic ideological vote (Model 3) outperforms other representations of the ideological vote. Within any particular survey context some parties are more sensitive to this particular component of the strategic ideological calculations than others. To illustrate we examine parties whose difference between Models 2 and 3 is significant at the 95% level.<sup>20</sup> Table 1 shows these results where Models 2 and 3 differ significantly and indicates which parties gain and lose predicted votes.

There are systematic patterns in these Model 2 and Model 3 differences that are certainly worth further exploration. Note, for example, in France the strategic Model 3 generates significantly better predictions for the three of the four major parties in the countries: the Socialists and the Union pour la Démocratie Française (UDF) are always predicted better by Model 3 when there is a significant difference in predictions; and the Rassemblement pour la République (RPR) are better predicted by Model 3 twice as often as they are better predicted by Model 2. The Communists (PCF) are the sole exception in that they are always better predicted by Model 2. In Germany, like France, the two largest parties are favored by strategic Model 3: the Christian Democratic Union (CDU) is always predicted better by Model 3; and the Social Democratic Party (SDP) is better predicted by Model 3 twice as often as it is better predicted by Model 2. The FDP is always better predicted by Model 2.<sup>21</sup> Finally, in the Netherlands, the PvdA and VVD are about evenly split between being better predicted by Models 2 and 3;

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<sup>20</sup>This means 95% of the bootstrap replicate percent correctly predicted figures for Model 3 would be higher (or lower) than those from Model 2.

<sup>21</sup>The Greens are always better predicted by Model 3 but this is based on one observation

however the CDA is always predicted worse by Model 3; and D66 is always better predicted by Model 3.

As we pointed out earlier, the strategic and sincere components of Equation 2 often generate very similar, if not identical, predicted party votes. Nevertheless, as Table 1 indicates, in some countries and for some political parties the strategic ideological model always outperforms the sincere model. And there is also considerable evidence that the strategic and sincere models alternate in terms of generating more accurate vote predictions. We do not pretend to have a general explanation here as to when, or in which context, one model will outperform the other (aside from the obvious that strategic ideological voting only occurs in coalition contexts). When and where strategic ideological considerations come into play is of course difficult to anticipate since their importance are contingent on the both voter utilities, party placements and coalition histories. Hence, the conservative modeling strategy is to always incorporate strategic ideological terms in vote choice models in coalition contexts.

## 4.2 Comparing Alternative Representations of the Ideological Vote

Our conceptualization of the strategic ideological vote builds on existing spatial voting models in which voters anticipate a post-election political process that moderates in some fashion how elected parties impact policy outcomes (Adams, Merrill and Groffman 2005, Merrill and Groffman 1999). We believe our added value here is to provide a richer account of how voters incorporate information regarding post-election coalition outcomes into their expectations about how candidates affect the ideological positioning of coalition governments. In this section we assess whether in fact our model of the strategic ideological vote provides added insight into how ideology shapes vote choice in contexts with multi-party governing coalitions. Our benchmark is the unified voting model proposed by Adams, Merrill and Groffman (2005) which includes two of the most widely employed alternatives to the pure proximity model: the directional and the discounting models of spatial voting. Accordingly, we estimate a directional and discounting model employing the same data used for Model 3.

Equation 13 represents the discounting model that we estimate. There are three coefficients to be estimated here: The  $d$  term represents the extent to which voters discount the distance

Table 1: Significant Differences between Model 2 and Model 3

	$M3 > M2$	$M2 > M3$		$M3 > M2$	$M2 > M3$
Albania/PDS	1	0	Ireland/FG	4	0
Albania/PSS	1	0	Ireland/Lab	0	7
Australia/Lib	0	2	Israel/Labour	1	0
Australia/Nat	0	1	Israel/Merez	2	0
Belgium/CVP	0	5	Italy/exright	1	0
Belgium/Green	1	0	Italy/FI	0	1
Belgium/PS	7	2	Italy/LN	0	1
Belgium/PVV-VLD	2	0	Italy/PDS	1	1
CzechRepublic/CSSD	4	0	Lithuania/LCS	0	1
CzechRepublic/KDU-CSL	3	0	Lithuania/TS	0	1
Denmark/CD	1	0	Netherlands/CDA	0	11
Denmark/KF	1	6	Netherlands/D66	5	0
Denmark/RV	0	1	Netherlands/PvdA	13	10
Denmark/SD	11	0	Netherlands/VVD	2	2
Denmark/V	2	2	NewZealand/Nat	0	1
Estonia/KESK	1	0	Norway/DNA	0	1
Estonia/Mood-SDE	0	1	Norway/H	4	0
Estonia/Reform	1	0	Norway/KRF	0	1
Finland/KES	0	1	Poland/PSL	0	2
Finland/KOK	2	0	Poland/SLD	1	2
Finland/SFP	0	1	Portugal/PSD	1	0
Finland/SSDP	2	0	Portugal/PSP	0	1
Finland/VAS	1	1	Slovakia/APR/DEUS	0	1
Finland/VIHR	0	2	Slovakia/HZDS	1	3
France/PCF	0	4	Slovakia/KDH	2	0
France/PS	7	0	Slovakia/SDL	0	4
France/RPR	8	4	Slovakia/SKDU	0	1
France/UDF	2	0	Slovakia/SMK	0	1
Germany/CDU-CSU	3	0	Slovenia/LDS	0	1
Germany/FDP	0	3	Slovenia/SDSS	1	1
Germany/Green	1	0	Slovenia/ZLSD	0	1
Germany/SDP	2	1	Sweden/CD	2	0
Greece/KKE	0	4	Sweden/CEN	1	0
Greece/Left Alliance	0	1	Sweden/MOD	0	3
Greece/ND	0	5	Sweden/PP	5	0
Hungary/FKGP	1	0	Sweden/SD	2	2
Hungary/MDF	1	0			
Hungary/MSZP	0	2			

between the candidate’s ideal and theirs in recognition of the moderating effect of the policy process. The  $\lambda$  term indicates the relative importance of the discounted ideological distance term in the voter utility function. Finally,  $\beta$  represents the importance of other factors in the vote calculus.<sup>22</sup>

$$u(j_i) = \lambda[-(x_i - (1 - d)p_j)] + \beta\Psi_i \quad (13)$$

The directional model that we estimate is summarized in Equation 14. Again, three coefficients are estimated: The  $(1 - \alpha)$  term represents the importance of the directional component of voter’s ideological calculus (the product of voter and candidate distance from a neutral point). And  $\alpha$  captures the extent to which the directional effect is moderated by a conventional ideological proximity term. The  $\lambda$  term indicates the relative importance of the directional ideological term in the voter utility function. Finally,  $\beta$  represents the importance of other factors in the vote calculus.

$$u(j_i) = \lambda[2(1 - \alpha)[(x_i)(p_j) - \alpha(x_i - p_j)^2] + \beta\Psi_i \quad (14)$$

Following (Adams, Merrill and Grofman 2005) we generate MLE estimates of the  $\lambda$ ,  $\alpha$  and  $\beta$  terms in these two unified voter utility models, in addition to the standard proximity model.<sup>23</sup> For comparative purposes we employ this same estimation strategy for the  $\lambda$  and  $\beta$  terms in our Model 3 that was described in Equation 2. From the 245 studies considered, all four utility models converge in around half (120).<sup>24</sup> The results below are from considering these 120 models. Our contention is that the strategic model set forth above is “better” (i.e., provides a better fit to the data) than the sincere model in at least some circumstances and is not worse

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<sup>22</sup>Note that in both models the ideological measure is standardized to have mean zero so that the neutral point for candidates and voters is zero.

<sup>23</sup>The *R* code is available on the authors’ web site [www.raymondduch.com/ideologicalvote](http://www.raymondduch.com/ideologicalvote)

<sup>24</sup>These results were estimated in R version 2.6.2 using the `nlm` non-linear maximization routine on computing resources provided by the Oxford Supercomputing Centre. We used `Rmpi` version 0.5-5 to distribute the jobs to 16 nodes each of which was equipped with 2× dual core Intel Xeon 2.6 GHz (Woodcrest) processors and 4GB DDR2 RAM, for a total of 64 processors (of which one was the primary and sixty three were the subordinates). The total run time of the estimation was roughly eight hours ( $8 \times 64 = 512$  hours of computing time). Models were considered to have converged if the estimation procedure returned a convergence code of 1 [“relative gradient is close to zero, current iteration is probably solution”] or 2 [“successive iterates within tolerance, current iterate is probably solution”] and was considered not to have converged if code 3 [“last global step failed to locate a point lower than ‘estimate’]. Either ‘estimate’ is an approximate local minimum of the function or ‘steptol’ is too small] was returned. The code used in the estimation is available on the authors’ web site.

than other strategic representations of a voter's utility. The data bear out our expectations.

First, we consider the BIC (Bayesian or Schwarz Information Criterion). Since these models are not technically nested within each other, the BIC is a natural choice for model comparison. Raftery suggests positive support for a model if it's BIC is more than two points smaller than an alternative model (Raftery 1996). First, we look at the cases where the BIC for any one model is "significantly" better than all of the three other models. These results are in Table 2. As you can see from the table, there are only 4 studies where our strategic ideological model dominates all others; and there are 36 studies in which the sincere model is significantly better. However, there are no instances where either the directional or discounting model dominates all others. These results suggest, first, that in the vast majority of cases (70 percent) there is no significant difference amongst the models in terms of model fit. Hence, in most cases incorporating a richer specification of the voter's spatial calculus is defensible in terms of model fit. Secondly, these results indicate that our strategic ideological model is never worse than the other modified proximity models (discounting and directional) and in fact in a handful of cases actually generates a better fit statistic. Third, there clearly are cases in which the sincere ideological model provides a better fit statistic. This, of course, is consistent with our earlier findings that show variation in the importance of strategic versus sincere ideological voting across political contexts.<sup>25</sup>

The next set of results are a little less conservative. Here, we compare the percent of vote preferences correctly predicted by each model. Table 3 shows the studies in which one model generates a higher percent of correct predictions than all of the other models (however, these differences could be, and often are, quite small). Again, there are a number of cases where our strategic ideological model predicts better than all of its competitors (including the sincere model). However, there are a number of situations where the sincere model out-predicts all of the others. As in the previous table, neither the directional nor the discounting models are ever "better" than all the other models.

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<sup>25</sup>Some of the higher fit statistics for the sincere model also may result from the fact that the BIC statistic tends to favour parsimony in model specification and the sincere model is the most parsimonious of the three.

Table 2: BIC Model Comparisons 1

Sincere	Strategic
Belgium 1988, 1993	Netherlands 1981, 1985, 1986
Bulgaria 1991, 1992, 1997, 1999	Italy 1996
Denmark 1981, 1998	
Finland 1990	
France 1991	
Germany 1984, 1991, 1994	
Greece 1990, 1991, 1994	
Hungary 2001	
Iceland 1990	
Israel 1981, 1984, 1988	
Italy 2006	
Luxembourg 2004	
Netherlands 1989	
Poland 1997, 2000	
Portugal 1988, 1990, 1994, 2002	
Slovenia 1999, 2004	
Sweden 1985, 1988, 1991	

Table 3: Comparison of Percent Correctly Predicted

Sincere	Strategic
Australia 2001	Australia 1987
Belgium 1983	Belgium 1988
Denmark 1983	Denmark 1990, 1998
Finland 1990	France 1983, 1986
Germany 1984, 1988	Germany 1983, 1993
Hungary 2001	Iceland 1984
Italy 1990, 1991, 1993, 1994	Israel 2001
Netherlands 1988, 1994	Netherlands 1982, 1985, 1986, 1989, 1994
Norway 1991, 1993	Poland 2001
Poland 1997	Romania 1998
Portugal 1987, 1988, 1990, 1991, 1993, 1994	Slovenia 1995
Slovenia 1999	Slovakia 1994
	Sweden 1988, 1991

## 5 Conclusion

The point of departure for this essay is the analysis of 400 voter preference surveys, conducted in 57 countries, over a 25 year time period that demonstrates quite definitely that the

ideological vote is pervasive in both mature and transition democracies. There is, as we expected, considerable contextual variation in the ideological vote. Some countries, particularly transition democracies from Latin America, have quite low levels of ideological voting while in Western, Eastern and Central Europe it is quite high. The fact that the conventional measures of ideological voting are both pervasive and variable across contexts is an important necessary condition for the theory of strategic ideological voting that we develop in this essay.

We argue that rational voters should condition their ideological vote on the likely coalitions that form after an election since these agreements determine the ideological orientation of government policy. In this essay we develop a model of the ideological vote that incorporates in the voter's utility for each party a term consisting of the distance between the voter's left-right self-identification and the expected left-right ideological composition of each coalition that a party might join.

Accordingly, a fully specified empirical model of the vote choice includes a conventional expressive ideological distance term; our strategic ideological distance term; and controls for the other factors that typically also affect voting behavior. We assess the independent contribution of the strategic ideological distance term to the vote decision based on 245 voter preference surveys from 30 countries. Even though the strategic and sincere ideological terms often generate predictions that are similar, and frequently exactly the same, we are able to demonstrate empirically that the strategic ideological distance component of our theoretical model has an important independent affect on vote choice.

Our representation of the voter's strategic ideological calculus builds on a body of research, not dissimilar to ours, that aims to better capture the voter's anticipation of the ideological compromises negotiated after an election in contexts with coalition governments. We compare the explanatory and predictive power of our representation of how voters use ideology in their vote decision with that of these other models. On balance our strategic ideological model performs just as well as these other models; for a number of cases it performs better; and never performs worse. A reasonable conclusion to draw from these results is that our richer specification of the voter's strategic ideological vote calculation represents theoretical value added to our understanding of the vote decision in coalition government contexts.

Our specification of the strategic ideological theoretical model, and the empirical results summarized in this essay, highlight an important feature of, and a challenge associated with, the study of electoral behavior. There are four terms in our theoretical model of the voter utility –  $\lambda$  captures the overall importance of ideology;  $1 - \lambda$  indicates the relative importance of other non-ideological factors in the vote utility function; and  $1 - \beta$  and  $\beta$  indicate the relative importance, respectively, of sincere versus strategic ideological voting. The relative magnitudes of these coefficients will vary systematically across countries but also within countries from one time period to the next. Some countries should never have a strategic ideological vote and, even for those that typically do, there may be occasions when  $\lambda$  or  $\beta$  are near zero and hence  $1 - \lambda$  is uncharacteristically high. If we believe the theoretical model and the empirical results presented here, then we can only learn about the voter utility function with repetitive observations from varied political contexts. Hence, as has been pointed out elsewhere (Duch and Stevenson 2008), we learn very little, and possibly can be seriously misled, by testing our theories on a small number of voter preference studies. The challenge presented by these results is explaining variation in the strategic ideological vote in contexts with multi-party coalition governments. What contextual factors result in variations in the  $\lambda$ ,  $\beta$ ,  $\gamma$  terms in our model? A challenge we hope to take up in future research.

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