

# **A Water Cooler Theory of Political Knowledge and Voting**

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[First preliminary draft]

Prepared for presentation at the Annual Meetings of the American Political Science Association, Boston, August 28-31, 2008.

### **Abstract**

Since individuals cannot affect public policies they have no incentives to invest in costly political knowledge for that that reason, and the assumption in standard political economy models that people know how public policies affect their economic interests is consequently problematic. We argue in this paper that the incentive to acquire political knowledge is a byproduct of other incentives, both private social, and that these incentives are unequally distributed across groups in the electorate. In our amended political economy model of voting, the process of political knowledge acquisition is endogenous and we show how this has notable implications our understanding of distributive politics across democracies. We test the model on public opinion data from 18 advanced democracies and show that the coupling between economic interests and political choice is much stronger in some economic classes, and in some political systems, than in others.

## 1. Introduction

The lack of political information among ordinary voters has been thoroughly documented since the publication of “The American Voter” in 1960 (Campbell et al., 1960; Lewis-Beck et al. 2008), and the problem is succinctly captured by Downs’ concept of rational ignorance (Downs 1957). Yet modern political economy largely ignores the problem and assumes that people are well-informed about their interests and how public policies affect them. In this paper we argue that the acquisition of political knowledge is not only problematic, but likely to be biased in a manner that has important implications for our understanding of distributive politics. We propose an amended political economy model of political choice, which endogenizes the process of political knowledge acquisition. We then test this model on survey data for 18 advanced democracies.

The problem of political knowledge would perhaps not be great if errors in political understanding were randomly distributed since they would tend to be cancelled out through the political process of preference aggregation. In that situation standard political economy models would still make the correct predictions to the extent that errors were not systematically biased away from the expectation. But political knowledge is almost certainly not evenly distributed across groups with different interests, so some groups will be less likely to vote in a matter that is consistent with their economic interests.

The problem is amply illustrated in a new book by Larry Bartels (Bartels 2008). Bartels shows that ordinary people routinely vote against their own distributive interests and fail to punish (mostly Republican) governments for poor economic performance. A solid majority of Americans favored Bush’s tax cuts, for example, even though only the wealthiest Americans benefited, and even though the same majority believed that the government can and should reduce inequality. In Bartels own words, “[t]he results of my analysis suggest that most Americans support tax cuts not because they are indifferent to economic inequality, but because they largely fail to connect inequality and public policy” (p. ??).

The conclusion Bartels draws is aptly captured by the image of the delusional and easily duped working class cartoon figure, Homer Simpson, who graces the front page of one of the chapters. As Bartels notes about his evidence: “[T]here is plenty of raw material here for an account of contemporary politics emphasizing ordinary Americans’ misperceptions, myopia, and missing connections between values and interests on one hand and policy preferences and votes on the other” (p. 295). And Bartels’ observations imply a distinct partisan bias in the political consequences of ignorance. Even though Democratic governments tend to improve the lot of a majority of Americans, Republicans end up winning most of the time. Ah, if only Homer would get it right!

But Bartels’ analysis also shows that some voters are better informed than others and much more likely to vote for policies that are in line with their economic interests. Alvarez and Brehm (2002) also show that people who are informed about politics vote differently than voters who are not, and Duch et al. (2000) argue that the bias in people’s assessments of the economy are correlated with information. What we need, therefore, is

a theory of mass politics that endogenizes the acquisition of political knowledge. We build such a theory on the assumption that people acquire political information when, and only when, it makes individual sense for them to do so.

We argue that there are two such motivations, both entirely unrelated to any desire to affect public policies. One is the incentive that some people have to understand public policies and regulations because this enables them to make better private economic decisions or because they need to understand these policies and regulations as part of their jobs. We argue that these incentives tend to be concentrated among those with high incomes, significant property holdings, or in managerial or supervisory positions.

For those who do not have strong private incentives to acquire knowledge, the only motivation to acquire knowledge is social. Mounting evidence in social psychology shows that human behavior is in large part motivated by the desire to gain the recognition and respect of others. This desire, we argue, also motivates people to acquire knowledge about politics when this is a recurrent topic of discussion around the water cooler. Of course, politics is often not the focal point for discussion in groups, but when it is people have a strong social incentive to know at least something about politics in order to contribute productively to the discussion. The more others in the group know, the greater the incentive to be knowledgeable yourself.

Of course, much of the fodder for political discussion is comes from the public spectacle of political elites competing for the support of potential voters (especially around elections). Indeed, elites have an incentive to cultivate political discussion around topics that they help to frame. If this leads to clear differentiation of policies and focus on party programs as opposed to individual candidates, the process of translating political discussion into an understanding of that relationship between public policies and economic interests is facilitated. In turn, policy differentiation and programmatic orientation differ systematically across political systems for well-understood institutional reasons, and this helps explain cross-national differences in distributive politics -- in particular, we argue, why there appears to be a tighter linkage between individual economic conditions and left party vote in some countries than in others.

## **2. A water cooler theory of political knowledge**

### ***2.1. The micro-level logic***

Because most public policies are collective goods, individuals cannot influence them through voting and they consequently have no reason to acquire costly political information for *that* reason. We instead propose two classes of individually rational incentives: one is strategic and socially motivated; the other is non-strategic and privately motivated. Privately motivated knowledge acquisition happens when public policies affect which economic choices are the most optimal for individuals. The decisions of business people, for example, depend on regulations and taxes in ways that make it advantageous to understand these. This is also true for managers and upper-level

professionals who are often charged with applying public regulations and policies in their capacities as supervisors and administrators (think of regulation of employment, wages, social benefits, and so on). A similar logic applies to economic decisions such as buying a house – where one needs to know rules for deducting mortgage interest payments, and how these may change – or investing in a private pension scheme, an education, and so on. As individual economic choices multiply, so do the ways in which public policy impact these. In turn, knowledge acquired to make sound economic choices can in turn be used to decide which policies and political parties are most likely to improve one’s economic situation.

In general, we would expect business people, people in management, and people with high incomes and significant property holdings, to have stronger private incentives than others to acquire costly information about complex tax codes and regulations. This *does not* imply that such codes and regulations are unimportant for the welfare of lower-income people – indeed, they underpin most efforts of redistribution – but for most of these public policies are largely collective goods with few consequences for private economic decision-making.<sup>1</sup> This class-bias in the economic incentive to acquire political information may be magnified by education since it is easier to make sense of sometimes complicated public policies for people with high education, and hence cheaper for these individuals to acquire the information.

For this reason social incentives for acquiring political information are probably particularly important at the lower end of the income distribution. A good starting point for understanding these incentives is what Verba, in work with Brady and Schlozman, calls “civic skills” (Verba, Schlozman and Brady 1995). Although they use civic skills as an explanatory variable, they also suggest that such skills are acquired through interaction inside informal groups and networks, including the family, the neighborhood, churches, and the workplace.

In a recent paper (Abrams, Iversen, and Soskice 2007) we argue that the key for understanding the political role of these informal networks is the desire of human beings to belong to groups and to be valued by their peers (Brennan and Pettit 2004). The desire to earn the respect and esteem of those around us can be a powerful incentive to act in ways that at first blush appear unselfish, even irrational. In particular, we argue that many people learn about politics because they want to maintain or improve their standing in groups where politics is a central topic of conversation. When political knowledge becomes a marker for group standing, the desire for approval can turn into an engine of political knowledge acquisition.

Verba, Nie and Kim long ago observed that individual resources will be harnessed for political purposes primarily when people with such resources come into contact with others who are politically active, and they specifically pointed to political discussion as a catalyst for activism (Verba, Nie and Kim 1978). There is also a long tradition in

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<sup>1</sup> There are clearly exceptions such as the earned income tax credit, which is advantageous to understand in making decisions about working hours and so on. Our claim is simply that those with more property and income tend to have stronger individual incentives to know about a broader range of public policies

sociology, beginning with the pioneering work of Lazarsfeld and Berelson and their associates (Lazarsfeld et al 1944; Berelson et al 1954) and echoed more recently in the highly influential study by Huckfeld and Sprague (1991, 1995) and an insightful recent book by Walsh (2004), that places discussion of politics at the center of an understanding of opinion formation and voting.

It is not hard to spot the individual incentive to acquire political knowledge in the context of close-knit networks. Simply put, if politics is a recurrent topic of discussion with friends, family and colleagues you don't want to be Homer Simpson who never knows what is going on in the world. The same would be true if the topic is baseball, movies, or you name it. In all cases most people will develop an interest in, and knowledge about, the relevant topic for the sole purpose of being able to contribute productively to the discussions of the group.

The topics groups talk about are not randomly distributed, although it may often appear that way to individuals. Discussion of politics is more likely to emerge in settings with repeated interaction between individuals who can be assumed to have well-aligned interests. When people of the same socioeconomic class interact repeatedly it is sensible to expect that issues of public policy will enter the range of topics that are broached. As we argue in more detail below this tendency is reinforced by political elites with an interest in using their local presence to try to shape the content of group discussion through face-to-face interaction. Unlike political information that is acquired for individual economic gain, political parties can help shape peoples' understanding of how their own interests are linked to public policies.

We focus on three specific social mechanisms that shape individuals' non-economic incentives to acquire political knowledge or to be able to make use of such knowledge. One can be called a *variance reduction mechanism* and occurs from the simple sharing of information. Individuals may have some idea about their interests and how public policies affect them, but these are prone to error. For example, a low income person may see an interest in redistribution but mistakenly conclude that a tax cut is likely to further that interest (as Bartels documents). If such errors are randomly distributed around the true effect, they will tend to cancel each other out in a group where the interests of members are aligned and where information about politics is shared through discussion. It is not really that people become more knowledgeable through this mechanism, but that they are empowered to make more informed decisions.

Second, being in social networks incentivizes individuals to acquire more information about public policies if these are recurrent topics of discussion. This is the *social esteem mechanism*. There is strong evidence in social psychology that people care a great deal about what others think of them and that this is a key individual motivator. As Baumeister and Leary (1995) note in the highly-cited review article of the literature: "Existing evidence supports the hypothesis that the need to belong is a powerful, fundamental and extremely pervasive motivation... A great deal of human behavior is caused by this fundamental interpersonal motivation." We concur and argue that the

ability to contribute productively to group discussion is one of the most important sources of individual welfare, and sometimes the focus of discussion is politics.

Finally there is a *network externality mechanism* that occurs because people in networks are in fact playing strategic games with each other. An individual will acquire political knowledge the higher the level of discussion, but discussion is also a function of knowledge in the group because it is more interesting to discuss topics on which there is more information and because there is more to be learned from discussion when that is the case. As we show, this leads to unique discussion-knowledge equilibria.

## ***2.2. The macro-level logic***

Because people are not perfectly sorted into groups with identical interests, and because politics, including distributive politics, is multi-dimensional, arriving at common knowledge about interests is problematic. Nor is politics necessarily the focal point for discussion. This helps explain a relatively weak relationship between economic position and political attitudes. Instead, politicians, political parties, and organized groups with a vested interest in cultivating common knowledge around particular partisan ideas are likely to play an important role in agenda-setting. Discussion of politics, and common knowledge about interests, is likely to be partly a function of elite mobilization.

Our starting point here is the conjecture by Aldrich (1993) and by Rosenstone and Hansen (1993) that political elites and political parties have an interest in mobilizing voters who might share their political agenda. As argued by Uhlaner (1989), Morton (1991) and others, this also applies to large interest groups who stand to benefit, or suffer, from particular public policies. But the micro-logic spelled out above suggests a quite different mechanism by which elites affect the behavior of individuals: Political parties and groups can use advertising and media access to try to shape the issues people pay attention to, and they can sometimes use their local presence to shape the agenda through face-to-face contacts and by initiating discussions about political issues. Of course, the intensity of such behavior will increase around elections, but the hot political issues of the day can and *do* find their way onto the agenda between elections. Contacting people in localities that are likely to be responsive to the political message is one method. Making use of party or group members, or sympathizers, who can take on the role of “opinion leaders” is another. An example of the latter is when shop stewards in companies – in some countries often viewed as the most knowledgeable and respected colleagues – initiate political discussions around the lunch table.

The implication of this line of reasoning is that political information and participation will vary with the strength of collective organizations such as parties, unions, and churches. But the role of politicians and groups is also a matter of elite incentives, which vary by the type of political system. A key for our argument is to understand the institutional conditions under which parties are more willing to differentiate their political messages from other parties and target their core constituents. Clearly differentiated political messages help reduce the uncertainty of voters about party positions. Another salient consideration is the incentives parties have for focusing their electoral appeals on

policies as opposed to individual candidates. Candidate qualities such as honesty, effectiveness, and so on, are not likely to differ in a manner that is tied systematically to the content of political messages, and so candidate-oriented systems are not conducive to political discussion that clarifies the relationship between policies and economic interests.

In turn we know a great deal about the institutional causes of policy differentiation and programmatic focus. In majoritarian two-party systems, the need to convince the median voter that parties are credibly committed to a centrist platform means that they cannot appear to be too beholden to the interests of their core constituents (Aldrich 1993; Schlesinger 1984; Kitschelt 1994). Parties therefore cannot create strong party organizations around “extreme” voters if this is seen by the middle class to undermine the credibility of commitments to centrist economic platforms. And precisely because the main parties do not differ radically on economy policy, each party is free to use non-economic appeals to capture voters that what would otherwise be a natural constituency for the other party (Kitschelt and Rehm 2005). A center-right party may appeal to working-class voters on issues such as religion and crime that do not directly engage these voters’ core economic interests. By the same token, center-left parties may appeal to high-educated, high-income voters on issues such as the environment or democratic accountability. Parties become, in the words of Kirchheimer, catch-all parties. And this means that voters across economic classes will find it harder to decide which party is more likely to advance their own interests.

Multiparty PR is different because representation does not depend on capturing the median voter. Parties are therefore free to mobilize more narrowly-defined segments of the electorate – subject to the constraint that too narrow targeting will invite the formation of new parties and undermine the attractiveness of the party as a potential coalition-partner in government. Multiparty PR is thus conducive to a segmentation of the electoral market where each segment becomes exposed to relatively coherent messages.

The distinction between platform- versus candidate-centered competition is also shaped by the nature of the electoral systems. We have argued elsewhere (Iversen and Soskice 2006) that whereas parties in PR systems can represent the interests of their constituents directly, parties in majoritarian systems need to reduce the role of the party organization and delegate more power to their elected leaders. The implication is that elections in PR parties will tend to be issue or platform oriented, while elections in majoritarian systems will tend to focus more attention on the qualities of political leaders.

This difference is related to the idea in Carey and Shugart (1995) that some electoral systems produce candidate-oriented as opposed to programmatic parties. Carey and Shugart focus on the incentives candidates in different electoral systems have to cultivate a personal vote. For our set of countries, two features of electoral systems are particularly salient. One is the size of electoral districts. At one extreme the Netherlands treats the entire country as a single electoral district. At the other, single member district (SMD) systems have as many districts as there are members in the legislature. District size matters to electoral strategies parties because whereas it makes good sense to field

candidates in SMD systems who can cater effectively to local interests, if the electoral district is the nation as a whole specialization of candidate appeals makes little sense. In turn, as the focus shifts from individual candidates to party platforms, voters lose interests in the attributes of the former and focus their attention on policies instead.

Another electoral feature that affects the extent to which voters choose parties according to individual candidate qualities as opposed to party platforms is pooling of votes. If votes for a candidate that exceeds the required number can be transferred to other candidates from the same party list, voting for a candidate is also in part a vote for the party. This forces voters to pay attention to the party label in addition to individual candidates.

To summarize, the stronger the institutional incentives for politicians and parties to target particular constituencies, and the greater their incentives to emphasize policies over candidates, the more political discussion will focus on the relationship between economic interests and public policies, and the more discussion will be linked to education. When parties need to present centrist economic policies and shun close association with “extreme” constituencies, and when there is strong emphasis on candidates as opposed to policy platforms, political discussion will be less tied to economic issues and more to candidate qualities, and discussion may be less dependent on education.

### 2.3. Formalizing the argument

We assume that the main dimension of political competition is economic, and that there is a left and right block of parties. Whether an individual voter  $i$  votes for the left,  $L$ , depends on his economic situation,  $y_i$ , which we assume he knows. Parties take policy positions,  $y_L$ , which affect the economic situation of each voter but are only partially known and understood. If  $y_i$  is closer to  $i$ 's perception  $y_{Li}$  than to  $R$ 's position  $y_{Ri}$ ,  $i$  votes left. His knowledge of  $L$ 's position is  $y_{Li}$  and his knowledge of  $R$ 's position is  $y_{Ri}$ . Hence in Index function formulation

$$\begin{aligned} v_{Li} &= \mathbb{1}[(y_i - y_{Li})^2 < (y_i - y_{Ri})^2] \\ &\rightarrow = \mathbb{1}[y_i^2 + y_{Li}^2 - 2y_{Li}y_i < y_i^2 + y_{Ri}^2 - 2y_{Ri}y_i] \\ &= \mathbb{1}[2y_{Ri}y_i - 2y_{Li}y_i < y_{Ri}^2 - y_{Li}^2] \\ &= \mathbb{1}\left[2y_i < \frac{y_{Ri}^2 - y_{Li}^2}{y_{Ri} - y_{Li}}\right] = \mathbb{1}\left[y_i < \frac{y_{Li} + y_{Ri}}{2}\right] \end{aligned}$$

Now define  $i$ 's perception of the midpoint between the two parties as

$$\frac{y_{Li} + y_{Ri}}{2} \equiv \bar{y}_{LR,i}$$

so that  $i$  votes  $L$  when

$$v_{Li} = \mathbb{1}[y_i < \bar{y}_{LR,i}]$$

or in terms of probabilities where  $P(v_{Li} = 1)$  is the probability that  $i$  votes  $L$ :

$$(1) \quad P(v_{Li} = 1) = P(y_i < \bar{y}_{LRi})$$

We now introduce political knowledge and assume that  $\bar{y}_{LR,i}$  is normally distributed around the true midpoint between the two parties  $\bar{y}_{LR}$  so that  $i$ 's "drawing" from this distribution generates

$$\bar{y}_{LR,i} = \bar{y}_{LR} + \varepsilon_i$$

where

$$\varepsilon_i \square N \left[ 0, \frac{\sigma^2}{\kappa_i^2} \right]$$

and  $\kappa_i$  is some measure of  $i$ 's access to relevant political knowledge. Thus

$$P(v_{Li} = 1) = P(y_i < \bar{y}_{LR} + \varepsilon_i) = P(\kappa_i(\bar{y}_{LR} - y_i) > \eta_i)$$

where

$$\eta_i \square N(0,1).$$

We now have

$$(2) \quad P(v_{Li} = 1) = \Phi \left[ \sigma^{-1} \kappa_i (\bar{y}_{LR} - y_i) \right] = \Phi \left[ \kappa_i (\bar{y}_{LR} - y_i) \right]$$

and  $\Phi(z_i)$  is the standard normal density function; note that the variance can only be identified up to a constant so that  $\sigma$  is dropped. Thus while we will see that there are efficiency concerns which will need to be tackled econometrically, the model directly translates into a Probit form.

### 2.3.1 Determining $\kappa$

Our argument is that  $\kappa$  is determined by three reinforcing factors: (a) private economic incentives to acquire political knowledge; (b) utility attached to group approval resulting from political knowledge; and (c) a variance reduction mechanism resulting from group membership.

As we suggested above, one purpose of investing in political information is to be able to make better private economic decisions (*the private economic incentive*); another is to gain the approval and respect of people in informal social networks where politics is a topic of discussion (*the esteem mechanism*). We incorporate these motives in the model by letting  $i$  maximize

$$U(K_i) = vK_i - \frac{c}{2}K_i^2 + gD_G K_i$$

where  $v$  is the marginal economic benefit and  $gD_G$  the marginal social benefit to  $i$  of acquiring political knowledge,  $K_i$ , where  $D_G$  is the degree of political discussion in  $i$ 's group. There is a quadratic cost of knowledge acquisition, so that the marginal cost is  $cK_i$ . Hence at an optimum

$$\begin{aligned} v + gD_G &= cK_i \\ \rightarrow K_i &= \frac{v}{c} + \frac{g}{c}D_G \end{aligned}$$

These represent the individual and social benefits from acquiring political knowledge. To see how group membership reduces the error involved in voting, the *variance reduction mechanism*, we assume that the  $i$ 's political knowledge by itself,  $K_i$ , implies  $\kappa_i = K_i$  so that the variance of  $\varepsilon_i$  is equal to  $\sigma^2 / K_i^2$ . But as a member of a group,  $i$  has access to the estimates of each of the others, and uses the group average  $\varepsilon_G = n_G^{-1} \sum_{i \in G} \varepsilon_i$  as the new estimate. This implies that, if the individual estimates are randomly drawn, the variance of  $\varepsilon_G$  is

$$\text{var } \varepsilon_G = \frac{\sigma^2}{n_G \left( \sum_{i \in G} K_i^2 \right)}$$

If we assume there is an error term in the  $K_i$  equation so that

$$\begin{aligned} K_i &= \frac{v}{c} + \frac{g}{c}D_G + u_i \\ \rightarrow K_G &\approx \frac{v}{c} + \frac{g}{c}D_G \end{aligned}$$

Hence we can rewrite (2)

$$\begin{aligned} P(v_{Li} = 1) &= \Phi \left[ \kappa_i (\bar{y}_{LR} - y_i) \right] \\ &= \Phi \left[ n_G^{1/2} K_G (\bar{y}_{LR} - y_i) \right] \\ &= \Phi \left[ n_G^{1/2} \left( \frac{v}{c} + \frac{g}{c}D_G \right) (\bar{y}_{LR} - y_i) \right] \end{aligned}$$

Finally it may be useful to analyze the determinants of  $D_G$ , although they will not be used directly in the empirical section. A simple way to close the model is to assume that group discussion is proportional to group knowledge, simply:

$$\begin{aligned}
D_G &= \sum_{i \in G} K_i \\
\rightarrow D_G &= n_G \frac{v}{c} + n_G \frac{g}{c} D_G \\
\rightarrow D_G &= \frac{n_G \frac{v}{c}}{1 - n_G \frac{g}{c}} = \frac{v}{\frac{c}{n_G} - g}
\end{aligned}$$

Hence  $D_G$  decreases in  $c$  (the marginal cost of political knowledge), and increases in  $g$  (the importance of esteem),  $n_G$  (the size of the group) and  $v$  (the marginal economic benefit of political knowledge). Groups are economically homophilic – members of an informal social network group in which in effect members choose each other are likely to have similar economic characteristics. So since  $v$  (and probably also  $N_G$ ) is likely to be positively related to an individual's economic characteristics, and since  $v$  is likely to be broadly similar within informal groups, well-to-do groups are likely to have more political discussion than poorer groups.

### 2.3.2 Country variations in the left/right divide.

Our intention is to explain left vote across countries, which introduces the complication that while  $\bar{y}_{LR}$  is a constant for all voters in a particular country,  $\bar{y}_{LR}$  will be different across countries (for example lower in Switzerland than in Sweden). If  $i$  is a member of country  $J$ , let  $\bar{y}_{LR}^{J(i)} = 1$  and otherwise zero; and define  $\bar{y}_{LR}^J \equiv \delta_J CD_J$  where  $CD_J$  is the country dummy for country  $J$  (dropping the  $i$  indicator). So we can write

$$\bar{y}_{LR} \equiv \sum_J \bar{y}_{LR}^J = \sum_J \delta_J CD_J$$

And as has been argued above  $y_i$  depends on various economic factors, income, skill specificity, private/public sector, etc, which we can refer to as  $x_i$ , we have

$$y_i \equiv \sum_j \gamma_j x_{ij}$$

Since  $i$ 's economic propensity to vote left ( $EPVL_i$ ) increases the greater is  $\bar{y}_{LR}$  above  $y_i$  we have

$$EPVL_i \equiv \bar{y}_{LR} - y_i = \left[ \sum_J \delta_J CD_J - \sum_j \gamma_j x_{ij} \right]$$

hence the model we estimate takes the Probit form

$$\begin{aligned}
(3) \quad P(v_{Li} = 1) &= \Phi \left[ n_G^{1/2} (\alpha + \beta D_{G(i)}) (\bar{y}_{LR} - y_i) \right] \\
&= \Phi \left[ n_G^{1/2} (\alpha + \beta D_{G(i)}) EPVL_i \right] \\
&= \Phi \left[ n_G^{1/2} (\alpha + \beta D_{G(i)}) \left[ \sum_J^N \delta_J CD_J - \sum_j^K \gamma_j x_{ij} \right] \right]
\end{aligned}$$

2.4. *The role of electoral systems.* As noted in the macro discussion in section 2 it seems plausible that electoral systems set up different incentives for politicians to impact on political knowledge. In particular it might be thought that under *PR* systems more importance would attach to political knowledge as opposed to personalities. A very simple way to adding this to the model is to assume that knowledge is greater within *PR* systems so that

$$(5) \quad P(v_{Li} = 1) = \Phi \left[ \left( n_G^{1/2} (\alpha + \beta D_{G(i)}) + \eta El_i \right) \left[ \sum_J^N \delta_J CD_J - \sum_j^K \gamma_j x_{ij} \right] \right]$$

### 3. An empirical test

We use data from the 2004 ISSP survey of citizenship to test our argument. The survey includes 18 established democracies for which we have complete data on the key variables.<sup>2</sup>

The main model to be estimated is Equation (5), and true to the EITM standard we do so directly using a combination non-linear least square regression and multi-level Probit for survey data. The only simplifying assumption is that the effect of group size is captured by the extent of group discussion. In addition to (5), assuming all the economic variables have the correct (negative) sign, we can also estimate the simplified model:

$$(6) \quad P(v_{Li} = 1) = \Phi \left[ \left( n_G^{1/2} (\alpha + \beta D_{G(i)}) + \eta El_i \right) EPVL_i \right]$$

The reason we cannot use linear regression to estimate this model is that the model implies a particular (non-linear) relationship between the coefficients on the economic variables and political discussion (and PR). The NL procedure in Stata enables the estimation of such non-linearities, but it does not allow Probit estimation. We therefore use a two-step procedure where we first estimate the parameters on political discussion and the economic variables in NL, and then re-estimate these in Probit through an iterative routine that yields the correct non-linear Probit estimates. We explain the exact procedure in Appendix A. The regressions we end up estimating are exactly those in (5) and (6).

<sup>2</sup> The countries are Austria, Australia, Britain, Canada, Denmark, Finland, France, Germany (with separate surveys for east and west Germany), Ireland, Japan, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, and the US.

We use five economic variables to capture the economic propensity to vote left, *EPVL*: Family income, private sector employment, skill portability, self-employment, and supervisory position.<sup>3</sup> All can be reasonably expected to be negatively related to support for left parties, our dependent variable, based on standard political economy arguments about redistribution (eg. Meltzer and Richard 1981), sector and occupation (eg. Kitschelt 1984; Garrett and Way 1999), class (eg. Ericson and Goldthorpe 1992; Evans 1993), and insurance (eg. Iversen and Soskice 2001 and Rehm 2008). Except for the logged income variable (which ranges between 0 and about 14), all economic variables are scaled so that they range between 0 and 1 (in the case of the dummy variables, these are the only possible values). Hence:

Hypothesis (i):  $\delta_j < 0$ , where  $j =$  (income, private sector, portable skills, self-employment, supervisory position)

When economic conditions predispose an individual to vote left (*EPVL*) – that is, when income is low, employment is in the public sector, skills are specific, and so on -- political discussion is expected to increase the probability of voting left. This implies that the interaction of political discussion and the country fixed effects is positive for all countries, assuming the economic variables are zero (or very low):

Hypothesis (ii):  $\gamma_j > 0$ , for all  $j =$  (Australia, Austria, Britain, ..., US)

As economic conditions become more favorable for a right vote, the effect of political discussion should diminish and potentially become negative. This implies that the following inequality must hold if all variables are set to their observed maximum:

$$\text{Hypothesis (iii): } \beta^* \left[ n_K^{-1} \sum \gamma_j + \sum_j \delta_j \right] \leq 0$$

Finally, with respect to political institutions, the argument implies that PR, as well as electoral systems that emphasize party programs as opposed to individual candidates, strengthens the association between economic interests and left vote. Specifically, the estimated parameter,  $\eta$ , in Equation (4) must be positive:

Hypothesis (iv):  $\eta > 0$

We have two measures of the electoral system. One simply assigns the code 1 to countries with more or less pure PR electoral rules and 0 to all other countries (including those with mixed systems). The other is based on the distinction between candidate-centered versus party-centered electoral systems and is a mean of the two previously discussed measures: the size of electoral districts (standardized by dividing by the

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<sup>3</sup> Family income is in US dollars using 2004 PPP exchange rates. Portability of skills is the inverse of the skill specificity measure (*s\_1*) used in Iversen and Soskice (2001) and available at [www.people.fas.harvard.edu/~iversen/data](http://www.people.fas.harvard.edu/~iversen/data). Individuals are coded to be in private sector employment if they work for a private firm or are self-employed (coded 1; otherwise 0). Supervisors are those who say they supervise others at work (coded 1; otherwise 0)

number of seats in the national assembly), and the pooling of votes across candidates (coded 1 if votes are pooled across all candidates in a district, 0 if no pooling is allowed, and  $\frac{1}{2}$  if pooling is across subsets of candidates).<sup>4</sup> For both measures, if there is more than one tier in the electoral system, we use an average across tiers weighted by the share of seats elected from each tier.

Political discussion is based on a survey question that specifically asks respondents to assess the frequency of discussion in informal groups:

“When you get together with your friends, relatives or fellow workers how often do you discuss politics?”

The respondent could answer “never” (coded 1), rarely (1), sometimes (2), and often (3). The percentage distribution of answers across the four values is 14, 31, 42, and 13.

The dependent variable is a dummy indicating whether an individual voter is affiliated with, or voted for, a left-of-center political party. In the case of the US, respondents are also asked about the strength of their identity with a party. The division of parties into left, center, and right is based on the ISSP’s classification, which is derived from the national party codes.<sup>5</sup>

### **3.1. Results**

Table 1 shows the results of estimating Equation (4) with and without the indicators for electoral system. Model (1) shows that those with high income, in private employment, in supervisory positions or self-employed, and with skills that are portable have a very small probability of voting left (no more than half a percent or so). As the personal economic situation becomes more propitious to a left vote (when income is low, employment is in the public sector, and so on), the probability of voting left rises. This pattern is predicted by standard political economy models and confirms Hypothesis (i). But as we have argued political discussion conditions these relationships in important ways.

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<sup>4</sup> This follows Carey and Shugart (1995), and the implementation of their coding scheme by Johnson and Wallack (2007).

<sup>5</sup> This is variable 258 in the ISSP data set.

**Table 1. The probability of voting left as a function of economic variables, political discussion, and electoral institutions (t-scores in parentheses)**

	(1)	(2)	(3)	(4)	(5)	(6)
Political discussion x [] <sup>1)</sup>	0.245 <sup>4)</sup> (0.024)	-	1.331 (0.489)	-	0.300 (0.041)	-
Programmatic parties x []	-	-	0.346 (0.050)	-	-	-
PR x []	-	-	-	-	0.371 (0.188)	-
[Income	-0.012 (0.004)	-	-0.009 (0.002)	-	-0.010 (0.003)	-
Portability of skills	-0.045 (0.009)	-	-0.029 (0.006)	-	-0.037 (0.007)	-
Private sector employment	-0.046 (0.005)	-	-0.030 (0.003)	-	-0.039 (0.004)	-
Supervisor	-0.030 (0.005)	-	-0.020 (0.003)	-	-0.025 (0.004)	-
Self-employed	-0.053 (0.008)	-	-0.036 (0.005)	-	-0.046 (0.006)	-
Mean country dummy <sup>2)</sup>	0.435 (0.046)	-	0.298 (0.031)	-	0.612 (0.053)	-
EPVL (econ. propensity to vote left) <sup>3)</sup>	-	3.823 (0.150)	-	0.934 (0.188)	-	0.698 (0.163)
EPVL x Political Discussion	-	0.621 (0.045)	-	0.869 (0.064)	-	0.364 (0.026)
EPVL x Electoral System (programmatic)	-	-	-	4.632 (0.245)	-	-
EPVL x Electoral System (PR)	-	-	-	-	-	0.678 (0.048)
Constant	-1.808 (0.104)	-1.743 (0.038)	-1.737 (0.100)	-1.746 (0.038)	-3.200 (0.210)	-3.188 (0.080)
Pseudo R-squared	0.088	0.088	0.088	0.088	0.088	0.088
N	15809	15809	15809	15809	15809	15809
Number of countries	18	18	18	18	18	18

*Notes:* <sup>1)</sup> The variables in brackets are non-linearly interacted with 1 plus the variables outside brackets according to model ?? in the text; <sup>2)</sup> The effects of individual country dummies are not shown. They vary between .18 (Japan) and .55 (France); <sup>3)</sup> The EPVL variable is created as a linear combination of all the economic variables plus the country dummies. It indicates whether an individual is to the left or right of the political center, and far away. <sup>4)</sup> All parameters are significant at a 0.01 level or better.

Consistent with Hypothesis (ii), among the natural constituents of the left – those with low income, public sector employment, and so on – the probability of voting left rises notably with political discussion. An average voter to the left of the political center has a slightly greater than 20 percent probability of voting for a left party when he or she does not engage in political discussion, but an almost 40 percent probability of doing so when he or she engages in frequent discussion. Apparently social incentives are essential in causing low-income voters to vote their economic interests.

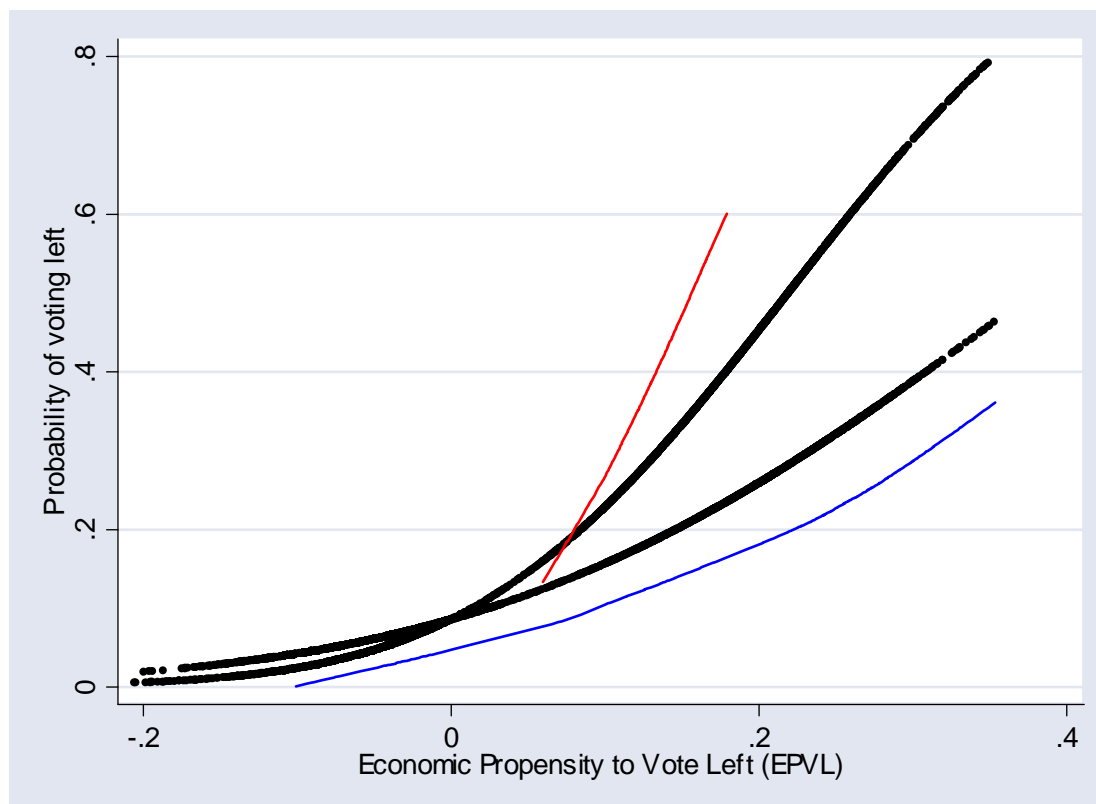
Among those with high income and other economic conditions pointing away from the left, discussion matters much less (Hypothesis iii). These individuals apparently have little difficulty recognizing that their interests are not well served by the left, and they vote accordingly. We attribute this fact to the private economic incentives people with high income, property ownership, and managerial responsibilities have in understanding the effects of fiscal and regulatory policies on their own economic choices. Such knowledge can be used to make political choices even in the absence of strong social incentives.

This central finding can be presented in a very parsimonious way using Equation (6). We first create a variable for the economic propensity to vote left -- *EPVL* in the theoretical model – based on the estimated parameters for the economic variables and the country dummies, assuming political discussion is zero. The *EPVL* variable is positive if an individual is to the left of the national political center, and it is negative if an individual is to the right of the center. We then interact the variable with political discussion (or electoral system) so we capture the conditioning effects of discussion (or electoral system) on the economic propensity to vote left. The results are illustrated in Figure 1.

The figure shows that economic conditions clearly matter for how people vote, as expected by standard political economy models (the lower black line). When there is no discussion of politics, the estimated probability of voting left increases from a little above zero to about 40 percent as we go from those with the lowest to those with the highest economic propensity to vote left. In the presence of political discussion, however, this effect is notably larger (the upper black line). In average, the probability of voting left when objective economic conditions (“interests”) are propitious for such a vote (high *EPVL*) is nearly 80 percent. Political discussion is thus a critical factor in linking objective economic conditions to political choice, especially among the natural constituents of the political left.

On the basis of these results it is not surprising that left parties have always been more proactive than right parties in establishing organizations of mass mobilization and organizing social life of their would-be supporters around politics. Yes, the incentives of elites to do so vary across countries according to well-understood macro-institutional incentives. Although much research needs to be done to identify the mechanisms linking these incentives to political discussion in social groups -- theoretically as well as empirically -- we have focused on what would appear to be an important institution in shaping elite behavior: electoral systems. Models (3) – (6) of Table 1 test the importance of this variable, using different measures of electoral systems.

**Figure 1. Economic propensity to vote left and actual probability to vote left, by level of discussion and electoral system**



The positive effects of PR and programmatic party systems confirm hypothesis (iv), and is illustrated in Figure 1. Electoral systems that encourage programmatic parties produce a notably stronger relationship between economic conditions and left vote, especially when discussion is high (the red line in Figure 1). By contrast, electoral systems that encourage candidate-centered parties tend to be associated with a weaker relationship between economic conditions and left vote, especially when discussion is low (the blue line). The effect of PR is similar. This suggests to us that the structure of party competition in PR systems with strong programmatic parties generates messages, and focal points for political discussion, that are more closely tied to underlying economic interests as compared to majoritarian, candidate-centered systems.

There is however a countervailing effect that is not captured by these results. If we use political discussion as a dependent variable, it turns out that discussion is more closely associated with high education in PR systems than in majoritarian and candidate-centered systems (the results are shown in Appendix B). We speculate that this is because the latter focus voter attention on candidate qualities instead of party programs, and that discussion of personal qualities (honesty, effectiveness, and so on) depends much less on education than is true for discussion of the economic consequences of public policies. Majoritarian, candidate-centered systems, it would appear, generate a comparatively high level of discussion among the natural constituencies of the left, but much of this

discussion is “noisy” in terms of establishing a clear linkage between economic interests and party choice.

#### **4. Conclusion**

We have argued in this paper that standard rational choice political economy models of mass politics need to be amended to take account of the process by which people accumulate information about public policies and how these affect their economic interests. Rational choice theory itself implies that political knowledge acquisition is problematic and ignoring this insight reduces the explanatory power of standard models. We have argued that there are private incentives to invest in specific types of political information, especially among the better-off, but much information is acquired for social reasons in order to participate in group discussion and earn the recognition and respect of others. Especially at the lower end of the income distribution, people have few reasons to understand politics except if such understanding affects their standing in the social groups to which they belong.

The fact that social incentives for political knowledge acquisition are particularly important at the lower end of the income distribution means that the political role of social groups is important for distributive politics. Knowledge is power, even if people do not acquire knowledge to become powerful. This shows up clearly in our results because among those who discuss politics frequently, and whose economic circumstances make them natural constituents for the left, the probability of voting for the left is twice as high. Among those whose economic circumstances predispose them to vote for the right also tend to do so, regardless of the level of political discussion. But these individuals often have private incentives to acquire information about policies (especially the tax code), and they often have the education to make the acquisition of political information less costly.

Understanding the level and distribution of political discussion across groups is thus an important task for future research. We have provided a framework through which such research can be done. But the task is not simply to explain the level of discussion, but also the content. Assuming that much political discussion is induced by political elites, we have suggested one macro-institutional mechanism that may help explain the distribution and content of political knowledge: electoral systems. Because political parties under PR can target the economic concerns of their core constituents without the fear of losing representation, political discussion is likely produce a better fit between voting and individual economic interests (measured by standard economic variables). Because parties in majoritarian systems need to present themselves as centrist, they may send less clear signals to their constituents, and open these up to mobilization on other dimensions. The result is likely to be political discussion that is less clearly focused on economic interests.

Another factor affecting the structure of political discussion is what Carey and Shugart have called the incentive to cultivate a personal vote. In candidate-centered systems discussion of politics tends to become focused on personal qualities as opposed to

policies, whereas in party-centered systems the reverse is true. As in the case of PR this shows up as a stronger effect of discussion in party-oriented systems. Interestingly enough, however, candidate-oriented systems appear to be more conducive to discussion among low-educated people, perhaps because discussion of candidate qualities requires less understanding of causal relationships than public policies. The conclusion seems to be that majoritarian and candidate-oriented systems are conducive to political discussion among the natural constituencies of the left, but such discussion is less tied to economic circumstances. Needless to say these conjectures have to be corroborated through future research.

### Appendix A: Deriving non-linear Probit estimates

Stata only has a non-linear least squares estimation program, so this doesn't work for the probit form. However we can use non-linear OLS to approximate the parameters on the different variables and then use an iterative re-estimation procedure in Probit to get the correct (probit) estimates:

(1) Assume for simplicity that there is only one country and two economic variables (the method generalizes straightforwardly to more countries and variables). The model is now

$$P(v_{Li} = 1) = \Phi((\alpha + \beta D_i)(\gamma + \delta x_i + \eta z_i))$$

$$EPVL_i \equiv \gamma + \delta x_i + \eta z_i$$

(2) Define  $EPVL_{i,(0)} \equiv \gamma_{(0)} + \delta_{(0)}x_i + \eta_{(0)}z_i$ , where  $\gamma_{(0)}$ , etc. are derived from the Stata's non-linear (NL) OLS procedure.

(3) Run Probit with 2 explanatory variables  $EPVL_{i,(0)}, D_i * EPVL_{i,(0)}$ .

Recuperate estimates  $\alpha_{(1)}, \beta_{(1)}$  from Probit estimation and form  $\Delta_{i,(1)} = \alpha_{(1)} + \beta_{(1)}D_i$

(4) Run Probit with 3 explanatory variables  $\Delta_{i,(1)}, \Delta_{i,(1)} * x_i, \Delta_{i,(1)} * z_i$

Recuperate estimates  $\gamma_{(2)}, \delta_{(2)}, \eta_{(2)}$  from Probit estimation and form

$$EPVL_{i,(2)} \equiv \gamma_{(2)} + \delta_{(2)}x_i + \eta_{(2)}z_i$$

(5) Run Probit with 2 explanatory variables  $EPVL_{i,(2)}, D_i * EPVL_{i,(2)}$ .

Recuperate estimates  $\alpha_{(3)}, \beta_{(3)}$  from Probit estimation and form  $\Delta_{i,(3)} = \alpha_{(3)} + \beta_{(3)}D_i$

(6) Repeat until convergence is achieved (in practice about 3-4 iterations).

This procedure produces correct non-linear Probit estimates, but in principle there is a more direct method, which is to differentiate the log likelihood by each of the 5 parameters. The log likelihood is

$$\log L = \sum_{y_i=1} \log \Phi((\alpha + \beta D_i)(\gamma + \delta x_i + \eta z_i)) + \sum_{y_i=1} \log [1 - \Phi((\alpha + \beta D_i)(\gamma + \delta x_i + \eta z_i))]$$

so the 5 estimating equations take the form:

$$\begin{aligned} \frac{\partial \log L}{\partial \alpha} = 0 & \quad \frac{\partial \log L}{\partial \beta} = 0 & \quad \frac{\partial \log L}{\partial \gamma} = 0 \\ \frac{\partial \log L}{\partial \delta} = 0 & \quad \frac{\partial \log L}{\partial \eta} = 0 \end{aligned}$$

We do not have a program to estimate these.

**Appendix B:  
The determinants of political discussion**

The Probit regression uses a 0-1 version of the political discussion variable, where 1 indicates a high level of discussion. The model is fixed effects (so PR cannot be entered separately), but the results of the country dummies are omitted. Standard errors are in parentheses.

	<b>Dependent variable: Political discussion</b>
Education	0.08*** (0.01)
PR * Education	0.10*** (0.03)
Income	0.14*** (0.04)
Portability of skills	-0.02 (0.02)
Private sector employment	-0.10*** (0.04)
Supervisor	0.18*** (0.03)
Self-employed	0.18*** (0.04)
Number of observations	15804
Number of countries	18

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