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In this present and some future papers I intend to explore some usually neglected, but nevertheless possible links between party system characteristics, citizens' political behaviour and democratic governance. While they are certainly not the only, and most probably not even the most powerful connections between institutional design and the quality of democracy, they do surface, from time to time, in learned reflections on democratic government, and their existence seems, at first sight, plausible. Yet, in the scholarly literature they tend to be neglected, partly, I believe, because of the apparent difficulty of their empirical assessment, and partly because of an overwhelming preoccupation of theoretically oriented research on voting with how relatively uninformed citizens can perform the role assigned to them in democratic theory (as interpreted by survey researchers) at all. Instead, I would like to ask whether they do this as well as their better informed peers.

Where my work probably offers something original is the analysis of the electoral consequences of the obviously large variation among citizens in political sophistication (i.e. information level). What is new here is not so much the basic hypothesis under investigation, namely that differences in political sophistication lead to significant differences in the extent to which members of different groups manage to accurately and articulately express their preferences regarding political outcomes through the vote. Rather, the novelty is that I make an attempt to empirically evaluate the validity of this hypothesis in the context of national elections, and examine the systemic factors that may strengthen or weaken the tendencies anticipated by the hypothesis. In the present paper first I present some thoughts on the conceptual and theoretical issues related to the problem, and then a way to tackle the pressing problems of operationalization that anyone encounters when trying to assess whether and how much political inequality results from the trivial fact that some voters are far more politically sophisticated than others. Finally, I present some empirical analyses - more in order to illustrate how one can examine the issues at hand than to draw firm conclusions about the validity of my hypotheses. Nevertheless, I hope that my preliminary results will prove intriguing and plausible enough so as to argue for the merits of this line of inquiry, and allow the evaluation of the proposed instruments.

VOTER INEQUALITY

Citizens' equality is central to the notion of democracy. Ordinary citizens may often mistake simple majority rule for democracy - but majority rule itself derives its powerful normative appeal from the fact that it allows each voter to have an equal influence on the outcome. Ultimately, citizens may always remain unequal in their propensity to engage in political activity and in the resources they can mobilize in the pursuit of their political goals. Yet, apparently all contemporary definitions agree that democracy is nothing but a label where the equality of citizens is not rigorously preserved in the domain where the power of a nation's lawmakers originates from.

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2 Collier and Levitsky's (1997) review provides sufficient evidence of this. The centrality of voters' equality is probably best reflected by Robert Dahl's ten definitional characteristics of a polyarchy, with the first two items on the list stating exactly this requirement: "1. Every member of the organization [polity] performs the acts we assume to constitute an expression of preferences among the scheduled alternatives, e.g. voting. 2. In tabulating these expressions (votes), the weight assigned to the choice of each individual is identical" (Dahl 1956: 84, emphasis in the original). Note that in this text Dahl talks not about an ideal, but a minimum requirement for
Equality in the electoral arena is a minimal precondition that contemporary states can successfully claim democratic legitimacy at home and abroad, and also has an intimate relationship with another modern ideal, individual autonomy. Free and fair elections, in particular, are seen as the hallmark of political democracy partly because other methods based on representation and/or citizens' participation favour certain viewpoints over others in rather transparent ways. Referenda results, for instance, are strongly influenced by the taste of the agenda-setters, and frequent popular votes are likely to go hand in hand with low - and this almost inevitably means socially unequal - turnout. Corporatist decision-making, in its turn, is bound to give disproportional weight to organized interests.

Voters' equality has more than just symbolic, ritual value. Despite the complexity and contingent nature of the causal relations involved, election results may, after all, have some influence on public policies. Thus, voters' inequality may create and increase, or - rather less likely - reduce other forms of inequalities.

The concern about electoral turnout stems at least as much from this consideration as from participatory ideals. But it has been recognized for long that problems with voter equality may arise even if all voted and each vote had the same weight. The move from open to secret balloting - one of the most universally adopted electoral reforms of the last two centuries - is testimony to this. An important motive for this innovation was the belief that legislation must - either in order to preserve the integrity of the democratic process or to credibly pay lip service to democratic ideals - ensure that all people listen to no else but their own heart and mind in the secrecy of the voting booth, and that universal and equal adult franchise was not enough to achieve this.

Thus, it is nothing new to examine democratic institutions with an eye on the goal of making every vote an authentic expression of the voter's true preferences. That some people may not wish to be that equal is besides the point: indeed, in the debate on secret balloting apparently few deemed it relevant that some voters may actually prefer a free drink to searching their mind for a cue to vote choice. Rather, there is an epistemological obstacle to seriously discussing whether some people may not vote according to their true preferences: namely that the latter cannot be known. Yet, the popularity of banning vote buying suggests that the lack of direct evidence on voter inequality is an insufficient argument against institutional changes that seem likely to make people vote more faithfully to their political preferences.

Although the present study is looking for explanations of some empirical phenomena rather than

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3 Kitschelt et al. (1999, chapter 1).
4 Already the possibility that any legislation can be easily challenged by an intense and organized minority may give rise to a peculiar relationship between government and organized interests and reduce government accountability (Lehner and Homann 1987).
5 For recent reviews of the voluminous literature from different perspectives see Hibbs (1992), Klingemann, Hofferbert, and Budge (1994); Schmidt (1996).
7 Cf. Reeve and Ware (1992: chapter XXX).
prescriptions for institutional engineering, whether the possibilities of such reforms are already exhausted will be one of the themes touched upon by implication. Given that electoral democracy has become a nearly universally endorsed ideal in the aftermath of World War 2, it seems timely to inquire whether its justification is based on an ideal that cannot, in fact, be attained by the means of electoral procedures. Should this be impossible, electoral mechanisms do not treat all viewpoints neutrally, but have a built-in bias instead. Then, the very ideals that justify sustaining electoral democracies as well as the possible legitimacy deficit that they suffer from may require that the importance of the electoral arena be reduced, and its natural bias counterbalanced by expanding the jurisdiction of other channels in democratic decision-making. If sweeping changes in the institutional design of democracies are nonetheless undesirable or unfeasible, at least the contemporary evaluation of democratic elections need to be revised if they turn out to be just another fertile ground for political inequality.

Alternatively, voters’ equality may turn be within reach, yet not an automatic by-product of electoral competition between parties and candidates. If so, the interest in minimizing legitimacy deficits and pursuing democratic ideals may urge modest institutional reforms to reduce political inequality in elections themselves, but without altering their central role in the political process.

In recent years, the problem of voter inequality seems to have attracted growing attention among political theorists. Some proposed radical measures to combat it, while others identified a wide range of potential victims. Yet, the scholarly literature on voting has rarely elaborated on voter inequality and for most of the time probably deemed it an inevitable consequence either of democratic elections or of the complex social environment in which they occur. In the more recent literature one could see a tide of ingenious works on how and why relatively uninformed citizens may be able to emulate the choices of political sophisticates, or at least to make a very good use of the little information they have. Regarding the opposite question, Larry Bartels’ innovative study of a handful of US presidential elections remains, to my knowledge, the only empirical analysis of whether there usually are significant differences between the vote choices of people of (presumably) identical preferences but different information level. While his work was a major source of inspiration for my present study, I will argue below that it focused on the wrong questions: namely on how many individual voters would vote differently in a fully informed electorate than ordinarily do, and to what degree different candidates would benefit from this jump in voters’ political sophistication.

As for this last question, I cannot see how contemporary electoral research could model the likely reaction of political parties to a major change in voters’ sophistication. Barring this, it seems an irrelevant

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9 In this context, Knight and Johnson (1997) discuss measures like granting special veto rights to disadvantaged groups, government support for civic associationalism, and weighted representation.
10 Cf. Breton and Breton (1997: 179-80), who argue that in modern democracies lack of political awareness (of the political dimensions of the self and its problems) disempower a great variety of groups, and refer to previous works discussing this problem with respect to the elderly, the homeless, the mentally disabled, native and coloured peoples, poor women, single mothers, children in state custody, immigrants, refugees, abused women, the physically disabled, and disadvantaged youth.
11 See Berelson et al. (1954: 59); Downs (1957: 94, 221, 223, 235, 252-6, 263-6, 273); Converse (1987: S20-S23); Smith (1989: 6); Converse (1990: 387). Bartels’s (1998) discussion of voter inequality follows an entirely different line of argument than the present paper and is therefore not considered here.
datum that, had all American voters reached a particular information level that Bartels - in an admittedly arbitrary manner - calls the threshold of fully informed behaviour, Republican presidential candidates would have fared fare better in the US between 1976 and 1992. Rather than presenting my similarly meaningless simulation results about how the Kuomintang could have lost the 1996 parliamentary election in Taiwan or the Liberal Democrats snatched second place in the 1997 British General Election, I try to explore the possibility that voter inequality is not a constant but a variable in democratic elections, with some groups of voters being particularly vulnerable to it.

The basic intuition behind my investigation is that the gap between the observed election results and those that, according to some Bartels-inspired simulations, would obtain in a better informed electorate is likely to be the highest in those socio-demographic groups - the less educated, low income, young, blue collar and female voters - who, as a rule, have below average political information level across contemporary democracies (cf. table 1 on the striking cross-national uniformity in the impact of demographic variables on political information level).

Table 1 about here

Below I will mention a number of reasons to doubt this proposition and demand empirical proofs before swiftly accepting it. Yet, there is nothing particularly unorthodox in the basic idea. In the social sciences it was often argued that modern educational systems, market capitalism, mass party organizations, pluralist pressure group politics, and so forth, while conspicuously uphold the ideal of equal rights and treatment for all, may systematically favour the resource-rich over the resource-poor. Discussions about "biased pluralism" are anything but rare in public policy analysis. A straightforward extension of this line of reasoning to democratic elections states "that information and transaction costs [...] introduce class bias into the electoral system, so that those who are on top in terms of wealth and other resources also come out on top in terms of political influence." Not only that "since social power may be based on knowledge, relative deprivation of knowledge may lead to relative deprivation of power", but this conversion between cultural and political assets may take place in the electoral arena too.

This is the phenomenon that I will call voters' political inequality or shortly voter inequality. Skeptically recalling that giving a name and a definition to an animal is no proof of having already seen one, we can define it as follows:

Because of the unequal distribution of relevant resources among formally equal citizens, members of some groups will have a lower probability to vote correctly than others.

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14 Cf. Bourdieu and Passeron (1977); Marx (1867); Michels (1962); Offe (1985); and Schlozman (1984), respectively.
15 See e.g. Akard (1992); Kennamer (1992: 4).
Making the terminological conventions of the previous literature explicit,\textsuperscript{18} the hypothetical "correct" votes are those that given citizens would cast if they ... 

(1) possessed perfect (even if partially uncertain) information about their own policy preferences, the content and credibility of party platforms, the probability of each possible election outcome, and any other relevant consideration excluding the actual election results and their consequences; and

(2) disregarded decision-making costs and followed the decision rule that, with perfect information, has the highest probability of picking from the given choice set the party that is most likely to maximize their expected utility.\textsuperscript{19}

Since most probably neither of the two conditions is ever satisfied, we cannot observe what a correct vote would be for a given individual or a group of voters. But even in the unlikely case of voters deciding their vote with a random device, voting correctly has a non-zero probability, and this probability should usually increase with voters' political sophistication (information level). This is a critically important property that my empirical analyses will try to exploit in order to test propositions about voter inequality without making any assumptions about the substantive content of the true, unobserved preferences of (specific groups of) individual voters. In practice, then, I equate "correct" votes with fully informed votes. I will not try to argue that they always coince, but nevertheless offer some arguments why the probability of voting correctly may monotonically increase with political information level. A further problem concerns defining where "full" information really starts. Here again, I will follow the previous literature in equating this with a relatively high information level that can still be found in the real world - otherwise we could only guess how fully informed voters might behave.

Note that since election results influence collective outcomes, the potential victims of the political inequality stemming from the socially unequal distribution of relevant information are not the poorly informed voters as such, but those voters, who, irrespective of their own political information level, share their underlying political preferences with uninformed, rather than with knowledgeable voters. Now matter how they personally vote, their preferences will have a weaker expression in the election outcomes than their incidence in the electorate at large would imply. On the individual level, therefore, there is, at most, a probabilistic relationship between voting correctly and benefiting from - rather than being a victim of - voter inequality.

Before turning to the data analysis, six further points are in order here that I am now going to address briefly.

**Forms of voter inequality**

Voters' political inequality can take other forms than just class bias.\textsuperscript{20} For instance, in recent American
presidential elections members of racial minorities and women had less accurate perceptions of candidate positions than others did, even after controls for education and political efficacy. Young voters may also be handicapped by their relative dearth of political experience. It would, of course, also be relevant to find out whether (potential) supporters of a certain policy proposal, general political orientation, or party were systematically less likely to do what they would, had they had perfect information. However, for reasons discussed below I will limit my investigation to possible inequalities between socio-demographic groups.

**Voter inequality and legitimacy**

While I will not analyse the impact of voter inequality on regime support in this paper, the possible consequences of voter inequality deserve a detour. Voter inequality as understood here may have important consequences for popular participation and support for the democratic process. But the opposite finding would not be irrelevant either. Recalling Marx's theory of capital-labour relations or Pierre Bourdieu's portrayal of educational inequalities, one could hypothesize that the actors themselves are likely to remain unaware of the systematic bias of institutions based on universalistic principles, formal procedure, and equal treatment for all. In some sense, this would be even worse for democracy than a robust negative effect of voter inequality on regime support. In the absence of such an effect, free and fair elections may just successfully legitimize the hidden conversion of cultural capital, organizational resources and money into unequal political influence.

However, this hypothesis may be unrealistically bleak. For one thing, elections are prima facie likely to remain vastly more neutral and less class-biased institutions than economic markets or even educational selection. The kind of voter inequality postulated above derives not from the unequal share in the means of production or in an upper-class habitus and cultural heritage, but from unequal political sophistication. Previous research provided compelling evidence that political sophistication (information level) is systematically, but only relatively weakly correlated with high social status. Thus, the concern with its possible consequences for voter inequality is not unwarranted, but the electoral arena may still be freer of social bias than any comparable institution.

It is also unlikely that, as radical theories of false consciousness would have us believe, a high voter inequality can leave the legitimacy of the institution unaltered. Some studies showed that voters' uncertainty about the policy positions of the candidate who they felt politically closest to significantly increased the probability of their voting for a rival candidate (or not voting at all). Thus, the more knowledgeable the voters, the better they expressed their policy preferences in their vote. However, it was also shown that the voters who, according to objective measures, had below average knowledge of candidate positions were not only lower in social status than the sample mean, but were also less likely to vote, and more likely to be subjectively aware of their uncertainty about candidates. Hence, it is probable that voting "incorrectly" makes people doubt the meaningfulness of their electoral participation and vote choices, and influence their evaluation of the electoral mechanisms generating voter inequality than the one operating through unequal political knowledge.

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23 Bartels (1986); Palfrey and Poole (1987); Alvarez (1997).
24 Alvarez and Franklin (1994).
process. At the very least, it would certainly prompt exciting questions about the effects and legitimation of electoral democracy if we learn that (1) it claims legitimacy as the visible embodiment of ideals that it systematically violates; and that (2) it cannot function otherwise than by raising expectations that it cannot live up to.

**Rational voting behaviour and voting correctly**

As the definition above made it clear, voting correctly is seen here not as something that Anthony Downs' rationally ignorant actors do. Instead, it means voting as if one disregarded all costs of information, decision-making and electoral participation. It is highly unlikely that any voter - not too speak about a voter who is sensitive to cost/benefit ratios - would ever disregard these costs altogether, since the impact of a single vote on the election outcome is negligible, and the pleasure that voting for expressive reasons (like the sheer fun of it or a sense of citizen duty) can cause is - while not inconsiderable, nonetheless - limited. Correct voting would, by definition, be instrumentally rational as far as the voters' actual political utility from the election outcome is concerned, but would seem prohibitively cost-inefficient in the eyes of any instrumentally rational voter solely interested in the utility of the election outcome and the costs. Yet, the rationality of ignorance does not guarantee that one cannot become a victim of collective ignorance - quite the opposite. That is why the occasionally frivolous explanations about how small bits of superficial information can be put to good use by the voters - and some recent works like Samuel Popkins' *Reasoning Voter* provide ingenious inventories of this - bear little relevance to the question of whether elections really do what they are supposed to do, at least in terms of treating every voter equally.

**Political information level and voting correctly**

Some voters (rational or not) almost certainly vote correctly despite their lack of perfect information. The smaller the number of parties in the choice set, the more likely that some voters, just by chance, end up picking the one that would be their "correct" choice. More importantly, the richer the voters' information environment in efficient shortcuts that help them realize which party their correct choice might be, the more likely that they will develop a taste for voting for exactly that party. For those who believe that voting behaviour follows (low information) instrumental rationality, this is likely to sound like an unproblematic assumption. Handy information shortcuts may allow even some relatively uninformed voters to vote exactly as if they were fully informed.\(^\text{25}\) In fact, beyond a certain level extra information may have no impact on voting behaviour at all - I will return to this problem below. But if any single piece of information is more likely to reach the sophisticated than the unsophisticated, the probability of voting correctly will monotonically increase with political information level.

At first sight, this last point must seem far from obvious for people who are persuaded that voting behaviour can only be expressive.\(^\text{26}\) The criteria of voting correctly is the match between the impact of the voter's choice on the election outcome on the one hand, and his or her underlying preferences regarding the


\(^{26}\) On the notion of expressive voting and why it is likely to dominate electoral behaviour see especially Brennan and Hamlin (1998); and Guttman, Hilger, and Schachmurove (1994).
outcome of that election on the other. In contrast, expressive votes are motivated not by a concern over the impact of election outcome on personal or collective life, but by the various tiny pleasures of the act of voting (deriving from the expression of our feelings towards particular attitude objects, the performance of citizen duty, being part of a reasonably entertaining show widely covered by the media, and so forth). Thus, the expressive voter will not necessarily utilize additional information exactly the same way as an instrumentally rational voter would. Some may start their voting career with a strong identification with a party that - given their policy preferences - they should never vote for if they were interested in the consequences of election outcomes. These voters may find some pleasure in seeing the political world with this party's eyes, supporting it at every possible occasion, and incorporating any incoming information into a political belief system that maximizes the joy of this behaviour.

Yet, previous research on voting behaviour returned more than sufficient evidence that voters often revise their opinions and voting preferences in the light of new evidence, and do so in ways that seem reasonable adjustments to incoming political information. It is likely that the pleasure of voting for a party or candidate is reduced by an emerging suspicion that their political influence has an adverse effect on the satisfaction of our preferences regarding actual political outcomes. Thus, a long learning process may eventually create convergence between even the most unfortunate voter's expressively and instrumentally rational choices. This is not to deny the frequency of convenient rationalizations of new information that help voters to simultaneously maintain cognitive balance and pre-existing partisan preference. I submit that actual vote choices are - just like electoral participation and political information collection - presumably motivated by purely expressive considerations. Yet, their coincidence with the correct vote is not an entirely random event, but has a positive relationship with the political information level of the voter.

The relationship must be stochastic, however, and only partly because of expressive voting. An additional reason is that not all information (shortcut) is equally likely to help just about any citizen to vote correctly. Much information can be irrelevant, and some may even turn out to be deceitful. The better informed voters are in no way guaranteed to have a lower proportion of such unhelpful information in their stock of political knowledge, although they are certainly likely to have a greater amount of helpful information than the less knowledgeable, and thus be in a better position to discount for irrelevant and deceitful impressions. But at the end of the day there is something inherently probabilistic about exactly what kind of information is contained, and with what weight, in any individual voter's stock of knowledge. Thus, the relationship between political information level and voting correctly must be positive, monotonic, and stochastic.

Systemic and situational information effects

The non-deterministic nature of this relationship has some further roots too. Imagine an election where political information level influences vote choices in just two ways. On the one hand, it polarizes voters along social class lines, by making lower class voters to be ever more likely to vote for an anti-market party as their information 27 See especially Zaller (1992) and Alvarez (1997).
28 Cf. the voluminous literature on the impact of recent information on party identification, e.g. Jackson (1975); Page and Jones (1979); Fiorina (1981); Miller (1986); Brody and Rothenberg (1988); Lockerbie (1989); Mackuen, Erikson and Stimson (1989, 1992); Brody (1993).
level increases, and pulling upper class voters towards a pro-market party in proportion of their political information level. To the extent that voters can judge what is good and bad for them, this must indicate that the anti-market party is more likely to be the correct choice for a lower class than an upper class voter - without implying that the correct choice is exactly the same for every voter in a given class. Now suppose that there is a last minute breaking news about a money scandal in the anti-market party, but it does not reach everyone. As a result, the better informed voters, who are most likely to learn about the scandal, become ceteris paribus more likely to vote for the pro-market party. Hence, poorly informed upper class voters will be far less likely to accurately express in the vote their preferences regarding either money scandals or economic issues than the better informed upper class voters do. In contrast, poorly informed lower class voters may have a lucky strike: if the pull of the two information effects is equally strong, they may well end up dividing their vote between the two parties exactly the same way - though for far less good reasons - as their better informed peers. Clearly, the victims of less than perfect information in the electorate are now both the well-informed and the poorly informed upper class voters in the first place, but - to the extent that the money scandal did not receive a fair enough punishment from the voters - also the electorate as a whole. On the individual level, there still is a positive relationship between the probability of voting correctly and political information level, even though it may totally disappear among lower class voters. But, on the level of social groups, it is the better informed who, presumably, vote less correctly in this example.

Another subtype of such situational information effects occurs when the breaking news can influence vote choice only in a small fraction of the electorate, while it remains totally irrelevant for all others. If the information in question does not reach all members of the affected group in at least some indirect and mediated form, the whole group will pay the political price for this - unless, of course, members of the group were prone to be pulled in conflicting directions by the news.

What distinguishes these situational effects from the kind of voter inequality that has been discussed earlier is that they do not systematically discriminate between social groups. Rather, they work much like Russian roulette: anyone can fall victim to the inequalities of political influence temporarily induced by them. While they probably increase the absolute difference between "correct" and actual votes in the electorate, at the same time they weaken the systematic relationship between socio-demographic status and voting correctly. Situational effects are likely to get weaker as the weight of recent information among the total pool of political information relevant to vote choice decreases, and the weight of past experiences with the parties increases. In other words, new or changing party systems may make votes more dependent on political information level, but, paradoxically, may simultaneously undermine the systemic dependence of voting correctly on the socio-demographic traits that are correlated with political information level.

**Limits to voter inequality**

With this last remark we reached the question of possible cross-national variations in voter inequality. To begin with, it has to be recognized that a rise in the population’s average familiarity with the major party alternatives may reduce the space for the electoral impact for situational information effects, but may make the distribution
of information either more or less equal in the population. Contradictory findings from dozens of studies on so-called knowledge gaps (in both political and non-political domains) give strong support to this latter proposition. Yet, the electoral arena has a special property that makes it likely that beyond a certain level further increases in voters' sophistication reduce voter inequality. This property of the voting act was often noted by electoral researchers: "an individual facing a choice situation like voting, where the number of alternatives is limited, need only gather enough information to determine which alternative is preferable". It is not only, as Lau and Redlawsk's experiments suggest, that most citizens may not be able to utilize any more information than they normally do. This would still leave the possibility open that differential capabilities transform into inequalities of politically relevant skills. However, there is a low ceiling to the amount of information that a vote can possibly convey about the preferences of the voter who cast it. Consequently, if the number of alternatives is reasonably low, fairly small stocks of information may already suffice for a voter to emulate fully informed behaviour.

To explain this with a parallel, the social inequality of electoral participation cannot help but decrease as it approaches 100 percent. The impact on representation is well documented: higher voter mobilization is associated with higher agreement between elite and masses on policies, and higher turnout is associated with higher responsiveness of public policies to lower class interests. Just as turnout in national elections - as long as they are not too frequent - can come close to the upper limit, the vote choice of an individual cannot get any closer to his or her "correct" vote beyond a certain point either. Lupia (1994) shows an example in which poorly informed voters could perfectly emulate the behaviour of much better informed ones who - presumably - had identical preferences to them. Thus, inequalities of contextual knowledge and information continued to exist, but were not transformed into voter inequality. This is, indeed, the basic idea behind the notion of information shortcuts that electoral researchers have so often relied on to explain how low information rationality may lead to supposedly reasonable voting behaviour in terms of the match between the voters' (largely unknown) preferences and election outcomes.

A key precondition to this fortunate functioning of information shortcuts is a free and competitive information environment. This can assure that various pieces of political information reach the voters approximately in the order of their potential impact on citizens' voting preferences. The more fully this condition is satisfied and the simpler the choice is, the more likely it is that increases in the political information level of the voters will reduce voter inequality. The simplicity of the choice is presumably determined by a great many factors: how many serious options there are on the ballot paper, how well known they are, how much they were tested in governmental positions in the recent past, how easy it is to distinguish between their policy offerings, how straightforward to determine their respective responsibilities for past outcomes, and so forth. In other words, be much more stable over time in old than in new democracies (Bartolini and Mair 1990).

30 See Viswanath and Finnegan (1996). Similarly mixed findings were reported about the development of knowledge gaps during election campaigns. For instance, Berelson et al. (1954: 246) and Moore (1987) observed increases, while Alvarez (1997: 186-7, 199-201) a decrease in the gap between the least and the best informed during such campaigns.

31 Popkin et al. (1976: xxxxxxx).

32 Lau and Redlawsk (1997).

33 Hansen (1975); Powell (1982); and Verba and Nie (1972: 309-318).

I hypothesize that voters' political inequality is a function of how balanced and competitive their political information environment is (including the mass media, interpersonal contacts, the range of informed opinion conveyed by them, and so forth), and of how stable, unfragmented, competitive, and programmatically structured the party system is.35

In the present analysis, only a few of these variables will be empirically examined in terms of their impact on voter inequality: the age and fragmentation of the party system, and the clarity of the offering and responsibility of the different parties regarding actual policy outcomes. The reasons for this restriction include both data availability and the impossibility of estimating the separate contribution of a large number of contextual variables in a data set that covers relatively few political contexts. The justification for the hypotheses behind these variables comes, in the case of party system age, from the above discussion of why situational information effects may abound in new or changing party systems, and from previous analyses of turnout that suggest some positive effects exercised by low party system fractionalization, clarity of political responsibility, and maybe even by ideological differentiation.36 I hypothesize that a similar micro-logic is present in the cases of both turnout and voting correctly: the lower the information and decision-making costs of the voters, the more people will pass the thresholds of both participation and voting correctly. Following Tingsten's "law of dispersion", the more people do these things, the less systematically unequal their distribution becomes across socio-demographic groups.37

HYPOTHESES

To sum up, I expect that there are differences of politically relevant magnitude between how people vote and how they would vote if they were as informed as the best informed few in the electorate, but everything else remained the same. I assume that to the extent that such differences exist, the better informed get closer to voting correctly. I hypothesize that on the collective level of socio-demographic groups the differences between fully informed and observed vote decrease with the average political information level among group members. If so, groups with below average information level (the young, the poor, the less educated, residents of rural areas; women, farmers, manual workers and some racial minorities), cannot make as good use of elections as other groups, and systematically become victims of voter inequality.

However, this tendency - even if it exists, despite a vigorous political competition supplying voters with many handy information shortcuts - can be counteracted by what was above called situational information effects. These effects will not be directly observed here, but it seems trivially true that they often occur. They may not alter the individual-level relationship between political information level and voting correctly, but introduce a random element in the relationship between information level and the probability of voting correctly at the aggregate level. Therefore, the systematic handicap of groups with below average information level may often

35 In relevant analyses, Hansen (1975) shows higher mass-elite agreement in communities with higher political competitiveness, and Hill, Leighley and Hinton-Andersson (1995) find a positive relationship between competitiveness and responsiveness to lower class interest.

36 see especially Jackman (1987); Jackman and Miller (1995); Hirczy (1995); Franklin (1996); Blais and Dobrzynska (1998).

disappear, or even be reversed. Nonetheless, these cases remain the exception, and it is unlikely that across a sufficiently large sample of democratic elections the default relationship described in the previous paragraph would not show up in a probabilistic form.

It seems very likely that situational information effects are largest when the political alignments of large groups are rapidly changing, i.e. in new or transforming party systems. In these contexts, an unusually large number of people may vote incorrectly in all sorts of socio-demographic groups. In spite of this effect, Tingsten's "law of dispersion" suggests that the less people vote correctly, the bigger voter inequalities will be, and the more likely that the disadvantaged will systematically fall victim to them. The older and less fragmented the party system, the clearer the parties' policy positions and their relative degree of responsibility for policy outcomes, the lower information costs' the voters will have to bear. Consequently, more of them will vote correctly, and the space open for voter inequalities will diminish. Thus, party system characteristics can influence the quality of the democratic process not only through the proportion of citizens who manage to vote "correctly", but also through the even social distribution of this ability.

DATA AND MEASURES

The micro-data that is analysed below was provided by the Comparative Study of Electoral Systems (CSES), which has been collecting mass survey data in the immediate aftermath of national elections since 1996, using a cross-nationally standardized questionnaire and probability sampling. Background information on the project, study documentation, as well as the data files themselves can be downloaded from the CSES web-site. Below I use the July 1999 version of the integrated cross-national data file. The countries covered by the analysis are Australia, the Czech Republic, New Zealand, Poland, Romania, Spain, Taiwan, the Ukraine, the United Kingdom and the United States. The Israeli and Lithuanian data in the file had to be excluded from the analysis because they do not contain information on the respondents' political information level. The resulting data set is uncomfortably skewed towards Anglosaxon and East European countries, creating, for instance, a high multicollinearity between party system age and fragmentation (cf. table 4). Since there are realistic hopes of a new release of the CSES data set in the near future, with a substantial increase in both the absolute number of countries and the balance of geographic coverage in the sample, the current analysis is only meant to illustrate the potential of the planned analysis, rather than to give final results. On the positive side, this limitation of the present paper commits the author to particular hypotheses and operationalizations before they could have been conveniently adjusted with an eye on the actual data.

Appendix 1 briefly explains the operationalization of the variables. Note that some of them (e.g. the effective number of parties in the system, for instance) are contextual variables that only vary across countries, while others (like observed party preference or gender) vary across the individual respondents interviewed in a particular survey. The micro-data are weighted by the weights supplied in the 1999 version of the CSES.

38 While my argument parallels here Gordon and Segura (1997), I will not follow them in including a large number of idiosyncratic variables in the analysis, making the reader suspect that they were random catches from a sea of macro-level variables initially considered.

Contextual variables

Some of the contextual variables were measured in an admittedly crude manner (for their numerical values consult table 2). Party system age (PS_AGE) was coded 2 if the respective party system did not go through such drastic changes in the last ten years as that of Taiwan and New Zealand, and 1 for every new East European democracy. Among the four party systems that were rated as most stable, Australia may have deserved an even higher score than the US, the UK and Spain. However, it was decided that beyond fifteen years without a major change in the number and identity of the major party alternatives or the structure of political cleavages, a further aging of the party system is unlikely to reduce the voters’ information costs significantly. In New Zealand, two-party competition and a first-past-the-post electoral system gave way to a moderately fragmented multiparty scene and a mixed-member PR-system. In Taiwan, changes in the issue agenda and in party positions on the statehood issue, together with the democratization process and the splits in the Kuomintang have been progressing to the point where the opposition became a credible contender for executive power on the national level. The scope of these changes was deemed such that these two party systems were scored 1.7 on the PS_AGE variable, i.e. twice closer in stability to the "old" than to the "entirely new" party systems in the sample.

Table 2 about here

Given data availability, the clarity of party positions is measured here with a far less satisfactory measure than what would be desirable. The respective variable, called POLARIZ, shows the strength of statistical association (as expressed by an eta coefficient) between party choice and left-right self-placement on an eleven point scale in the CSES surveys. In Taiwan, where the terms left and right are absent from the political discourse, these labels are even less likely to capture the major ideological differences between the parties than in the United States. Therefore, I substituted the left-right scale with an alternative measure, that, in the judgement of the Taiwanese principal investigator, is best able to capture self-placement on the most important political cleavage lines there.\footnote{XXX CHECK CONTENT OF SCALE WITH YUN-HAN CHU.}

The problem with POLARIZ is that instead of the clarity of party positions on relevant policy issues it measures the extent to which the political discourse relies on particular ideological concepts. As a remedy, I decided to replicate the present analysis in a future paper using a different data set that includes far more valid measures of the clarity of party positions. However, that measure is only available in a data set that covers just a small set of East Central European countries that do not show much variation either in the age or the fragmentation of the party system.\footnote{Tóka (1998); see also Kitschelt et al. (1999) on programmatic structuration.} Thus, to estimate the separate contributions of several party system characteristics, I recoursed to an analysis of the CSES data, and accepted POLARIZ as a measure of the clarity of party positions.

The clarity of responsibility for policy outcomes is another factor expected to reduce the information
costs of the voters. Unfortunately, a large number of systemic factors can obscure party responsibility, from the terms of the political discourse to federalism, bicameralism, multiparty or divided government, minority and short-lived governments, strong committee influence in the legislature, judicial review, central bank independence, and corporatism to party indiscipline. I cannot see how one could come up with a valid cross-national weighting of the possible contribution of all these factors to the information costs of the voters. Instead, a measure similar to POLARIZ was employed. This variable called ACCOUNT shows the strength of statistical association (as expressed by the average of two eta coefficients) between party choice one the one hand, and responses to two questions about economic evaluations in the CSES surveys.

Individual-level variables

The only observed variables that vary across the individual respondents in the analysis are vote choice in the last election, demographic traits, and political information level. The country-specific coding of the VOTE variable is shown in Appendix 2, those of the demographic variables in Appendix 1. A longer note is due about the measurement of political sophistication.

Following the previous literature on the topic, I assume that political knowledge (and its close equivalent, the number of considerations that people mention when responding to open-ended questions about what they like and dislike about individual political parties) is not only the simplest, but also as valid and reliable a measure of political sophistication as any more complex instrument would be. The most comprehensive studies of political information level to date have clearly demonstrated that the empirical referent of this concept is a single dimension: individual citizens tend to be just as informed (or uninformed) in one political domain as in any other.

The mean and dispersion of political information within particular electorates may well influence voter inequality, but their cross-nationally and longitudinally comparable measurement is an unresolved issue. Therefore, I arbitrarily keep the country mean and standard deviation of political information level constant.

The collaborators in the CSES project were asked to pose three neutral, factual, country-specific political knowledge questions to the respondents that seemed likely to be correctly answered by one, two, and three quarters of the sample, respectively. In creating the INFO variable for the analysis below, the number of each respondent's incorrect responses was subtracted from the number of his or her correct responses. The resulting values were then recoded using the BLOM procedure so as to assign such values to the variable that - within each country - INFO's distribution as closely approximated as possible that of a continuous variable with a normal distribution, a mean of 0.5 and a standard deviation of 1/6. Because of this transformation, all respondents had values between 0 and 1 on INFO as required by the subsequent simulations of fully informed behaviour (i.e. correct votes), and the estimated percentage differences between observed vote distributions and those that would obtain if all had an information level of 1 (corresponding to the least informed citizen among the best informed half percent) are as cross-nationally comparable as possible.

Delli Carpini and Keeter (1996: 142-6 and Appendix 4). See also Neuman (1986: 68-73) and Price and Zaller (1990). Note that the unidimensionality of political information level does not mean that all voters are equally likely to be moved by the same considerations or issues.
Estimating correct votes

As explained above, correct votes are equated here with fully informed votes. To conclude that fully informed votes would differ from actual vote choices it is certainly not enough to show that better informed voters are x percent more likely to support party A than the electorate as a whole. The different choice of the less informed may be explained by all sorts of traits that may have kept them less informed, but are themselves unchanged and unchangeable by additional political information. In order to estimate the effects of a change in the general political information level on the vote, we need a model where information level is entered alongside with all other independent variables that may simultaneously influence political information level and vote choice, and all possible interactions between these exogenous variables, information level, and vote choice are properly specified. The interaction terms must allow for the possibility that the partisan preferences of groups with conflicting interests may get more (or less) polarized as information level increases. The model must also accommodate the possibility that political information level may alter politically relevant attitudes and opinions, the range of considerations related to vote choice, or move an entire electorate closer towards a particular party.

Even then, we will not be able to estimate the probability and likely direction of information-induced change in the vote choice of particular individuals, who surely have many politically relevant traits that influence their vote independently from their political information level, but will never be discovered by survey researchers. All we can possibly estimate is how the net distribution of votes might change in some larger group as they get generally better informed. Changes of this type will constitute my ultimate variables. For brevity, let me call POTSWING (potential for information-induced swing) the estimated percentage difference between the distribution of vote within a given population under the observed information level and under fully informed behaviour. POTSWING can be estimated for the electorate as a whole or for any larger group as long as it is defined in terms of one or more of the independent variables present in the vote function.

Before coming to the details of this, a further difficulty need to be addressed. In the vote choice models of the present analysis, only demographic variables (plus church attendance, which is also likely to remain unaffected by a change in political information) were controlled for. This can cause problems if political information level were directly influenced by the political taste of (some) voters. Should such determinants play a large role, their omission from the vote function may seriously inflate the estimated values of POTSWING in particular elections.

However, this is just another reason for not taking results regarding individual elections too seriously. But no further problem can be expected unless there were reasons to believe that some kinds of political taste influence political information level not only in particular contexts, under the impact of idiosyncratic situational factors, but systematically and universally. Otherwise, distorted estimates about a few elections will cancel out each other in a sufficiently large sample of elections, and the lack of control for such situational effects must not distort our findings regarding the overall relationships between party system characteristics and voter inequality. A critically important assumption of my analysis is that this is exactly the case.

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44 This is why I do not find convincing Bartels' (1996) attempt to estimate how many voters would vote differently if they were fully informed.
The basic tool for the present exploration comes from Bartels (1996), who attempted to estimate the difference between actual votes cast in five American presidential elections and how the same interviewees would have voted if they were as well informed as the best informed respondents in the same post-election surveys. To achieve this, Bartels used probit analysis, with vote choice as the dependent, and two sets of interaction terms between political information level (measured on a scale running from 0 to 1) and demographic variables as the independent variables.

The first set of interaction terms were the pairwise products of political information (let’s call it INFO) with politically relevant demographic variables (income, gender, residence in the South, and so forth). The second set consists in the pairwise products of the same demographic variables with (1 - INFO).

Bartels' probit analysis yields two constants and two sets of parameter estimates showing the impact of each interaction term. A voter who scores .4 on political information can be conceived of as the mix of a maximally informed and a maximally uninformed voter: to be precise, as 40 percent of the former and 60 percent of the latter. Thus, gender’s impact on vote choice at INFO = .4 can be obtained as .4 times the estimated effect of GENDER*INFO, plus .6 times the estimated effect of GENDER*(1 - INFO) on vote choice.

From the parameter estimates it is straightforward to estimate the distribution of "correct" votes in every demographic group. Here and below, a "demographic group" means a group of respondents who have identical values on every socio-demographic variable that entered the vote function. To calculate their correct vote, the probability of vote for each party j for each respondent i at INFO = 1 is estimated. These probabilities can run from 0 to 1, add up to 1 for each respondent, and are identical for every member of a demographic group, assuming, for instance a value .4 for the probability of voting Democratic and .6 for voting Republican. Since the estimates do not take into account differences in unobserved and information-resistant preferences between members of a demographic group, they cannot be interpreted as if they said, for instance, that for a given American respondent i the fully informed (or "correct") vote would be 40 percent Democratic and 60 percent Republican. But the same numbers can be legitimately interpreted as saying that if every person in a given demographic group had been fully informed, then 40 percent would have voted Democratic and 60 percent Republican. 45

In adapting this model to the analysis of multiparty contexts, I used discriminant analyses with VOTE as my dependent variable.46 These analyses were run separately for all ten countries. The predictor variables were equivalent to those in Bartels’ analysis, i.e. the interactions of INFO and (1:INFO) with each of a set of demographic variables that includes FEMALE, AGE, AGE45, LEDUC, HEDUC, CITY, AGRIC, MANUAL, INCOME, DEVOUT, MINOR1, and MINOR2. Note again that no political attitude variable was included in the equations, since political attitudes themselves may change as a function of INFO.

Following Bartels, the design of the interaction terms between INFO and the demographic variables assumed that INFO has a linear effect - if any - on the way the demographic variables influence VOTE, but that

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45 This, of course, assumes that the independent variables in the vote function included every variable that simultaneously influences (directly or indirectly) both vote choice and political information level.

46 This choice was motivated by the convenient generation of predicted vote probabilities by the respective module in the SPSS package. Purists will certainly find this method objectionable and recommend multinomial logit/probit instead, but the only gain offered by the latter would be in the precise estimation of the standard errors of parameters and predicted scores - both of which are irrelevant for my present purposes.
this effect can vary across demographic variables, countries and parties without any further constraint. The validity of this assumption of linearity is critical for the analysis. There is an infinite number of alternatives (e.g. men’s probability of supporting the Legalize Cannabis list in New Zealand remaining steady between INFO = 0 and INFO = .3, then sharply and linearly increasing till INFO = .7, and then declining exponentially till reaching zero at INFO = .85, and so on for other parties and variables) that are no more plausible than the assumption of universal linearity, but may not be distinguishable from the latter and each other by the statistical criteria of model fit. The linear formula was preferred to these alternatives on the grounds of parsimony, its consistency with the assumption that vote choice and information-processing are inherently probabilistic, and because it largely eliminates the problem that the results regarding voter inequality may depend on how the threshold of full information (INFO = 1? or 0.8? or 6?) is defined. Under the assumption of linearity, the choice of this threshold still influences the estimated values of POTSWING, but, as long as we set a threshold over INFO = .8 or so, they cannot possibly influence the direction and relative magnitude of the estimated between-group differences on POTSWING.

The results obtained with the discriminant analyses were used to estimate the probability of voting support for each party $j$ in the choice set among respondents in every conceivable combination of demographic groups and information level. As in Bartels’ analysis, the estimated probabilities at INFO = 1 define the distribution of correct votes.

The observations about the empirical relationships between the interactions between demographic characteristics, INFO and VOTE were, of course, provided exclusively by the respondents who claimed that they voted in the last election. However, the vote probabilities could be and were estimated for the non-voters as well, and the latter were included in every subsequent step of the analysis. This means that the analysis assumed 100 percent electoral participation both at the observed information level and in the fully informed citizenry. This assumption facilitates the cross-national comparability of the findings, and makes sense because of the issue under investigation is the possibility of voter inequality even if all citizens had voted.

**Estimating the potential for information-induced swing and voter inequality**

For every pair of respondent $i$ and party $j$, the difference between the probability of support at the observed information level and at INFO = 1 (but the demographic characteristics remaining the same) was calculated. This led to as many new variables \( \text{CHANGE}_j \) as parties in the choice set defined by VOTE. Since the observed information level can (and does) vary across demographic group, group members did not necessarily have identical values on these new variables. The sign was necessarily the same though for every member of a given demographic group, with negative values indicating support for party $j$ decreased in the group as INFO increased. Positive values showed the opposite.

The group mean of these variables for either demographic groups of for entire countries gives us a straightforward estimate of how much the vote for a given party $j$ would increase or decrease if the given population were fully informed. In order to calculate for respondents $i$ the degree to which they are

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47 The highly hypothetical nature of this exercise must be stressed once again: obviously, political parties would somehow try to adapt their appeal if the political sophistication of the electorate would radically change.
disadvantaged by the fact that members of their demographic group are not fully informed, we just have to sum the absolute values of these group means across all parties $j$ in their choice set, and divide the sum with two to adjust for the fact that every vote increase for one party must appear as a decrease for another. Since some demographic groups (i.e. highly educated, high income, church-going, manual worker, simultaneously Buddhist and mainland Chinese men of 25 years of age in Taiwan) were necessarily poorly represented in the sample, only 90 demographic groups were distinguished in this part of the analysis, which were defined as the unique combinations of values on variables FEMALE, AGE5, EDUC3 and INCOME3.

Voter inequality clearly exists to the extent that the potential for information-induced swing (POTSWING) varies across demographic groups. However, situational information effects may make the electoral arena work like Russian roulette, randomly putting different groups at a disadvantage in different elections. The simplest way to see whether systematic voter inequality exists too is to regress the group-level values of POTSWING on the group means of political information level.

The metric regression coefficients displayed in table 3 are probably the best comprehensive measure of voter inequality available in this study. The higher the absolute values, the higher the deviation from perfect equality by political information level. If the regression coefficient is positive, the generally better informed groups display a higher potential for information-induced swing. If the sign is for most of the time negative, then, just as predicted by the discussion of voter inequality at the beginning of this paper, the generally lesser informed groups vote less correctly than the better informed. With the average coefficient across the ten countries -.18 (and highly significant in a pooled cross-national analysis), this is indeed what seems to be the case. Taken individually, five countries show significant and usually sizeable negative coefficients, two countries clearly insignificant and a further two statistically significant but very weak positive effects, with only one country left with a sizeable positive effect.

Table 3 about here

Repeating the same aggregation procedure to compute the value of POTSWING for entire national electorates we can determine how far they were from a fully informed vote in the ten elections considered here. The values obtained are shown under the POTSWING heading in table 1, while their correlations with the metric regression coefficients of table 3 (also shown in table 1 under the VOTINEQ heading) can be examined in table 4.

Table 4 about here

DISCUSSION
The results so far suggest that voter inequality may exist, and often reaches noticeable magnitude. Despite the presumably frequent presence of situational information effects that must powerfully depress it, the ten-country average of VOTINEQ (that is, of the regression coefficients in table 3) is -.18. Since the standard deviation of
the underlying normal variable of political information is set at 1/6, and the metric of POTSWING retains the metric of vote probabilities, this tells us that in a typical national election the difference between fully informed and actual vote distributions is 18/6 = 3 percent bigger in a demographic group that, on the average, is one standard deviation below the national mean on political information level than in a demographic approximating the national average (.50) on the latter variable. A cursory investigation of table 1 can reveal that deviations of this magnitude from the national average of political information level are quite frequent for groups that combine several demographic characteristics associated with low political sophistication (i.e. a "wrong" age with rural residence and low education, or the "wrong" gender with manual work, low education and membership in a racial minority).

While 3 percent may not sound all that much, it can get far more than that in an election where it was not counteracted but further strengthened by situational information effects. Our most extreme value of VOTINEQ (the one in the 1996 Austra federal election) is, indeed, more than six times bigger than the ten-country average. Overall, the present results may well suggest that the electoral arena is still the most even-handed political institution ever invented. But there seems to be some reason to believe that it is not entirely unbiased.

As regards the contextual determinants of voter inequality, the results displayed in table 4 are not particularly impressive, but are not totally insignificant either. Less fragmented and more mature party systems are clearly associated with a lower potential for information-induced change. Both these correlations were theoretically expected, but they are hardly surprising. The positive impact of FRAGMENT on POTSWING, in particular, is substantively trivial, since POTSWING gives the same weight to a move between to ideologically similar coalition partners in a multiparty system as a move between government and opposition in Great Britain.

More interesting is the -.30 correlation between VOTINEQ and PS_AGE. Although it is not statistically significant, the sign and the size suggest that the electoral arena may, in fact, be relatively less disadvantageous for poorly informed groups in new than in old democracies - despite the fact in a new democracy more or less everybody is less likely to vote correctly than under an old party system. My theoretical framework explains these findings with reference to the same factor, namely the presumably bigger situational information effects in more volatile contexts.

Tingsten's law may also be counterbalanced by this factor. This would explain why POTSWING shows just a very weak - although, as expected - negative correlation (-.12) with the absolute value of VOTINEQ (this correlation is not shown in the table). Thus, only a multivariate analysis may be able to reveal whether, as I expected, a lower potential for information-induced swing (and through that certain party system characteristics) may reduce the space for voter inequalities.

However, given the small sample size, and the strong multicollinearity between FRAGMEN and PS_AGE, no multivariate analyses are worth to report here. Although there is a somewhat unexpected multicollinearity between party system polarization (POLARIZ) and clarity of responsibility (ACCOUNT), their relationships with all other variables in the analysis seem clearly insignificant, independently from the possible confounding effect of other variables. At this point, I cannot tell whether this reflects problems with my theoretical expectations, the measures, or with the uneven geographic coverage of the sample.
I conclude that there is both a justification and a need to continue this line of inquiry with including a much bigger number of elections in the analysis. A major advantage that I can claim for the presented research design is that its data requirements are minimal, and therefore it opens the possibility for a comparative exploration of micro-macro links on a very large scale. The obvious question addressed to the reader is whether there are some visible fallacies in the methods presented that can counterbalance this advantage.
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**Note:** On the independent variables see Appendix 1. On the construction of the dependent variable see the main text.

**Source:** July 1999 version of CSES Integrated Integrated Micro Data Set
Table 2: Party system characteristics and the national-level values of the potential for information-induced swing and voter inequality

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<tr>
<td>Poland</td>
<td>1</td>
<td>4.55</td>
<td>.240</td>
<td>.70</td>
<td>.25</td>
<td>.13</td>
</tr>
<tr>
<td>Romania</td>
<td>1</td>
<td>5.56</td>
<td>.205</td>
<td>.23</td>
<td>.16</td>
<td>.04</td>
</tr>
<tr>
<td>Spain</td>
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<td>3.33</td>
<td>.235</td>
<td>.49</td>
<td>.12</td>
<td>-.49</td>
</tr>
<tr>
<td>Taiwan</td>
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<td>2.86</td>
<td>.145</td>
<td>.28</td>
<td>.18</td>
<td>.02</td>
</tr>
<tr>
<td>USA</td>
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<td>2.38</td>
<td>.200</td>
<td>.38</td>
<td>.10</td>
<td>-.62</td>
</tr>
<tr>
<td>Ukraine</td>
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<td>10.00</td>
<td>.140</td>
<td>.58</td>
<td>.25</td>
<td>-.10</td>
</tr>
<tr>
<td>UK</td>
<td>2</td>
<td>3.23</td>
<td>.410</td>
<td>.51</td>
<td>.16</td>
<td>.54</td>
</tr>
</tbody>
</table>

**Note:** On the meaning and construction of the variables see Appendix 2 and the main text.
Table 3: Systematic voter inequality by country. OLS regression of the potential for information-induced swing (POTSWING) on mean political information level (INFO). N per country = 90 socio-demographic groups

<table>
<thead>
<tr>
<th>Country</th>
<th>b (s.e.)</th>
<th>constant</th>
<th>Adj. $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>-1.08 (.06)</td>
<td>.80</td>
<td>.17</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>-.34 (.07)</td>
<td>.45</td>
<td>.02</td>
</tr>
<tr>
<td>New Zealand</td>
<td>.06 (.02)</td>
<td>.12</td>
<td>.00</td>
</tr>
<tr>
<td>Poland</td>
<td>.13 (.05)</td>
<td>.34</td>
<td>.00</td>
</tr>
<tr>
<td>Romania</td>
<td>.04 (.04)</td>
<td>.25</td>
<td>.00</td>
</tr>
<tr>
<td>Spain</td>
<td>-.49 (.04)</td>
<td>.47</td>
<td>.10</td>
</tr>
<tr>
<td>Taiwan</td>
<td>.02 (.02)</td>
<td>.28</td>
<td>.00</td>
</tr>
<tr>
<td>USA</td>
<td>-.62 (.05)</td>
<td>.45</td>
<td>.10</td>
</tr>
<tr>
<td>Ukraine</td>
<td>-.10 (.05)</td>
<td>.38</td>
<td>.00</td>
</tr>
<tr>
<td>UK</td>
<td>.54 (.03)</td>
<td>-.08</td>
<td>.17</td>
</tr>
</tbody>
</table>

**Note:** On the construction of the two variables see the main text. On the variables defining the 90 demographic groups see Appendix 1. Cases are weighted by group size in the original national samples.

**Source:** July 1999 version of CSES Integrated Micro Data Set.
Table 4: Bivariate Pearson correlations (with one-tailed significance level in parentheses) between party system characteristics, potential for information-induced swing (POTSWING) on the national level, and voter inequality (VOTINEQ). N=10 countries

<table>
<thead>
<tr>
<th></th>
<th>PS_AGE</th>
<th>FRAGMENT</th>
<th>ACCOUNT</th>
<th>POLARIZ</th>
<th>VOTINEQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>POTSWING</td>
<td>-.55 (.05)</td>
<td>.55 (.05)</td>
<td>-.24 (.25)</td>
<td>.19 (.30)</td>
<td>.11 (.38)</td>
</tr>
<tr>
<td>VOTINEQ</td>
<td>-.30 (.20)</td>
<td>.19 (.30)</td>
<td>-.05 (.45)</td>
<td>.16 (.33)</td>
<td></td>
</tr>
<tr>
<td>FRAGMENT</td>
<td>-.73 (.01)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACCOUNT</td>
<td>.06 (.44)</td>
<td>-.19 (.30)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POLARIZ</td>
<td>-.33 (.17)</td>
<td>.31 (.19)</td>
<td>.53 (.06)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: On the construction of the variables see Appendix 1.
Appendix 1: variables

Observed contextual variables

PS_AGE: the age of the party system, coded 2 for Australia, Spain, the United Kingdom, and the United States; 1.7 for New Zealand and Taiwan; and 1 for all East and Central European new democracies.

FRAGMENT: number of effective electoral parties in last legislative (in the US: presidential) election; computed as \(1/\sum(v_i)^2\), where \(v_i\) is the fraction of the vote obtained by the \(i\)th party in the election.

Source: calculated by the author from electoral data published in relevant 1996-98 issues of Electoral Studies and at the website of the Political Transformation and the Electoral Process in Post-Communist Europe project at http://www2.essex.ac.uk/elect/.

POLARIZ: clarity of party positions, measured with the strength of statistical association (as expressed by an eta coefficient) between VOTE and left-right self-placement (xxxxxxx in Taiwan) on an eleven point scale in the CSES surveys.

ACCOUNT: clarity of responsibility for policy outcomes, measured with the strength of statistical association (as expressed by the average of two eta coefficients) between VOTE one the one hand, and responses to two questions about economic evaluations (Q9: “What do you think about the state of the economy these days in [country]? Would you say that the state of the economy is very good, good, neither good nor bad, bad, or very bad?” and Q10: “Would you say that over the past twelve months, the state of the economy in [country] has got better, stayed about the same, or got worse? [IF BETTER/WORSE:] Would you say much better/worse or somewhat better/worse?”) in the CSES surveys.

Estimated variables:

CHANGE: see main text.
POTSWING: see main text.
VOTINEQ: see main text.

Observed individual-level variables

FEMALE: coded 1 for women and 0 for men.
AGE: age of respondent in years
AGE45: absolute value of (AGE - 45).
LEDUC: coded 1 for primary education or less and 0 otherwise.
HEDUC: coded 1 for university education or more and 0 otherwise.
CITY: coded 1 for residents in urban areas and 0 otherwise.
RURAL: coded 1 for residents in rural areas and 0 otherwise.
AGRIC: coded 1 for agricultural occupation and 0 otherwise.
MANUAL: coded 1 for non-agricultural manual workers and 0 otherwise.
INCOME: personal income, divided into quintiles by country.
DEVOUT: coded 1 for weekly church attendance and 0 otherwise.
MINOR1: coded 1 for Asians in Australia, residents of Moravia in the Czech Republic, Maori people in New Zealand, ethnic Hungarians in Romania, Catalan-speakers in Spain, mainland Chinese in Taiwan, Blacks in the US, ethnic Russians in the Ukraine, people of Asian or Black origin in the UK, and 0 otherwise.
MINOR2: coded 1 for Catholics in Australia and New Zealand, Buddhists in Taiwan, Catholics and Jews in the US, residents of three Western regions in the Ukraine and of Scotland in the UK, and 0 otherwise.
RACE (used instead of MINOR1 and MINOR2 in the analysis of political information level): coded 1 for Asians in Australia, Maori people in New Zealand, Blacks in the US, people of Asian or Black origin in the UK, and 0 otherwise.
VOTE: vote in last election. For coding see Appendix 2.
INFO: political information level. On construction and scaling see the main text.
Variable used in constructing the socio-demographic groups that are the units of analysis in table 3

FEMALE: see above.

AGE5: coded 1 for 30 years old and younger; 2 for the 31-40 years old; 3 for the 41-50 years old; 4 for the 51-60 years old; 5 for 61 years and older.

EDUC3: coded zero for less than completed secondary education, two for a college degree or higher, and one otherwise.

INCOME3: coded zero for the bottom two income quintiles, two for the top two income quintiles, and one otherwise.
Appendix 2: Coding of VOTE

Australia
  1 Liberal
  2 Australian Labor
  3 National (Country)
  4 Australian Democrats
  5 Greens
  6 other parties

Czech Republic
  1 CSSD
  2 KDU-CSL
  3 KSCM
  4 ODA
  5 ODS
  6 SPR-RSC
  0 other parties

New Zealand
  1 Labour
  2 National
  3 New Zealand First
  4 Alliance
  5 ACT
  6 Christian Coalition
  0 other parties

Poland
  1 UP
  2 UW
  3 AWS
  4 SLD
  5 PSL
  6 ROP
  0 other parties

Romania
  2 Romanian Party of Social Democracy
  6 Democratic Union of Hungarians in Romania
  9 Greater Romania Party
  33 Romanian Democratic Convention (also includes the separately coded National Liberal Party, National Peasant and Christian Democratic Party, National Liberal Party -- Democratic Convention, and Romanian Ecologist Party)
  34 Social Democratic Union (also includes the separately coded Democratic Party and Romanian Social Democratic Party)
  0 other parties

Spain
  1 PP
  2 PSOE
  3 IU
  4 CIU
  0 other parties

Taiwan
  1 Kuomingtang (KMT)
  2 Democratic Progressive Party (DPP)
3 Chinese New Party (NP)
0 other parties

USA
1 Democratic Party
2 Republican Party
0 other parties

Ukraine
1 Social-National party
2 Party of Muslims of Ukraine
3 Agrarian party of Ukraine
4 Citizen’s Congress of Ukraine
5 Liberal Democratic party
6 Ukrainian Republican party
7 Constitutional-Democratic party
8 All-Ukrainian party of Workers
0 other parties

UK
1 Conservative
2 Labour
3 Liberal Democrats
4 Scottish National Party
0 Other parties
References


