# The impact of turnout on election outcomes in a cross-national perspective

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**Abstract:**
Several previous analyses of aggregate data found that left-wing parties may win a much bigger share of the vote if turnout in elections were higher. This finding is hard to reconcile with the findings of previous survey-based analyses about the usually rather weak relationship between socio-demographic variables on the one hand, and vote choice and turnout on the other. The paper presents a cross-national empirical simulation of the possible link between election results and turnout using individual-level data from several dozen recent elections on five continents. The findings show that turnout may have a substantial impact on election outcomes in general, and specifically on the vote for the left in established democracies. However, at the aggregate-level left-party support must have a bigger impact on turnout than the latter on the former, and only this reverse causation can be at work in post-communist countries. Moreover, the roots of the turnout effects on left party support are strikingly different from what is commonly assumed.

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Previous scholarship produced several studies exploring whether the unequal electoral participation of different social groups creates relevant political inequalities between different political preferences. The most tractable way of posing this question asks how elections results would change - e.g. whether left-wing parties would do better - if turnout were equally high across social groups and everything else remained the same. Of course, this question refers to a highly implausible scenario since party strategies and a host of other things would presumably change if all social inequalities in turnout disappeared, i.e. if everyone voted, for instance. Yet, for analytical purposes this counterfactual question is useful because quantitative tests like the one offered in this paper can answer it, and these answers already give hints at whether and how party strategies may change if turnout increased dramatically.

A most interesting finding emerging out of the previous literature comes from cross-national aggregate data analyses. Pacek and Radcliff (1994), Aguilar and Pacek (2000), Bohrer, Pacek and Radcliff (2000) find support for the conventional wisdom that higher turnout yields a considerably higher vote share for parties that supposedly appeal to the working class and socio-economically disadvantaged groups (cf. also Crewe 1981). Moreover, turnout was also found to be positively associated with the degree of agreement between political elite and citizens on policy issues (Hansen 1975; Powell 1982; Verba and Nie 1972: 309-18), and, conversely, class bias in the electorate with weaker responsiveness of welfare spending to lower class interests (Hicks and Swank 1992; Hill and Leighley 1992; Hill, Leighley and Hinton-Andersson 1995; Ringquist *et al.* 1997).

Thus, it would appear that the supporters of certain political preferences, merely because of their non-political traits like their level of education and income, systematically remain underrepresented at the polls, and this has a considerable impact both on election results and public policy outcomes. If so, then these findings have a great relevance for explaining cross-national and over-time variation in party systems and government policies. The problem is relevant for normative democratic theory too. Political equality is, of course, one of the fundamental political ideals underlying democratic institutional arrangements and serving as their legitimating principle. While

electoral institutions in genuine democracies do not treat people unequally on the basis of their political preferences *per se*, unequal electoral participation by different groups of citizens violates the democratic ideal to the extent that it assures a *de facto* unequal voice for different kinds of preferences (Verba 2003).

Some problems remain, however, with the previously accumulated evidence on the matter, and this paper aims at remedying four of these. The first problem is an apparent contradiction in the available empirical evidence. The second has to do with the theory explaining the aggregate-level relationship between turnout and left-party vote, which also resurfaces in an apparent modeling problem in the previous literature. The third is the tendency to assume without demonstrating that the "left-wing" parties whose vote total seems to be correlated with turnout do indeed appeal to such social groups whose turnout is below the respective national average. Finally, the fourth problem is the nearly exclusive focus on the impact of turnout on electoral support for the left, instead of the entire universe of political inequalities that can be caused by the unequal turnout of different groups.

This paper addresses these problems by simulating the likely impact of an increased turnout on aggregate election outcomes using cross-national survey data. This method has its own problems and requires some contestable assumptions that will be discussed below. However, the method has some clear advantages in overcoming certain limitations of the previous literature, and is capable of providing new insights into the turnout-vote nexus.

**Unresolved issues in the previous literature**

Participation in elections is distributed far more evenly across social groups than other forms of political activity (Verba and Nie 1972; Verba, Nie and Kim 1977; Verba, Schlozman, Brady 1995; Parry, Moyser and Day 1992). Nonetheless, the previous literature leaves little doubt that turnout is, with very few exceptions (cf. Bahry and Lipsmeyer 2001) positively correlated with income and education, varies significantly by age, and is often correlated with gender, place of residence, church attendance, ethno-religious identity, and other non-political characteristics.

Suppose now that voting support for a particular Party A is twenty percent higher in a given social group X than in the rest of the population, group X comprises 40 percent of all eligible voters. Suppose further that turnout is lower than 100 percent, and members of group X only account for 30 percent of those who actually cast a valid vote. Thus, the determinants of turnout and party choice overlap. If voting and non-voting members of group X are equally likely to support Party A when they vote, and that voting and non-voting members of the rest of the population are also equal in their propensity to support this party, Party A would obtain 20 times 10 (i.e. 40 minus 30)=2 percent more of the votes if everyone voted.

This line of reasoning underlines both the conventional wisdom about the relationship between turnout and the electoral performance of left-wing parties as well as several scholarly analyses. Single country studies suggest that the Australian and New Zealand labor parties as well as the US Democrats used to be hurt electorally by low turnout (McAllister 1986; Nagel 1988; Radcliff 1994, 1995; Tucker and Vedlitz 1986; Citrin, Schickler and Sides 2003). The evidence regarding the US Democrats as well as the theory that best explains it is a matter of controversy (see DeNardo 1980; Erikson 1995a, 1995b; Nagel and McNulty 1996, 2000). The chief counterargument, which also received considerable empirical support, is that low turnout voters are more likely to vote against their own partisanship and hence high turnout helps the minority party, whichever is that in a district (DeNardo 1980). At least one study on Great Britain also challenged the conventional view about the link between left party vote and turnout (McAllister and Mughan 1986; see, however, Howard and Nelson 2001 on the most recent general election). Similarly, Citrin, Schickler and Sides (2003) found the partisan impact of turnout to have been quite variable – though predominantly pro-Democratic – across US Senate elections in the 1990s.

Yet the cross-national evidence offered by Pacek and Radcliff (1995), Aguilar and Pacek (2000), and Bohrer, Pacek and Radcliff (2000) about a strong effect of turnout on vote for the left have been largely uncontested so far. These studies present pooled cross-national time-series analyses where the vote share of left-wing parties in particular elections is the dependent variable, turnout is the independent variable, and vote for the same left-wing parties in the previous election is a control variable. Pacek and Radcliff

(1995) find that the vote share of these parties increases by nearly one-third of a percentage point for every percentage point increase in turnout across 19 long-established democracies, and an even bigger impact of turnout on the left-wing vote in countries with stronger class voting. Aguilar and Pacek (2000) find much the same picture across ten developing countries; while Bohrer, Pacek and Radcliff (2000) estimate that every percentage point increase in turnout produces nearly one percentage point higher vote for the left across post-communist countries.[1]

The first problem with these impressive findings is that they seem to contradict survey-based analyses. Many of the latter showed that voters and non-voters do not differ significantly and systematically in their political attitudes and party preferences (Bennet and Resnick 1990; DeNardo 1980; Gant and Lyons 1993; Highton and Wolfinger 2001; Shaffer 1982; Studlar and Welch 1986; Teixeira 1992; Verba, Schlozman and Brady 1995; Wolfinger and Rosenstone 1980: 108-13; as well as Elsinga 1984 and Castenmiller 1988 cited by Denters 1995). Some survey studies do indeed find that a few election outcomes may have been significantly influenced by the small vote swing that a much higher - and thus more equal - turnout could have brought about (Citrin, Schickler and Sides 2003; Petrocik 1987). However, the dominant reading of this literature is that higher turnout would cause little systematic difference in election outcomes (cf. Citrin, Schickler and Sides 2003; Teixeira 1992: 100; Verba 2003). Significantly, Lijphart 's (1997: 4) argument in favor of compulsory voting submits that if nonvoters "were mobilized to vote, their votes would be quite different" from what we expect on the basis of attitudes revealed in surveys, since their responses to survey questions are not based on careful thought.

Of course, survey-based evidence should be taken with a grain of salt because of the notorious overreporting of participation in elections by respondents and other sources

[1] This is not to say that their methodology received no criticism. Gray and Caul (2000: fn. 24) note that the use a lagged endogenous variable (left vote at t-1) as a control variable is problematic in these articles. If such a lagged endogenous variable is included in the equation, then it will obscure the effect of the independent variables unless their lagged values are also included in the equation, since they influence the lagged value of the dependent variable. Moreover, the levels of two variables - say left vote and turnout - may co-vary positively over time even if changes in one lead to a negative change of the other for each observation. Therefore, a more appropriate procedure than the one used by Pacek and his associates is to transform the level variables into change variables, thus rendering the time-series data stationary.

of measurement error (Anderson and Silver 1986; Bernstein, Chadha and Montjoy 2001; Granberg and Holmberg 1991; Perea 1995: Table 1; Silver, Anderson and Abramson 1986). But there clearly is a need systematically to confront survey-based estimates with aggregate-level evidence so as to determine to what extent they really contradict each other on this important question. The chief obstacles to such a confrontation seem to be the lack of comparable survey data for a large number of elections and countries, and the distorting effects of recall bias regarding past behavior on survey-based estimates of the overlap between determinants of turnout and party choice. The present study seeks to overcome these obstacles by relying on cross-national survey data from module 1 of the Comparative Study of Electoral Systems, and adjusting survey-based estimates for measurement error.

The second problem with the findings of Pacek and Radcliff (1995), Aguilar and Pacek (2000), and Bohrer, Pacek and Radcliff (2000) is that they assume a unidirectional link from turnout to left-party vote. A reciprocal, or even a reversed direction of causation are also quite possible. For instance, turnout and support for the left may co-vary if they were both dependent on cleavage mobilization by parties and ideological polarization in the party system. A higher left-vote is then merely an expression of the same polarization that creates higher stakes in election and thus drives turnout higher. Indeed, Crepaz (1990) found a positive effect of left-right polarization on turnout across 16 Western democracies. Thus, rather than higher turnout helping left-wing parties, an anticipated increase in the vote total of the left may bring many more left-wing as well as right-wing voters to the polls.[2] In a time-series analysis, it is exceedingly hard to separate the effects of anticipated changes in left-party vote on turnout from the impact of turnout

[2] Note that this argument differs considerably from that of Gray and Caul (2000), who also take the vote for left-wing parties the independent and turnout the dependent variable. Their reasoning would necessarily imply a reciprocal relationship between the two variables: as the capacity of left-wing parties to mobilize the lower classes declines, turnout drops, which may (or may not) lead to a lower vote share for the left, which, in its turn, may (or may not) undermine the mobilizing capacity of the left even further, and so forth. They consider the electoral strength of left-wing parties merely an indicator of their mobilizing capacity. The model that they test assumes that the observed covariance of changes in the two variables is due to a one-way causation from left party strength to turnout. But this is theoretically not satisfactory since without allowing turnout to impact left party vote, the model cannot easily explain why left-wing parties wanted to mobilize people to vote in bigger numbers in the first place.

on left-party vote. The present analysis seeks to achieve this by directly simulating turnout effects from survey data.

Thirdly, previous aggregate-level analyses tended to assume without much further ado that the actual electorate of ideologically left-wing parties – or more broadly, of the parties that *apparently* seek the support of socio-economically disadvantaged groups – does indeed have such a socio-demographic profile that predisposes them to below-average turnout. This assumption may well be problematic given the decline of class voting across Western democracies (Nieuwberta 1995; Knutsen 2003); its relative weakness in many Third World and post-communist democracies (Torcal and Mainwaring 2003; Tóka 1996); and the possible appeal of the left in some countries to such high-turnout groups as older generations or public sector workers. It is also possible that long-term aggregate time-series data show a pattern that, given the transformation of the left-wing electorate, may not hold any more. Once again, the present simulations, which are based exclusively on recent survey data, can avoid this pitfall.

A related problem is that the previous literature hardly considered how non-class bias in the electorate influences election results. It is well known that age, gender, ethnicity, religiosity, place of residence and so forth often are as important determinants of turnout as social class (Blais 2000: 52; Perea 1995, 2002; Topf 1995a; Font and Virós 1995). Since these social characteristics may be related to vote choice, it is unwarranted automatically to attribute, as Pacek and Radcliff (1995), Aguilar and Pacek (2000), and Bohrer, Pacek and Radcliff (2000) do, all observed association between turnout and left-party support to the presumed tendency of these parties to garner above average support in the lower class. Similarly, it needs to be explored systematically whether the possible age-, ethnic-, etc. bias of the electorate may have similarly large effects on election outcomes as the class bias of the electorate is believed to have on left-party support. The present survey-based analysis allows addressing these problems in a straightforward manner.

**Data, methods, and assumptions**

All empirical analyses reported below use cross-national data from the July 2002 version of the Comparative Study of Electoral Systems (CSES) Integrated Micro Data Set.[3] The data were collected in the immediate aftermath of national elections in over 30 countries between 1996 and 2000. For various technical reasons, some countries and some respondents were excluded from all analyses. In contrast, because of their different party systems and the very substantial oversampling of peculiar regions in the respective surveys, the Francophone and the Flemish parts of Belgium, East Germany and West Germany, Quebec and the rest of Canada, as well as Scotland on the one hand and England and Wales on the other were treated as two separate countries each (see Appendix A). The total number of samples in the analysis is thus 33, and the unweighted number of respondents in the 33 samples is 46739.

Survey data are used in the present analysis partly to obtain a realistic picture about the overlap between the socio-demographic determinants of turnout on the one hand, and of party choice on the other.[4] The other use of the survey material here is to evaluate parties and presidential candidates according to two criteria, which previous analyses did not really separate from each other. The first criterion characterizes them according to their left-right ideology, and the other according to the observed – rather than presumed - socio-demographic composition of their electorate. The ideological classification is based on the self-placement of their self-reported voters on an eleven-point left-right scale. The self-placements were standardized within each of the 33

[3] The data are made available through the website of the American National Election Study at <http://www.umich.edu/~nes/cses/>, Ann Arbor, MI: University of Michigan, Center for Political Studies [producer and distributor], 1995–1999. The data collection was supported by many different organizations around the world. The CSES Secretariat is supported by the National Science Foundation under Grant Nos.: SBR-9317631 and SES-9977967. Any errors of data handling and interpretation are mine. Regarding the construction and coding of variables, the exclusion, inclusion and weighting of cases in the analysis, the reader is referred to the appendices.

[4] Political attitudes are presumably better predictors of either turnout or vote choice than the socio-demographic variables included in the analyses reported below. Yet, there are two reasons why there is no need to include attitude variables in this analysis (see Citrin, Schickler and Sides 2003: 78). First, the whole argument about the impact of turnout on election outcomes treats the socio-demographic composition of the active electorate as the intervening variable. Second, the goal here is not to predict or explain individual political behavior, but to simulate the

samples in the analysis. All negative group means on the standardized variable – i.e. those to the left of the sample mean - were considered left-wing positions. Note that a party or presidential candidate was also classified left-wing when the unstandardized mean left-right position of its voters was, like the 5.1 mean score of the Clinton-voters in the 1996 US sample, slightly above point 5 on the original 0-10 left-right scale.[5] The combined vote share of the left-wing parties and candidates so defined was a minimum of 33, a maximum of 76, and an average of 53 percent (with a standard deviation of 11 percent) of the self-reported vote across the 33 samples in the analysis.

Parties and presidential candidates were also classified into "turnout-assisted" and "turnout-hampered" types on the basis of the socio-demographic composition of their electorate. To this effect, turnout was regressed within each sample on up to nine variables measuring age, gender, education, income, religiosity, as well as ethnic and religious identity.[6] Next, the resulting equations were used to determine the expected probability of turnout for every respondent. Finally, the mean expected probability of turnout was calculated for the self-reported voters of each party and presidential candidate in the analysis, and subtracted from the mean value for all actual voters.[7]

As an illustration of how the turnout-assisted versus turnout-hampered nature of the parties and candidates was established, consider the US data. As table 1 shows, probability of participation in the 1996 presidential election was positively and statistically significantly influenced by age, university-level education, income and religiosity, and was negatively and significantly influenced by minimal education. The

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kind of change in aggregate election outcome that could follow if the socio-demographic composition of the electorate changed in a particular way.

[5] Apart from convenience, other reasons for classifying party ideologies in this way included my inability to replicate the diverse judgmental classifications used in the previous literature on turnout, and the very considerable heterogeneity of my country sample regarding the relevance of various aspects of the left-right ideological cleavage.

[6] The number of variables was less than nine in those countries where religiosity, ethnicity, or religion were not considered a sufficiently relevant determinant of vote choice so that the local principal investigators for the CSES study would have included them in the survey. In practice, my analysis assumes that in these countries the impact of these variables on vote choice is zero, and hence their possible correlation with turnout has no influence on election outcomes.

[7] Obviously, this part of the analysis assumes that the impact of socio-demographic variables on turnout may vary across samples but is the same for every respondent within each sample.

other variables in the equation – like gender, race and being a Catholic or a Jew – did not influence turnout significantly.

Tables 1 and 2 about here

Table 2 presents data about the socio-demographic profile of self-reported non-voters, Clinton-, Dole- and Perot-voters. Clearly the average non-voter was younger, less educated, less well off and less religious than the average supporter of any presidential candidate. Therefore, the calculus based on the equation shown in Table 1 yields a much lower mean expected probability of turnout for actual non-voters than for any of the three other groups - see the last row of Table 2, while vote overreporting obviously inflates the numerical estimates for all four groups. In terms of the socio-demographic characteristics that impact turnout, Clinton- and Perot-voters were more similar to non-voters than Dole-voters. Therefore, Clinton- and Perot-voters had a lower mean expected probability of turnout - 0.748 and 0.742, respectively - than Dole-voters.

Incidentally, the group means for Clinton- and Perot-voters were also lower than the mean expected probability of all voters in the US sample (0.775, not shown in the table). In other words, Clinton and Perot were "turnout-assisted" candidates in the sense that they were poised to win a greater share of the votes if turnout were higher and a peculiar assumption (see below) held. Similarly, Dole was a "turnout-hampered" candidate in the sense that mean expected probability of turnout was higher among his voters (0.821) than among all self-reported voters, and for such candidates my simulation procedure (see below) inevitably predicts a drop in their vote share as turnout increases.

Note that this steady relationship between the predicted direction of turnout effects on the vote share of a candidate on the one hand, and the difference between the mean expected probability of turnout among all voters and the given candidate's supporters on the other is not an empirical finding. Instead, it is an inevitable consequence of the key assumption built in the analysis, namely that a higher turnout would not have affected anything else but the election outcome. The crucial bit of the assumption is that no matter how turnout were to change, the relationship between socio-demographic variables and vote choice would remain the same as we observe it among

those respondent who actually report that they had voted in the given election. The result of this assumption is that among the non-voters the predicted probability of voting support for "turnout-assisted" candidates is higher than the respective probability among self-reported voters. Hence, the entry of the non-voters with their simulated votes into the imagined electorate inevitably yields a higher vote share for "turnout-assisted", and a lower vote share for "turnout-hampered" candidates.

What is an empirical finding in my analysis is the size estimate about possible turnout effects. What it reveals is how much vote shares can possibly be affected by the fact that the voters of some parties have socio-demographic traits that facilitate below-average turnout. The novelty is that my simulation procedure allows separating the impact of turnout on election outcome from the reverse effect, i.e. those of the - anticipated - election outcomes on turnout, using the assumption of constant association between vote choice and socio-demographic variables. Note that the same assumption is also present – and remains untested - in the analyses of Pacek and Radcliff (1995), Aguilar and Pacek (2000), and Bohrer, Pacek and Radcliff (2000). They observe aggregate-level (partial) correlations between turnout and the vote share of the left, but their analysis remains unable to tell how of much this correlation is due to turnout effects on the vote and how much of it is due to the impact of (anticipated) election outcomes on turnout. They assume that turnout effects are the only source of the observed partial relationship, and under this assumption derive the estimate that the vote share of the left increases by approximately one-third of a percentage point for every percentage point increase of turnout - and by almost three times that much in some countries. My analysis also assumes that turnout impacts election outcomes through changes in the socio-demographic composition of the electorate, but it estimates the size of these effects differently, namely from survey data about the relationship between socio-demographic variables on the one hand, and turnout and vote choice on the other.

The key technique of this is a discriminant analysis with vote choice as the dependent variable, and the nine socio-demographic variables as predictors. This analysis assumes that the socio-demographic variables have merely additive effects on vote choice. The so-called discriminant functions are uncorrelated additive combinations of the independent variables that are calculated so as to maximize our ability to discriminate

between the voters of the three candidates. Together they define an *n*-dimensional space, where *n* is one less than the number of distinct categories on the dependent variable. Thus, for the US in 1996, where the dependent variable has just three categories – Clinton, Dole, and Perot, respectively -, two so-called discriminant functions are calculated. All respondents can be located in this space on the basis of their values on the independent variables, and the predicted probability of supporting each of the candidates can be readily calculated for every position in this space.

Among the self-reported voters, the mean probability of supporting any one of the candidates equals the candidate's observed share of the self-reported votes in the sample. However, since the expected vote probabilities can be derived for the non-voters too, we can now estimate what the election result would be if (1) everyone was equally likely to vote; but (2) everything else remained unchanged, i.e. the observed relationships between socio-demographic characteristics and vote choices remained the same, no new candidate entered the race, and so forth. Obviously, some people always vote for other candidates than they would be expected merely on the basis of their socio-demographic traits. However, these individual-level errors in the prediction cancel out each other at the aggregate-level, and the simulation results must give an accurate picture of how merely a change in the socio-demographic composition of the electorate would alter the election outcome under conditions (1) and (2).

Table 3 about here

Let me once again use the case of the US as illustration. Table 3 reports standardized coefficients from the discriminant analysis of vote choice. The first discriminant function combines age, gender, income position, education, religiosity, and minority status in such a way that middle-aged people, women, the less educated, low income respondents, the non-religious, Blacks, Jews and Catholics tend to receive high positive scores: the more of these traits a respondent has, the higher his or her score on this function. As it can be guessed from this, this dimension pits Clinton-voters against Dole-voters, with Perot-voters in between the two, but on the average closer on this dimension to Dole- than to Clinton-supporters. The second dimension barely

discriminates between Clinton- and Dole-supporters, but pits both groups against Perot-voters. Individual positions on this function are defined by age above all.

Table 4 about here

Table 4 shows the mean predicted vote probabilities derived from this analysis for non-voters as well as for the actual voters of each candidate. Strikingly, because these estimates are based exclusively on socio-demographic traits and their observed relationship with vote choice, the self-reported non-voters end up with an even higher mean probability (0.639) of voting for Clinton than the actual Clinton-voters themselves. Apparently, the socio-demographic setup of the actual Clinton-supporters was, in many ways, intermediary between the socio-demographic traits of non-voters and Dole-supporters, and thus, on the basis of these traits, about four-five percent more of them could have voted for Dole than that 26.6 percent of the non-voters who could be expected to support the Republican candidate.

All in all, the mean vote probability for Clinton was 0.530 among the actual voters – i.e. 53 percent of the self-reported votes were cast for Clinton -, 0.639 among the non-voters, and 0.562 in the total sample. The mean vote probabilities for Dole in these three groups were 0.391, 0.266, and 0.354, respectively, and for Perot 0.079, 0.096, and 0.084. In other words, if everyone voted, Perot may have got about half a percentage point, and Clinton 3.2 percentage points greater share of the vote, with Dole's losses mirroring the gains of the two turnout-assisted candidates.

Obviously, vote overreporting heavily pollutes these estimates: in reality only 47.2 percent of the voting age population voted in this election, and not 70.8 percent as the self-reports would let us believe (see Pintor and Gratschew 2002: 169). One can correct this error by making the assumption that a unit change of turnout always has the same impact on the election outcome,[8] and that the relationship between socio-

[8] While the empirical validity of this assumption about the linear nature of turnout effects may be open to challenges, this assumption also underlines the estimates of Pacek and Radcliff (1995), Aguilar and Pacek (2000), and Bohrer, Pacek and Radcliff (2000). Therefore I will retain it to maintain comparability between my findings and those earlier estimates based on aggregate data.

demographic characteristics and the vote is correctly observed in the CSES data. Then, every percentage point increase of turnout would have earned an extra (3.7) / (29.2)=0.13 percent share of the vote for turnout-assisted candidates. In other words, given that the change from a 70.8 percent turnout to 100 percent turnout would have boosted the vote share of the turnout-assisted parties by about 3.7 percentage points, the change from a 47.2 turnout to 100 percent turnout would have given a (0.13) x (52.8)=6.9 percentage points boost to the Clinton- and Perot-vote combined. Incidentally, both these candidates are left-wing in terms of my classification, i.e. the mean left-right self-placement of their voters is to the left of the U.S. country mean. Even then, however, my analysis of the 1996 American data suggest that a percentage point increase of turnout would benefit the left much less – i.e. by 0.13 percentage points - than the one-third of a percentage point increase in vote share estimated by Pacek and Radcliff (1995) from aggregate time-series data covering the 19 long-established democracies in the OECD. On the other hand, my estimates regarding Clinton's gain under full turnout are almost five times bigger than the 1.3 percentage point average gain for Democratic candidates in senatorial races in the very same year estimated by Citrin, Schickler, and Sides (2003) with procedures and assumptions that are very similar to mines.

Of course, my estimate is subject to errors for the same two reasons as theirs. First, the assumption of constant associations between socio-demographic variables and vote choice presumably leads to a slight overestimation – rather than underestimation - of turnout effects on election outcomes to the extent that non-voters are likely to be politically less sophisticated than voters. It is conceivable that lower political awareness introduces more random variation in the voting preferences of non-voters than those of the actual voters, and hence socio-demographic characteristics may be less strongly related to political preferences among non-voters than voters. If so, then the entry of the non-voters in the active electorate may cause actually less change in election outcomes than a simulation based on the assumption of constant associations suggests. Unfortunately, the present data do not really allow estimating the size of this error.

At any rate, this error may well be counterbalanced by the fact that probably not all the possible shared determinants of turnout and vote choice are controlled in the discriminant analyses, plus by measurement and sampling errors in the survey data. For

instance, the analyses reported so far did not include data on the respondents' occupational status or place of residence, and relied on a very rough three-fold measurement of the level of education. It is quite possible that after correcting these errors one would find a stronger overlap between determinants of vote choice and turnout, and thus a greater turnout effect on simulated vote shares. Luckily, a richer set of relevant background variables is actually available for some – though not all - of the countries covered by the CSES data set. Therefore, at a later point in the analysis I will be able to present estimates about the extent to which the omission of relevant socio-demographic variables from the analysis may have biased the results that I derived for all the 33 samples included in the present analysis. To anticipate those findings, if the whole analysis is redone for the US by including three more dummy variables – referring to occupation and place of residence – in the vote function, then the estimated turnout effect on turnout-assisted parties would increase from the above cited 3.7 percent to 3.9 percent. Overall, then, given that the previous literature rather unambiguously point at age, education and income as the strongest socio-demographic determinants of turnout, it seems unlikely that these remaining measurement errors would lead to a truly significant underestimation of the possible turnout effects on election outcomes.

To sum up, my analysis seeks to determine how large effect the inequalities of turnout between social groups can possibly have on election outcomes. I attempt to achieve this by estimating distributions of likely votes among non-voters. In doing so I assume, together with those authors who see space for large turnout effects on election outcomes, that the non-voters' party choice, if they voted at all, would be related to socio-demographic characteristics the same way as self-reported votes are. I quantify possible "turnout effects" for each party, i.e. an estimate of how the vote share of each party may have differed from the observed proportion if turnout were 100 percent in the given election.

Finally, the predicted total percentage point change in the vote share of parties will be compared, via a regression analysis involving interaction terms, to the percentage point change in (self-reported) turnout that it would take to reach a 100 percent turnout. The regression coefficients so derived can estimate the vote gain of a given type and size of party for every percentage point increase in turnout. These analyses provide empirical

generalizations that can be compared to the estimates found in the previous literature, and share the assumptions of those previous analyses about the linearity of turnout effects on election outcomes.

**The overall size of turnout effects**

Table 5 displays descriptive statistics about the 212 political parties and presidential candidates for which computations of the above types could be carried out with the CSES data. In order to prevent a bunch of individually almost irrelevant small parties from exercising the same influence on the results as large parties do, in all party-level analyses the cases were weighted by Party Size, i.e. each party's share of the self-reported votes within a national sample. The weighting assured that each of the 33 party systems received equal weight in the analysis, independently from the number of parties they contain. Therefore Table 5 shows both unweighted and weighted statistics about the variables.

Table 5 about here

The first variable is Turnout Effect, signaling the change expected in the election outcome if the probability of turnout became equal - and greater than zero - for all. It shows how much bigger fraction of the vote the party in question would have won, according to my estimates, if turnout raised to 100 percent. The simulated values range between –0.04 and 0.03, i.e. between a four percentage points loss and a three percentage points gain. However, as can be seen from the modest 0.01 standard deviation of the variable, most values are concentrated around the mean (i.e. zero). Thus, turnout effects seem usually smaller than a percentage point. Recall, however, that the observed values of Turnout Effect are certainly deflated by vote overreporting in surveys. Thus, in their stead, the quantity of real interest will be the regression coefficients showing the amount of change on Turnout Effect associated with a unit change on its predictors.

Because of the way it is estimated, the sign of Turnout Effect is fully determined by whether the Relative Expected Turnout of the party's supporters is positive - i.e. above the respective sample average - or negative, i.e. below average. The average Relative

Expected Turnout is .010 for the 134 turnout-hampered parties and candidates in the analysis (with a maximum value of .10 and a standard deviation of .012) and -.012 for the 124 turnout-assisted parties and candidates (with a minimum value of -.15 and a standard deviation of .014).[9] In other words, given their socio-demographic characteristics, the supporters of an average relevant party or presidential candidate are expected to have either a one percentage point higher, or a 1.2 points lower turnout than the national average, and only in the most extreme cases do these value reach the magnitude of ten percent or more in absolute value.

Once again, these estimates must, by logical necessity, be deflated by vote overreporting. The simple reason is that as the percentage of people who report to have voted gets closer either to zero or to one hundred percent, the percentage difference in reported turnout between any two groups of respondents is bound to shrink. Through this connection vote overreporting must spill over the to the estimates about Relative Expected Turnout. Indeed, if we regress the absolute value of latter on the Simulated Rise in Turnout - this variable equals the fraction of self-reported non-voters in a given national sample -, a significant regression coefficient of 0.039 is obtained.[10] Once we know the actual degree of overreporting, the above regression coefficient can be used to adjust the observed values of the Relative Expected Turnout for vote overreporting.

A comparison of Pintor and Gratschew‘s (2002) approximate data on actual turnout in the given elections with the self-reported turnout in the CSES study suggests that vote overreporting inflate the survey estimates of turnout by about 12.5 percentage points on the average (data not shown).[11] A 12.5 percentage points increase in Simulated Rise in Turnout must increase the average Relative Expected Turnout among turnout-hampered parties from 0.010 to (0.010) + (0.056) x (0.125)=0.017, or in other words to 1.7 percentage points above the expected national turnout. Similarly, the Relative

[9] Note that in this calculus too, the 212 parties and candidates were weighted by the Party Size variable.

[10] The standard error of the regression coefficient was .018, the significance level .035, and the adjusted R-square=.086. When parties and candidates are not weighted by their size, b=.051, s.e.=.011, and the adjusted R-square is .078.

[11] Note that for New Zealand and the United States I relied on valid votes in percentage of registered voters, while for all other countries on valid votes in percentage of the size of the voting age population.

Expected Turnout of a turnout-assisted party, after this adjustment for measurement error, must be about -0.020.

Clearly, Relative Expected Turnout impacts the sign and size of Turnout Effects only in interaction with Simulated Rise in Turnout and Party Size. Surely the vote share of the same turnout-assisted party will increase more for a bigger than for a smaller increase of turnout. Similarly, for any country-specific percentage change of turnout and for the same party-specific Relative Expected Turnout, all parties, independently of their size, must, by definition, experience the same degree of relative change in their share of the vote. The same relative change – say two percent - converts, of course, into vastly different absolute, percentage point changes depending on party size: a party with 20 percent of the observed vote should gain (or lose) ten times more (or less) vote than a party with just 2 percent of the observed votes. Thus, Relative Expected Turnout must influence Turnout Effects through a three-way interaction with the Simulated Rise in Turnout and Party Size.

Table 6 about here

Table 6 shows the results of the relevant regression analyses. The two-way interaction of Relative Expected Turnout and Party Size already gives an almost perfect explanation of the simulated Turnout Effects on the vote shares of parties and candidates, with the adjusted R-squared reaching an unusually high 0.95 value. Unexpectedly, the three three-way interaction term (Relative Expected Turnout times Party Size times Simulated Rise in Turnout) does not match Turnout Effect even more closely - the adjusted R-squared for this equation is "just" 0.93. At any rate, only this last equation yields a coefficient that provides estimates of Turnout Effect for different rates of turnout, and therefore this remains my preferred model on *a priori* grounds, despite the fact that a more parsimonious model fits the data slightly better.

Note that the unusually high explanatory power of these equations does follow from the very way Turnout Effects were simulated, exactly from the kind of information distilled, in a different form, in the independent variables of the regression analyses. Therefore, the finding of interest is really just the size estimate for the regression

coefficient from the three-way interaction, which shows the size of Turnout Effects for a unit change in the product of Simulated Rise of Turnout, Party Size, and Relative Expected Turnout.

This coefficient is estimated to be -6.964, with a .66 points margin of error (see the last row of Table 6). To decipher the meaning of this estimate, consider the Dutch Labor Party (PVdA). Its Relative Expected Turnout is negative (–.034), it had 29.3 percent of the recalled votes among the Dutch respondents, and turnout was nearly 26.8 percent short of 100 percent in the given national election (i.e. of 1998) in the Netherlands. Thus, had turnout been 100 percent in 1998, the PVdA's share of the vote would have changed by a positive fraction of the vote. The precise figure is (.0186), which was calculated by multiplying the respective parameter estimate (-6.964) with the party's estimated true score on the three-way interaction term, i.e., (–.034) x (.293) x (.268). In other words, the PVdA would have obtained then 1.86 percent more of the total vote.

To take another example, consider the party with the lowest Relative Expected Turnout in my entire sample (–.116), New Zealand's Aotearoa Legalize Cannabis. As one would guess from the name, the party attracted a youthful group of voters, and ended up with a tiny 2.2 percent of the votes in the sample. According to Pintor and Gattschew (2002), 83 percent of the registered New Zealand voters cast a valid vote in 1996. So I estimate that the ALC may have won a (–6.964) x (–.116) x (.022) x (.17) = .00302 larger fraction, i.e. 0.3 percent more of the vote, if turnout had been 100 percent.

Hence it is straightforward to calculate the expected impact of a given percentage point change in turnout for a party of any given size and Relative Expected Turnout. Recall that the Relative Expected Turnout of an average turnout-assisted party, after appropriate adjustment for vote overreporting, is about –0.020. Since the vote gains of turnout-assisted parties add up within a party system in generating a total country-level turnout effect on the elections, the most sensible value of Party Size for which to estimate turnout effects is probably 0.50, since this way we see the total expected impact on the party system, independently of how fractionalized the latter is. The expected impact of a single percentage point change (i.e. Simulated Rise in Turnout=0.01) on a party that has

50 percent of the self-reported votes (Party Size=0.50) and approximates the average of the turnout-assisted parties in terms of Relative Expected Turnout is thus:

$$(-6.964) \times (0.01) \times (0.50) \times (-0.020) = 0.000696$$

or, in other words, roughly .07 percent of the total vote.[12] Note again that this figure is already adjusted for vote-overreporting in the surveys as well as the latter's impact on Relative Expected Turnout. Moreover, the figure would be the same for several turnout-assisted parties combined as long as their combined share of the self-reported votes is 50 percent and their Relative Expected Turnout is about average.

The political significance of the estimated figure is best appreciated if we consider that for a twenty-five percent increase in turnout[13] would then produce a roughly 1.75 percentage point gain for all turnout-assised parties combined, which must be mirrored by the losses for all the turnout-hampered parties combined. Clearly, then, if we can assume that the votes of the actual non-voters would be related to their socio-demographic traits just as we observe this among the actual voters, then the outcome of an average election is quite noticably influenced by the fact that not everyone is equally likely to vote.

Furthermore, my estimate is still likely to be deflated by the fact that not all relevant determinants of turnout were appropriately taken into account while estimating Relative Expected Turnout for individual parties and presidential candidates. To test the impact of this omitted-variable bias, all calculations were redone for the 21 samples in which information was available about the respondents' occupation and place of residence (data not shown).[14] Across these 21 samples, the expected impact of a single

[12] Ignoring the sampling error of Relative Expected Turnout, the standard error of this estimate is (0.331) x (1.96) x (0.01) x (0.50) x (–0.020) = 0.000065.

[13] According to the IDEA database of Pintor and Gratschew (2002), the average turnout in the elections covered by my analysis – minus the 2000 presidential election in Belarus, for which they provide no data - was somewhere above 72 percent. Note that for New Zealand and the United States I relied on valid votes in percentage of registered voters, while for all other countries on valid votes in percentage of the size of the voting age population, and thus obtained an average turnout of 71.9 percent. After adjustments for invalid votes and voting age residents who are not eligible to vote, this figure would presumably reach well above 72 percent.

[14] The party systems (survey samples) that were excluded from this part of the analysis were the two parts of Belgium and the UK each, Denmark, Japan, Lithuania, Mexico 1997 and Mexico 2000, Peru 2000 and Peru 2001, and Slovenia.

percentage point change on a party that has 50 percent of the self-reported votes and approximates the average of the turnout-assisted parties in terms of Relative Expected Turnout was not 0.0696 but just .0676 percent of the total vote. The same estimate increased to 0.0721 percent if the calculations were redone by including three more dummy variables – signaling rural residence, agricultural occupation and non-agricultural manual workers, respectively - in the vote function that allocated non-voters among parties and presidential candidates. This suggests to me that the omission of some relevant socio-demographic determinants of turnout from the vote function is unlikely to distort my results to a very great extent. Age, income, and education, which the previous literature seems to have identified as the most important socio-demographic determinants of turnout, are included in the vote function at any rate.

Therefore, in the light of the test results regarding occupation and rural residence, I doubt that the total elimination of the omitted variable bias would raise the estimated impact a percentage point change in turnout much further than a tenth of a percent of the total vote.[15] For a 25 percent increase in turnout, this estimate would translate into a 2.5 percentage points gain for turnout-assisted parties, and a similarly large loss for turnout-hampered parties.

**Turnout effects on left-wing parties and candidates**

Let's return now to the full sample of 33 party systems and estimate turnout effects on left-wing parties in particular. To derive estimated turnout effects that are comparable to those reported by Pacek and Radcliff (1994), Aguilar and Pacek (2000), and Bohrer, Pacek and Radcliff (2000), one just has to re-run the regression analyses shown in Table 5 with the Relative Expected Turnout variable replaced with a variable referring to left-right ideology. The latter is measured here through the left-right self-placement of each party's and candidate's voters. The first version of the variable is a continuous variable that shows the exact difference between the mean value of supporters and the respective sample mean on a standardized left-right scale. The second version of the same variable

[15] As before, this estimate too refers to a party that has 50 percent of the self-reported votes and approximates the average of the turnout-assisted parties in terms of Relative Expected Turnout.

is a dummy variable where all parties and candidates to the left of the respective sample mean are coded –1 and all others zero.

Table 7 about here

Table 7 displays the findings for both versions of the party ideology variable. Both the regression coefficients and the adjusted R-square statistics suggest that it makes virtually no difference whether the dichotomized or the continuous party ideology variable is used, and that the relationship between party ideology and turnout effects is extremely weak. Nevertheless, the effect is in the expected negative direction, i.e. parties with negative values on the party ideology scale are expected to increase their vote share as turnout increases. The regression coefficient is sizeable, though only of borderline statistical significance. Substituting the –0.074 coefficient from the last row of Table 6 into the by now familiar formula to calculate the expected impact of a single percentage point increase of turnout on a party that has a 50 percent share of the self-reported votes and whose Left-Right Position (dichotomized) equals –1 (i.e. left), we obtain:

$$(-0.074) \times (0.01) \times (0.50) \times (-1) = 0.000370,$$

or in other words 0.037 percentage points. This is roughly one-half of the gain for an average turnout-assisted party of the same size, and roughly one-eighth of the 0.31 points gain for every percentage point increase of turnout that Pacek and Radcliff (1995) estimated for 19 industrial democracies between 1950 and 1990, and Aguilar and Pacek (2000) replicated for a sample of developing countries. One possible reason for the difference could be if in the new democracies covered by CSES the meaning of left and right, and consequently the composition of the left-wing electorate, is rather different from what it is in the older democracies. Indeed, Aguilar and Pacek (2000) explicitly reckon that among developing countries turnout effects concern not so much left-wing parties but all sorts of forces appealing to socio-economically disadvantaged groups.

To check this possibility the analysis reported in Table 7 was replicated for three types of polities (see Table 8). Across the 17 old democracies, which include Australia,

the two parts of Belgium and Canada each, Denmark, the Western part of Germany, Japan, the Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, the two parts of the United Kingdom, and the United States, the three-way interaction term has a statistically significant impact of the expected direction. The size of the coefficient suggests that a left-wing party that has 50 percent of the self-reported votes can expect a .0845 percentage points change in voting support for every one percentage point increase in turnout, with a plus-minus 0.055 margin of error. In case of a change from a 75 percent turnout to full turnout, this would mean a 1.4 to 2.8 percentage points gain – obviously mirrored by the similarly big losses of the right-wing half of the party political spectrum.

Table 8 about here

The effect is in the opposite direction but statistically insignificant across the ten post-communist party systems, and in the expected direction but insignificant for the tiny sample for "other democratizing countries" provided by two Mexican, two Peruvian, one South Korean and one Taiwanese election. Running the regression on unweighted data or replacing the dichotomous measure of party ideology with the continuous one make little difference in the findings, except that the coefficient regarding "other democratizing countries" reaches borderline statistical significance (with p=.077). The results regarding this group are thus inconclusive, but - just as Aguilar and Pacek (2000) observed - probably not too dissimilar from the pattern emerging among established industrial democracies.

The possible turnout effects on the left-wing vote across old democracies certainly appear to be substantial, but they are nevertheless just about a quarter of what Pacek and Radcliff (1995) estimated them to be. As we saw above, such a large difference between the estimates can hardly be blamed on the omission of relevant determinants of turnout from my computations. Instead, some of the difference may be due to the difference in the time frame of these analyses: i.e. my estimate may be so much lower partly because of a decline in the negative impact of low turnout on left-party support over time, which may have been caused by a decline in class voting, for instance. Alternatively or in addition, Pacek and Radcliff (1995) may have overestimated the impact of turnout on

election outcomes because they did not control for the possibility that the presence of a strong left – through generating greater ideological polarization or some direct and indirect impact on voter mobilzation - leads to a higher participation rate of both left- and right-wing voters.

While I cannot test these explanations, they appear particularly relevant for the explanation of the stunning difference between my estimates and those of Bohrer, Pacek and Radcliff (2000) regarding post-communist countries. In the latter, the largest left-wing parties tend to be the former communist parties associated with the ancien régime. Thus, it is surely plausible that a stronger expected performance of the left can greatly increase the stakes and the drama of post-communist elections by intensifying the regime cleavage, and thus generate higher turnout. Regarding the other hypothesis, previous cross-national analyses already noted that the support basis of the post-communist left is often better defined in terms of its age profile than by social class (cf. Evans and Whitefield 1996; Tóka 1996). Given the weakness of class voting and the appeal of many former communist parties to pensioners - and of some of their right-wing competitors to the younger generations -, it is probably not so hard to explain why left-wing parties in Eastern Europe appear to be just as likely to lose as to gain votes when turnout increases.

The importance of these regional differences in the social basis of the left is buttressed by Table 9, which displays the correlation between party ideology and four different measures of how the social composition of each party's electorate influences its expected turnout. The first of these measures is the same Relative Expected Turnout that has been used throughout this paper. The three other measures are identical to Relative Expected Turnout except that each was generated by just one subset of the socio-demographic variables that defined the former. The three subsets consisted of the demographic (gender, age, and age squared), the socio-economic (income and the two dichotomous measures of education), and the ethno-religious (RELIGIOSITY, MINORITY 1 and MINORITY 2) variables, respectively.

Table 9 about here

Because of the conservative treatment of the weighted number of cases in the analysis, the statistical significance of the coefficients is influenced by whether or not weighting is used. Therefore both the weighted and the unweighted results are displayed in the table. Positive correlations signal that right-wing party ideology go together with above-average expected turnout.

Clearly, the left-wing parties of established democracies and of post-communist countries radically differ with respect to how the expected turnout of their supporters is impacted by their gender and generational composition. In terms of basic demographics, the Western left tends to appeal to low-turnout groups, while the post-communist left to high-turnout groups. In terms of class, the left tends to appeal to high-turnout groups in post-communist and other democratizing countries, but this relationship is extremely weak and statistically insignificant. The same correlation is, as one would expect, in the opposite direction across established democracies, but even there it remains entirely insignificant. Apparently, then, in the years around the millennium, the left-wing parties of the 17 old democracies included in this analysis did not have a very consistent or strong tendency to attract electoral support especially among less educated and poorer strata in society.

Finally, there is at least one thing that unites the left-wing parties of established and post-communist democracies. Both groups tend to appeal to voters who, in terms of their position on the ethno-religious cleavages structuring the given party system, are expected to have below-average turnout. Though only a detailed country-by-country analysis could explore what exactly is the root of this phenomenon in each individual country, it sounds plausible that left-wing parties often appeal to the less religious sections of society, and to some disadvantaged ethno-religious minorities. However, as a visual inspection of Figure 1 reveals, the correlation between party ideology and expected turnout based on ethno-religious variables is driven less by something peculiar to the left than by something related to the right. In other words, the relationship depicted in Figure 1 does not appear to be linear, and may be due merely to the fact that the Relative Expected Turnout of some right-wing parties is particularly high because of the ethno-religious composition of its electorate. Notably, the same pattern appears both across post-communist countries and established democracies (data not shown).

Figures 1 and 2 about here

On the whole, the correlations displayed in Table 9 leave little doubt that the relationship highlighted by Figure 1 is the major reason why, by and large, we encounter a positive relationship between the overall Relative Expected Turnout (based on all the available socio-demographic variables) and Left-Right Position. This general relationship is depicted in Figure 2, and retains signs of a non-linear relationship, with little if any difference between the far left, the center left and the center, but with a great heterogeneity and relatively high average expected turnout among right-wing parties. Thus, turnout effects on the vote share of the left appear not so much because of the left's appeal to the lower classes, but of the right's appeal to some high-turnout groups along ethno-religious cleavage lines.

**Conclusions**

It seems that turnout-based voter inequality exists, and the preference schedules of some groups - like the apparently intense preference in some circles for the legalization of cannabis - remain underrepresented in election outcomes. These theoretically possible turnout effects could decide close, and even some not overtly close elections – had twenty or thirty percent jumps in turnout ever been conceivable. Even then, however, the estimates about individual parties and elections would be of no real interest here, since the parties would presumably adjust their behavior to a 100 percent turnout in ways that we cannot predict. Thus, it is not necessarily obvious which parties would benefit from higher turnout: what is clear and significant is which social groups would have a stronger voice if turnout were higher.

As Tóka (2002) showed, the changes that full turnout would cause in the vote share of individual parties are not correlated with the changes that a uniformly high political information level in the electorate might produce. Therefore, the turnout- and knowledge-based political inequalities neither strengthen nor cancel out each other in the electoral arena: they live side by side. This also implies that there is no need to fear that if nonvoters started voting, or mandatory voting forced them to do so, they would

disproportionately support those parties that would lose support if the information level of the electorate increased.

The findings also confirm that the left-wing parties of established democracies may be significantly handicapped in elections by the socio-demographic composition of their electorate. Interestingly, however, the reason for this has to do less with the class composition of the left-wing electorate, than with the ethno-religious composition of some right-wing constituencies. This is an intriguing new finding that may well be worth further tests and explorations, just as well as the striking difference between the left in established and post-communist democracies. The latter simply does not have the kind of handicap in the electoral arena that may hurt the left in old democracies. One obvious possibility is that the communist experience significantly altered the social location of the left-wing constituency in Eastern Europe, but similarities and differences between post-communist and late developing countries need to be better explored before firm causal inferences can be made about this connection.

Despite the decline of class voting, even in elections around the millennium the benefit of the left from full turnout would have been around two percentage points of the vote in established democracies. This number appears big enough to explain why high turnout is associated with higher agreement between the elite and the masses on policies across US states (Hansen 1975; Powell 1982; Verba and Nie 1972: 309–18), and with higher responsiveness of public policies to lower class interests (Hicks and Swank 1992; Hill and Leighley 1992; Hill, Leighley and Hinton-Andersson 1995). Interestingly, the present results about the role of ethno-religious cleavages also suggest that left-leaning public policy outcomes may not be dependent on a lesser class bias in the electorate.

Of course, the above conclusions obtain only as long as we assume that a higher turnout would leave unaltered the relationship between socio-demographic variables and vote choice observed among actual voters. This may or may not be true: the present analysis did not and could not test this basic assumption. Instead, I merely explored how things may be if the assumption holds. Yet, one clear implication emerges from the present findings at any rate: most of the strong association between left-party support and turnout observed across national election results by Crewe (1981) and others must be due to other factors than turnout effects on left-party vote. For instance, it may be that the

anticipated presence of a strong left-wing party leads to a higher participation among all kinds of citizens, including right-wingers, due to its impact on ideological polarization among the parties and mobilization efforts by rival actors. This opposite direction of causation between turnout and left-party vote, as we saw, is probably the only reason there is any link between the two variables in post-communist elections. These propositions could be tested in future research by regressing turnout on expectations regarding election outcomes.

**References**


Anderson, Barbara A., and Brian D. Silver. 1986. "Measurement and Mismeasurement of the Validity of the Self-Reported Vote." *American Journal of Political Science* 30: 771-85.

Bahry, Donna, and Christine Lipsmeyer. 2001. "Economic Adversity and Public Mobilization in Russia." *Electoral Studies* 20: 371-98.

Bennet, Stephen Earl, and David Resnick. 1990. "The Implications of Nonvoting for Democracy in the United States." *American Journal of Political Science* 34: 771-802.

Bernstein, Robert, Anita Chadha, and Robert Montjoy. 2001. "Overreporting Voting: Why It Happens and Why It Matters." *Public Opinion Quarterly* 65: 22-44.

Blais, André. 2000. *To Vote or Note To Vote? The Merits and Limits of Rational Choice Theory.* Pittsburgh, PA: University of Pittsburgh Press.

Bohrer, Robert E. II, Alexander C. Pacek, and Benjamin Radcliff. 2000. "Electoral Participation, Ideology, and Party Politics in Post-communist Europe." *Journal of Politics* 62: 1161-72.

Castenmiller, P. 1988. *Participatie in beweging; Ontwikkelingen in politieke participatie in Nederland.* Rijswijk: Sociaal en Cultureel Planbureau.

Citrin, Jack, Eric Schickler, and John Sides. 2003. "What if Everyone Voted? Simulating the Impact of Increased Turnout in Senate Elections." *American Journal of Political Science* 47: 75-90.

Crepaz, Markus L. 1990. "The Impact of Party Polarization and Postmaterialism on Voter Turnout: A Comparative Study of 16 Industrial Democracies." *European Journal of Political Research* 18: 183-206.

Crewe, Ivor. 1981. "Electoral Participation." in *Democracy at the Polls: A Comparative Study of Competitive National Elections*, ed. by David Butler, Howard R. Penniman, and Austin Ramney. Washington, DC: American Enterprise Institute, pp. 216-63.

DeNardo, James. 1980. "Turnout and the Vote: The Joke's on the Democrats." *American Political Science Review* 74: 406-20.

Denters, S. A. H. 1995. "Voter Turnout in Dutch Elections." in *Electoral Abstention in Europe*, ed. by Joan Font and Rosa Virós. Barcelona: Universitat Autonoma de Barcelona, ICPS, pp. 113-46.

Elsinga, E. 1984. "De politieke representativiteit van politieke participatie." *Beleid en Maatschappij* 11: 173-82.
Erikson, Robert S. 1995a. "State Turnout and Presidential Voting: A Closer Look." *American Politics Quarterly* 23: 387-96.
Erikson, Robert S. 1995b. "Pooling and Statistical Control: A Rejoinder to Radcliff." *American Politics Quarterly* 23: 404-8.
Evans, Geoffrey, and Stephen Whitefield. 1996. "The Social Bases of Electoral Competition in Eastern Europe." Paper prepared for presentation at the European Science Foundation conference on Transition and Political Power Structures in Cambridge, UK, on 19-21 April 1996.
Font, Joan, and Rosa Virós. 1995. *Electoral Abstention in Europe*. Barcelona: Universitat Autonoma de Barcelona, ICPS.
Gant, Michael M., and William Lyons. 1993. "Democratic Theory, Non-Voting, and Public Policy: The 1972-1988 Presidential Elections." *American Politics Quarterly* 21: 185-204.
Granberg, Donald, and Sören Holmberg. 1991. "Self-reported Turnout and Voter Validation." *American Journal of Political Science* 35: 448-59.
Hansen, Susan Blackall. 1975. "Participation, Political Structure, and Concurrence." *American Political Science Review* 69: 1181-99.
Hicks, Alexander M., and Duane H. Swank. 1992. "Politics, Institutions, and Welfare Spending in Industrialized Democracies 1960-82." *American Political Science Review* 86: 658-74.
Highton, Benjamin, and Raymond M. Wolfinger. 2001. "The Political Implications of Higher Turnout." *British Journal of Political Science* 31: 179-223.
Hill, Kim Quaile, and Jan E. Leighley. 1992. "The Policy Consequences of Class Bias in State Electorates." *American Journal of Political Science 36*: 351-65.
Hill, Kim Quaile, Jan E. Leighley, and Angela Hinton-Andersson. 1995. "Lower-Class Mobilization and Policy Linkage in the U.S. States." *American Journal of Political Science* 39: 75-86.
Howard, Chris, and Sarah Nelson. 2001. "A Higher Election Turnout in 2001 Could Have Led to Even Worse Tory Losses." Report on BBC Radio 4. URL: www.bbc.co.uk/radio4/today/reports/non_voters.shtml, accessed on 9 August 2001.
Knutsen, Oddbjorn. 2003. "Class Voting in Eight West European Countries: A Comparative Longitudinal Analysis, 1975-97." Paper presented at the Joint Sessions of Workshops of the European Consortium for Political Research at Edinburgh, 28 March - 2 April 2003.
Lijphart, Arend. 1997. "Unequal Participation: Democracy's Unresolved Dilemma." *American Political Science Review* 91:1-14.
McAllister, Ian, and Anthony Mughan. 1986. "Differential Turnout and Party Advantage in British General Elections." *Electoral Studies* 5: 143-52.
McAllister, Ian. 1986. "Compulsory Voting, Turnout and Party Advantage in Australia." *Politics* 21 (2): 89-93.
Nagel, Jack H. 1988. "Voter Turnout in New Zealand General Elections, 1928-88." *Political Science* 40 (4): 16-38.

Nagel, Jack H., and John E. McNulty. 1996. “Partisan Effects of Voter Turnout in Senatorial and Gubernatorial Elections.” *American Political Science Review* 90: 780-93.
Nagel, Jack H., and John E. McNulty. 2000. “Partisan Effects of Voter Turnout in Presidential Elections.” *American Politics Quarterly* 28: 408-29.
Nieuwbeerta, Paul. 1995. *The Democratic Class Struggle in Twenty Countries 1945-1990.* Amsterdam: Thesis Publishers.
Pacek, Alexander, and Benjamin Radcliff. 1994. "Turnout and the Vote for Left-of-Centre Parties: A Cross-National Analysis." *British Journal of Political Science* 24: 137-43.
Parry, Geraint, George Moyser, and Neil Day. 1992. *Political Participation and Democracy in Britain.* Cambridge: Cambridge University Press.
Perea, Eva Anduiza. 1995. "Looking for the Impact of Institutions on the Individual Determinants of Electoral Participation." Paper presented at the 23rd Joint Sessions of the European Consortium for Political Research at Bourdeaux, 27 April - 2 May 1995.
Perea, Eva Anduiza. 2002. “Individual Characteristics, Institutional Incentives and Electoral Abstention in Western Europe.” *European Journal of Political Research* 41: 643-74.
Petrocik, John. 1987. “Voter Turnout and Electoral Preferences: The Anomalous Reagan Elections.” in *Elections in America*, ed. Kay Lehman Schlozman. New York: Allen and Unwin.
Pintor, Rafael López, and Maria Gratschew. 2002. *Voter Turnout since 1945: A Global Report.* Stockholm: International Institute for Democracy and Electoral Assistance.
Radcliff, Benjamin. 1994. "Turnout and the Democratic Vote." *American Politics Quarterly* 22: 259-76.
Radcliff, Benjamin. 1995. "Turnout and the Vote Revisited: A Reply to Erikson." *American Politics Quarterly* 23: 397-403.
Ringquist, Evan J., Kim Quaile Hill, Jan E. Leighley, and Angela Hinton-Andersson 1997. "Lower-Class Mobilization and Policy Linkage in the States: A Correction." *American Journal of Political Science* 41: 339-44.
Shaffer, Stephen D. 1982. “Policy Differences Between Voters and Non-voters in American Elections.” *Western Political Quarterly* 35: 496-510.
Studlar, Donley T., and Susan Welch. 1986. "The Policy Opinions of British Nonvoters: A Research Note." *European Journal of Political Research* 14: 139-48.
Teixeira, Ruy. 1992. *The Disappearing American Voter.* Washington, DC: The Brookings Institution.
Tóka, Gábor. 1996. "Parties and Electoral Choices in East Central Europe." in *Stabilising Fragile Democracies*, ed. by Paul Lewis and Geoffrey Pridham. London: Routledge, pp. 100-25.
Tóka, Gábor 2002. "Voter Inequality, Turnout and Information Effects in a Cross-National Perspective." Helen Kellogg Institute Working Paper Series No. 297. Notre Dame, IN: The Helen Kellogg Institute for International Studies at the University of Notre Dame.

Topf, Richard G. 1995a. "Electoral Participation." in *Citizens and the State*, ed. by Hans-Dieter Klingemann, and Dieter Fuchs. Oxford: Oxford University Press, pp. 27-51.

Torcal, Mariano, and Scott Mainwaring. 2003. "Social Cleavages, the Anchoring of the Vote, and Party System Stability: Latin America and Western Europe." Paper presented at the Joint Sessions of Workshops of the European Consortium for Political Research at Edinburgh, 28 March - 2 April 2003.

Tucker, Harvey J., Arnold Vedlitz, and James DeNardo. 1986. "Does Heavy Turnout Help the Democrats in Presidential Elections?" *The American Political Science Review* 80: 1291-304.

Verba, Sidney. 2003. "Would the Dream of Political Equality Turn out to Be a Nightmare?" *Perspectives on Politics* 1: 663-79.

Verba, Sidney, and Norman H. Nie. 1972. *Participation in America.* New York: Harper and Row.

Verba, Sidney, Norman H. Nie, and Jae-On Kim. 1978. *Participation and Political Equality: A Seven-Nation Comparison.* Cambridge: Cambridge University Press.

Verba, Sidney, Kay Schlozman, and Henry Brady. 1995. *Voice and Equality: Civic Voluntarism in American Politics.* Cambridge, MA: Harvard University Press.

Wolfinger, Raymond E., and Steven J. Rosenstone. 1980. *Who Votes?* New Haven: Yale University Press.

**Table 1: The dependence of turnout on socio-demographic characteristics in the 1996 US data**

| | b | s.e. | sig. |
|---|---|---|---|
| **AGE** | 0.067 | 0.021 | 0.001 |
| **AGE SQUARED** | -0.000 | 0.000 | 0.255 |
| **FEMALE** | -0.035 | 0.134 | 0.797 |
| **EDUCATION LOW** | -1.100 | 0.188 | 0.000 |
| **EDUCATION HIGH** | 0.969 | 0.151 | 0.000 |
| **INCOME** | 0.311 | 0.060 | 0.000 |
| **RELIGIOSITY** | 0.276 | 0.040 | 0.000 |
| **MINORITY 1** | -0.148 | 0.206 | 0.473 |
| **MINORITY 2** | 0.138 | 0.154 | 0.368 |
| **Constant** | -2.656 | 0.494 | 0.000 |

Notes: Table entries are logistic regression coefficients (column “b”), their standard errors (column “s.e.”) and significance level (column “sig.”). The dependent variable in the equation is TURNOUT, the data are weighted, and the unweighted number of cases is 1475. On data source, weighting, and the coding of variables see the appendices.

**Table 2: The mean value of selected socio-demographic variables and the expected probability of turnout by self-reported turnout and vote choice in the 1996 US data**

| Turnout and Vote: | Did not vote | Clinton | Dole | Perot |
|---|---|---|---|---|
| **AGE** | 39 | 48 | 48 | 43 |
| **AGE SQUARED** | 1755 | 2597 | 2548 | 2047 |
| **FEMALE** | 0.57 | 0.60 | 0.45 | 0.47 |
| **EDUCATION LOW** | 0.32 | 0.17 | 0.05 | 0.05 |
| **EDUCATION HIGH** | 0.29 | 0.52 | 0.65 | 0.54 |
| **INCOME** | 3.02 | 3.47 | 3.90 | 3.62 |
| **RELIGIOSITY** | -0.51 | 0.02 | 0.56 | -0.12 |
| **MINORITY 1** | 0.15 | 0.19 | 0.00 | 0.02 |
| **MINORITY 2** | 0.22 | 0.32 | 0.26 | 0.29 |
| **Expected prob. of turnout** | 0.54 | 0.75 | 0.82 | 0.74 |

Notes: Table entries are group means of the respective demographic variables and the expected probability of turnout calculated from the data with the equation shown in Table 1. The data are weighted. The unweighted number of cases in each row is 1475. On data source, weighting, and the coding of variables see the appendices.

**Table 3: Discriminant analysis of socio-demographic influences on presidential vote choice in the US in 1996**

| | Function 1 | Function 2 |
|---|---|---|
| **AGE** | 0.66 | -0.11 |
| **AGE SQUARED** | -0.65 | 0.74 |
| **FEMALE** | 0.36 | 0.17 |
| **EDUCATION LOW** | 0.28 | 0.30 |
| **EDUCATION HIGH** | -0.09 | 0.43 |
| **INCOME** | -0.22 | 0.44 |
| **RELIGIOSITY** | -0.59 | 0.41 |
| **MINORITY 1** | 0.73 | 0.34 |
| **MINORITY 2** | 0.31 | -0.06 |

Notes: Table entries are standardized canonical discriminant function coefficients. The dependent variable is VOTE, and the data are weighted. The unweighted number of cases is 1116 (359 self-reported non-voters are excluded from the analysis). On data source, weighting, and the coding of variables see the appendices.

**Table 4: Mean expected probabilities of voting support for each presidential candidate by self-reported turnout and vote choice in the 1996 US data**

| Turnout and Vote: | Did not vote | Clinton | Dole | Perot |
|---|---|---|---|---|
| **Expected probability of a Clinton-vote** | 0.639 | 0.614 | 0.420 | 0.490 |
| **Expected probability of a Dole-vote** | 0.266 | 0.313 | 0.497 | 0.412 |
| **Expected probability of a Perot-vote** | 0.096 | 0.073 | 0.083 | 0.099 |

Notes: Table entries are mean expected vote probabilities derived from the discriminant analysis reported in Table 3. The data are weighted. The unweighted number of cases is 1475. On data source, weighting, and the coding of variables see the appendices.

**Table 5: Descriptive statistics about the variables in the party-level analysis**

| Panel A: Unweighted data | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|
| **Turnout Effect** | -0.04 | 0.03 | 0.00 | 0.01 |
| **Relative Expected Turnout** | -0.12 | 0.10 | 0.00 | 0.02 |
| **Party Size** | 0.01 | 0.73 | 0.16 | 0.14 |
| **Simulated Rise in Turnout** | 0.01 | 0.44 | 0.16 | 0.11 |
| **Left-Right Position of Voters** | -1.63 | 1.10 | 0.01 | 0.54 |
| **Left-Right Position (dichotomous)** | -1.00 | 0.00 | -0.50 | 0.50 |

| Panel B: Data weighted by Party Size | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|
| **Turnout Effect** | -0.04 | 0.03 | 0.00 | 0.01 |
| **Relative Expected Turnout** | -0.12 | 0.10 | 0.00 | 0.02 |
| **Party Size** | 0.01 | 0.73 | 0.29 | 0.16 |
| **Simulated Rise in Turnout** | 0.01 | 0.44 | 0.16 | 0.10 |
| **Left-Right Position of Voters** | -1.63 | 1.10 | 0.01 | 0.50 |
| **Left-Right Position (dichotomous)** | -1.00 | 0.00 | -0.53 | 0.51 |

Notes: Table entries are the minimum, maximum, mean and standard deviation of the variables used in the party-level analysis. The cases are 212 parties and presidential candidates, and are unweighted in the calculation of the statistics displayed in the upper panel and weighted by Party Size in the bottom panel. On data source and the coding of variables see the appendices.

**Table 6: Three bivariate models of turnout effects on election outcome**

| | b | (s.e.) | Adj. $R^2$ |
|---|---|---|---|
| Relative Expected Turnout | -.350** | (.055) | .56 |
| Interaction of Relative Expected Turnout and Party Size | -1.764** | (.074) | .95 |
| Interaction of Relative Expected Turnout and Party Size and Simulated Rise in Turnout | -6.964** | (.331) | .93 |

**: significant at the p<.01 level
* : significant at the p<.10 level

Notes: Table entries are unstandardized OLS-regression coefficients (see column "b"), their standard errors (see column "s.e."), and the adjusted R-squared (see column "Adj. $R^2$") statistics for the respective equation. The dependent variable is Turnout Effect, i.e. the simulated impact of a hypothetical rise of turnout to 100 percent on the vote share of each party within the respective survey sample. The cases in the analysis are 212 parties and presidential candidates, weighted by their observed fraction of recalled votes within a sample. Hence each of the countries receives equal weight in this analysis and the weighted number of cases in the regression is 33. On data source and the coding of variables see the appendices.

**Table 7: Six bivariate models of turnout effects on the vote share of left-wing parties**

| | b | (s.e.) | Adj. $R^2$ |
|---|---|---|---|
| Left-Right Position of Voters | -.004 | (.003) | .03 |
| Interaction of Left-Right Position of Voters and Party Size | -.020* | (.010) | .09 |
| Interaction of Left-Right Position of Voters and Party Size and Simulated Rise in Turnout | -.087* | (.044) | .08 |
| Left-Right Position (dichotomized) | -.004 | (.003) | .03 |
| Interaction of Left-Right Position (dichotomized) and Party Size | -.010 | (.007) | .03 |
| Interaction of Left-Right Position (dichotomized) and Party Size and Simulated Rise in Turnout | -.074* | (.036) | .09 |

**: significant at the p<.01 level
* : significant at the p<.10 level

Notes: Table entries are unstandardized OLS-regression coefficients (see column "b"), their standard errors (see column "s.e."), and the adjusted R-squared (see column "Adj. $R^2$") statistics for the respective equation. The dependent variable is Turnout Effect, i.e. the simulated impact of a hypothetical rise of turnout to 100 percent on the vote share of each party within the respective survey sample. The cases in the analysis are 212 parties and presidential candidates, weighted by their observed fraction of recalled votes within a sample. Hence each of the countries receives equal weight in this analysis and the weighted number of cases in the regression is 33. On data source and the coding of variables see the appendices.

**Table 8: The impact of the three-way interaction of Left-Right Position (dichotomized) and Party Size and Simulated Rise on Turnout Effects by type of polity**

| Type of polity | b | (s.e.) | Adj. $R^2$ | Unweighted N | Weighted N |
|---|---|---|---|---|---|
| Old democracy | -.169* | (.055) | .34 | 107 | 17 |
| Post-communist country | .044 | (.044) | .01 | 77 | 10 |
| Other democratizing country | -.029 | (.049) | -.15 | 28 | 6 |

**: significant at the p<.01 level
* : significant at the p<.10 level

Notes: Table entries are unstandardized OLS-regression coefficients (see column "b"), their standard errors (see column "s.e."), the adjusted R-squared (see column "Adj. $R^2$") statistics and the weighted/unweighted number of cases for the respective equation. The dependent variable is Turnout Effect, i.e. the simulated impact of a hypothetical rise of turnout to 100 percent on the vote share of each party within the respective survey sample. The cases are parties and presidential candidates, weighted by their observed fraction of recalled votes within a sample. On data source and the coding of variables see the appendices.

**Table 9: Pairwise correlations between Left-Right Position (dichotomized) and four measures of Relative Expected Turnout by type of polity**

**Panel A: Weighted data**

| Type of polity | Relative Expected Turnout based on: demographic vars. | socio-economic vars. | ethno-religious vars. | all of the above |
|---|---|---|---|---|
| Old democracy | .30 | .11 | .41 | .46* |
| Post-communist country | -.47 | -.09 | .44 | -.08 |
| Other democratizing country | .14 | -.28 | .22 | .03 |

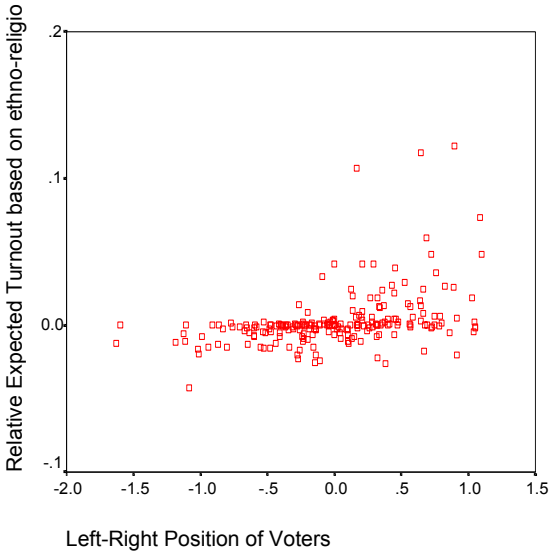
**Panel B: Unweighted data**

| Type of polity | Relative Expected Turnout based on: demographic vars. | socio-economic vars. | ethno-religious vars. | all of the above |
|---|---|---|---|---|
| Old democracy | .30** | .01 | .34** | .43** |
| Post-communist country | -.34** | -.11 | .37** | -.05 |
| Other democratizing country | .16 | -.22 | .11 | -.01 |

**: significant at the p<.01 level
* : significant at the p<.10 level

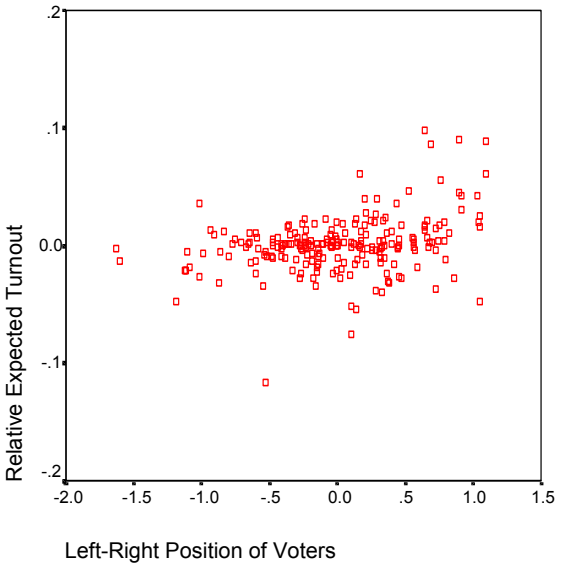
Notes: Table entries are Pearson correlations. The cases are parties and presidential candidates, weighted by their observed fraction of recalled votes within a sample. Regarding the weighted/unweighted number of cases for each row see Table 8. On data source and the coding of variables see the appendices.

Figure 1: The relationship between Relative Expected Turnout (based on ethno-religious variables) and Left-Right Position of Voters across the 212 parties and presidential candidates included in the analysis




Notes: On data source and the coding of variables see the appendices.

Figure 2: The relationship between Relative Expected Turnout (based on all nine socio-demographic variables) and Left-Right Position of Voters across the 212 parties and presidential candidates included in the analysis




Notes: On data source and the coding of variables see the appendices.

**Appendix A: Data sets and cases in the analysis**

The data come from the July 2002 version of the Comparative Study of Electoral Systems (CSES) Integrated Micro Data Set. Due to missing data on the turnout variable, Chile, Hong Kong, Iceland, Israel, Portugal, Thailand, as well as the 2000 data from Russia and Spain had to be dropped from the analysis. Because of regional differences in the party system and very substantial oversampling of peculiar regions in the respective surveys, Belgium, Germany, Canada, and the UK were treated in the present analysis as if each included two separate countries. Hence, there are 33 samples in the analysis, which cover the following national elections: Australia 1996, Flanders (Belgium) 1999, Walloonia (Belgium) 1999, Belarus 2001, Quebec (Canada) 1997, the rest of Canada 1997, Taiwan (ROC) 1996, Czech Republic 1996, Denmark 1998, West Germany (FRG) 1998, East Germany (FRG) 1998, Hungary 1998, Japan 1996, South Korea 2000, Lithuania 1997, Mexico 1997, Mexico 2000, the Netherlands 1998, New Zealand 1996, Norway 1997, Peru 2000, Peru 2001, Poland 1997, Romania 1996, Russia 1999, Slovenia 1996, Spain 1996, Sweden 1998, Switzerland 1999, Ukraine 1998, England and Wales (UK) 1997, Scotland (UK) 1997, and the United States 1996.

Individual respondents with inconsistent response patterns across the turnout and vote choice variables were also excluded from the analysis. All parties that individually had less than 20 self-reported voters in a given sample were collapsed into a single "other parties" category on the vote choice variable, but if all "other parties" combined still had less than 20 self-reported voters in a sample, then they were excluded from the analysis. The individual-level data were weighted with the country-specific demographic and sample design weights if any were provided with the CSES data set.

**Appendix B: Variables in the individual-level analyses (cf. Tables 1 to 4)**

TURNOUT: coded 1 for respondents who recalled to have voted in the last election and gave a valid answer regarding their vote choice, and zero for respondents who recalled to have abstained from voting in the last election and did not give a valid answer regarding their vote choice.

VOTE: recalled party or candidate choice in the last national election. All parties that individually had less than 20 self-reported voters in a given sample were collapsed into a single "other parties" category on the vote choice variable.

FEMALE: coded 1 for women and 0 otherwise.

AGE: age of respondent in years. Missing values were replaced with the weighted sample mean.

AGE SQUARED: the squared value of AGE.

RELIGIOSITY: the sum of the standardized value of the frequency of church attendance and the subjective religiosity variables. Missing values on the orginal variables were replaced with the weighted sample mean. High values stand for strong religiosity.

EDUCATION LOW: coded 1 for primary education or less and 0 otherwise.

EDUCATION HIGH: coded 1 for university education or more and 0 otherwise.

INCOME: personal income, divided into quintiles (from 1 = lowest to 5 = highest) by country. Missing values were replaced with the weighted sample mean.

MINORITY 1: coded 1 for Asians in Australia; Belorussian-speakers in Belarus; English-speakers or English/Scottish/Welsh/Irish/British ethnicity in Quebec; French-speakers or French ethnicity in the rest of Canada; residents of Moravia in the Czech Republic; Catholics in either part of Germany and the Netherlands; Roma in Hungary; Christians in Korea; people of Polish ethnicity in Lithuania; natives in Mexico; Maori people in New Zealand; ethnic Hungarians in Romania; anyone who is not a Russian-speakers or of Russian ethnicity in Russia; Croatian, Serb or "Moslem" ethnicity in Slovenia; Catalan-speakers in Spain; Catholics in Switzerland; mainland Chinese in Taiwan; African-Americans in the US; ethnic Russians in the Ukraine; people of Asian or African origin in England and Wales; and 0 otherwise.

MINORITY 2: coded 1 for Catholics in Australia; Polish-speakers, Polish ethnic origin, and Catholics in Belarus; Catholics in the rest of Canada; Buddhists in Taiwan; people of Russian ethnicity in Lithuania; Catholics in New Zealand; Moslems in Russia; Italian-speakers or ethnicity in Switzerland; Catholics and Jews in the US; residents of three Western regions in the Ukraine; and 0 otherwise.

**Appendix C: Variables in the party-level analysis (cf. Tables 5 to 9)**

Turnout Effect: the simulated impact of a hypothetical rise of turnout to 100 percent on the vote share of each party within the respective survey sample. The value is by definition positive for turnout-assisted, and negative for turnout-hampered parties. The value of turnout effects was calculated for each of the 212 parties and presidential candidates with the help of a discriminant analysis of the impact of the nine socio-demographic variables listed in Appendix B on VOTE, i.e. recalled vote choice in last election. The discriminat analysis was carried out separately for each of the 33 countries (i.e. survey samples) in the analysis. The results of the discriminant analysis regarding the relationship between the socio-demographic variables and vote choice among the self-reported voters were used to determine the mean probability of voting support for each party (or presidential candidate) in the whole sample, including self-reported non-voters, as well as among the self-reported voters only. The differences between the mean probabilities between the whole sample and the self-reported voters were taken as the estimate of how much the vote share of a party would have increased compared to its observed value if turnout in the given election was 100 percent.

Relative Expected Turnout: a continuous variable showing whether and to what extent the socio-demographic composition of a party's electorate is such that an above average turnout can be expected among them. To calculate the measure, turnout was regressed within each sample on up to nine variables measuring age, gender, education, income, religiosity, as well as ethnic and religious identity. Next, the resulting equations were used to determine the expected probability of turnout for every respondent. Finally, the mean expected probability was calculated for the self-reported voters of each party and presidential candidate in the analysis, and

subtracted from the mean value for all actual voters. Note that the number of socio-demographic variables was actually less than nine in some of the countries for which data on religiosity or ethnic and religious identities was either not available, or none of the ethnic and religious minorities distinguished could be expected to have a significant impact on vote choice.

Party Size: the fraction of recalled votes in the given national sample that was reportedly cast for the given party or presidential candidate.

Simulated Rise in Turnout: the difference between 1 and the fraction of respondent who reported to have voted in the given election. Note that this variable only varies across countries but not across parties and presidential candidates within the same country.

Left-Right Position of Voters: the mean standardized score of the self-reported voters of each party and presidential candidate on an eleven-point Left-Right scale. Note that in Japan a Liberal-Conservative scale was used instead of the Left-Right scale.

Left-Right Position (dichotomous): a dichotomized version of the Left-Right Position of Voters, where negative values were recoded to minus one and positive values to zero.

Relative Expected Turnout based on demographic variables: the same variable as Relative Expected Turnout except that only FEMALE, AGE, and AGE SQUARED entered the vote function that was used to allocate non-voters among parties and presidential candidates.

Relative Expected Turnout based on socio-economic variables: the same variable as Relative Expected Turnout except that only INCOME, EDUCATION LOW, and EDUCATION HIGH entered the vote function that was used to allocate non-voters among parties and presidential candidates.

Relative Expected Turnout based on ethno-religious variables: the same variable as Relative Expected Turnout except that only RELIGIOSITY, MINORITY 1 and MINORITY 2 entered the vote function that was used to allocate non-voters among parties and presidential candidates.