

Does Turnout Decline Matter?  
Electoral Turnout and Partisan Choice in Britain

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Abstract

In recent years, the decline in election turnout seems to have abated in the United States, (McDonald and Popkin, APSR 2001) but it has been exacerbated in other advanced industrial democracies. For example, voter participation in Britain dropped from 75.3% in 1987 to 59.4% in 2001. While election officials, academics, and pundits in Britain and elsewhere agonize over the causes of the turnout decline, it is important to examine the political consequences of lower levels of turnout in these settings. In this paper, I simulate the effects of varying levels of turnout on partisan outcomes in the 2001 British election based on five different models. The results suggest that Labour would have won under almost any conceivable level of turnout (higher or lower), and the order of finish among the major parties would not have been affected. These findings raise further doubts about the conventional wisdom that higher turnout helps parties of the left.

## Introduction and Purpose

“The big drop in turnout on 7 June – down to 59.4% from 71.4% in 1997 – is surely the single most important aspect of the 2001 general election. Fewer than six out of every ten eligible voters across the United Kingdom bothered to take part in choosing the country’s government for the next five years. This apparently accelerating trend away from participation in the institutions of democracy contrasts with what seems to be a growing tendency for people to make their voice heard through a variety of forms of direct action rather than through the ballot box. Politicians and commentators of all persuasions have rightly identified voter engagement as a key priority for the future.” – *Election 2001: The Official Results* (Electoral Commission of the United Kingdom, 2001)

The opening paragraph of the official report of the 2001 election results makes it obvious that election administrators in Britain agonize over the meaning and implications of turnout decline, as do administrators and pundits elsewhere. In recent years, the decline in electoral turnout seems to have abated in the United States, but it has started to appear in other advanced industrial democracies. The sharp drop in Britain’s most recent national election contrasted with the usual return to normalcy that followed earlier short-term declines (Clarke *et al.* 2004, 4), and may signal that Britain is following a path to lower turnout charted by the United States (McDonald and Popkin, 2001), Canada (Pammett and LeDuc 2003), and other countries (Dalton 2002, 36-37). Whether the most recent decline in turnout in Britain is ephemeral (owing primarily to a widely popular incumbent and a decidedly weak challenger in a political environment dominated by valence issues) or is indicative of a new lower baseline of electoral participation, it is important for the scholarly community to examine the political consequences of lower levels of turnout.

In recent years, scholars have developed a variety of approaches to estimate whether there are significant political (and specifically, partisan) consequences associated with varying levels of turnout in democracies. Interest in this question is long standing in the British context (see McAllister and Mughan 1986), the United States (see DeNardo 1980), and cross-nationally (Pacek and Radcliff 1995), and continues today among scholars who wonder if higher turnout might change outcomes in elections for the European Parliament (Gosselin and Henjak 2004) and U.S. Senators (Citrin, Schickler, and Sides 2003), as well as among prognosticators of the partisan consequences of lower turnout rates that would likely result if compulsory voting were abolished in Belgium (Hooge and Pelleriaux 1998) and Australia (Mackerras and McAllister 1999). These approaches include simulations of likely partisan results under conditions of full turnout, or other simulated levels of turnout, based on estimated models of voter participation and voter choice.

In this paper, I review several methodologies used in earlier assessments of the partisan effects of turnout in Britain, and replicate those methods with data from the 2001 British Election Study. In short, does the recent decline in turnout in Britain matter, in a partisan sense?

Would Labour's majority have been even bigger if turnout had been closer to its historical average, and would it have been smaller if turnout had dropped even further than it did? And, how would we know that?

## A Two Stage Approach

McAllister and Mughan's (1986) early attempt to simulate partisan vote outcomes in Britain across different levels of turnout is based on estimates of a two-stage model. In the first stage, they estimate of a linear probability model of voter turnout from individual level survey data, using usual demographic variables, political interest, and strength of partisanship as predictors of turnout. The individual level predicted probabilities derived from the first stage (multiplied by 100) are saved, and used in second-stage quadratic linear probability models predicting binary voter choices (Conservative or not, Labour or not, Liberal or not) for each voter<sup>1</sup>, as in

$$\text{Conservative Vote Dummy} = a + b_1 \text{ Prob Turnout} + b_2 (\text{Prob Turnout})^2 + e$$

The second-stage estimates the relationship between the probability of turning out and the probabilities of supporting each party, and the quadratic function in the model allows the relationship to be curvilinear and its direction to vary (with one inflection point) across the full range of possible turnout levels. Thus, for any given hypothetical level of turnout (either higher or lower than the actual turnout level), the coefficients from the second-stage models can be used to predict the distribution of likely partisan votes. Although the relationships between simulated turnout levels and partisan vote distributions varied slightly over the three elections (1964, 1974, and 1983) examined by McAllister and Mughan, higher turnout tended to favor the Liberals (and their Social Democratic allies in 1983) and, contrary to conventional wisdom, hurt Labour (more so in 1964 and 1974 than in 1983).

I emulate their two-stage approach using the pre-post panel data from the 2001 British Election Study (most fully described by Clarke *et al.* 2004)<sup>2</sup> with some technical improvements in the estimation procedure. First, instead of using pairwise deletion of missing data (as McAllister and Mughan did), I use the MICE package in R to impute missing data. Essentially, MICE and similar multiple imputation routines allow us to make informed guesses about the unobserved values of the missing data from random draws from distributions constructed from the valid data that we *do* have about each case.<sup>3</sup> (For a general discussion of multiple imputation, see King *et al.* 2001, and for information about the MICE package used here, see Van Buuren and Oudshoorn 1999.) I draw five imputed values for each missing value, which combined with the observed non-missing data, form five replicate datasets. The two-stage analyses are run five times, and results presented here are based on the average over the five estimations.

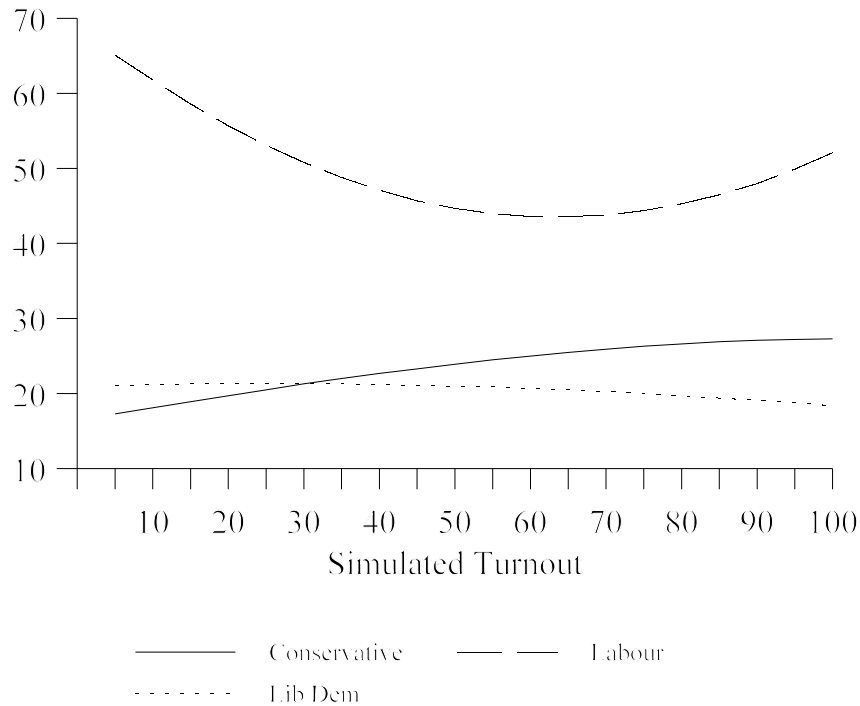
Second, instead of relying on McAllister and Mughan's linear probability model, I use logit models in both the first and second-stage estimations, as the outcome variables are all dichotomous. Third, because this model is intended to be more predictive than elegant and explanatory, I use a more comprehensive model of turnout, which includes the respondent's self-reported vote in 1997 (separate dummy variables constructed from aq28a for Conservative,

Labour, Liberal Democratic, other, and ineligible, with abstentions in 1997 as the excluded category), margin of victory in the 2001 constituency, as well the variables included in Clarke *et al.*'s composite model (2004, 259): interest, social trust, interaction between efficacy and benefits (mean squared differential affect for the three major parties), costs, duty<sup>4</sup>, social norms, policy dissatisfaction, political knowledge,<sup>5</sup> economic expectations, class, party mobilization, attention to television coverage of the campaign, relative deprivation, age, age squared, female, and ethnicity. (Variable numbers are noted in Appendix A. Individual probabilities of turnout were obtained from the logit estimation of this model.

To summarize this approach, I (1) imputed missing values to create five replicate datasets for BES panel respondents, (2) estimated a binary logit model of voter participation for each replicate dataset, (3) saved the predicted probabilities of participation, (4) estimated binary logit models of vote choice (using a series of dummy variables for each party choice) regressed on the predicted probabilities of participation and their squares, again for each replicate dataset but with non-voters excluded from the analysis, and (5) averaged over the five replicate datasets to obtain the predicted values of voter choice at each of twenty turnout levels.

The first stage estimation generates the predicted values of the probability of voting. The average estimated model (over the five replicate datasets, as shown in Appendix B) shows the effects of current party mobilization, age, ethnicity, gender, norms, duty, differential benefits, mobilization, and attention to the campaign on television, but the large impact of having voted in 1997 (or having been ineligible) surely diminishes the impact of many coefficients in the model. The second stage equations (also in the Appendix) show the effects of the predicted probabilities on the likelihood of supporting Conservatives, Labour, and Liberals.

The results of this model (shown in Figure 1) suggest that Labour's victory in the 2001 election was decisive at all anticipated levels of turnout, and was actually probably at its weakest margin at the moderate level of turnout at which Britons actually went to the polls. Labour receives its highest share of the simulated vote at very low levels of turnout (which is consonant with McAllister and Mughan's simulations in earlier elections), but their simulated margin of victory declines as turnout approaches 60% (due to Labour's losses and the Tories' gains). After that point, vote shares for both Labour and Conservatives increase, at the expense of the Liberal Democrats and other parties.



**Figure 1: Partisan Outcomes by Simulated Turnout (Two-Stage Binary Logit Model based on McAllister and Mughan (1986))**

McAllister and Mughan’s parsimonious approach suggests that the relationship between turnout and party support in Britain is an ever-evolving one, as demonstrated by the changes in patterns that they report over the 1964-83 period and that which is revealed here in this analysis of 2001. Sometimes Labour’s support decreases with higher levels of turnout (as in 1964 and 1974), sometimes the relationship is fairly flat (as in 1983), and sometimes the relationship is curvilinear (as in 2001). However, McAllister and Mughan do not report any validation of their method beyond the low  $R^2$  statistics in the voter turnout models. For the 2001 data, the correlations between the predicted probabilities from the vote choice models and the actual votes are very small (.04 for Conservative votes, .05 for Labor votes, and .02 for Liberal votes). Despite the elegance of this approach, its verisimilitude appears to be very weak.

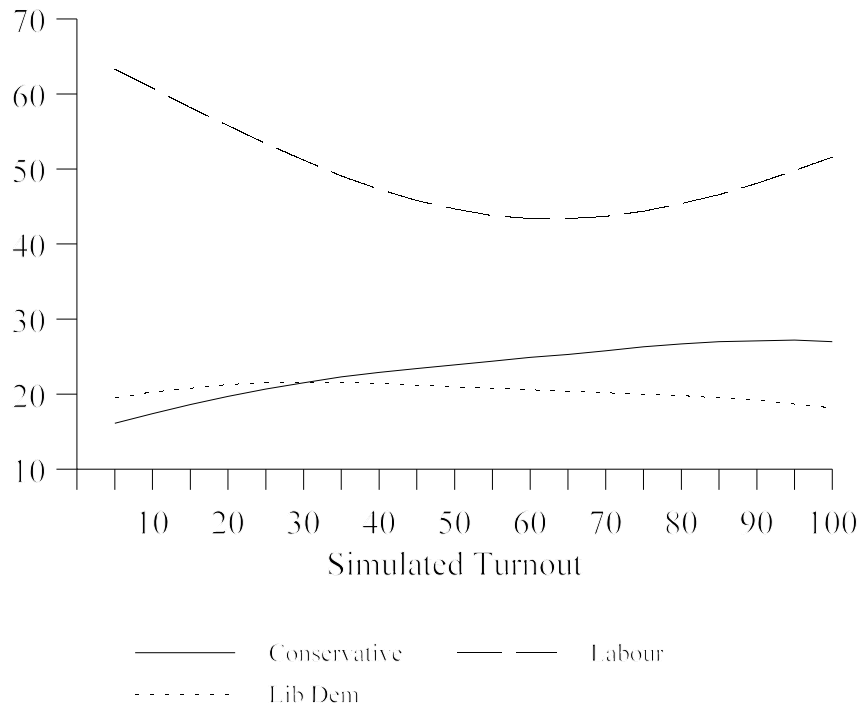
### A Variation on the Two Stage Approach

The second-stage of the McAllister and Mughan model is estimated as a series of binary choices (Conservative or not, Labour or not, Liberal Democrat or not), but this approach fails to take into account that the choice alternatives are constrained (as one cannot simultaneously cast valid votes for both Conservatives and Liberal Democrats, for example). Moreover, the explanatory power of the binary choice models is strained by the fact that those who did *not* vote for any

given party are likely to include birds of very different social and political feathers. Thus, in the Liberal Democratic equation, Liberal Democratic voters may be relatively homogeneous, but those who did *not* vote for the Liberal Democrats include citizens who voted for Labour, as well as others who voted Conservative, and still others who voted for regional parties (the Scottish National Party or Plaid Cymru).

Multinomial logit models overcome these problems by simultaneously estimating the probability of selecting each choice alternative over a baseline alternative as a function of one set of explanatory variables. In this case, the baseline alternative is a Conservative vote, and the multinomial logit model yields estimates of the effects of an individual's probability of voting (derived from the first-stage equation) on the odds that a voter will choose each other choice alternative (Labour, Liberal Democrat, and other) relative to a Conservative vote. As in the model portrayed in Figure 1, those coefficients can then be converted to probabilities of choosing each party for a given level of turnout. The results of this two-stage estimation using multinomial logit in the second stage are shown in Figure 2, and the pattern is very similar to the binary logit model results shown in Figure 1. Labour support is again at its nadir with moderate levels of turnout, and its lead over the Conservatives increases with higher *and* lower levels of simulated turnout.

Once again, however, the validation check reveals that the correlations between predicted votes and actual votes are very faint (.04 for Conservative votes, .05 for Labor votes, and .02 for Liberal votes), suggesting doubts about the overall approach.



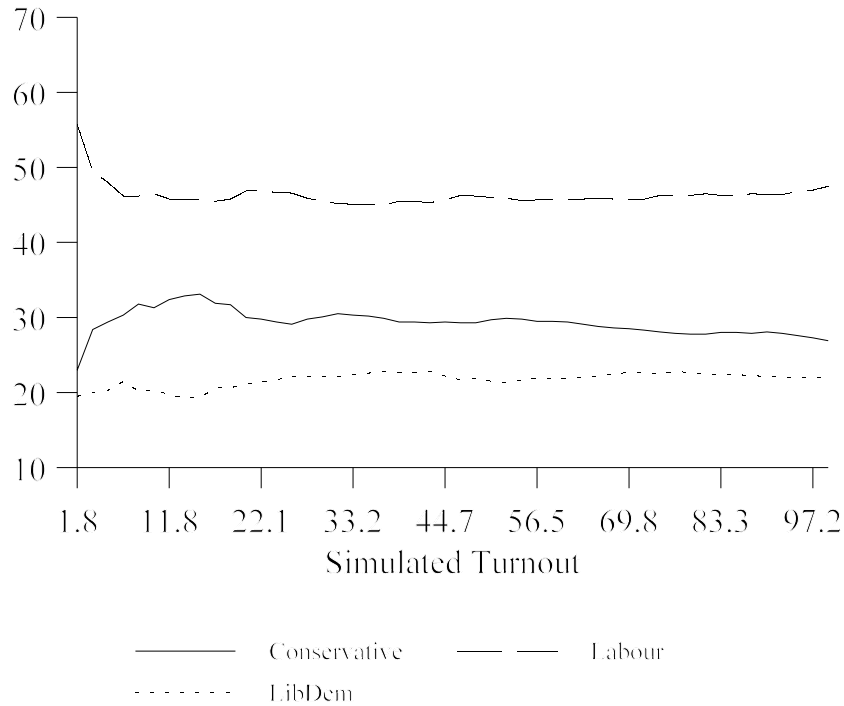
**Figure 2:** Partisan Outcomes by Simulated Turnout (Two-stage model with multinomial logit in the second stage, based on McAllister and Mughan (1986))

## Imputing “Missing Votes”

Bernhagen and Marsh (2004) simulate full turnout in twenty-eight elections over twenty-five countries in the Comparative Study of Electoral Systems dataset (including Britain in 1997) by regarding abstentions as missing data, and using the Amelia algorithm for imputing missing data suggested by King *et al.* (2001). By regarding abstentions as “missing votes” in an Amelia routine, Bernhagen and Marsh simulate full-turnout by adding imputed votes<sup>6</sup> of abstainers to the actual votes cast by voters in each election. Looking across a sample of nations, they find that the effects of the addition of abstainers’ imputed votes on the partisan outcomes is greatest when turnout is lower (though the relatively low turnout British election of 1997 is an outlier, in that the anticipated effects of full turnout were modest in that particular case). However, the advantages of higher turnout do not invariably accrue to the parties of the left.

Bernhagen and Marsh’s results are based only on a comparison of actual turnout to simulated full-turnout. While their results provide a useful step toward a general model of the effects of turnout on partisan outcomes across elections, their comparisons do not tell us about the potential consequences of higher (but not full) turnout, nor about the potential consequences of lower turnout in any given election (as the McAllister and Mughan model does). Still, this is still relatively easy to address with the framework of their imputation approach by comparing the distributions of actual and imputed votes among samples of voters with different probabilities of turnout (or conversely, abstention).

Thus, I replicate the Bernhagen and Marsh routine using panel data from the 2001 British Election Study. Five imputations of missing data (which this time include abstentions on the vote choice variables) were again obtained using MICE. Then, for each of the five replicate datasets, I estimated the model of voter participation, similar to that described in the replication of McAllister and Mughan (results not shown) and saved the predicted probability of abstention (which is 1 minus the predicted probability of turnout). In this simulation, the lowest levels of turnout are simulated by the sample of respondents with the lowest estimated probabilities of abstaining. 9.9% turnout is estimated by those with no more than a 7% chance of abstaining (averaged across the five replicate datasets). The simulated partisan outcome for that group is represented by the proportion of votes received by each of the three major parties among that small sample (again, averaged over the five replicate datasets). Higher levels of turnout are simulated by progressively adding voters with the next lowest probabilities of abstaining, until full turnout is finally simulated by counting the actual and simulated votes of all respondents. Results are shown in Figure 3.



**Figure 3: Partisan Outcomes by Simulated Turnout (Imputed Vote Model based on Bernhagen and Marsh (2004))**

In their analysis of the 1997 British election, Bernhagen and Marsh (2004, 41) reported less than a 2.0% difference in the vote totals for each of the three major parties between the actual vote and simulated full turnout. The results portrayed in Figure 3 across a full range of possible turnout show a similar faint impact of turnout on partisan outcomes in 2001, and a much flatter relationship than we observed in the replication of McAllister and Mughan’s procedure. Remarkably, the ordering of the parties in simulated vote totals (Labour first, Conservative second, and Liberal Democrats third) does not change over the full range of simulated turnout levels, but Labour’s advantage over the second-place party is somewhat affected by the turnout rate. When half of our respondents “vote”, Labour’s advantage of the Conservatives is 16.3% (46.0% to 29.7%). When 70% of respondents “vote”, Labour’s advantage over the Official Opposition increases slightly to 17.2% (45.7% to 28.5%), but it reaches a peak of 20.6% (46% to 26.9%) at simulated full turnout. Support for the Liberal Democrats stays in a tight range (between 21.3% and 22.8%) across these levels, which coupled with the Conservatives’ declining support as turnout approaches universality, results in the gap between the second and third place parties being smallest at full turnout. While the conventional wisdom that Labour

benefits from higher levels of turnout is technically supported based on these results, the most obvious lesson from Figure 3 is the overall stability of partisan outcomes across a broad range of turnout levels.

While these results are similar enough to those obtained by Bernhagen and Marsh's simulation of 1997 to warrant some confidence in the reliability of the simulation procedure, direct validation checks are limited. Unlike the McAllister and Mughan model and its variant, the Bernhagen and Marsh model doesn't estimate actual voters' choices: it imputes non-voters' choices based on the assumption that their choices (if they had voted) would have been structured similarly to those of actual voters, at least with respect to variables included in the imputation routines. Thus, there is no need to validate actual voters' choices, but because the BES did not ask non-voters after the election who they would have voted for, a direct validation of the "predictions" made by the imputations is difficult.

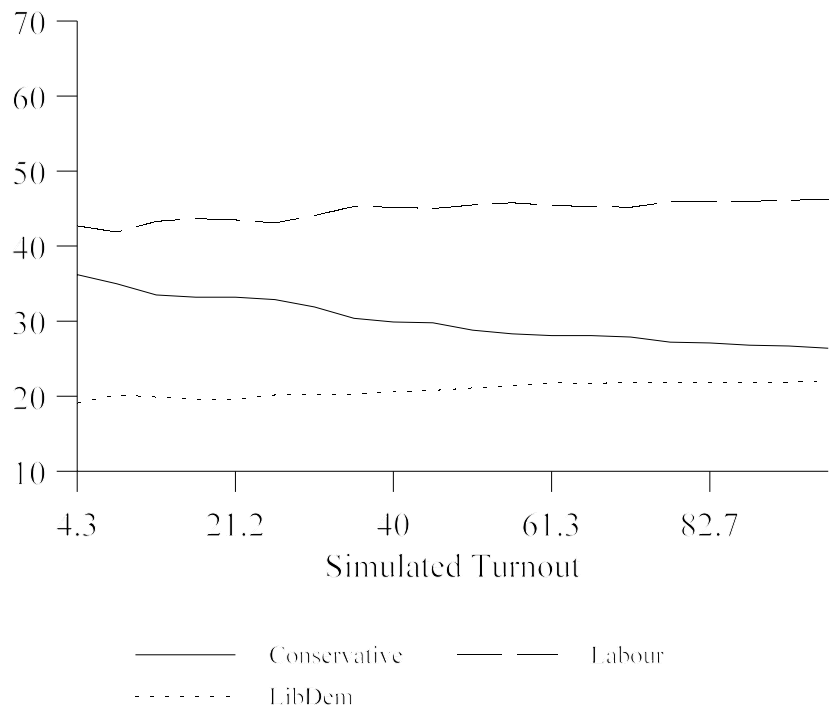
### **Removing Abstentions as Choice Alternatives**

The Bernhagen and Marsh simulations essentially assume that the vote decision is a two-step process, in which the first step is the decision *to vote or not to vote*, and the second step is the voters' choice from among the competing candidates. Alternatively, one might model abstention as an alternative to the candidate choices that parties present to voters. That conceptualization recognizes that people who are dissatisfied with their own party's performance or current policy positions may not be able to bring themselves to vote for the opposition, but instead may choose to sit out an election as a more modest protest against their own party. Statistically, that conceptualization can be represented by a multinomial logit model of voter choice, which includes abstention as a baseline category. Just as with the second McAllister and Mughan model displayed in Figure 2, the multinomial logit model provides estimates of the effects of covariates on the likelihood of choosing each alternative over the baseline alternative, but in this model, abstention is the baseline alternative. The model can then be used to generate predicted probabilities of abstaining, as well as conditional probabilities of supporting each party. Using this approach to analyze U.S. presidential elections, Martinez and Gill (2002) found that the relationship between the likelihood of voting and voter preference was strong in 1964, but had flattened out considerably by the 2000 presidential election. The Democratic candidate, Gore, would have benefitted from higher turnout in that election, but not by much.

Using this approach to estimate the effects of turnout in the 2001 British election, I again use MICE to impute missing data, creating five replicate datasets. On each dataset, I estimate a multinomial model, regressing voter choice (specifying the choice alternatives as abstention, Conservative, Labour, Liberal, and other) on benefits, costs, duty, assessment of government performance, social class, party mobilization, party identification dummies for Conservative, Labour, and Liberal, affect for the Labour, Conservative, and Liberal party leaders, pocketbook retrospective economic evaluations and prospective expectations, sociotropic retrospective economic evaluations and prospective expectations, a dummy variable for tactical voting, and dummy variables representing 1997 vote choice (Labour, Conservative, Liberal, other, and ineligible). The estimated equation yields individual probabilities for voting for each party and

for abstention. Low levels of turnout are simulated by the subset of respondents with the highest probability of voting (one minus the probability of abstention), and higher levels of turnout are simulated by successively adding respondents with the next highest probabilities of voting. For twenty simulated levels of turnout, partisan outcomes are simulated by summing the conditional probabilities for voting for each party (which is the unconditional probability divided by the probability of voting). The average results over the five simulations are presented in Figure 4.

The results of this model broadly resemble the results in the simulation of the Bernhagen and Marsh model, though the estimated relationships between turnout and choice appear to be smoother. Generally, Labour’s performance does improve as turnout increases, but the slope is not steep. When half of our respondents “vote”, Labour garners 45.5% of the vote. Labour’s support is highest (46.3%) with universal turnout, so the overall relationship between the probability of voting and the probability of voting for Labour is faint. There is a similar story for the Liberals, but the relationship between probability of voting and support for the Conservatives is more dramatic. Generally, support for the Conservatives is highest at low levels of turnout, and declines steadily as turnout increases. As with the Bernhagen and Marsh model, the gap between Labour and the Official Opposition is greatest at high levels of turnout, and that has more to do with the decline in support for the Conservatives than in Labour’s amassing support from those who are least likely to vote. Again, the conventional wisdom is supported, but the biggest lesson appears to be the overall stability of partisan outcomes across a wide range of turnout.



**Figure 4:** Partisan Outcomes by Simulated Turnout (Multinomial logit model based on Martinez-Gill (2004))

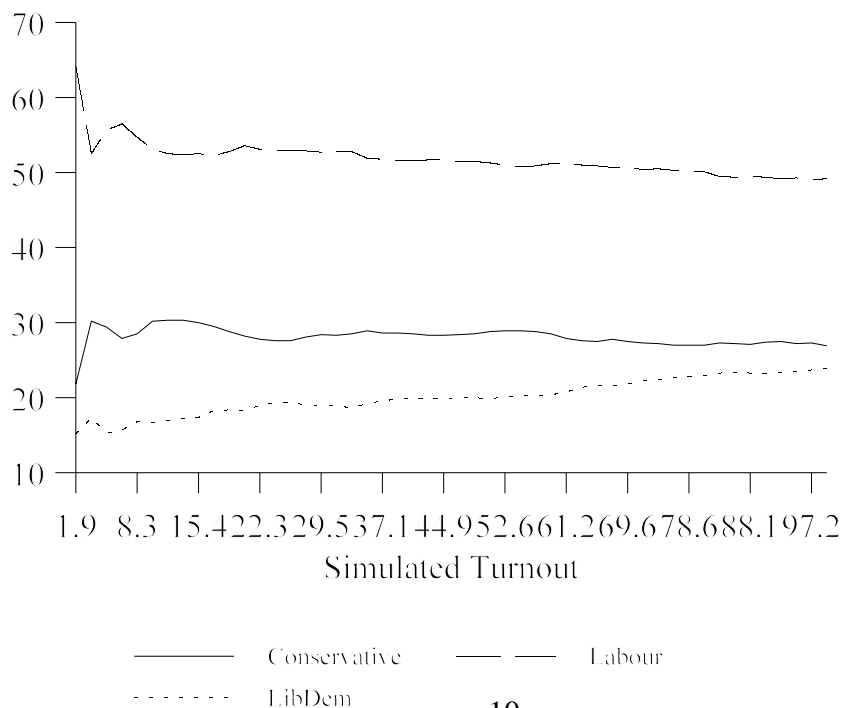
## The Modified Rule

An even simpler approach to simulating choices among non-voters is to assume that, if they would have voted, each would have selected the candidate and/or party which s/he preferred. This, of course, would be a direct implementation of Kelley and Mirer's (1974) elegant "rule" for voters in U.S. presidential elections. In the British context, such a rule should reflect the voters' weighing both leaders and parties. Thus, I developed a "rule" that each person votes for the party ranked highest on the eleven-point thermometer scale (aq10)

if two or more parties are tied, the leader candidate ranked highest on the eleven-point thermometer scale (aq17),

if two or more leaders are also tied, the hypothetical vote is split among the parties who are tied.

As with the other simulations, I imputed five replicate datasets, and for each dataset, I estimated a model predicting vote participation and saved the predicted probabilities (again, similar to the McAllister and Mughan first stage). Simulated partisan outcomes based on the modified rule are arrayed against turnout levels based on those predicted probabilities in Figure 5. Again, the basic story here is that expected outcomes are fairly stable over a broad range of turnout. Labour's support drops about two points as participation increases from 61% to full participation (while it had increased by about the same margin under the previous two simulations). Tory support also declines with higher levels of turnout, so Labour's margin of victory is hardly affected. Once again, Liberal Democrats seem to have been the real losers under the low turnout scenario that came to pass in 2001.



**Figure 5:** Partisan Outcomes by Simulated Turnout (based on Modified 'Rule')

## Discussion

Taken together, the overall thrust of these findings is that the partisan outcome in the 2001 British election was not drastically affected by the historically low level of turnout. Three simulations based on different estimation techniques suggested that the order of finish (Labour, Conservative, Liberal Democrat) would not have changed over almost any conceivable level of turnout, though there is a suggestion in all the models that higher turnout would have increased Labour's margin of victory (mostly due to positive effect of higher turnout on the Liberal vote at the expense of the Tories). Although British election officials, pundits, and pols may bemoan turnout decline, it appears not to have mattered in a partisan sense.

The "conventional wisdom" that higher levels of turnout advantage the parties of the left (and lower turnout advantages the parties of the right) is not supported in these analyses, but the real question is "why?" Part of the answer likely lies in the transformation of politics in Britain, which are defined by class much less than was previously the case. Tony Blair is not Neil Kinnock, and "New Labour's" shift away from its traditional ideological moorings, as well as the unpopularity of the Conservative candidate, took some of the class-based tinge out of British politics. When Labour finally captured the ideological center, its share of the working class vote *and* its support among the middle class increased, resulting in an overall decline in the index of class voting (Clarke *et al.* 2004, 40-50; Dalton 2002, 147-154).

Not only have the parties changed, but social roots of class politics have also changed. Many young professionals with highly technical skills but who are not closely tied to management or capital interests (the "salariat") are less attached to class identities and their traditional partisan affiliations than are people in older industries. (Dalton 2002, 148) This "new middle class" doesn't neatly fit in the class-partisan paradigm, is more receptive to new parties' appeals, and perhaps more likely to be cross-pressured in evaluating the major parties.

The other part of the story is related, and suggests that the conventional wisdom is incomplete at best and potentially misleading. The conventional wisdom that higher turnout helps the lower class depends in part on a simple SES model, noting that the less educated and less affluent are less likely to vote than more educated and more affluent people are. That is generally the case (see, for one among many sources, Blais 2000, 51-54), but non-voters include mixes of different types of people (Ragsdale and Rusk 1993; Teixeira 1992). Cross-cutting social cleavages leads to people with cross-cutting political interests, who are also less likely to vote. The essence of DeNardo's (1980) critique of the conventional wisdom (as applied in the U.S. setting) was that while a majority of non-voters' *class* orientations may predispose them to vote left (Democratic), cross-pressuring social orientations and their relatively low psychological engagement in politics also makes them more likely to defect from that predisposition. The findings presented in this paper and similar results in the United States (Martinez and Gill 2002) and in Canada (Martinez and Gill 2003) do not generally support DeNardo's contention that "the joke is on the left," but they do suggest that, among those who are least likely to vote, the higher propensity to defect offsets much of the potential gain that higher turnout might bring to the left.

Finally, these analyses show that the two-step approach introduced by McAllister and Mughan (1986) yields quite different results than the imputation approach suggested by Bernhagen and Marsh (2004) and the multinomial logit approach suggested by Martinez and Gill (2002). The weakness of McAllister and Mughan model in predicting vote choice is not surprising, since it is a second-stage equation, but it is disconcerting when that model's results diverge from other models.

## Appendix A

### Variables used in the construction of voter turnout model

vote in 1997 (aq28a)  
margin of victory in the 2001 constituency (maj01)  
interest (aq1),  
social trust (aq30),  
efficacy (aq36)  
benefits (mean squared differential affect for the three major parties, from aq10a, aq10b, and aq10c)  
costs (bq17e and bq66b)  
duty (bq66a, bq66d, bq66e, bq66f, bq66g)  
social norms (bq66c and bq17g)  
policy dissatisfaction (bq6g, bq6d, bq6b, bq6j)  
political knowledge (bq69a, bq69b, bq69c, bq69d, bq69e, bq69f)  
economic expectations (aq20)  
class (aclass)  
party mobilization (bq60, bq61, bq62)  
attention to television coverage of the campaign (bq64)  
relative deprivation (aq14a, aq14b)  
age (ageall)  
age squared  
female (genall)  
ethnicity (aq50)

## Appendix B

### Model estimations for McAllister and Mughan replication

First stage

	Coeff.	s.e.	t	95% lower	95% higher
<b>(Intercept)</b>	<b>-7.0242</b>	<b>0.8448</b>	<b>-8.31</b>	<b>-8.68</b>	<b>-5.37</b>
Interest	0.0673	0.0716	0.94	-0.07	0.21
Social trust	0.0182	0.0201	0.91	-0.02	0.06
Efficacy	-0.0202	0.0366	-0.55	-0.09	0.05
<b>Benefit</b>	<b>0.0070</b>	<b>0.0028</b>	<b>2.50</b>	<b>0.00</b>	<b>0.01</b>
Efficacy * benefit					
	0.0012	0.0011	1.09	0.00	0.00
<b>Cost</b>	<b>-0.1309</b>	<b>0.0395</b>	<b>-3.31</b>	<b>-0.21</b>	<b>-0.05</b>
<b>Duty</b>	<b>0.1692</b>	<b>0.0175</b>	<b>9.67</b>	<b>0.13</b>	<b>0.20</b>
<b>Norms</b>	<b>0.0888</b>	<b>0.0402</b>	<b>2.21</b>	<b>0.01</b>	<b>0.17</b>
Performance	0.0066	0.0219	0.30	-0.04	0.05
Knowledge	0.1669	0.0523	3.19	0.06	0.27
Econ Expect	0.0358	0.0742	0.48	-0.11	0.18
Class	0.1476	0.1265	1.17	-0.10	0.40
<b>Party Mblztn</b>	<b>0.2657</b>	<b>0.1324</b>	<b>2.01</b>	<b>0.01</b>	<b>0.53</b>
<b>TV attention</b>	<b>0.1550</b>	<b>0.0728</b>	<b>2.13</b>	<b>0.01</b>	<b>0.30</b>
Relative Dep	0.0724	0.0400	1.81	-0.01	0.15
<b>Age</b>	<b>0.0476</b>	<b>0.0210</b>	<b>2.27</b>	<b>0.01</b>	<b>0.09</b>
Age squared	-0.0003	0.0002	-1.50	0.00	0.00
<b>Female</b>	<b>0.2585</b>	<b>0.1213</b>	<b>2.13</b>	<b>0.02</b>	<b>0.50</b>
Ethnic	0.3960	0.2482	1.60	-0.09	0.88
Margin in '01	0.0015	0.0043	0.35	-0.01	0.01
<b>Voted 97 Lab</b>	<b>1.0348</b>	<b>0.1864</b>	<b>5.55</b>	<b>0.67</b>	<b>1.40</b>
<b>Voted 97 Cons</b>	<b>0.9958</b>	<b>0.2148</b>	<b>4.64</b>	<b>0.57</b>	<b>1.42</b>
<b>Voted 97 Lib</b>	<b>1.4847</b>	<b>0.2728</b>	<b>5.44</b>	<b>0.95</b>	<b>2.02</b>
<b>Voted 97 oth</b>	<b>1.0437</b>	<b>0.2827</b>	<b>3.69</b>	<b>0.49</b>	<b>1.60</b>
<b>Inel in 97</b>	<b>1.0565</b>	<b>0.3661</b>	<b>2.89</b>	<b>0.34</b>	<b>1.77</b>
Scotland	-0.0082	0.1495	-0.05	-0.30	0.28
Wales	-0.0218	0.1551	-0.14	-0.33	0.28

Second stage

	Intercept	b(pvote)	b(pvote ^ 2)
Conservative	<b>-1.3669</b> (0.3229)	0.0045 (0.0038)	-0.0001 (0.0002)
Labour	-0.3689 (0.2747)	0.0017 (0.0032)	<b>0.0003</b> (0.0001)
Liberal	<b>-1.1799</b> (0.3396)	-0.0027 (0.0040)	0.0000 (0.0002)

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## Endnotes

1. The second-stage models appear to exclude non-voters as having missing data on the dependent variable.
2. The principal investigators of the British Election Study 2001 were David Sanders, Paul Whiteley, Harold Clarke and Marianne Stewart. While they generously provided free access to the data through their website (<http://www.essex.ac.uk/bes/index2001.html>), they are not responsible for my interpretations or analyses. Variable names appear as parenthetical references in this section, question wording is available on the BES website, and the code for the analyses appears on my website. The sample includes respondents who participated in both the pre- and post-election surveys (prepost = 1), and were either validated voters or validated abstainers (voted ...5, 7, 8, or 98).
3. Five imputations of missing data (including the abstentions on the vote choice variables) were obtained using MICE (see Van Buuren and Oudshoorn 1999), including data for education (aq43a and aq43b), constituency level measures of turnout (turn01), percent of votes for Labour (lab01), dummy variables for Scotland and Wales (from region), and items used to construct the explanatory variables in a logit model of the validated vote. (See below.)
4. The “duty” scale combines the items used in Clarke *et al.*’s (2004) system benefits and individual benefits scales.
5. There are six indicators of political knowledge in the BES 2001 survey:
  1. Polling stations close at 10:00 p.m. on election day. (True)
  2. It is official Conservative Party policy that Britain should never join the single European currency. (False)
  3. The Liberal Democrats favour a system of proportional representation for Westminster elections. (True)
  4. The minimum voting age is 16. (False)
  5. Unemployment has fallen since Labour was elected in 1997. (True)
  6. Only taxpayers are allowed to vote in a general election. (False) (see Clarke *et al.* 2004, 246)

The BES interviewers asked respondents “Please tell me if you think that the following statements are true or false. If you don’t know, just say so and we will skip to the next one. Remember- true, false, or don’t know.” Mondak (2001) has offered evidence that prompting the “don’t know” responses might detract from the validity of the overall measure of political knowledge, as some respondents might opt for a “don’t know” response instead of risking a “wrong” response, even if they had some inkling about the correct answer. The BES interviewers did offer the “don’t know” option, so it is possible that some respondents may have underreported their knowledge for reasons that Mondak describes. One approach to handling these data would be to use a multiple imputation process to impute factual answers to questions for which the respondent said “don’t know”. I tested this method by constructing two knowledge measures. The first followed the usual practice of counting “don’t know” as incorrect responses to the factual questions; the second measure regarded “don’t know” as missing and imputed responses using MICE (into five replicate datasets). I then compared the criterion validity of the two

measures (using correlations with turnout and a slope dummy with ideology in a linear regression model of the feeling thermometer for Blair). The “don’t know” measure was slightly more strongly correlated with turnout than the five imputed measures were, and, in the linear model predicting evaluations of Blair, the interaction between the “don’t know” measure and ideological conservatism was reliably negative, while the corresponding interactions using the imputed measures were not. Thus, for the measure of political knowledge in this study, I regard “don’t know” responses as incorrect and set aside the multiple imputation approach.

	Imp. 1	Imp. 2	Imp. 3	Imp. 4	Imp. 5	DK
Correlation with Validated Turnout	0.36	0.37	0.39	0.38	0.37	0.42
Slope dummy with ideology in model of Blair FT	-0.07	-0.06	-0.08	-0.06	-0.07	-0.08
prob value of slope dummy coefficient	0.13	0.13	0.07	0.20	0.11	0.02

6. Imputations are based on socio-demographic variables (including gender, race, age, union membership, income, urban versus rural residence, religious denomination, and language), retrospective, sociotropic economic evaluations, and thermometer scales for each party and candidate. (Bernhagen and Marsh 2004, 17-18)