Social Class and Voting: A Multi-Level Analysis of Individual And Constituency Differences

By Robert Andersen and Anthony Heath
Abstract

This paper extends previous work on the changing importance of individual and contextual social class in Britain. We adopt a multilevel framework for analysis, linking surveys from the 1964-97 British Election Studies with Census data on the social class composition of constituencies. The goal of the paper is to test whether, net of individual social class effects, the social class composition of the constituency in which the voter lives has declined in importance over time. We found that contextual class effects were consistently significant and fairly constant throughout the period under study. We also find a gradual increase in the amount of constituency variation in vote. Although the proportion of this variation explained by contextual and individual social class has remained fairly constant for Conservative vote, it has decreased for Labour vote. Ultimately, we find evidence of a decline in class voting, but no evidence of a growth in the individualism of voters.
Introduction

There has been considerable interest in the changing pattern of class voting in western democracies (see, for example, the volume edited by Evans, 1999). A number of writers argue that there has been a long-term process of ‘class dealignment’ with social classes becoming increasingly similar in their voting patterns (Sarlvik and Crewe, 1983; Franklin, 1985a, 1985b; Clark and Lipset, 1991; Nieuwbeerta and De Graaf, 1999). Others have argued that the pattern is merely one of “trendless fluctuation” (Heath et al., 1985, 1991; Weakliem, 1989; see also Hout et al., 1993). The most recent research has shown that class voting fell to a low level in Great Britain in 1997 when the Labour Party moved towards the centre of the political spectrum (Evans et al., 1999; Heath et al., 2001). Despite debate over whether observed changes in class voting are generated by long-run social processes or by short-term political events, there is general agreement that class voting still persists to some degree in Britain.

Although interest in the effects of the social milieu on voting is not new (see, for example, Butler and Stokes, 1974; Rasmussen, 1973; Miller 1977; Bodman, 1983; Kelley and McAllister, 1985; Huckfeldt and Sprague, 1987; MacKuen and Brown, 1987; Harrop et al., 1992; Pattie and Johnston, 1999; Johnston et. al, 2000), it has rarely been integrated within the study of class voting. Most studies have taken an individualistic approach to the question of trends in class voting, looking at the changing relationship between an individual’s class membership and his or her vote. However, the sociological theories upon which the basic theory of social cleavages rests emphasize the role of social processes, in particular the development of class-based communities which generate
social pressures on individuals to support a particular party (Berelson et al., 1954; Lipset and Rokkan, 1967; Parkin 1967; Butler and Stokes 1974). These theories assume that the individual voting decision is not simply a consequence of the individual’s own class characteristics but is also dependent on the class positions of the people with whom that individual associates.

According to Hauser (1974) contextual effects are systematic differences in individual behaviour across environments that cannot be accounted for by explanations in terms of individual characteristics. In other words, “a contextual effect is any effect on individual behaviour that arises due to social interaction within an environment” (Huckfeldt and Sprague, 1995, 11). The basic premise of how this applies to class relations is well outlined by Miller (1977):

If Mr A and Mr B have similar social characteristics but Mr A lives in an area where the middle class form twice as large a fraction of the local population as in the area where Mr B lives, then Mr A is likely to have more middle-class contacts than Mr B even if he is unlikely to have twice as many. Thus Mr A’s contact group will be biased towards the middle class compared with Mr B’s contact group.

Miller argues that contextual effects are generally consensual whether or not people’s social contacts are similar to themselves in their social class positions. That is to say, people will tend to be influenced towards political agreement with their social contacts. Following this argument, we would expect to find tendencies towards class voting to be reinforced among voters who regularly associate with others from the same social class. On the other hand, we would expect to find the tendency towards class voting to be
undermined among voters who frequently interact with people from other social classes since the interaction will tend to move them towards agreement with the other social classes (cf Goldthorpe et al., 1968). Simply put, the more that people interact with members of other social classes, the weaker we expect class voting to be.

Przeworski and Soares (1971) also argue that the contextual effects are consensual on the working class. They differ from Miller, however, in arguing that, under certain circumstances, contextual effects may be reactive on other classes. For example, areas with a high proportion of working class inhabitants may influence people in other classes to become more conscious of their own class position and interests and this in turn may lead to voting against left-leaning parties. This suggests that there will be an interaction between individual class, contextual social class, and voting behaviour; that is, the influence of contextual social class will differ in the case of middle-class and of working-class individuals.

It is plausible that locally-based communities may be strongest for the working class (see, for example, Parkin, 1967). Professional and managerial careers typically involve greater geographical mobility and lead to the development of looser-knit and geographically wider-ranging social networks than do manual careers. Such looser networks may well be less effective in developing strong community sanctions in favour of a particular party, even if the network is composed of people from the same social class. If working class people are indeed involved in denser social networks, then this might tend to magnify the role of social environment on their voting behaviour, while the looser networks of the middle class might tend to permit a more individualistic pattern of voting behaviour.
A widely advanced explanation for class dealignment is the gradual erosion of these class-based communities and an increasing individualization of the voter (Inglehart, 1990). A wide variety of processes in contemporary societies have been suggested as contributors to increasing individualism: the decline of traditional heavy industries and the associated decline of one-industry communities centred on mining, shipbuilding or steel; increased rates of social and geographical mobility leading to greater turnover within in a particular class community; the decline of local associations and increased opportunities for individual choices about lifestyles and leisure activities; the growth of new forms of communication leading to weaker and more diffuse patterns of personal communication and a reduced reliance on locally-based networks of support. More generally, ‘post-modern’ views (see, for example, Pakulski and Waters, 1996; Pakulski, 1993) argue that there is a decline of class as a basis of social identity and action, with individualism taking its place.

To explore these questions we need to go beyond the conventional individualistic approach to voting behaviour and to incorporate data on patterns of association and community formation. In order to model these sociological theories of class voting we need to include measures both of individual class and of the social class of that individual’s associates, which we will term ‘contextual social class’. A simple formulation of this idea is

\[ \text{Vote} = f \left( x_i + \bar{x} \right) \]  

(1)
where $x_i$ is the individual’s social class and $\bar{x}$ is the average social class of the
individual’s associates. If the theory that a decline of social and community influence
explains class dealignment, as conventionally measured, is correct, we would expect to
find that:

a) The effect of $\bar{x}$ on vote has declined over time;
b) $\bar{x}$ explains some of the overall association between vote and $x_i$; but

$\bar{x}$ explains a smaller proportion of that association over time—i.e., vote decisions
have become increasingly determined by individual class and other individual
characteristics, and decreasingly influenced by contextual social class.

The appropriate technique to model individual and contextual variables
simultaneously is multilevel modelling (see Goldstein, 1987; 1999) and there are some
examples of this technique applied to voting behaviour (see Jones et al, 1992; Heath et al,
1996; Charnock, 1996; Fisher, 2000; Yang et al., 2000). We therefore employ multilevel
modelling in this paper, exploring the relative effects of individual and contextual social
class on vote for the Conservative Party and Labour Party since 1964. We restrict our
analysis to these parties because it is between them that class voting has generally
occurred.

In the British Election Studies (BES) we have a valuable series of surveys
containing information about social class at the individual level. Most BES datasets lack
information on the social class of the survey respondents’ associates, however. (Data of
this sort are available only in the 1992 BES, so they cannot be used to explore trends over
time). This shortcoming can be overcome by acquiring contextual data about the social
class composition of constituencies from the British census. We are limited to the use of
constituency as our level of community because this is the lowest level of detail preserved in the early BESs. Admittedly constituency is not an intimate level of community but it should still allow us to tap some of the effects of social milieu. Our assumption is that the more working class a constituency is, the more likely it is that individuals will predominantly associate with working class people. At the very least, one would expect constituencies with a high proportion of working class voters to be characterised by more general public discussion of issues important to that class than constituencies where the working class make up a smaller proportion of the electorate. It is likely that a more localized measure of community would show stronger contextual effects, and in this respect our use of constituency data will lead to a conservative test of our hypotheses.

Data and Methods

The British Election Studies

The British Election Studies have been conducted after every British General Election since 1964. They constitute survey data from representative samples of the British electorate, stratified according to constituency and polling district. Although there is some overlap of constituencies between years, fresh samples of constituencies were drawn for each election study that we use in the present paper, apart from 1979 (see Heath et al. 1996, 392). Our analysis is based on BES data from 8 elections: 1964, 1970, October 1974, 1979, 1983, 1987, 1992 and 1997. We exclude non-voters on the grounds that previous research has shown non-voting is weakly related to class (Swaddle and Heath, 1989). After including only those who voted, the sample sizes for the individual election
years range from 1499 to 2957 (see Table 6 for the sample sizes for each year). The pooled dataset for all elections combined has a sample size of 17993.

The individual-level variables used in the analysis are age, sex, social class and vote. Social class is measured using Goldthorpe’s seven-class schema (Goldthorpe, 1980; Goldthorpe and Heath, 1992). The seven classes are as follows:

I. Higher salariat (managers and administrators in large establishments, professionals);
II. Lower salariat (managers and administrators in small establishments, semi-professionals);
III. Routine non-manual labour;
IV. Petty bourgeoisie (farmers, small employers and own-account non-professionals);
V. Manual foremen and technicians;
VI. Skilled manual labour;
VII. Semi- and unskilled manual labour.

We will frequently refer to Classes V, VI and VII as the working class. Finally, vote is treated as two binary variables: Conservative vote (coded 1) versus other (coded 0) and Labour vote (coded 1) versus other (coded 0).

British Census Data

Information about the social class composition of constituencies was gathered from the British Census (see Dale and Marsh, 1993 for details of the census). The 1964 and 1970 BES data were matched with the 1966 Census (Registrar General, 1969); the 1974 and
1979 BES data were matched with the 1971 Census (Great Britain, 1972); the 1983 and 1987 BES data were matched with the 1981 Census (Great Britain, 1982); and the 1992 and 1997 BES data were matched with the 1991 Census (Great Britain, 1992).\(^1\)

From these data we include one constituency-level variable: the percentage of people living in each constituency who are classified as members of the salariat classes (i.e., Class I and Class II combined). We have explored alternatives, such as the percentage of working class people in the constituency but preliminary models showed similar results when either variable was used. Since the percentages must sum to 100 it is not sensible to include more than one of the class percentages in the same model.

There is a slight difference in how constituency social class was measured in 1966 compared to the other years. The 1966 Census used the social class of all males over the age of 15 years old. In all other years constituency social class was determined by the social class of the heads of households. We expect that these two measures would yield very similar results in 1966, however, since at that time women were seldom labelled as the head of household.

**Statistical Models**

Our data have two basic levels: level one refers to the individual observations (i.e., individual respondents to the BES); level two refers to the constituency level. We fit a series of preliminary binary logit models (for Conservative and Labour vote separately), using both conventional single level and multilevel models, comparing their fit. In the single level models the constituency social class variable is treated as an individual level explanatory variable so it can tell us little about how voting patterns differ across
constituencies. Multilevel modelling, on the other hand, allows us to explicitly model differences in voting behaviour according to constituency.\(^2\)

Referred to as an Analysis of Deviance, we can determine the improvement in fit associated with the addition of explanatory variables to the model by contrasting the deviance (-2xlog likelihood) of the two models. The difference in deviances is distributed as Chi-square with degrees of freedom equal to the number of parameters omitted from the nested model (Fox, 1997, 452). As can be seen from Table 1, the multilevel models fit the data much better than the single level models, both in the case of Conservative vote and with Labour vote. This is not surprising given the clustering of the samples of the BES (see Heath et al., 1996 for a more detailed discussion of the advantages of using multilevel modelling with clustered samples). Consequently, we use only multilevel models, in particular variance component models (also referred to as random intercept models), for the rest of our analysis.\(^3\)

The variance component model assumes that the explanatory variables have the same effect on vote in all constituencies, but allows for constituency differences in overall support for the parties. In other words, the model allows the constituency intercepts to vary but holds the slopes constant across constituencies. Our full model, applied separately to Conservative and Labour vote, takes the following form:
\[
\text{Logit} (\pi_{ij}) = \beta_{0j} + \beta_{1} \text{sex}_{ij} + \beta_{2} \text{age}_{ij} + \sum_{l=1}^{6} \gamma_{l} \text{individual class}_{ij} \\
+ \beta_{3} \% \text{salarariat}_{j} + \beta_{4} (\% \text{salariat}_{j} \times \text{nonmanual}_{ij}) \\
+ \sum_{h=1}^{7} \alpha_{h} \text{year}_{hij} + \sum_{m=1}^{6} \eta_{m} (\text{individual class}_{ij} \times \text{time}_{ij}) \\
+ \beta_{5} (\% \text{salariat}_{j} \times \text{time}_{ij}) + \beta_{6} (\% \text{salariat}_{j} \times \text{nonmanual}_{ij} \times \text{time}_{ij})
\]

\[
\beta_{0j} = \beta_{0} + u_{0j}, \quad \pi_{ij} = \text{E}(p_{ij}), \quad p_{ij} = \begin{cases} 0 \\ 1 \end{cases}
\]

\[
p_{ij} = 1 \text{ if voting for the party}; 0 \text{ if not}, \quad p_{ij} \sim \text{Binomial} \left[ \pi_{ij}, \eta_{ij} \right]
\]

Here the subscript \(i\) indicates individuals (i.e., level one observations) and \(j\) indicates constituencies (i.e., level two observations). The \(p_{ij}\) are distributed binomially with mean \(B_{ij}\), and variance \(B_{ij} (1 - B_{ij})\). The explanatory variables are as follows: sex is a dummy regressor, coded 1 for men and 0 for women; age is treated as a continuous variable; individual (or respondent’s) class is measured by a set of dummy regressors contrasting the other six social classes with unskilled manual labour; \% salariat is the percentage of people in the constituency who belong to the salariat classes; year is a set of dummy regressors contrasting each election year with 1964 (the first year in the study); and non-manual is a recode of individual class into manual (classes V, VI and VII) and non-manual occupations (classes I to IV). This is a linear trend model with time measured in years following 1960, and interactions between time and individual and constituency social class (\% salariat). The interaction between constituency social class (\% salariat) and individual social class (which for the purposes of the interaction we dichotomise into
manual and nonmanual) allows us to test whether the effects of constituency social class on voting are consensual. The intercept is $\beta_0$ and $u_{0j}$ is a random error term at the constituency level capturing the variation in intercepts.

If we substitute $\beta_0$ into Equation (2) we get the following equation:

$$
Logit(\pi_{ij}) = \beta_0 + \beta_1 sex_{ij} + \beta_2 age_{ij} + \sum_{l=1}^{6} \gamma_l \text{individual.class}_{ij} + \\
+ \beta_3 \% \text{salarial }_j + \beta_4 (\% \text{salarial }_j \times \text{nonmanual }_j) + \\
+ \sum_{k=1}^{7} \alpha_k \text{year}_{n ij} + \sum_{m=1}^{6} \eta_m (\text{individual class }_j \times \text{time }_j) + \\
+ \beta_5 (\% \text{salarial }_j \times \text{time }_j) + \beta_6 (\% \text{salarial }_j \times \text{nonmanual }_j \times \text{time }_j) + u_{0j}$$

$$
\pi_{ij} = \pi_{0j} + e_{ij}
$$

Here $\beta_0$ relates to the baseline group; $u_{0j}$ is estimated at the constituency level and all other parameters are estimated in the fixed part of the model; and $e_{ij}$ are the level one residuals.

To better understand the temporal trends, we also fit similar models for each year separately, both for Conservative vote and Labour vote. Aside from the omission of the now irrelevant time-related variables (i.e., the election year dummy regressors, and the time and social class interactions) these models are identical to Equation (3), taking the following form:

$$
Logit (\pi_{ij}) = \beta_0 + \beta_1 sex_{ij} + \beta_2 age_{ij} + \sum_{l=1}^{6} \gamma_l \text{individual.class}_{ij}
$$

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Results

Figure 1 uses the BES data to chart the relationship between individual social class and Conservative and Labour vote from 1964 to 1997. There is clear evidence of the familiar pattern of class voting in Britain where the working class favours the Labour Party and the salariat favour the Conservative Party. Evidence of a gradual decline in this pattern is less convincing although there does seem to be some convergence since 1983 between the lines representing the classes, and class voting was clearly least important in 1997. But even in 1997 it is evident that class was still important to voting behaviour.

\[ + \beta_3 \%salariat_j + \beta_4 (\%salariat_j \times nonmanual_y) + u_{0j} \]

How far, then, can declining contextual effects explain this pattern of class voting? Table 2 reports the fit and the constituency variation of a series of nested models, starting with a baseline model (Model A) that contains no explanatory variables. We then see from a comparison of Models B and C that age and gender account for significant individual variation in vote but little of the constituency level variation, which remains virtually unchanged in Model C. In contrast, Model D shows that individual social class accounts for a substantial portion of the constituency variation in vote for both parties, while Model E shows that even after controlling for individual social class, the
introduction of constituency social class leads to a significant improvement in fit and accounts for a further substantial portion of the constituency variation in vote. Interestingly, constituency class appears to explain more of the variation in Labour voting than in Conservative voting. In the case of the Conservative vote the level two variation is reduced by a quarter with the addition of the contextual variable (falling from 0.406 in Model D to 0.297 in Model E); in the case of the Labour vote it is reduced by more than one third (falling from 0.655 to 0.409). The full model, Model F, which includes the interactions with individual and contextual social class, makes a further significant improvement to the fit but does little to account for the constituency variation.

[Table 2 about here]

These results thus support our initial formulation (in equation 1) of the importance of contextual social class in explaining individual voting behaviour. But is there a decline in the importance of contextual social class which might thus explain the overall decline in class voting? To answer this question we need to turn to the parameter estimates. Table 3 displays the parameter estimates for the full model as described in equation 3, while Wald tests of the significance of each of the terms in the model are shown in the supplementary table.

[Table 3 about here]
To begin with, the parameters for the individual-level variables show the expected patterns. The estimates associated with election year show the expected fall in the Conservative share of the vote after the high-point reached in 1979, while the Labour share reaches a high point in 1997. We also see that increasing age is associated with an increased propensity to vote Conservative, while men are more likely than women to vote Labour. Also, as expected, we see the familiar pattern of individual class voting, with the petty bourgeoisie and the salariat being more likely to vote Conservative than other social classes and the working classes being more likely to vote Labour. The Labour and Conservative patterns are almost mirror images of each other, although there are some discrepancies that can almost certainly be accounted for by the distinctive patterns of Liberal Democrat support. For example, the Liberal Democrats tend to be stronger in the salariat than in other social classes, and hence the Labour parameter estimates for the salariat tend to be larger than the Conservative ones.

The parameter estimates for the interactions between individual social class and time are significant and negative in the case of the Conservative model and significant but positive in the case of the Labour model. In other words, both sets of individual class parameters tend to move towards zero over time. This is of course consistent with the standard hypothesis of class dealignment.

Turning next to the contextual-level variables, we see that the effects of contextual social class tend to be consensual. Thus a higher percentage of the constituency in the salariat is associated with a higher individual propensity to vote Conservative. Conversely, we can infer that a higher percentage in the working class will tend to be associated with a higher propensity to vote Labour (and this is confirmed if we
include % working class in the model instead of % salariat). This is consistent with the hypothesis that, other things being equal, the voter will tend to vote in accord with the social class of those around him or her.

In contrast to the interactions between time and individual class, however, we find that there has been no weakening of the impact of contextual social class over time. Neither in the Labour nor the Conservative case is the interaction between time and contextual social class significant, and in the Conservative case the sign is in the opposite direction to that expected by the class dealignment thesis. Contrary to the standard theory, then, we find no support for the idea that declining contextual influences can account for a large part of the overall class dealignment.

We do however find a significant interaction between respondent’s social class and constituency social class in the case of Conservative vote (but not for Labour vote). The implication of the Conservative parameter estimate is that the marginal effects of social context are smaller for nonmanual individuals than they are for manual individuals. However, the effects of contextual social class are consensual for both manual and nonmanual workers alike: the interaction term reduces but does not eliminate or reverse the main effect of the percentage salariat in the constituency. In other words, for both manual and nonmanual individuals alike, living in a constituency with a higher percentage in the salariat is associated with a higher propensity to vote Conservative although the size of the marginal effects differ. The final three-way interaction term between individual class, contextual class and time implies a weakening over time in the difference between manual and nonmanual workers in their responsiveness to contextual social class.
To better understand the trends uncovered in the pooled dataset, we turn to an election-by-election analysis fitting separate models to each of the eight surveys. Figure 2 plots the parameter estimates representing the effects of individual social class on voting. (These estimates are derived from equation 4, that is from models controlling for age, sex, constituency social class and the interaction between individual and constituency class but not including time or interactions with time). Although individual social class has consistently had a significant impact on vote, its declining importance is evident in the convergence of the lines representing the dummy variables for the various social classes.

Figure 3 plots the parameter estimates for contextual social class over time. As was found in the analysis of the pooled data, it is evident that there has been little change in the contextual effects over time. Although there was a slight decrease in the effect on Labour vote in 1997, there is no evidence of a long-term trend over time.

[Figures 2 and 3 about here]

Perhaps the most interesting finding emerging from the election by election analysis is the gradual increase in level two variance over time. This is shown in figure 4. The pattern suggests that there are increasing differences in party support across constituencies that remain unexplained by the variables included in our model. This pattern is evident in the case of both parties, but more so for Labour where the level two variance was only .115 in 1964 but has been consistently higher than .500 since 1983. Figure 4 is informative in that it displays this pattern in graphical form simultaneously.
with the level two variance for the null model that includes only a constant. We can clearly see here that the level two variance is consistently greater for Labour vote than for Conservative vote. Moreover, with the exception of 1997, the gap between the null model and the full model is consistently higher for the Labour vote than it is for Conservative vote.

Figure 5, which plots the proportion of level two variation that is explained by the full model, allows us to further examine the latter point. In the case of Labour voting, there is a more or less steady decline in the amount of constituency variation that is explained by our model; in other words there are increasing constituency differences that are not accounted for by individual or contextual social class. On the other hand, in the case of Conservative vote, the proportion of the constituency variation that is explained has remained fairly stable except for a temporary decline in 1970.

[Figures 4 and 5 about here]

Discussion

Theories of individualism imply that there has been a decline in the influence of the contextual situation on individual action. Moreover, implicit in many accounts of class dealignment in voting behaviour is the idea that the influence of social context has weakened over time and that vote decisions have become increasingly determined by individual characteristics. Our results show very little indication of this with respect to class voting. Our analysis provides significant evidence for the continuing role of
contextual social class on voting in Britain. Paradoxically, while the relationship between individuals’ own class positions and their voting decisions has declined over time, the relationship between their voting decisions and the class composition of the constituency in which they live has remained more or less stable.

Like others who have examined this problem, we found the effects of contextual social class to be generally consensual regardless of one’s individual social class (see also Miller, 1978; Harrop et al., 1992; Fisher, 2000). These findings are consistent with the argument that people are influenced by the majority. However, the responsiveness of nonmanual voters to their social context was less than that of manual workers during the early years of the study. In these years, the percentage of the constituency who were in the salariat had a stronger association with the propensity of manual workers to vote Conservative than it did on the propensity of nonmanual workers. However, this difference between manual and nonmanual voters disappears after the late 1970s.

We can interpret this interaction between individual social class and constituency social class in the context of party competition. Until the late-1970’s, policies of the Liberal Democrats (then the Liberal Party) were more closely associated with those of the Conservatives (see Budge, 1999) and Liberal candidates were also more likely to stand in middle-class constituencies than in working-class ones. This meant that nonmanual workers had two parties that represented their concerns. Moreover, the less constituencies were dominated by the working classes, the less was the threat posed by Labour, and hence salariat voters were freer to chose between the Liberals and Conservatives. This same political context argument can also explain why the interaction between individual social class and constituency class composition virtually disappears after 1979.
this time period, Liberal Democrat policies became less similar to the policies of the Conservatives and more similar to Labour policies; they also contested more working-class constituencies, thus reducing the asymmetry. The political contexts were thus more symmetrical from the mid-1970s onwards.

This also suggests that political interpretations of the contextual effects should be considered. We cannot be sure from our data that the association between contextual social class and individual voting decisions is actually generated by processes of social interaction. The evidence we have reported is consistent with this interpretation, but other interpretations are possible too. The significant improvement in fit of the multilevel models over the conventional single-level logistic regression clearly demonstrates that there is something to be explained at the constituency level but we cannot be sure from existing data which is the correct interpretation.

Firstly, the observed constituency variation could reflect either individual or contextual variables, or both. Including additional individual characteristics in the models might serve to account for some of this constituency variation. As we noted earlier, individual characteristics such as age and sex account for a negligible part of this variation (presumably because they are randomly distributed across constituencies) while individual social class accounts for a substantial part of the variation. What are needed are further individual characteristics similar to social class that are differentially distributed across constituencies and also have major impacts on vote, net of the variables already in the model. These are rather restrictive requirements. Ethnicity is perhaps the best candidate to meet these requirements, but given the small proportion of ethnic minorities in the electorate, ethnicity is unlikely to account for a large portion of the
constituency variation. In any event, there were too few non-British respondents to be able to include ethnicity variables in our models.

Economic and political factors could also be relevant. It is possible, for example, that different levels of constituency prosperity could be reflected in individual economic fortunes, and that both these could play a role in one’s propensity to vote for specific parties (see, for example, Fisher, 2000). The differences could also reflect tactical voting which is known to reflect constituency characteristics. It is also possible that constituency differences may reflect the popularity of individual candidates and the personal votes that they enjoy, things that we cannot test with the present data. Moreover, since parties do not campaign equally in all constituencies, it is possible that some of the variation in party support may be accounted for by the amount of exposure voters have to candidates in their constituency (Johnston, 1987).

Nonetheless, while these additional individual, economic or political factors may well be at work, it remains true that a substantial part of the variation in constituency voting is explained by the social class composition of the constituency. Processes of social interaction do seem to be the most plausible mechanisms generating these findings.

Future research needs to control for more individual, economic and political factors. Nonetheless, regardless of our shortcomings, there have been no better attempts to test the theory of growing individualism and voting. Although our results do not disprove the theory—it is not possible to do that directly without longitudinal data regarding the social associates of individuals—they provide evidence against it. If individualism were on the rise, we would expect the impact of contextual social class to have declined. Our results, however, show that the effects of contextual social class have
remained fairly stable over time. It is therefore up to the proponents of the individualism thesis to provide evidence in support of their claims.

Acknowledgements

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Table 1. Comparison of fit for single and multilevel models of Conservative and Labour vote, pooled data 1964-97

<table>
<thead>
<tr>
<th>Model</th>
<th>Conservative Party</th>
<th>Labour Party</th>
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<td>Models Contrasted</td>
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<tr>
<td>1</td>
<td>Constant only</td>
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<td>2</td>
<td>Constant, Year</td>
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<td>Constant, year, age, sex, respondent’s class, % salariat</td>
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<td><strong>Multilevel (Variance Component) Logit Model</strong></td>
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<td>4</td>
<td>Constant, year, age, sex, respondent’s class, % salariat, intercept variance ($F^2u_0$)</td>
<td>4 – 3</td>
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Table 2. Comparison of fit and level two intercept variance ($F^2u_0$) for various multilevel models of Conservative vote and Labour vote. Standard errors in parentheses.

<table>
<thead>
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<th>Model</th>
<th>Models Contrasted</th>
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<th>Labour Party</th>
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<td>.962 (.052)</td>
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<tr>
<td>C Constant, year, age, sex</td>
<td>C – B (2 df)</td>
<td>235.6 (.030)</td>
<td>43.6 (.048)</td>
</tr>
<tr>
<td>D Constant, year, age, sex, respondent’s class</td>
<td>D – C (6 df)</td>
<td>985.2 (.026)</td>
<td>1691.2 (.041)</td>
</tr>
<tr>
<td>E Constant, year, age, sex, respondent’s class, % salariat</td>
<td>E – D (1 df)</td>
<td>320.4 (.026)</td>
<td>996.2 (.031)</td>
</tr>
<tr>
<td>F Constant, year, age, sex, respondent’s class, % salariat, respondent’s class<em>time interactions, % salariat</em>time interaction, respondent’s class* % salariat interaction, respondent’s class* % salariat*time interaction</td>
<td>F – E (10 df)</td>
<td>71.2 (.026)</td>
<td>46.5 (.031)</td>
</tr>
</tbody>
</table>
Table 3. Parameter estimates (standard errors in parentheses) for the full multilevel models of Conservative vote and Labour vote, 1964-97 (Model F from Table 2).

<table>
<thead>
<tr>
<th>Explanatory variables</th>
<th>Conservative vote</th>
<th>Labour vote</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>S.E.</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.206</td>
<td>.194</td>
</tr>
<tr>
<td>Election year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1964</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1970</td>
<td>.118</td>
<td>.127</td>
</tr>
<tr>
<td>1974</td>
<td>-.179</td>
<td>.144</td>
</tr>
<tr>
<td>1979</td>
<td>.352</td>
<td>.164</td>
</tr>
<tr>
<td>1983</td>
<td>-.096</td>
<td>.178</td>
</tr>
<tr>
<td>1987</td>
<td>-.701</td>
<td>.216</td>
</tr>
<tr>
<td>1992</td>
<td>-.279</td>
<td>.246</td>
</tr>
<tr>
<td>1997</td>
<td>-1.628</td>
<td>.316</td>
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<tr>
<td>Age</td>
<td>.013</td>
<td>.001</td>
</tr>
<tr>
<td>Men</td>
<td>-.133</td>
<td>.037</td>
</tr>
<tr>
<td>Respondent's social class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class I</td>
<td>2.004</td>
<td>.281</td>
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<tr>
<td>Class II</td>
<td>1.624</td>
<td>.264</td>
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<td>Class III</td>
<td>1.461</td>
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<tr>
<td>Class IV</td>
<td>2.400</td>
<td>.288</td>
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<td>Class V</td>
<td>.269</td>
<td>.169</td>
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<td>Class VI</td>
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<td>.138</td>
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<tr>
<td>Class VII</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Class I*time</td>
<td>-.030</td>
<td>.011</td>
</tr>
<tr>
<td>Class II*time</td>
<td>-.028</td>
<td>.011</td>
</tr>
<tr>
<td>Class III*time</td>
<td>-.021</td>
<td>.010</td>
</tr>
<tr>
<td>Class IV*time</td>
<td>-.033</td>
<td>.012</td>
</tr>
<tr>
<td>Class V*time</td>
<td>-.003</td>
<td>.007</td>
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<tr>
<td>Class VI*time</td>
<td>-.010</td>
<td>.006</td>
</tr>
<tr>
<td>Class VII*time</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Constituency social class</td>
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<td></td>
</tr>
<tr>
<td>% Salariat</td>
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<td>.012</td>
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<tr>
<td>% Salariat*time</td>
<td>.00011</td>
<td>.00046</td>
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<tr>
<td>Respondent's class*constituency class</td>
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<td></td>
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<td>.042</td>
<td>.015</td>
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<tr>
<td>Respondent's class<em>constituency class</em>time</td>
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<td></td>
</tr>
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<td>.00049</td>
<td>-.0006</td>
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<td>Level 2 Variance (random intercept) $\text{F}^2_{u_0}$</td>
<td></td>
<td></td>
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<tr>
<td>.295</td>
<td>.026</td>
<td>.407</td>
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</table>

Deviance (-2xlog likelihood) 21824.0  19751.0
### Supplementary Table. Test for terms in the Full Multilevel (variance component) Models of Conservative vote and Labour vote, pooled data 1964-97

<table>
<thead>
<tr>
<th>Term</th>
<th>Conservative vote Wald $\chi^2$</th>
<th>df</th>
<th>p-value</th>
<th>Labour vote Wald $\chi^2$</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Election year</td>
<td>45.74</td>
<td>7</td>
<td>&lt;.001</td>
<td>66.69</td>
<td>7</td>
<td>&lt;.001</td>
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<tr>
<td>Age</td>
<td>175.34</td>
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<td>&lt;.001</td>
<td>54.09</td>
<td>1</td>
<td>&lt;.001</td>
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<tr>
<td>Sex</td>
<td>13.02</td>
<td>1</td>
<td>&lt;.001</td>
<td>8.08</td>
<td>1</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Respondent’s class</td>
<td>199.51</td>
<td>6</td>
<td>&lt;.001</td>
<td>145.95</td>
<td>6</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>% salariat</td>
<td>26.65</td>
<td>1</td>
<td>&lt;.001</td>
<td>63.79</td>
<td>1</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Respondent’s class*% salariat</td>
<td>7.02</td>
<td>1</td>
<td>.008</td>
<td>.106</td>
<td>1</td>
<td>.745</td>
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<tr>
<td>Respondent’s class*time</td>
<td>24.15</td>
<td>6</td>
<td>&lt;.001</td>
<td>13.03</td>
<td>6</td>
<td>.043</td>
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<tr>
<td>% salariat*time</td>
<td>.057</td>
<td>1</td>
<td>.811</td>
<td>1.77</td>
<td>1</td>
<td>.183</td>
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<td>Respondent’s class*% salariat*time</td>
<td>5.14</td>
<td>1</td>
<td>.023</td>
<td>.015</td>
<td>1</td>
<td>.902</td>
</tr>
</tbody>
</table>
Figure 1

Conservative and Labour vote according to Social Class, during British General Elections from 1964-97. Data are from the British Election Studies, using the same respondents (i.e., excluding non-voters) used in the models of class voting discussed in the rest of the paper.
Relative effects of social class on voting in Britain, 1964-97. The data represent coefficients of social class dummy variables used in separate multilevel logit models fit for each election year (reference category is unskilled labour).
Figure 3
Net effects of the percentage of salariat living in constituency on vote in Britain, 1964-97. The data represent the coefficients of the percentage of salariat living in the constituency from multilevel models fit to each election year. The circles represent the point estimates; the dotted vertical lines represent the 95% confidence interval for the point estimate.
Figure 4
Level two variance in intercepts ($F_{\alpha}$) for Full Models and Constant only Models fit to each election year, Labour and Conservative vote, 1964-97. The solid lines represent the trends from models of Labour vote; Broken lines are trends from the models of Conservative vote; Hollow circles represent the variances for Constant only Models; Solid circles represent the variances from the Full Model.
Figure 5

Proportion of level two variance in intercepts ($F^2_{u0}$) explained by the full model fit for each election year separately, Conservative and Labour vote, 1964-97.
Except for in 1966, the data we employ here are from complete censuses of the whole population of Great Britain. The 1966 Census was a 10 percent sample of the population.

We used the software program MLWin, employing penalized quasi-likelihood estimation, to estimate all models (see Goldstein, 1995).

Multilevel modelling allows for the effects of the explanatory variables to vary across constituencies (i.e., random slopes models). While it would be interesting to know if class effects differ across constituencies, these models are rather complex and in some cases we do not have large numbers of cases in the constituencies suggesting that estimates would not be reliable. Nonetheless, we fit these models to ensure that the parameter estimates were unaffected—although they showed a better fit to the data than the simple variance component models, there were no major changes to the parameter estimates. As a result, we report only the more parsimonious variance component models.

Proportion of level two variance ($F^2_{u0}$) explained by the full model $= \frac{\sigma^2_{u0,Full}}{\sigma^2_{u0,Const}}$, where $F^2_{u0,Full}$ is the level two variance from the full model (Equation 3) and $F^2_{u0,Const}$ is the level two variance from the constant only model.

Despite the relatively few individual level variables employed in our models, our findings regarding the impact of contextual social class on voting are similar to Fisher (2000) which, despite controlling for a wider range of individual-level and ward-level characteristics, shows a statistically significant relationship between contextual social class and Conservative vote during the 1983 British General Election.