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Class Dealignment and the Neighbourhood Effect: Miller Revisited

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The concept of a neighbourhood effect within British voting patterns has largely been discarded, because no data have been available for testing it at the appropriate spatial scales. To undertake such tests, bespoke neighbourhoods have been created around the home of each respondent to the 1997 British Election Study survey in England and Wales, and small-area census data have been assembled for these to depict the socio-economic characteristics of voters' local contexts. Analyses of voting in these small areas, divided into five equal-sized status areas, provides very strong evidence that members of each social class were much more likely to vote Labour than Conservative in the low-status than in the high-status areas. This is entirely consistent with the concept of the neighbourhood effect, but alternative explanations are feasible. The data provide very strong evidence of micro-geographical variations in voting patterns, for which further research is necessary to identify the processes involved.

The class cleavage within the British electorate has been waning for over four decades, since Crewe and his colleagues first charted its onset:[1] its death notice was posted by Sanders in 1997.[2] In place of the once enduring relationship between class and voting, studies of recent British general elections, and also of inter-election voting intentions, have focused on economic voting models – with considerable success. In this article, we return to the class cleavage, but do so by looking at it in a spatially disaggregated way, taking up ideas suggested by Miller in the 1970s.[3] We show that micro-scale patterns of voting at the 1997 general election in England and Wales are entirely consistent with the now

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[1] I. Crewe, B. Särlvik and J. Alt, 'Partisan Dealignment in Britain, 1964–74', *British Journal of Political Science*, 7 (1977), 129–90; B. Särlvik and I. Crewe, *Decade of Dealignment* (Cambridge: Cambridge University Press, 1983). See also M. N. Franklin, *The Decline of Class Voting in Britain* (Oxford: Clarendon Press, 1985).

[2] D. Sanders, 'The New Electoral Battleground', in A. King, ed., *New Labour Triumphs: Britain at the Polls 1997* (Chatham, NJ: Chatham House, 1997), pp. 209–48.

[3] W. L. Miller, 'Social Class and Party Choice in England: A New Analysis', *British Journal of Political Science*, 8 (1978), 257–84.

generally disregarded neighbourhood effect hypothesis, although our data cannot reveal the processes responsible for the observed patterns.

THE NEIGHBOURHOOD EFFECT REVISITED

The concept of the neighbourhood effect has been employed in electoral studies for some time (notably, though not only, by electoral geographers).[4] The basic argument is constructed on the (rarely tested) assumption that social interaction within locales, particularly though not only residential communities, affects people's political attitudes and voting behaviour. People are influenced by those they talk to – so that if the majority of a person's social contacts favour one political position and/or party that person is more likely than otherwise to favour it also, even if her/his personal characteristics suggest a predisposition to favour another position/party[5]– according to Miller, 'people who talk together vote together'.[6] There is an assumed 'conversion by conversation' process, by which, because of ecological processes, majority positions in communities become more dominant than predicted by models based on the individual voters' characteristics alone. Recent studies of the links between conversations and voting are consistent with this assumption, except that they are unable to test whether the conversations involve near-neighbours.[7] There is strong circumstantial evidence of the existence of a neighbourhood effect – but no more – and authors who have promoted the hypothesis recognize that alternative explanations can be provided for the effect without calling on local social interaction as a (the major?) causal mechanism involved.

Most studies of the neighbourhood effect use ecological data, and so provide only circumstantial evidence of its existence. One of the most sophisticated of these studies – which has had much less impact than it should – was reported more than two decades ago.[8] Miller set out to test the assertion that 'contact is a condition for interaction', from which, if neighbourhood effects operate, it might then be assumed that 'contact is a condition for

[4] For a review of the seminal literature, see P. J. Taylor and P. J. Johnston, *Geography of Elections* (London: Penguin, 1979). See also R. J. Johnston, 'Electoral Geography', in N. J. Smelser and P. B. Baltes, eds, *International Encyclopaedia of the Social and Behavioral Sciences* (London: Elsevier, 2001, forthcoming). The most recent substantial review of the subject – though relating almost entirely to North American studies – is J. W. Books and C. L. Prysby, *Political Behavior and the Local Context* (New York: Praeger, 1991).

[5] See K. R. Cox, 'The Voting Decision in a Spatial Context', in C. Board *et al*., eds, *Progress in Geography, Volume 1* (London: Edward Arnold, 1969); J. Agnew, 'Mapping Politics: How Context Counts in Electoral Geography', *Political Geography*, 15 (1996), 129–46; and M. Eagles, ed., *Spatial and Contextual Models in Political Research* (London: Taylor and Francis, 1995).

[6] W. L. Miller, *Electoral Dynamics* (London: Macmillan, 1977), p. 65.

[7] J. Curtice, 'Is Talking Across the Garden Fence of Political Import?' in M. Eagles, ed., *Spatial and Contextual Models in Political Research* (London: Taylor and Francis, 1995), pp. 195–211; C. J. Pattie and R. J. Johnston, 'Context, Conversation and Conviction: Social Networks and Voting at the 1997 British General Election', *Political Studies*, 47 (1999), 877–89.

[8] Miller, 'Social Class and Party Choice in England'.

consensus'.[9] He identified four possible models of how people react to their neighbours and other contacts who differ from themselves in their political attitudes and behaviour, which he illustrates hypothetically by the percentage voting Conservative among middle-class and working-class electors in neighbourhoods that vary in their degree of 'middle-classness':

(1) The *no environmental effect model*, which postulates no differences in voting behaviour by neighbourhood type – contacts with neighbours have no influence on how people vote.
(2) The *reactive environmental effect model*, which suggests that 'people may be irritated, alarmed and antagonized by contact with those unlike themselves' and become even stronger supporters of their 'class party' than might otherwise be the case – middle-class people are more pro-Conservative in working-class than middle-class areas, for example, and working-class people are less pro-Conservative in strongly middle-class areas.
(3) The *consensual environmental effect model*, which argues that 'people will be influenced towards agreement with their contacts', so that, for example, 'both middle- and working-class individuals are more Conservative in middle-class areas because both sets of individuals have fewer working-class contacts and more middle-class contacts than if they lived elsewhere' – which is what most writers associate with the neighbourhood effect.
(4) The *'Przeworski environmental effect' model*, which suggests that the two classes operate in different ways – the middle class operate according to the reactive model in working-class areas, whereas the working class operate according to the consensual model in middle-class areas.[10]

These four are shown in Figure 1.

Miller tested these models by comparing the slopes of the regression lines for the relationship between class and voting at two scales – the individual (using survey data) and the constituency (using aggregate data). If there were no environmental effect operating, then the slope coefficient should be the same in each model. But it was not; models designed to identify the relative importance of the individual and constituency components found not only that the consensual model described voting behaviour in England at the five general elections between 1964 and October 1974 inclusive but also that (a) the constituency component was greater than the individual component in accounting for the level of class polarization and (b) the relative importance of the constituency component had increased over time. Further regression analyses suggested that the key ecological variable for the constituency analyses was not a middle-class/working-class dichotomy but rather the percentage of a constituency's workforce who were 'employers and managers'. These form the

[9] As was claimed in B. Berelson, P. F. Lazarsfeld and W. N. McPhee, *Voting* (Chicago: University of Chicago Press, 1954).

[10] The source of this model is A. Przeworski and G. A. D. Soares, 'Theories in Search of a Curve: A Contextual Interpretation of the Left Vote', *American Political Science Review*, 65 (1971), 51–68.

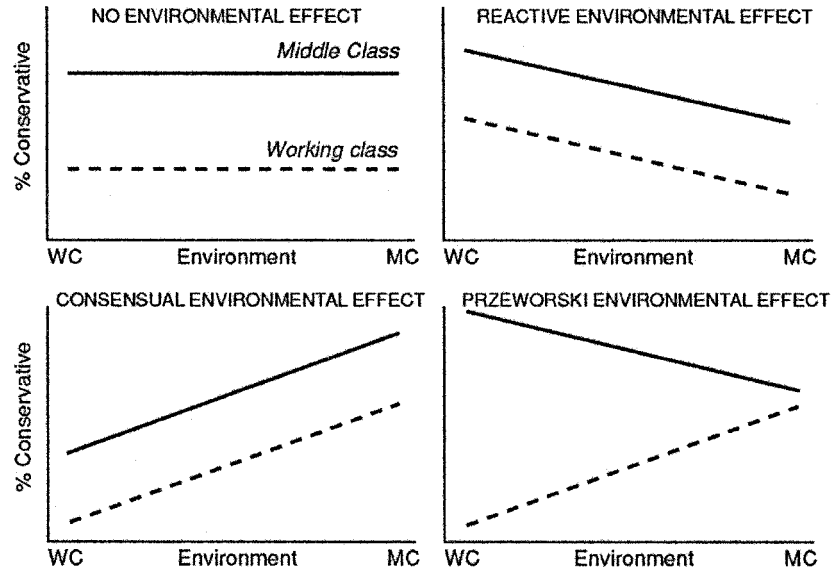

Fig. 1. Miller's four models of environmental effects
Source: W. L. Miller, *Electoral Dynamics* (London: Macmillan, 1977), p. 266.

'core class': the more numerous they are in a constituency the greater the support for the Conservative party among all social classes.

Miller concluded that:

> the class polarization shown by cross-tabulating survey respondents on class by partisanship is only very loosely related to class polarization as it affects how parties do in the constituencies. The major determinant of constituency class polarization is what we have termed the environmental effect of the local balance of the core classes.

This was especially so with the working class: the more members of the 'core class' in a constituency, the greater the Conservative vote by all classes except the core class itself. The reason for this, he asserts, is:

> the power of the environment to structure social contacts plus the empirical fact (and it is only empirical, not logical) that contact across class boundaries makes a consensual impact on partisan choice. Social interaction contributes the major component of constituency class polarization … ultimately it is the degree of contact with core class occupations that is critical for partisan choice.

In other words, people who talk together vote together.[11]

[11] For later work on this theme, see M. Savage, 'Understanding Political Alignments in Contemporary Britain: Do Localities Matter?' *Political Geography Quarterly*, 6 (1987), 53–76, and A. Warde, M. Savage, B. Longhurst and A. Martin, 'Class, Consumption and Voting: An Ecological Analysis of Wards and Towns in the 1980 Local Elections in England', *Political Geography Quarterly*, 7 (1988), 339–51.

As to the processes involved, Miller provides no evidence that people do talk together about politics, let alone that the consequence of such talking is that conversation leads to conversion. This was the basis for Dunleavy's critique.[12] He contended that the empirical evidence supporting the contagion model 'has never been significant'[13] and that its protagonists 'have never explained which causal mechanisms affect political alignment, given that voting by secret ballot is hardly in the public realm (unlike other aspects of lifestyle), and that political alignment is not apparently involved in any extensive way in the social life of the locality (unlike the workplace)'. The status of the explanations offered is thus 'highly suspect', he argues, and 'we cannot simply assume that political alignment brushes off on people by rubbing shoulders in the street, as exponents of contagion models invariably seem to imply'.

Although the neighbourhood effect continues to appear in some accounts of voting patterns in Britain it has rarely been put to exhaustive, critical tests. In large part this is because of the absence of data with which to make such tests at spatial scales smaller than that of the constituency, which is much too large to act as a surrogate for a neighbourhood community within which interaction takes place. A constituency may have 20 per cent of its workforce employed in Miller's 'core class', for example, but these may all live in one segment of it and have no social (even visible) contact at all with members of the other classes who live elsewhere in the constituency. Even if data which meet more rigorous criteria of relevance to studies of the neighbourhood effect are available, there is still the need to link empirical observations to plausible mechanisms: first, however, we need to establish what has rarely been done to date – that there are geographical variations in voting behaviour by local area that are consistent with the neighbourhood effect hypothesis.

The paucity of data at an ecological scale approximating that of a neighbourhood community within which social interaction occurs makes it difficult to test Miller's model. Voting data for general elections are not reported at scales below that of the constituency and although census data can be obtained for two other scales – the enumeration district (average population about 500) used in the collection of census data and the local authority electoral ward (average population about 5,000) – ecological studies can only be conducted at the constituency level.[14] Two other approaches have been employed to circumvent this problem: procedures such as entropy-maximizing have been used to estimate cross-classifications of voting and social variables;[15] and it is

[12] P. Dunleavy, 'The Urban Basis of Political Alignment: Social Class, Domestic Property Ownership, and State Intervention in Consumption Processes', *British Journal of Political Science*, 9 (1979), 409–43.

[13] Dunleavy, 'The Urban Basis of Political Alignment', p. 413.

[14] As in R. J. Johnston, C. J. Pattie and J. G. Allsopp, *A Nation Dividing? Britain's Changing Electoral Map, 1979–87* (London: Longman, 1988).

[15] R. J. Johnston, C. J. Pattie and A. N. Russell, 'Dealignment, Spatial Polarisation and Economic Voting: An Exploration of Recent Trends in British Voting Behaviour', *European Journal of Political Research*, 23 (1993), 67–90. Gary King's suggested resolution of the ecological problem

possible to explore contextual effects by combining ecological data from the census and other sources with survey data – though only one British study of voting at general elections has done this at a spatial scale below that of the constituency.[16] Harrop, Heath and Openshaw combined census ward data with the 1987 British Election Study (BES) data and showed that similar people in different places voted differently, in line with Miller's consensual environmental effect model.[17] Virtually all other analyses directed at identifying whether the neighbourhood effect operates in Britain have been on a large scale, however. They have provided clear evidence, despite arguments to the contrary,[18] of a geography to voting that cannot be reduced to individual characteristics: however, it is hard to link that, except in the most indirect way, to the neighbourhood effect.

Miller's models remain very largely untested, therefore, and the neighbourhood effect is at best a hypothesis supported by circumstantial evidence. This article reports research whose findings strengthen that circumstantial evidence, using 1997 BES data organized at spatial scales that are more relevant to the assumed social interaction processes in residential communities than has been undertaken heretofore.

BUILDING 'BESPOKE NEIGHBOURHOODS'

It is generally assumed that much, non-work-based, face-to-face social interaction takes place in relatively restricted areas around each individual's home, because of constraints on travelling. If face-to-face interaction is crucial to the operation of interclass neighbourhood effects, whether in formal or informal interaction settings, therefore, we need to look at small areas containing a few hundred or thousand residents at most – not entire constituencies. Electoral wards may fit this requirement but they vary substantially in their size, being generally much larger in metropolitan than in urban and rural areas. (In England in 1991 the average ward in Metropolitan Counties contained 10,231 electors, compared to 3,229 in non-Metropolitan rural areas.) Some wards may be not only socially heterogeneous (like most

(F'note continued)
has the potential for expanding this area of work in a variety of ways (G. King, *A Solution to the Ecological Inference Problem: Reconstructing Individual Behavior from Aggregate Data* (Princeton, NJ: Princeton University Press, 1997)).

[16] Warde *et al*., 'Class, Consumption and Voting', analysed voting patterns in local government elections at the ward scale, but low turnout makes for difficulties, especially as there is usually differential turnout between the supporters of the main political parties.

[17] M. Harrop, A. Heath and S. Openshaw, 'Does Neighbourhood Influence Voting Behaviour – and Why?', in I. Crewe, P. Norris, D. Denver and D. Broughton, eds, *British Elections and Parties Yearbook, 1991* (Hemel Hempstead: Harvester-Wheatsheaf, 1991), pp. 103–20.

[18] I. McAllister and D. T. Studlar, 'Region and Voting in Britain: Territorial Polarization or Artifact?', *American Journal of Political Science*, 36 (1992), 168–99. R. J. Johnston and C. J. Pattie, 'Composition and Context: Composition and Context: Region and Voting in Britain Revisited During Labour's 1990s' Revival', *Geoforum*, 29 (1998), 309–29.

constituencies), therefore, but also spatially segmented into separate communities.

Apart from wards, the only other scale for which census data are available that can be used to describe an area's social characteristics are enumeration districts, whose populations average about 500 persons. These may be ideal surrogates for local communities for many people, but they may be too small: in addition, because some of the census data are coded and made available for a 10 per cent sample only, the data for them may be unrepresentative and unreliable. What we have done, therefore, is use the enumeration districts as building blocks for the creation of 'bespoke neighbourhoods'. With the assistance of the CREST team who undertook the 1997 BES, we were able (without in any way jeopardizing the confidentiality guaranteed to respondents) to identify each respondent's post-code and enumeration district.[19] We then employed a customized algorithm designed to identify the group of districts containing the nearest *n* persons to the respondent's home – where *n* can be any number greater than 500.[20] We used five definitions of *n*, and built bespoke neighbourhoods for every 1997 BES respondent containing their nearest 500, 1,000, 2,500, 5,000 and 10,000 neighbours. Once these had been defined, we then obtained the relevant census data for the groups of enumeration districts which formed those neighbourhoods: only then were those data combined with the individual-level data.

We thus have census data with which an area's characteristics can be described, at eight scales: nearest enumeration district (*n*ED); nearest 500 persons (*n*500); nearest 1,000 persons (*n*1000); nearest 2,500 persons (*n*2500); nearest 5,000 persons (*n*5000); nearest 10,000 persons (*n*10000); electoral ward; parliamentary constituency. Our exploratory investigations of neighbourhood effects reported here use all of these. Unfortunately, because of problems with address-file matching, we were only able to apply the algorithm to England and Wales: the Scottish component of the 1997 BES is thus omitted from the analyses below.

Characterizing the Bespoke Neighbourhoods

Miller's model of the neighbourhood effect identified a 'core class' whose relative importance in an area's population was key to the effect's operation: the percentage of the (male?) workforce who were employers and managers. Our exploration of the 1991 census data for the various neighbourhoods found that it was not feasible to use this variable, or a number of others, as a single

[19] We are extremely grateful to John Curtice and other members of the CREST team for their considerable assistance in this work.

[20] The algorithm is based on Pythagoras's theorem. It identifies and rank orders the distances between each enumeration district centroid and the centroids of neighbouring districts and then consecutively adds the next-nearest neighbour to the original district until the threshold population is reached.

TABLE 1 *Varimax-Rotated Component Loadings at Various Scales*

	Scale							
Variable	*n*ED	*n*500	*n*1000	*n*2500	*n*5000	*n*10000	ward	const
NOCARS	0.94	0.95	0.96	0.96	0.97	0.97	0.96	0.97
UNEMPL	0.87	0.88	0.90	0.91	0.92	0.92	0.91	0.95
HOMEOWN	− 0.86	− 0.86	− 0.88	− 0.87	− 0.87	− 0.86	− 0.87	− 0.87
TWOCARS	− 0.84	− 0.85	− 0.86	− 0.87	− 0.88	− 0.89	− 0.88	− 0.92
SINGLEPARENT	0.73	0.75	0.81	0.86	0.88	0.89	0.88	− 0.94
PENSION	0.05	0.04	0.02	0.00	− 0.03	− 0.05	− 0.14	− 0.10
LONGILL	0.32	0.50	0.53	0.55	0.55	0.55	0.33	0.55
MANUFACTURING	0.16	0.18	0.22	0.23	0.18	0.13	0.19	0.03
FINANCE	− 0.24	− 0.25	− 0.30	− 0.26	− 0.25	− 0.23	− 0.23	− 0.14
EDUCATION	− 0.47	− 0.47	− 0.51	− 0.48	− 0.44	− 0.39	− 0.44	− 0.38

Key to variables: NOCARS, percentage of households with no car; UNEMPL, percentage of workforce unemployed; HOMEOWN, percentage of households owning/buying home; TWOCARS, percentage of households with two or more cars; SINGLEPARENT, percentage of households headed by a single parent; PENSION, percentage of population pensioners; LONGILL, percentage of adult population with limiting long-term illness; MANUFACTURING, percentage of workforce in the manufacturing sector; FINANCE, percentage of workforce in the finance sector; EDUCATION, percentage of adult population with higher-level qualifications.
Key to scales: see text.

identifier of neighbourhood characteristics/status. This was because the frequency distributions were either highly skewed or were multi-modal. Instead, we employed a synthetic index, based on varimax-rotated principal components analyses of a number of variables. Analyses at all eight scales produced extremely similar structures, with the first component clearly identifiable as a summary measure of neighbourhood socio-economic status (the loadings on those first components are in Table 1).

We used the scores on those components as indices of neighbourhood status. For the analyses reported here, they were grouped at each scale into approximate quintiles, so that about 20 per cent of the respondents are in each neighbourhood type. These provide the neighbourhood contexts for testing Miller's models.

CLASS POLARIZATION AND NEIGHBOURHOOD POLARIZATION

Table 2 gives the pattern of voting by class in 1997 as revealed by the BES.[21] Whether this indicates the absence of a class cleavage is clearly a matter of subjective interpretation. There are substantial differences between the three white-collar and two blue-collar classes in their support for the Conservative party, for example, and also, though to a lesser extent, in their support for Labour and rates of abstention. Labour won a plurality over the Conservatives in every class except the petty bourgeoisie, though the Labour:Conservative (L:C) ratio was much higher in the two blue-collar (2.80 and 3.62) than in the two white-collar classes (1.10 and 1.47).

TABLE 2 *The 'Class Cleavage' 1997**

	Vote					
Class	CON	LAB	LD	REF	DNV	L:C
Salariat	29	32	8	2	15	1.10
Routine non-manual	24	35	13	2	22	1.47
Petty bourgeoisie	34	26	13	3	22	0.76
Manual foremen etc.	15	42	14	3	25	2.80
Working class	13	47	10	2	25	3.62

Key to vote: CON, Conservative; LAB, Labour; LD, Liberal Democrat; REF, Referendum Party; DNV, did not vote. L:C, ratio of Labour to Conservative vote percentages. *Percentages by social class.

Do these patterns of support vary spatially within each class? To answer that, the size of the sample allows us to look at only three of the classes: the salariat; the routine non-manual workers; and the working class.

[21] This uses the five-category Heath–Goldthorpe scale; a finer division would have created cell-size problems for the later analyses.

The Large Scale

Voting for the Conservative and Labour parties by neighbourhood status (the quintiles described above) at the constituency and ward scales is shown in Table 3. Regarding support for the Conservatives, with one exception there is a continuous sequence of declining support from the highest to the lowest status areas for each of the three classes at both spatial scales: the Conservatives got most support, within each class, in the highest status neighbourhoods and least in the lowest status areas. Countering this, and with three very slight exceptions, there is a similar increase in support for Labour within each class as one moves from the highest to the lowest status constituencies and wards.

TABLE 3 *Vote by Class and Area Status: Constituencies and Wards*

	Constituency			Ward		
Area status	S	RN	WC	S	RN	WC
Percentage voting Conservative						
1 (High)	38	40	24	44	43	29
2	36	29	21	31	32	21
3	30	27	14	25	21	11
4	22	18	8	21	26	9
5 (Low)	17	17	9	16	10	9
Percentage voting Labour						
1 (High)	19	19	29	19	25	34
2	29	35	40	29	33	39
3	38	34	47	31	33	48
4	39	39	53	41	36	53
5 (Low)	45	47	53	43	49	50
Labour:Conservative ratio						
1 (High)	0.50	0.48	1.21	0.43	0.58	1.17
2	0.81	1.21	1.90	0.94	1.03	1.86
3	1.27	1.26	3.36	1.24	1.57	4.36
4	1.77	2.17	6.63	1.95	1.38	5.89
5 (Low)	2.65	2.76	5.89	2.69	4.90	5.55

Key to classes: S, salariat; RN, routine non-manual; WC, working class.

The final block of data in Table 3 synthesises the previous two, giving the ratio of support for the Labour and Conservative parties for each class at each status level. Again, with just three slight exceptions (levels 3 and 4 for the routine non-manual workers at the ward scale and levels 4 and 5 for the working class at both ward and constituency scale) there is an unbroken sequence down each column: the lower the area's status the greater the support for Labour relative to that for the Conservatives, in each of the social classes. As expected from the 'class cleavage', the Conservatives performed better than Labour among the salariat than the routine non-manual class, and among the latter than the working

class, but within each class the lower the status of the area, the better Labour's relative performance. Indeed Labour out-polled the Conservatives by a ratio of at least 2.5:1.0 in each class in the lowest status areas – rising to about 6.0:1.0 in the working class.

These findings support Miller's consensual environmental effects model, but at spatial scales for which it is difficult to hypothesize a relevant process. It may be that each constituency and ward is an agglomeration of groups of separate neighbourhoods within which that effect operates; tests using the bespoke neighbourhoods allow us to evaluate the validity of that claim for the first time.

The Smaller Scale

Tables 4 and 5 replicate the analyses reported in Table 3, at the smaller spatial scales represented by the bespoke neighbourhoods. They provide powerful circumstantial evidence of the operation of neighbourhood effects in these much more localized areas than is afforded by the constituencies and wards employed in Table 3.

Focusing on the Labour:Conservative ratios, the results in Table 4 contain only two slight exceptions to the down-column sequences identified above as showing the operation of neighbourhood effects. Among the salariat, for example, at the *n*500 scale the ratio for those living in the lowest status areas was some six times larger than it was for their contemporaries living in the high status areas (i.e., from 0.58 to 3.54): it was 4.5 times larger for the routine non-manual workers, and 3.7 times larger for the working class. Indeed, across all three scales the differences in the ratios between the first and fifth quintiles are largest among the salariat: their propensity to vote Conservative rather than Labour varied much more substantially over the five neighbourhood types than was the case with the other two classes.

A very similar, though slightly less clear-cut, set of results is reported for the larger bespoke neighbourhoods in Table 5, which has seven slight deviations from the columnar sequences that characterize all of these results. The differences between the classes are not as great as in the smaller bespoke neighbourhoods but the overall pattern is the same: the lower the status of the area, the higher the ratio of support for Labour to that for the Conservatives, within all three social classes.

Nesting the Scales

Tables 4 and 5 not only provide incontrovertible circumstantial evidence of Miller's consensual environmental effects model operating at the 1997 general election in England and Wales but also indicate that this evidence was very strong at the smallest spatial scales, thus justifying the decision to test the model using the bespoke neighbourhoods approach. The clear implication is that the process is operating at very local scales within constituencies and wards. To test whether that is indeed the case, in this last section we use a nested design. We

TABLE 4 *Vote by Class and Area Status: Small Bespoke Neighbourhoods*

	*n*ED			*n*500			*n*1000		
Area status	S	RN	WC	S	RN	WC	S	RN	WC
Percentage voting Conservative									
1 (High)	38	42	27	39	42	30	37	43	31
2	34	26	20	34	26	20	35	25	17
3	25	22	12	26	21	11	27	21	11
4	23	24	11	18	25	11	19	19	11
5 (Low)	12	14	9	13	14	9	16	17	9
Percentage voting Labour									
1 (High)	22	28	47	23	28	48	23	27	38
2	25	31	38	25	33	37	27	35	37
3	44	33	45	40	33	46	37	33	49
4	39	44	50	42	39	47	45	42	52
5 (Low)	44	42	50	46	42	51	42	43	50
Labour:Conservative ratio									
1 (High)	0.58	0.67	1.74	0.59	0.67	1.60	0.62	0.63	1.23
2	0.74	1.19	1.90	0.74	1.27	1.85	0.77	1.40	2.18
3	1.76	1.50	3.75	1.54	1.57	4.18	1.37	1.57	4.45
4	1.69	1.83	4.55	2.33	1.56	4.27	2.37	2.21	4.73
5 (Low)	3.67	3.00	5.55	3.54	3.00	5.67	2.63	2.53	5.56

Key to classes: S, salariat; RN, routine non-manual; WC, working class.
For key to bespoke neighbourhoods, see text.

TABLE 5 *Vote by Class and Area Status: Larger Bespoke Neighbourhoods*

	*n*2500			*n*5000			*n*10000		
Area status	S	RN	WC	S	RN	WC	S	RN	WC
Percentage voting Conservative									
1 (High)	37	43	35	40	41	35	39	36	30
2	44	25	15	37	29	13	38	36	16
3	24	23	9	29	27	14	27	28	14
4	21	22	11	15	17	8	16	18	9
5 (Low)	14	14	10	15	14	9	16	15	9
Percentage voting Labour									
1 (High)	27	28	28	23	28	28	21	30	26
2	24	37	46	28	28	48	25	22	41
3	29	30	48	29	31	43	30	30	51
4	44	37	51	45	42	52	50	50	51
5 (Low)	44	45	51	47	47	52	46	43	51
Labour:Conservative ratio									
1 (High)	0.73	0.65	0.80	0.58	0.68	0.80	0.54	0.83	0.87
2	0.55	1.48	3.07	0.76	0.97	3.69	0.66	0.61	2.56
3	1.21	1.30	5.33	1.00	1.15	3.07	1.11	1.07	3.64
4	2.10	1.68	4.64	3.00	2.47	6.50	3.13	2.78	5.67
5 (Low)	3.14	3.21	5.10	3.13	3.36	5.78	2.88	2.87	5.67

Key to classes: S, salariat; RN, routine non-manual; WC, working class.
For key to bespoke neighbourhoods, see text.

TABLE 6 *Vote by Class and Area Status: Smaller Areas Within High Status Constituencies*

	*n*5000			*n*10000			ward		
Area status	S	RN	WC	S	RN	WC	S	RN	WC
Percentage voting Conservative									
1 (High)	40	44	39	38	37	31	44	43	30
2	38	29	15	42	34	14	31	33	23
3	30	31	16	32	32	17	28	23	16
4	19	18	8	13	19	10	26	26	8
5 (Low)	21	*	13	22	*	9	8	*	11
Percentage voting Labour									
1 (High)	21	28	22	21	29	24	19	25	31
2	26	26	43	21	21	38	28	34	32
3	29	27	36	30	25	45	35	25	37
4	38	33	55	46	50	53	24	33	53
5 (Low)	43	*	63	56	*	62	54	*	68
Labour:Conservative ratio									
1 (High)	0.53	0.64	0.56	0.55	0.78	0.77	0.43	0.58	1.03
2	0.68	0.90	2.87	0.50	0.62	2.71	0.90	1.03	1.39
3	0.97	0.87	2.25	0.94	0.78	2.65	1.25	1.09	2.31
4	2.00	1.83	6.88	3.54	2.63	5.30	0.92	1.27	6.63
5 (Low)	2.05	*	4.85	2.54	*	6.89	6.75	*	6.18

**N* for cell less than 15.
Key to classes: S, salariat; RN, routine non-manual; WC, working class.
For key to bespoke neighbourhoods, see text.

have divided the constituencies into two groups – those in the top three quintiles ordered by their relative status, and those in the bottom three – and within each look at class voting by three smaller areas (ward, *n*10000 and *n*5000) according to constituency status. This enables us to test directly for differences within constituencies that are socially heterogeneous. Similarly, we have divided the *n*10000 areas into the top three and bottom three quintile groups, and looked at voting by class at the three smallest spatial scales.

Table 6 presents the full results from the analyses of high status constituencies (i.e. those in the top three quintiles). Although there are slightly more deviations from the 'smooth' sequences down the columns than recorded in Tables 3–5, once again the overall pattern is very much in line with the consensual environmental effects model: the lower the neighbourhood's status, at all spatial scales, the higher the Labour:Conservative ratio, in each of the three social classes – and at each scale for each class there is a very substantial difference in the L:C ratio between the highest and lowest status neighbourhoods. The constituencies are clearly spatially segmented, because there are sufficient respondents in the smaller areas in the bottom two quintiles for viable analyses, and they show that within each relatively high-status constituency, the lower the status of a smaller area (whether a ward or an *n*5000 or *n*10000 bespoke neighbourhood) the better Labour's performance relative to that of the Conservatives.

Table 7 reports on the other three nested scale analyses, giving the Labour:Conservative ratios only (together with those reported in Table 6). Again there are several small exceptions to the expected sequence, but the general pattern of ratios is the same: the higher the status of the small area, whatever the status of the larger area within which it is nested, the lower the Labour:Conservative ratio, in each of the three social classes – with in all cases a very substantial difference between the lowest- and highest-status neighbourhoods. There is one major exception to this, however – for the highest-status small areas within the low-status *n*10000 areas, among the working class only (the first row of the final block in Table 7). These have very high Labour:Conservative ratios for the highest status areas, suggesting the operation in those situations only of Miller's reactive environmental effects model: where members of the working class are in a minority in small high-status pockets within generally low-status areas, they tend to be very strongly pro-Labour.

PATTERNS AND PROCESSES

With that one major exception, which suggests that Miller's reactive model may have a limited application, these results have provided a consistent story: the lower the status of a neighbourhood the greater the likelihood of a person voting Labour rather than Conservative in 1997, whatever her or his social class. This is exactly in line with the neighbourhood effect as generally conceived and as formalized in Miller's consensual environmental effects model. Miller and others identify a 'conversion by conversation' process as the foundation for that

TABLE 7 *Labour:Conservative Ratio by Class and Area Status: Nested Areas*

	*n*5000			*n*10000			ward		
Area status	S	RN	WC	S	RN	WC	S	RN	WC
Smaller areas within high status constituencies									
1 (High)	0.53	0.64	0.56	0.55	0.78	0.77	0.43	0.58	1.03
2	0.68	0.90	2.87	0.50	0.62	2.71	0.90	1.03	1.39
3	0.97	0.87	2.25	0.94	0.78	2.65	1.25	1.09	2.31
4	2.00	1.83	6.88	3.54	2.63	5.30	0.92	1.27	6.63
5 (Low)	2.05	*	4.85	2.54	*	6.89	6.75	*	6.18
Smaller areas within low status constituencies									
1 (High)	0.67	1.00	1.55	0.46	1.29	1.22	0.45	0.91	1.56
2	1.00	1.42	6.52	0.95	0.88	2.40	0.81	1.31	2.27
3	1.15	1.15	3.89	1.62	1.17	6.35	2.25	1.81	8.32
4	3.73	3.07	6.29	2.81	2.87	6.56	2.26	1.46	6.32
5 (Low)	3.26	2.92	6.25	2.88	2.72	5.86	2.76	5.10	6.37
	*n*ED			*n*500			*n*1000		
Area status	S	RN	WC	S	RN	WC	S	RN	WC
Smaller areas within high status n*10000 areas*									
1 (High)	0.59	0.63	1.67	0.56	0.60	1.48	0.59	0.58	1.10
2	0.65	1.09	1.52	0.68	1.22	1.58	0.70	1.16	2.45
3	1.36	0.89	3.10	1.23	0.95	3.62	1.19	1.32	3.56
4	0.63	1.38	3.26	0.73	1.15	3.46	0.83	1.09	3.17
5 (Low)	*	*	5.25	*	*	5.26	*	*	3.76
Smaller areas within low status n*10000 areas*									
1 (High)	0.57	0.92	8.99	0.72	0.91	9.50	0.71	0.54	5.02
2	1.19	1.25	3.00	0.92	1.15	2.81	0.88	2.11	3.68
3	2.26	1.93	4.20	2.13	2.50	4.26	2.00	1.65	4.81
4	2.76	2.05	4.85	3.59	1.65	4.19	4.90	2.69	4.43
5 (Low)	3.90	2.94	5.39	3.70	2.94	5.71	2.75	2.50	5.39

**N* for cell less than 15.
Key to classes: S, salariat; RN, routine non-manual; WC, working class.
For key to bespoke neighbourhoods, see text.

model: people who talk together in an area vote together, irrespective of their social class. Cox noted that the same patterns could result from different processes, however – such as neighbourhood self-selection (middle-class people who are inclined to vote Labour are more likely to choose to live in lower-status neighbourhoods than their contemporaries whose attitudes are pro-Conservative) and differential patterns of local campaigning by the political parties.[22] There is evidence in other studies to support both of these arguments as providing at least a partial account for the patterns described here – but if they were to offer a full account this would imply either or both of very careful choices of where to live (at detailed spatial scales) by the 'non-conformists' and very finely-tuned spatial targeting of campaigns.

More generally, Books and Prysby have proposed a theory of contextual effects involving four separate potential processes:[23] (1) *personal observation*, whereby individuals are influenced in how they vote by their appreciation of events and situations in their milieux – as in their interpretations of the state of the local economy, on which Books and Prysby report that very little work has been done;[24] (2) *informal interaction*, with inter-personal communications influencing voting behaviour, as in Cox's formulation;[25] (3) *organizationally-based interaction*, in workplaces, churches, labour unions and a range of other organizations, many of which are local in their structure, provide milieux for meeting and discussing political issues with neighbours; and (4) *mass media*, many of which are locally focused and provide politically-relevant cues about events in voters' own neighbourhoods.

Other possible processes can be suggested that are entirely consistent with these patterns. The class categories used here – and in almost all other ecological studies of voting – are extremely broad, for example, and there may be substantial intra-class variations in voting patterns.[26] Thus, for example, the members of the salariat who live in relatively low-status areas may have lower incomes than the average for their class, come from less affluent backgrounds and have fewer educational qualifications than the members of the salariat who live in higher-status areas: the former may be more likely to vote Labour than the latter, irrespective of where they live.[27] Similarly, active trade unionists may

[22] Cox, 'The Voting Decision'.

[23] Books and Prysby, *Political Behavior and the Local Context*.

[24] J. W. Books and C. L. Prysby, 'Contextual Effects on Retrospective Economic Evaluations: The Impact of the State and Local Economy', *Political Behavior*, 21 (1999), 1–16. See also H. Tunstall, D. J. Rossiter, C. J. Pattie, I. MacAllister, R. J. Johnston and D. F. L. Dorling, 'Geographical Scale, the Feel-Good Factor, and Voting at the 1997 General Election in England and Wales', *Transactions of the Institute of British Geographers*, NS25 (2000), forthcoming.

[25] Cox, 'The Voting Decision'.

[26] This has been argued in I. McAllister and R. Rose, *Voters Begin to Choose* (London: Sage Publications, 1988) and in J. D. Kelley and I. McAllister, 'Social Context and Electoral Behavior in Britain', *American Journal of Political Science*, 29 (1985), 564–86.

[27] To illustrate this, at the constituency scale, the more middle-class the area (i.e. the higher the percentage of households headed by a person in socio-economic groups 1–5) the lower the percentage who are in the 'lowest' middle-class group (i.e. SEG 5): Wokingham, for example, has the highest

choose to live in particular areas where there is a strong Labour presence, whatever their occupational class; their support for Labour will also be independent of their social milieux.

Furthermore, despite Dunleavy's claim that political alignment does not 'simply brush off on people rubbing shoulders in the street', social interaction may not be necessary for people to become aware of, and adapt to, a local political culture. This is in line with what Festinger terms 'anticipatory dissonance reduction' or 'dissonance avoidance' whereby people seek to reduce the social distance (however defined) between themselves and their neighbours in order to be accepted as part of the local culture.[28] Political opinions and voting behaviour could form part of this: people recognize that there is a dominant political culture in their locality and decide to adjust their own perceptions and behaviour to fit in with it – even if only in their own minds and in the privacy of the polling station.

Books and Prysby concluded their review of the literature on contextual effects by noting that:[29]

> Existing work in this field frequently lacks empirical investigation of the above factors [assumed to produce contextual effects]. The link between the contextual variables and individual exposure to sources of information often is simply assumed to exist … This lack of empirical investigation into the mechanisms of contextual effects is due in large part to the fact that many studies employ secondary analyses of survey data collected for other purposes … Research designed specifically to examine a particular contextual effect … will be more likely to provide the necessary and appropriate data … [although] secondary analysis of existing data has its place too, especially as a cost-effective method …

That criticism applies to this article too. Our concern has been to establish that there were patterns of voting at the 1997 general election which were entirely consistent with the concept of a neighbourhood effect – something that the lack of relevant data has largely precluded until now. We have provided very strong evidence that there is a pattern which needs accounting for, and the literature, as indicated here, offers several potential avenues for further investigation of this micro-scale geography of voting.

(F'note continued)

percentage in SEGs 1–5 (41), of whom only 26 per cent are in SEG5; Birmingham Ladywood, by contrast, has the lowest percentage in SEGs 1–5 for England and Wales (8), of whom 45 per cent are in SEG5. If those in SEG5 are more likely to vote Labour than those in SEGs 1–4, then part of the 'neighbourhood effect' could be accounted for by intra-class geography. The BES data analysed here provide further supporting evidence. Among the salariat, for example, at the *n*1000 scale, 16.2 per cent of those living in the highest-status areas (the top quintile) had household incomes below £12,000, whereas 26.7 per cent did in the lowest-status areas. Analyses of variance showed that neighbourhood was the most significant influence on vote among the salariat, holding income constant, however.

[28] L. Festinger, *Theory of Cognitive Dissonance* (London: Tavistock Publications, 1957), pp. 29–31, and 268–70. We are very grateful to Hugh Berrington for suggesting this to us.

[29] Books and Prysby, *Political Behavior and the Local Context*, p. 40.

CONCLUSIONS

Whatever one's position in the 'death of the class cleavage' debate, it is extremely difficult in the face of the results presented here to deny the continued relevance of the spatial cleavage identified by Miller in 1977 and 1978. We have provided strong evidence of very significant differences in voting behaviour within each of the country's three main social classes at the 1997 general election according to the socio-economic status of the area in which they lived. The lower the area's status – at a range of spatial scales including not only the constituency and the ward but also bespoke neighbourhoods varying from populations of 10,000 to less than 500 – the greater the ratio of Labour: Conservative voting within each class. Geography clearly does matter.

But why? These findings are entirely consistent with Miller's consensual environmental effects model, suggesting the operation of classic neighbourhood effects. Furthermore, it is difficult to gainsay this inference on the grounds that the spatial scale of the analyses is incommensurate with that at which neighbourhood effects are believed to operate. We have identified patterns consistent with neighbourhood effects in small 'bespoke neighbourhoods' whose size appears to be in accordance with the assumed residential communities in which much social interaction occurs. We have not shown that people influence each other's voting decisions through discussions 'over the garden fence', however. We cannot identify from the available data what mechanisms have produced the patterns so clearly displayed in our data. It may be that the classic neighbourhood effect – conversion by conversation – is operating, but other processes may have produced that outcome. Further analyses are needed to evaluate these ideas – which call for richer (and probably larger) datasets than those currently available. What the analyses reported here have established, beyond any reasonable doubt, however, is that there was a fine-grained spatial patterning to voting behaviour at the 1997 British general election in England and Wales that provides strong evidence for a call to re-open the debate that Miller's 1978 paper initiated and Dunleavy's riposte a year later may have prematurely closed.