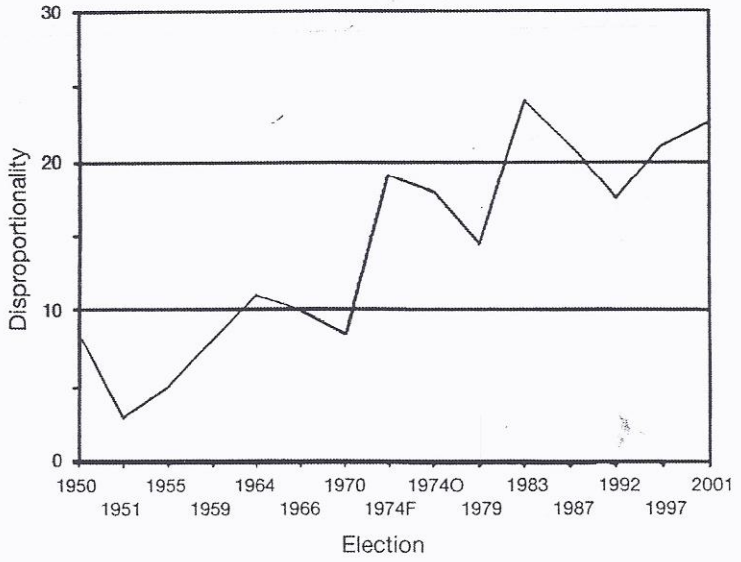
Johnston, R., Rossiter, D., Pattie, C. and Dorling, D. (2002) Distortion Magnified: New Labour and the British electoral system, 1950-2001. In L. Bennie et al. (Eds) British Elections and Parties Review, Volume 12, London: Frank Cass. P133-155

Distortion Magnified: New Labour and the British Electoral System, 1950–2001

Ron Johnston, David Rossiter, Charles Pattie and Danny Dorling

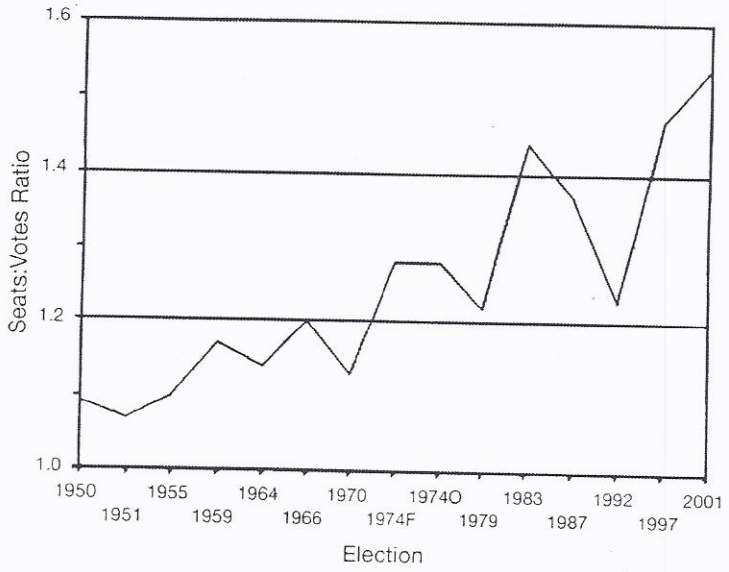
It is generally taken for granted that first-past-the-post election systems invariably produce distorted outcomes via the translation of votes into seats, even if the theoretical basis for this is far from fully understood (despite the classic efforts of Gudgin and Taylor, 1979). In the UK, such distortion increased significantly after the substantial growth in support for the Liberals, Plaid Cymru and the SNP at the 1974 elections: Conservative and Labour vote shares fell much more precipitately than their seat allocations (Dunleavy and Margetts, 1997). The 2001 general election saw a small increase compared with 1997 in the degree of distortion (measured as the percentage of seats that would have to be reallocated in order to equate to the percentage of the votes obtained by each party) – though not quite to the peak level recorded in 1983 (Figure 1).

FIGURE 1
DISPROPORTIONALITY IN UK GENERAL ELECTION RESULTS, 1950–2001



One associated feature of the votes-to-seats distortion, noted by Norris (2001), is the increase in the seats:votes ratio for the winning party (its percentage of the seats divided by its percentage of the votes), from 1.47 in 1997 to 1.54 in 2001 (Figure 2). There is a clear linear trend over the last half-century, suggesting growth in the 'winner's bonus' that the system almost invariably delivers. That growth, and particularly its increase in 2001 over 1997 (Labour's vote share fell more than did its share of seats between 1997 and 2001), provides the context of this article's discussion of the translation of votes into seats and of Labour's increased advantage from this translation procedure. Labour now benefits very handsomely from the procedure for translating votes into seats: 50 years ago, the Conservatives benefited substantially from the same procedure.

FIGURE 2
THE SEATS:VOTES RATIO FOR THE WINNING PARTY
AT UK GENERAL ELECTIONS, 1950–2001



Bias in Election Outcomes

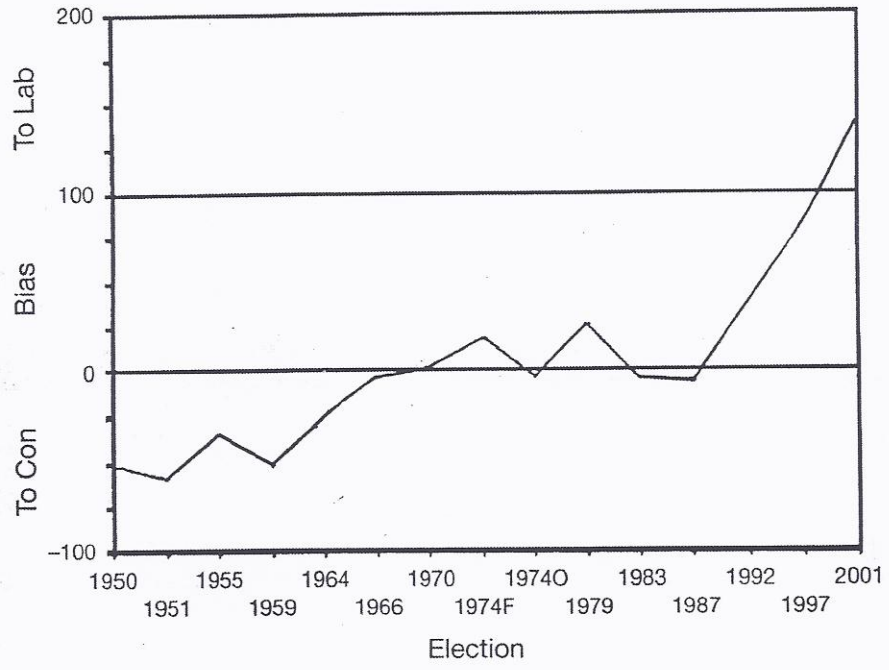
Our analysis of the translation of votes into seats, as in previous work (Johnston *et al.*, 2001), focuses on the amount of bias in each election result, with bias defined as the difference between the two main parties in the number of seats that they would obtain from the same share of the votes cast. In the first part of the article, we discuss the bias observed when they have equal vote shares.

The bias is calculated by applying a uniform shift in the pattern of votes

across all constituencies, so as to equalize vote shares. Thus in 2001, Labour won 42.0 per cent of the votes cast in Great Britain, and the Conservatives won 32.7 per cent: equalization is achieved by reducing Labour's share of the vote by 4.65 percentage points in each constituency, and increasing the Conservatives' share by the same amount. The bias measure is the difference between the number of seats that the two parties would have obtained with that distribution of the votes.

The result of this calculation is that *if Labour and the Conservatives had obtained equal proportions of the votes cast in 2001, at 37.35 per cent each, then Labour would have won 141 more seats than the Conservatives*. This is by far the largest amount of bias favouring a single party over the 15 elections conducted since the modern system of Boundary Commission redistribution was introduced – hence the title of this study.

FIGURE 3
NET BIAS WITH EQUAL VOTE SHARES AT UK GENERAL ELECTIONS, 1950–2001



Trends in the volume and direction of bias increasingly favoured Labour (Figure 3: in this, and all other diagrams showing the direction of bias, a negative figure indicates pro-Conservative bias and a positive figure indicates a pro-Labour bias). In the 1950s and 1960s, the Conservatives benefited by up to 50 seats, whereas in the next two decades there was no

major advantage to either party. From 1992 onwards, however, Labour's advantage has increased massively.

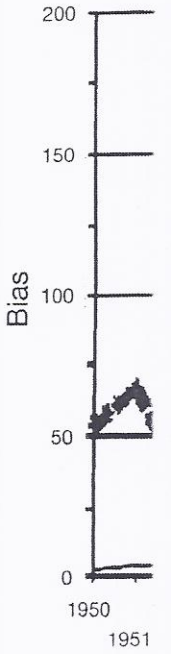
As set out in detail in our earlier work, this approach to measuring bias in the electoral system's operation has two main advantages: it is expressed in a readily appreciated metric (the number of seats difference between the two parties with a given vote share); and it can be decomposed (using the same metric) into various contributing factors, which are akin in their impact, if not their intent, to the classic American cartographic abuses of malapportionment and gerrymandering. (For negative aspects of the procedure, see Blau, 2001.) We have divided those components into three major categories:

1) *Malapportionment* (or seat-size variation), which can be subdivided into:
   a) National quota variations: the average constituencies in Scotland and Wales have approximately 80 per cent of the electors in an English constituency, because of the minimum seat numbers currently guaranteed to both of the former in the *Parliamentary Constituencies Act, 1986*;[1] and
   b) Constituency-size variations within each country, which result from differences in electorate sizes that are put in place by the Boundary Commissions and which are exacerbated over time by population change (basically urban decline and rural growth) – what we term creeping malapportionment.

2) *The efficiency in vote distributions*,[2] which varies between parties when one party either or both of: (1) wins by larger majorities on average in the seats where it is victorious (i.e. it gains more surplus votes than its opponent does in the seats where it is victorious); and (2) loses by small margins in the seats held by its main opponent (i.e. it wastes more votes in the constituencies where they deliver no seats than is the case for its opponent): one party's vote distribution – the one with fewer surplus and wasted votes – is thus more efficient than the other's.

3) *Reactive malapportionment* (or variations in the effective majority necessary for victory), which can be subdivided into:
   a) Abstentions bias: the smaller the turnout in the average-sized constituency, the smaller the number of votes needed for victory there;
   b) Minor party votes bias: the larger the number of votes in a constituency won by minor parties, the smaller the number of votes needed for victory there in the contest between the two main parties; and
   c) Minor party victory bias, which occurs when a minor party wins a seat that would otherwise have been won by one of the two main parties.

THE TOTAL

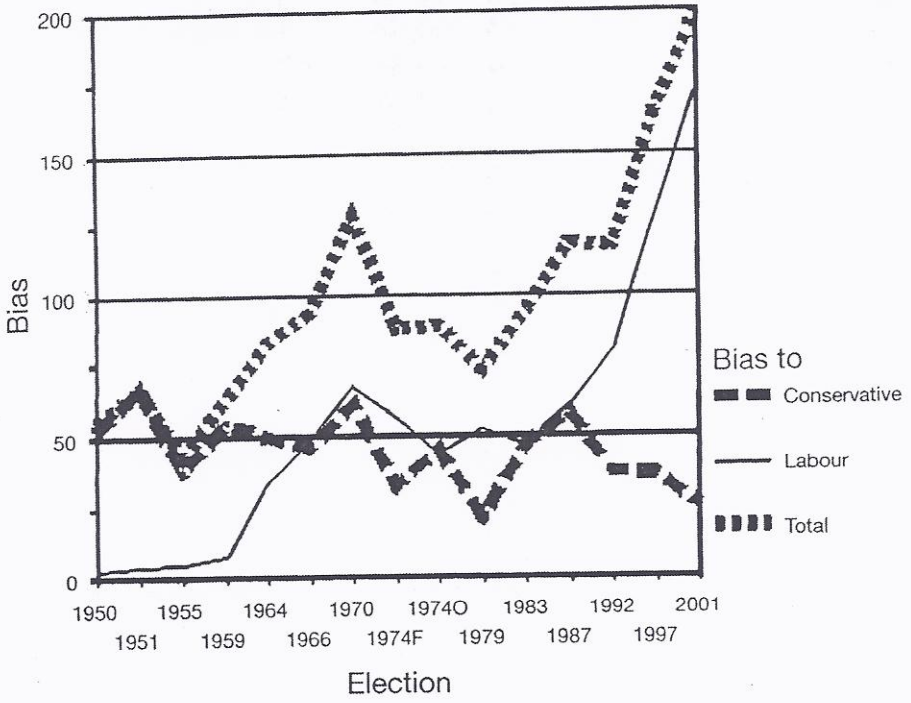


In the dec
six compone
Conservative

Figure 4
sum of the co
is very signifi
bias shows n
though there
1987: in gene
other hand,
very little pr
in the middl
very similar,
since 1987 th
to an almost

The incre
bias in Figur

FIGURE 4
THE TOTAL BIAS FAVOURING EACH PARTY AT UK GENERAL ELECTIONS, 1950–2001, AND THE SUM OF THESE BIASES



In the decomposition of the total bias, the bias figure for each of these six components can be either positive (pro-Labour) or negative (pro-Conservative).

Figure 4 shows the trends in the aggregate bias for each party (i.e. the sum of the components favouring it). The difference between the two parties is very significant. For the Conservatives, the total amount of favourable bias shows no more than trendless fluctuation over the full 51-year period, though there has been a substantial decline since the last of the peaks in 1987: in general, its advantage has been of the order of 50 seats. On the other hand, Labour has increasingly benefited over the period: there was very little pro-Labour bias in the system in the 1950s (less than ten seats); in the middle decades, the pro-Labour and pro-Conservative biases were very similar, producing the minimal net figures seen in Figure 3; and then since 1987 there has been a massive surge in the pro-Labour components, to an almost 180 seats advantage in 2001.

The increasingly pro-Labour outcome is clarified by the trend in total bias in Figure 4, which shows the absolute amount of bias at each election

(i.e. the sum of all six components, irrespective of sign). In the 1950s, the total bias was virtually the same as the pro-Conservative bias – none of the six components substantially favoured Labour. The total amount of bias increased between 1959 and 1970, as the components favouring Labour increased in volume, and then dropped back somewhat over the next three elections, before beginning a continuous sequence of increases from 1979 to 2001, by when the total amount of bias in the system was 199 seats.[3] From 1983 on, the very substantial increase in the total bias paralleled that for Labour: greater bias at the last five general elections in the sequence was almost entirely a consequence of an increased advantage for Labour in the operation of the electoral system.

From 1997 to 2001

The general reasons for these trends over the period 1950 to 1997 have been set out in our earlier work, and we concentrate here on the last inter-election period only. Table 1 identifies the changes in the bias components between the last pair of elections, and indicates that the main causes for the increased pro-Labour bias were growth in the efficiency and abstentions components, though it also benefited from a shift in the net impact of the two third-party components. The following sections look at each major component group in turn.

TABLE 1
THE BIAS COMPONENTS, 1997–2001

(a positive figure indicates a pro-Labour bias; a negative figure a pro-Conservative bias)

Bias source	1997	2001	Change
Malapportionment			
National quotas	11	10	−1
Constituency size	13	16	+3
TOTAL	24	24	+2
Efficiency	48	72	+24
Reactive malapportionment			
Abstentions	24	39	+15
Third-Party Votes	36	25	+11
Third-Party Wins	33	37	+4
[Total Third-Party]	−3	12	+15
TOTAL	21	51	+30
Interactions	−11	−8	+3
GRAND TOTAL	82	141	+59

Malapportionment

There was very little change in these two sub-components: Labour's advantage from the national quotas differential fell by one seat – reflecting the Conservatives' small comeback in support in Scotland and Wales. (The Conservative vote share fell there, from 18.3 to 17.6 per cent – though by only half the amount that Labour's share fell; and the Conservatives won a seat in Scotland.) Somewhat surprisingly, there was only a small rise in the pro-Labour constituency size sub-component. Labour usually benefits substantially from creeping malapportionment as population spills out of the inner cities into the Tory suburbs and beyond. The current constituencies are now more than a decade old in electoral terms (especially in England, where they are based on the 1991 electoral rolls, compiled in October 1990). But the gap between the two parties widened only slightly. If the 1992 election had been fought in the new constituencies, then Labour-won seats would have averaged 64,293 electors, compared to 68,530 for the Conservative-won seats: in 1997, the respective averages were 65,167 and 70,441, and in 2001, 65,762 and 71,952. Thus, although Labour retained a clear advantage over its main opponent in mean electorate per seat won with equal vote shares, the substantial malapportionment bias advantage produced by the rapid decline in Labour-held seat electorates in previous decades did not re-emerge.

Reactive Malapportionment

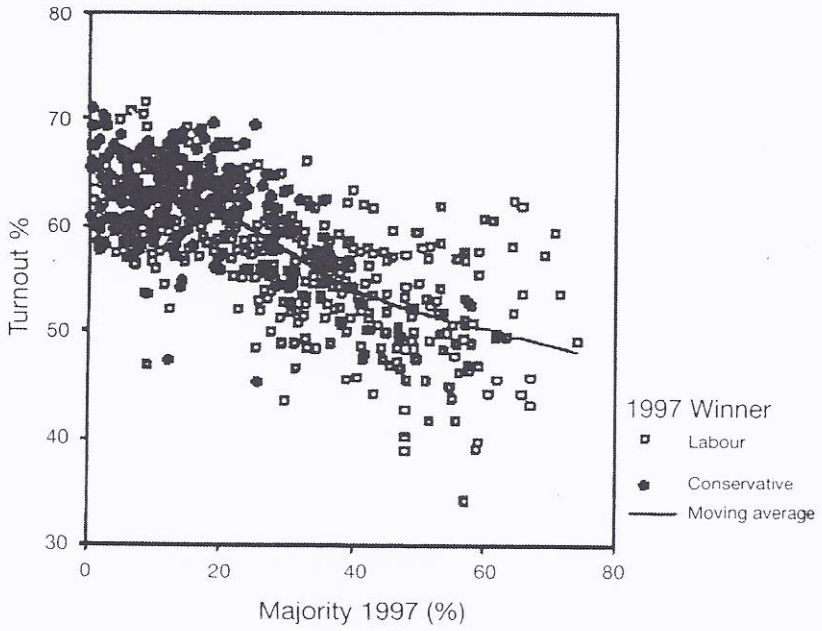
Over recent elections, two of the sub-components in this category – third-party votes and third-party winners – have tended to balance each other out. The Conservatives have benefited from the third-party vote element, because they tend to win in the seats where the third parties (the Liberal Democrats, Plaid Cymru and the Scottish National Party) perform relatively well, thus reducing the effective majority required there. Against this, Labour has benefited from the third-party winner element, because those three parties have tended to win in seats where the Conservatives would otherwise have been victorious.

This pattern was largely replicated in 2001 although, as Table 1 shows, the net advantage shifted somewhat to Labour. There was a reduction of the third-party votes pro-Conservative bias from 36 to 25, reflecting the growth of Liberal Democrat support in some traditional Labour areas in northern cities such as Sheffield (where the Liberal Democrats retained one seat won from the Conservatives in 1997 and came second to Labour in three more of the six).[4] Meanwhile, the third-party pro-Labour win element shifted upwards from 33 to 37, reflecting Liberal Democrat gains in seats such as Cheadle, Dorset North, and Romsey. The net advantage to Labour from these two components was a bias of 12 seats, compared to a net

advantage of three seats to the Conservatives in 1997. Changes in the geography of third-party (mainly Liberal Democrat) vote-winning, but not seat-winning, worked in Labour's favour in the overall process of translating votes into seats.

The biggest change within this component, however, was in the impact of abstentions, which benefited Labour by a further 15 seats. The fall in turnout between the two elections – from 71.4 to 59.4 – was one of the most noted aspects on election night and in subsequent discussions. In the run-up to the election, when pollsters were forecasting a low turnout, there was fear in the Labour camp that it might be the victim of abstentionism: if one in five of the party's core supporters stayed at home, it was argued, then it could lose a substantial number of seats. One in five of them may well have stayed at home (whether out of contentment, apathy, or protest remains to be seen),[5] but Labour lost no seats as a consequence – because the extra abstainers were very largely concentrated in its 'heartland' seats which it has traditionally won by large majorities, both absolute and relative. Rather than having a negative impact on the outcome, the low turnout produced an increased pro-Labour bias: the party won more seats with fewer votes than before because the main impact of the increased abstentions rate was to decrease Labour's surplus votes in the seats that it won.

FIGURE 5
TURNOUT BY CONSTITUENCY IN 2001 BY WINNER IN 1997 AND MARGIN OF VICTORY THEN (CONSERVATIVE- AND LABOUR-HELD SEATS ONLY)



The advantage that the fall in turnout brought to Labour in terms of bias is readily appreciated through Figure 5, which shows a strong negative relationship between turnout and margin. Because Labour was defending many more seats with large majorities than the Conservatives, this meant that the lowest turnouts on average were in Labour-held seats (55.9 compared to 63.2 per cent in Conservative-held seats); indeed there is little evidence of any variation in turnout by 1997 majority in Conservative-held seats. Furthermore, the fall in turnout was greatest in those safe Labour seats: Table 2 shows that it fell on average by 13.6 percentage points in the ultra-safe Labour seats (won by a margin of 20 per cent or more in 1997), compared to 10.8 percentage points in those constituencies where its lead over the Conservatives in 1997 was less than five per cent.

Taken together, the reactive malapportionment components produced a substantial increase in Labour's bias advantage in 2001 compared to 1997. Low turnout was concentrated in Labour-held seats, which the party won with smaller proportions of the total electorate. And the Liberal Democrats' improved performance harmed the Conservatives overall. Thus, whereas the net bias advantage to Labour from these three components was 21 seats in 1997, it increased to 51 in 2001. Labour got an increased return on its votes because the geographies of abstainers and Liberal Democrat voters favoured it rather than its opponent.

The Efficiency Component

The efficiency component produces advantages for a party if its own votes are more effectively distributed than are its main opponent's. A party's effective votes are calculated as its total less those that are either wasted (all votes obtained in seats that it lost) or surplus (all votes additional to those needed for victory in the seats that it won – i.e. its majority less one). Assuming equal vote shares, Labour had a smaller effective vote percentage than the Conservatives of about four percentage points between 1950 and 1979 (Figure 6), and the gap widened at the two 1980s elections. The advantage first accrued to Labour in 1997, though only very slightly (38.7 per cent of Labour's votes and 37.1 per cent of the Conservatives' were effective). It became much more substantial in 2001: 41.3 per cent of Labour's votes were effective then, compared to 33.8 per cent for the Conservatives.

There were only two elections between 1950 and 2001 when, with equal vote shares, Labour amassed fewer surplus votes per seat won than the Conservatives. The first was in 1970, an election fought on outdated constituencies (for an explanation, see Rossiter *et al.*, 1999), when the Conservatives had some very large majorities in suburban areas, which contrasted with the many small Labour majorities (albeit with large shares of the small number of votes cast) in the inner cities. The other was 2001: on average,

TABLE 2
CHANGES IN THE SHARES OF THE VOTE FOR EACH PARTY AND IN TURNOUT 1997–2001, BY FIRST AND SECOND PARTY AND MAJORITY IN 1997

(Mean changes, with standard deviations in parentheses)

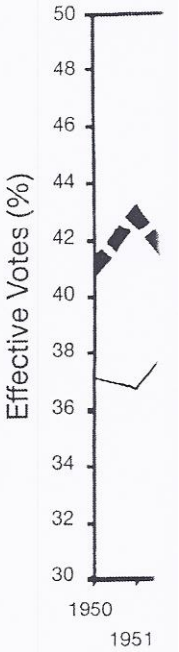
Winner 1997	Labour				Liberal Democrat			
Second 1997	Conservative				Conservative			
Margin 1997	C	L	LD	T/O	C	L	LD	T/O
0.0–4.9	1.4	2.5	–2.2	–10.8	–1.3	–4.1	7.7	–9.7
	(3.8)	(3.8)	(3.2)	(2.0)	(3.5)	(3.9)	6.70	(2.7)
5.0–9.9	0.3	1.6	–0.8	–11.6	–1.3	0.1	1.3	–12.1
	(3.0)	(3.8)	(3.9)	(1.9)	(4.1)	(2.3)	(5.0)	(0.9)
10.0–14.9	–0.7	–2.0	1.4	–13.0	0.1	–0.2	–1.0	–10.9
	(4.7)	(5.4)	(2.5)	(1.8)	(3.0)	(2.9)	(5.2)	(1.8)
15.0–19.9	0.3	–1.6	2.1	–13.3	–0.9	0.0	1.2	–11.1
	(2.0)	(2.9)	(2.5)	(1.8)	(4.0)	(2.0)	(2.4)	(3.6)
>20.0	0.7	–4.0	2.8	–13.6	2.4	0.8	–0.9	–12.6
	(2.8)	(3.6)	(2.6)	(2.3)	(4.5)	(2.0)	(2.4)	(3.6)
Significance	N	Y	Y	Y	Y	Y	Y	Y
Winner 1997	Conservative				Conservative			
Second 1997	Labour				Liberal Democrat			
Margin 1997	C	L	LD	T/O	C	L	LD	T/O
0.0–4.9	4.4	–0.4	–1.9	–11.2	3.8	–2.2	1.2	–9.3
	(2.8)	(2.2)	(2.5)	(2.4)	(2.8)	(5.0)	(6.2)	(1.7)
5.0–9.9	3.6	–0.5	–1.4	–11.7	2.2	–1.1	0.1	–10.7
	(1.6)	(2.4)	(2.4)	(1.4)	(3.3)	(4.4)	(6.3)	(2.6)
10.0–14.9	2.2	–0.7	–0.1	–12.1	2.5	–0.3	–0.3	–11.0
	(2.0)	(2.6)	(2.8)	(1.4)	(2.5)	(4.1)	(5.1)	(2.2)
15.0–19.9	1.9	–0.8	–0.4	–12.2	1.4	–0.2	–1.8	–11.0
	(2.7)	(2.0)	(2.8)	(1.6)	(4.9)	(6.0)	(9.6)	(2.0)
>20.0	1.7	0.7	–0.9	–11.1	1.7	–0.1	0.6	–11.4
	(3.7)	(3.2)	(3.8)	(2.0)	(3.1)	(2.6)	(3.6)	(1.8)
Significance	Y	N	N	N	N	N	Y	Y

Key to parties: C – Conservative; L – Labour; LD – Liberal Democrat. T/O – turnout.

Note: The significance tests were univariate analyses of variance (ANOVA): Y indicates a significant difference at the 0.05 level or better between the five marginality categories; N indicates no significant difference at that level.

the Conservative victories (with equal vote shares) were obtained with slightly larger majorities than its opponent's. With regard to wasted votes per seat lost, again the Conservatives have generally been the main beneficiary, though not to the same extent as with surplus votes. But this too changed in 1997 and 2001, when the Conservatives wasted more votes in seats lost than did Labour. (For fuller details on these trends up to 1997, see Johnston *et al.*, 2001.)

EFFECTIVE VO

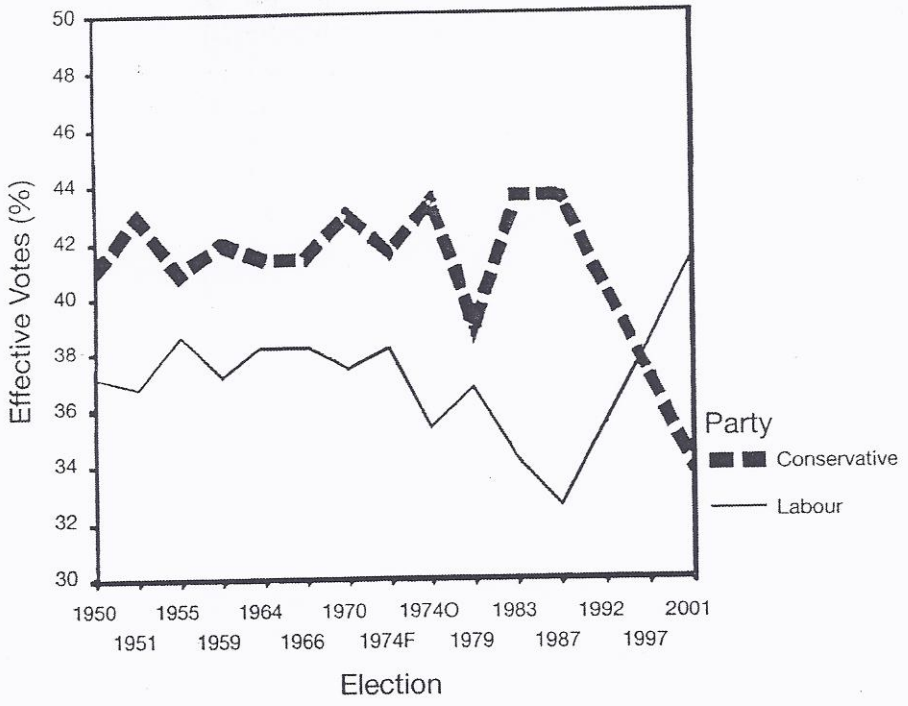


Improving or

So, why were before – and component offering an focused on f

- Labour's Commissi
- The target which foc ities) and safe seats produced never be v of wasted

FIGURE 6
EFFECTIVE VOTES AS A PERCENTAGE OF EACH PARTY'S TOTAL (WITH EQUAL VOTE SHARES) AT UK GENERAL ELECTIONS, 1950–2001



Improving on 1997

So, why were Labour's votes distributed more effectively in 1997 than ever before – and then even more so in 2001, delivering it an efficiency bias component of 48 seats at the former election and 72 seats at the latter? In offering an account for the 1997 turn-round (Johnston *et al.*, 2001), we focused on four features:

- Labour's success in the 'battle of the boundaries' before the Boundary Commissions in 1991–1995 (Rossiter *et al.*, 1999);
- The targeted campaigns by Labour (and the Liberal Democrats) in 1997, which focused on winnable and loseable seats (those with small majorities) and made little effort to do more than sustain support in either the safe seats that were being defended (and where extra effort would just have produced more surplus votes per seat won) or the hopeless seats that could never be won (where effort would just have increased the average number of wasted votes per seat lost);

- Anti-Conservative tactical voting by Labour and Liberal Democrat supporters in marginal Conservative-held seats, especially where this was encouraged by the relative weight of campaigning: transferring support to the Liberal Democrats reduced Labour's number of wasted votes per seats lost; and
- The relative impact of what we termed the 'infrastructural gerrymander', whereby Labour suffers from 'stacked-gerrymander-like' situations in its areas of strength, and from 'cracked-gerrymander-like' situations in areas of Conservative strength. In a 'stacked-gerrymander-like' situation a winning party's votes are spatially concentrated into a relatively small number of constituencies, most of which it wins by large majorities with substantial numbers of surplus votes. In a 'cracked-gerrymander-like' situation, on the other hand, the winning party's votes are spread over a larger number of constituencies, most of which it wins by relatively small majorities with few surplus votes (and its opponent amasses more wasted votes than is the case in a stacked situation) – and which it may therefore lose should there be an overall swing against it (see Johnston, 1979).

Of these four, the first would have had no new impact in 2001, since the same constituencies were in use as in 1997: Labour's advantage was already built-in. And the targeted campaigning would be likely to have had less impact, save in certain circumstances. Labour's targeting was not as aggressive as in 1997, and its strategy was more to protect that which it held than to gain more Conservative-held seats. Certainly, it did little to promote turnout either in its very safe seats or its hopeless ones, thus contributing to the abstentions bias component and reducing both its surplus votes per seat won and wasted votes per seat lost. And Charles Kennedy's goals were not only to gain seats where possible through focused campaigning but also to build support for the Liberal Democrat Party across the country as the foundation for later campaigns (Denver, 2001). Hence we focus here on the other two sources of gerrymander-like effects that generate an efficiency bias.[6]

Tactical voting delivered a number of unexpected victories to both Labour and the Liberal Democrats in 1997. Four years later, there was little evidence of its widespread use in Conservative-held seats, except in some areas (notably Dorset) where it was widely canvassed (mainly by an interested 'third party', Billy Bragg).[7] Elsewhere, the clearest evidence of pro-Liberal Democrat tactical voting was in seats that the party won in 1997, in some of which it ran very high profile campaigns seeking tactical votes. In Kingston & Surbiton, for example, Labour's share of the vote fell by 14.3 percentage points and the Liberal Democrats' increased by 23.5. However, in neighbouring Richmond Park, also gained by the Liberal

Democrats in 1997, Labour's share fell by only 1.3 points compared with a Liberal Democrat increase of 3 points.[8]

This general pattern is brought out in Table 2, which shows the mean (and standard deviation) change in each party's percentage of the votes cast by the margin of victory in 1997, for four different types of seat according to which parties occupied first and second places then.[9] In those seats that Liberal Democrat candidates were defending and where the Conservatives came second in 1997, the Liberal Democrat share of the vote increased most (by 7.7 percentage points on average) in the most marginal constituencies, whereas both the Conservative and Labour shares fell. (As the table shows, there are statistically significant differences – established by ANOVA tests – in changes in each party's vote share, and in the turnout level, across the marginality categories.) In constituencies which were held by larger majorities, however, the Labour vote on average remained stable – providing strong circumstantial evidence of pro-Labour supporters voting tactically to sustain a Liberal Democrat incumbent where the challenge from the Conservatives was greatest. (That this Conservative challenge failed to materialize, as shown by the party's declining vote share in the marginal constituencies, suggests a personal vote for the Liberal Democrat incumbents.)

The Labour-held seats with Conservatives occupying second place provide similar circumstantial evidence of anti-Conservative tactical voting in those which the party won by small majorities in 1997 – although it is not possible to identify how much of this was a personal vote for the incumbents (many of whom entered Parliament for the first time in 1997). Thus the Labour vote increased on average in its most marginal seats, whereas the Liberal Democrat share declined. The Conservative vote share also increased, though by less on average than did Labour's – clearly suggesting that Labour was able to outvote its Conservative challengers again in those marginal seats because of assistance from erstwhile Liberal Democrats who voted tactically. In Labour's safe seats (with 1997 margins of ten points or more), on the other hand, its share of the votes declined whereas that of the Liberal Democrats increased – differences that were statistically significant, as were the smaller changes in turnout in the more marginal seats. Both Labour and the Liberal Democrats probably retained a number of their more marginal seats because of tactical voting, therefore.

In Conservative-held seats, on the other hand, there were few significant variations in the changing support for individual parties. One exception was that the Liberal Democrat share increased most in those most marginal seats in which they came second in 1997. The clear focus of the campaign for both Labour and the Liberal Democrats was on retaining the seats won in 1997. With few exceptions, there was little sustained effort to win more

constituencies from their Conservative incumbents, hence the absence of any significant variations in the outcome in those seats. Labour sought no more wasted votes in the seats that it was almost certain to lose.

The geographies of support for the Labour and Conservative parties have traditionally produced an infrastructural gerrymander-like effect, which has led to the Conservatives having a more efficient vote distribution than their Labour opponents. In its areas of strength, Labour suffered from a stacked gerrymander-like situation, amassing large numbers of surplus votes per seat won in cities like Sheffield. In areas of Conservative strength, on the other hand, Labour amassed more wasted votes per seat lost in counties such as Northamptonshire (than the Conservatives did in Sheffield), because of the relatively small Conservative majorities there. Much of this infrastructural pro-Conservative advantage was removed in 1997 by Labour's targeted campaigning and the consequent uneven geography of its success then.

Having achieved all that, how did Labour manage to go even further in 2001, with fewer surplus votes per seat won as well as wasted votes per seat lost, and a consequent 7.7 percentage point advantage in the effective vote percentage? The change in surplus votes per seat won has already been accounted for largely through the differential pattern of changes in turnout. Labour's average majority in the seats it won in 1997 was 13,234: four years later, its average majority in those same seats was 9,558. Furthermore, although the change was linear, it was greatest in the safest seats. In seats where it had a majority of 0 in 1997, the regression

$$\text{Majority 2000} = 1{,}575 + 0.602\ (\text{Majority 1997}) \quad r^2 = 0.82$$

suggests a majority of 1,575 (the constant term) in 2001. But as its 1997 majority increases, its average majority (predicted by that regression) in 2001 increases less steeply: a majority of 1,000 in 1997 would produce a majority of 2,177 in 2001; and the respective 2001 majorities for 1997 figures of 10,000, 20,000 and 30,000 are 7,595, 13,615 and 19,635. Labour won more votes in 2001 where it mattered – and had fewer surplus votes where they did not matter!

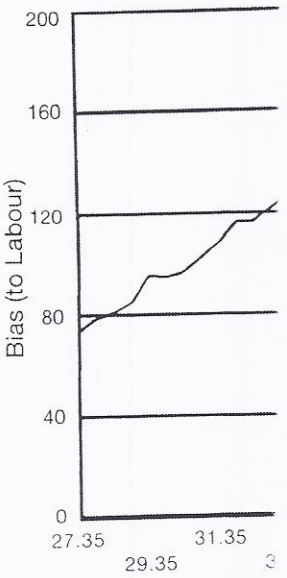
The change in wasted votes per seat lost is in part accounted for by both tactical voting and the turnout variations. But the biggest contribution to Labour's success in this category was the Conservative Party's failure to reverse the stacked gerrymander-like situation, save in a very few cases (the seats that it regained from Labour, notably in London's eastern suburbs). If Labour was to waste a lot more votes in seats lost in 2001 than in 1997, then one or both of two changes had to occur. First, the Conservatives had to win seats from Labour, thereby increasing the number that Labour lost

by small majorities – and so to do, capturing only five increase its vote share in th did not happen.

The Changing Efficiency C

The last two elections have therefore, but to what exte the biases with equal vote that point. This is readily which can calculate the bi the two main parties thr Figure 7 gives the net bias f and 47.35, centred on the say, 41.35 per cent is the dif would win if each had th Conservative and Labour would be a bias to Labou

THE NET BIAS AT THE 2001 GE
THE CO

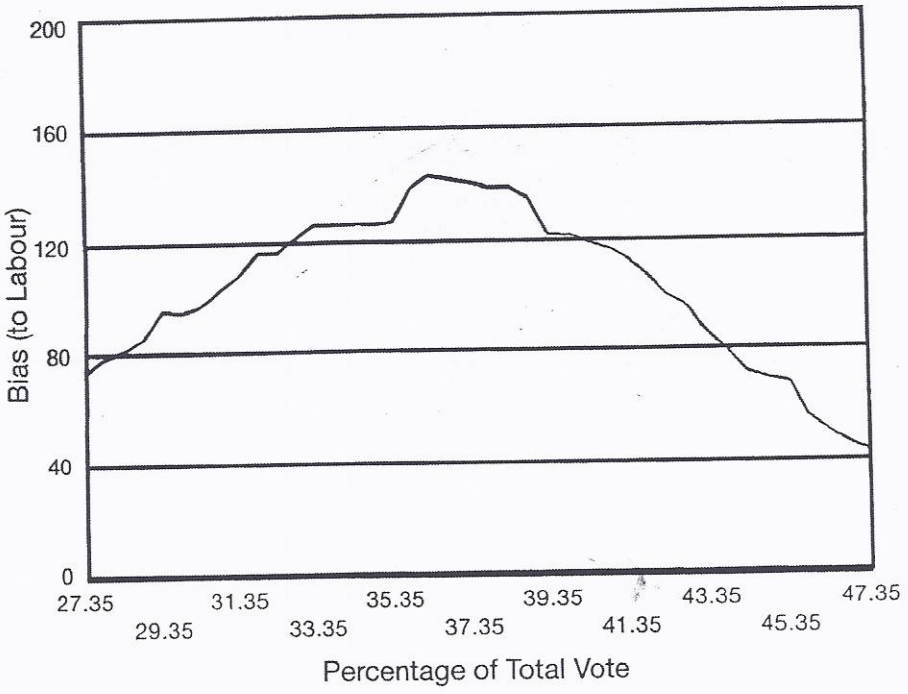


by small majorities – and so wasting more votes per seat lost: this they failed to do, capturing only five seats from Labour. Secondly, Labour had to increase its vote share in the Conservative marginals, which Table 2 shows did not happen.

The Changing Efficiency Component

The last two elections have seen a major shift in the operation of the biases, therefore, but to what extent? This can be addressed by looking not just at the biases with equal vote shares but also at a range of vote shares around that point. This is readily achieved by the methodology employed here, which can calculate the bias at any estimated vote percentage for each of the two main parties through a uniform shift across all constituencies. Figure 7 gives the net bias figure at every 0.5 percentage point between 27.35 and 47.35, centred on the equal vote share position of 37.35. (The bias at, say, 41.35 per cent is the difference in the number of seats that the two parties would win if each had that share of the two-party total.) Whatever the Conservative and Labour share of their joint vote total (74.7 in 2001), there would be a bias to Labour of at least 40 seats. The largest biases would be

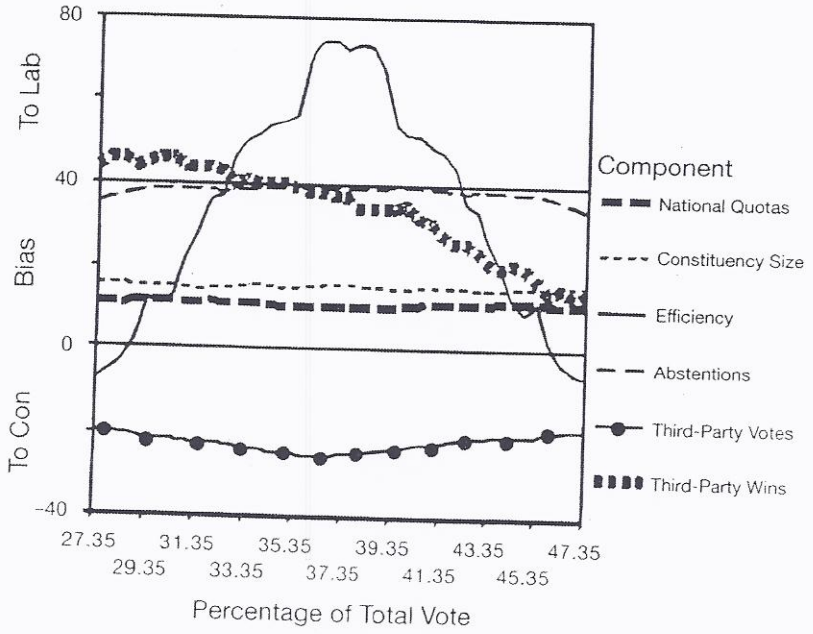
FIGURE 7
THE NET BIAS AT THE 2001 GENERAL ELECTION WITH DIFFERENT VOTE SHARES FOR THE CONSERVATIVE AND LABOUR PARTIES



around the 37.35 point. With much larger percentages, Labour would not benefit as much from the biases, because of the buildup of surplus votes in its safe seats; with much smaller percentages, it would waste more votes per seat lost in the constituencies that the Conservatives would regain.[10]

Figure 8 shows the variations in the six bias components that make up the net biases of Figure 7. Four vary hardly at all: the two malapportionment components each deliver biases of 10–15 seats to Labour across the full spectrum; abstentions deliver about a 40-seat bias to Labour; and third-party votes create pro-Conservative biases of about 20 seats. The only substantial variations are in the other two components. For third-party wins, the larger the vote percentage won by either party the smaller the pro-Labour bias, because as the Conservative vote falls the larger the number of seats it loses to the Liberal Democrats. This produces a 20-seat difference in the bias across the spectrum. The efficiency component varies by some 80 seats across the various vote shares. At the extreme percentages (below 30 and above 45), it favours the Conservatives slightly (because of the surplus and wasted vote patterns discussed in the previous paragraph). When the vote share is relatively equal (i.e. close to 37 points), however, the

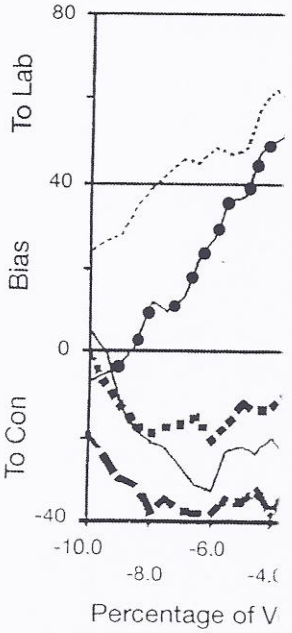
FIGURE 8
THE BIAS COMPONENTS AT THE 2001 GENERAL ELECTION WITH DIFFERENT VOTE SHARES FOR THE CONSERVATIVE AND LABOUR PARTIES



advantage is very substa
therefore, the efficiency c
of nearly 80 seats. Such
band (between *c.* 36–38 p
– 32–41 per cent of the vo
40 seats. A substantial s
substantially advantaged
But was this situation in

Figure 9 shows the ef
point spectrum for each
and 1987, the efficiency c
seats around the equal
extreme values. In 1992,
the bias fell (i.e. became
the central points. And t
Labour situation. In 199
the Conservatives benefit
even more in the central

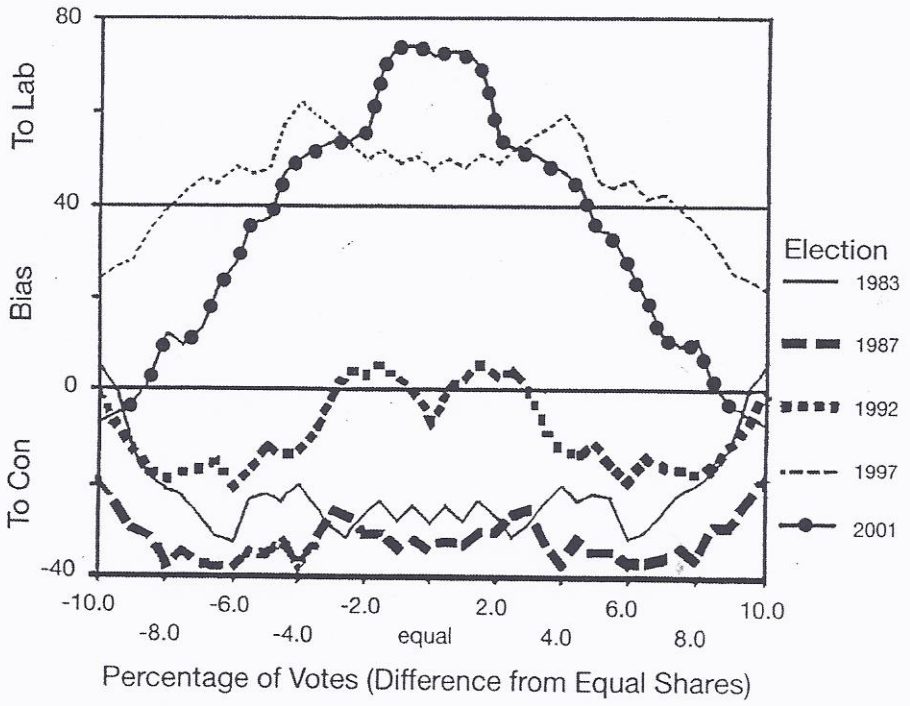
THE EFFICIENCY BIAS CO
DIFFERENT VOTE SHA



advantage is very substantially to Labour. With equal vote shares in 2001, therefore, the efficiency component delivered a substantial pro-Labour bias, of nearly 80 seats. Such a large pro-Labour bias was confined to a narrow band (between *c.* 36–38 per cent of the votes cast), but within a broader range – 32–41 per cent of the votes cast – the pro-Labour efficiency bias is still above 40 seats. A substantial swing either to or from Labour would thus leave it substantially advantaged in terms of the efficiency of its vote distribution. But was this situation in any way different from that at previous elections?

Figure 9 shows the efficiency bias component across the 20-percentage-point spectrum for each of the last five elections in the sequence.[11] In 1983 and 1987, the efficiency component favoured the Conservatives by up to 40 seats around the equal share point – and only favoured Labour at the extreme values. In 1992, although generally pro-Conservative, the size of the bias fell (i.e. became closer to zero) – and it favoured Labour at some of the central points. And then in 1997 and 2001 there was a switch to a pro-Labour situation. In 1997, Labour was the beneficiary at all points; in 2001 the Conservatives benefited slightly at the extremes – but Labour benefited even more in the central portions of the spectrum.

FIGURE 9
THE EFFICIENCY BIAS COMPONENT AT THE 1983–2001 GENERAL ELECTIONS WITH DIFFERENT VOTE SHARES FOR THE CONSERVATIVE AND LABOUR PARTIES



Between the 1983–87 and 1997–2001 elections, Labour's vote share increased very substantially, whereas that of the Conservatives fell to nadirs never previously experienced. Within this overall shift of support there was a significant alteration in the details of the geographies, especially in the support for Labour. As a consequence, a geography of support which had traditionally been inefficient for the party – too many surplus votes per seat won especially, but also too many wasted votes per seat lost – was transformed into one that was even more efficient than the Conservatives' had ever been. Labour's return from its own electoral nadirs of the 1980s involved it winning more votes where they mattered, so that these translated into seats at a better ratio than had ever occurred for the Conservatives in the preceding decades.

This very substantial change in the translation of votes into seats, very much to Labour's advantage, has occurred over a relatively short period and cannot readily be linked to major changes in the geography of Conservative and Labour support. In the classic use of the term by Americans, there have been no 'critical elections' in terms of changing geographies of support for one or more of the political parties at the macro-scale: the r^2 value from a regression of Labour percentage of the votes cast in 2001 on the same percentage in 1997 is 0.95 – its relative pattern of vote-winning remained virtually unchanged, as it did also for the Conservatives, $r^2=0.94$, and the Liberal Democrats, $r^2=0.87$. Nor can this shift readily be associated with the traditional electoral abuses of malapportionment and gerrymandering. Malapportionment is present in the British electoral system, but its impact is insufficient, and has not changed enough, to account for the shifts identified here. And there has not been extensive gerrymandering, as traditionally understood – i.e. as careful drawing of constituency boundaries for partisan ends. Indeed, that would not be possible if the distribution of votes for the parties remained relatively constant – and the extent to which it is feasible was demonstrated by Labour's success in the 'battle of the boundaries' during the Boundary Commissions' Fourth Periodic Reviews. (And this occurred between the 1992 and 1997 elections; Figure 9 shows as much change between 1987–1992 and 1997–2001 as over the inter-election period when the constituencies were changed.)

What has happened over recent elections is that Labour has successfully achieved a much greater efficiency in the distribution of its support across Great Britain's 641 constituencies (and thus the equivalent of a gerrymander), without changing the macro-geography of its support, by manipulating the pattern of votes within the constituency boundaries rather than by manipulating the boundaries. As the party's vote share increased from the nadirs at the two 1980s elections, it managed to ensure that this was concentrated where it mattered – and did not generate large increases in

either the number of
lost. It successfully c
encouraging more vo
intensity campaigns a
antipathy among som
votes, but no seats a
Democrats ensured th
previously: its vote in
could win, whereas in
Labour's performance
Conservatives were un
votes overall but, save
the infrastructural ge
only 19 seats where th
behind a Labour vict
geography was strongl
because Labour has l
strategies.

Conclusions

Labour won well in 1
geography. Through a
of them managed thro
an extent never previc
Democrats' own parall
vote share fell by 2.6 p
cent of its votes), but i
points). It lost votes a

These 1997 and 2
geography in the tran
that can result. This h
by the geography of
successful) spatial str
where they will have n
seats in the House of
in 1992, 1997 and 20
seats, where it still wo
at least because of the
so smaller proportion
seats. Elsewhere, it als
lose (why expend effo

ctions, Labour's vote share
ıe Conservatives fell to nadirs
all shift of support there was
eographies, especially in the
graphy of support which had
o many surplus votes per seat
tes per seat lost – was trans-
than the Conservatives' had
ectoral nadirs of the 1980s
tered, so that these translated
rred for the Conservatives in

ıtion of votes into seats, very
r a relatively short period and
ıe geography of Conservative
erm by Americans, there have
ıg geographies of support for
cro-scale: the r^2 value from a
es cast in 2001 on the same
rn of vote-winning remained
nservatives, r^2=0.94, and the
ift readily be associated with
onment and gerrymandering.
ectoral system, but its impact
account for the shifts identi-
rymandering, as traditionally
ıency boundaries for partisan
e distribution of votes for the
extent to which it is feasible
ıe 'battle of the boundaries'
Periodic Reviews. (And this
ns; Figure 9 shows as much
over the inter-election period

s that Labour has successfully
ribution of its support across
s the equivalent of a gerry-
aphy of its support, by mani-
tuency boundaries rather than
y's vote share increased from
ıaged to ensure that this was
ot generate large increases in

either the number of surplus votes per seat won or wasted votes per seat lost. It successfully countered the 'infrastructural gerrymander' by not encouraging more votes in its safe seats, which has involved both low-intensity campaigns and – perhaps in 2001 – not only apathy but also antipathy among some of its former heartland supporters: it has lost their votes, but no seats as a consequence. Tactical voting with the Liberal Democrats ensured that Labour didn't waste as many votes in seats lost as previously: its vote increase was concentrated in those constituencies it could win, whereas in those where the Liberal Democrats were best placed, Labour's performance declined – relatively, if not absolutely. Finally, the Conservatives were unable to counter this, especially in 2001: they won more votes overall but, save in a few places, not where they mattered to counter the infrastructural gerrymander. Following the 2001 election there were only 19 seats where the Conservatives were less than five percentage points behind a Labour victor. In the 1980s, as in the previous three decades, geography was strongly on the Conservatives' side: now it is on Labour's, because Labour has learned the great benefits to be gained from spatial strategies.

Conclusions

Labour won well in 1997 – in terms of seats relative to votes – because of geography. Through a combination of factors, some serendipitous but most of them managed through its campaign strategy, it made its votes count to an extent never previously achieved. It was assisted in this by the Liberal Democrats' own parallel geography of vote-winning tactics. In 2001 Labour's vote share fell by 2.6 percentage points over its 1997 total (i.e. it lost 6 per cent of its votes), but it lost only five seats net (a fall of just 0.7 percentage points). It lost votes at a much greater rate than it lost seats.

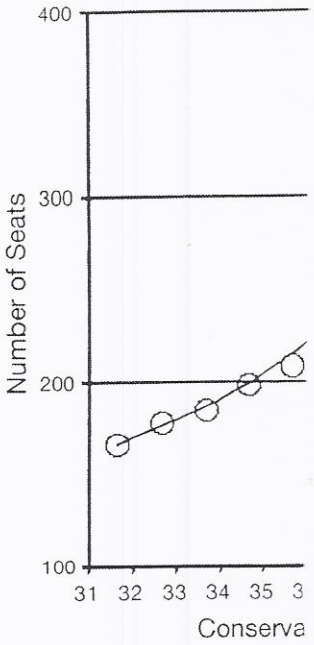
These 1997 and 2001 performances demonstrate the importance of geography in the translation of votes into seats, and the biased outcomes that can result. This has been brought about to a very considerable extent by the geography of Labour's campaigning, by its very focused (and successful) spatial strategy of winning votes where they matter, and not where they will have no effect on the ultimate outcome – the allocation of seats in the House of Commons. Thus, Labour did not expend much effort in 1992, 1997 and 2001 on turning out more votes in its safe 'heartland' seats, where it still won very comfortably – and as turnout fell there (in part at least because of the lack of a stimulus to turnout provided by any party), so smaller proportions of its overall vote delivered it the same number of seats. Elsewhere, it also failed to campaign hard in the seats it knew it would lose (why expend effort on winning votes that will not deliver seats: that is

just wasted effort and votes?) – including, increasingly, those where the Liberal Democrats were well placed for victory. Instead, it concentrated on those constituencies where more votes would matter (or losing votes would matter most) – and, of course, many of the policies in its 1997 manifesto and its 1997–2001 government were directed at the core voters in those seats ('middle England'). In this it was highly successful, both at outflanking the Conservatives in 1997 and preventing their resurgence in the same places four years later.

Malapportionment is built in to the UK electoral system, though not in order to advantage any particular party; it just happens to favour Labour currently. The equivalent of gerrymandering is present too – again, not in the partisan way that it has been employed in the USA, but rather as a necessary consequence of the interaction between geographies of party support on the one hand and the geographies of constituency boundaries on the other. Together, these have produced biases in the system's outcomes. In the 1950s, most of those biases favoured the Conservatives (including malapportionment, because the English Commission favoured rural – i.e. Conservative – areas when producing relatively small seats). In the 1960s and 1970s the bias components tended to cancel each other out: Labour had the advantage with the malapportionment and reactive malapportionment components (because it was the stronger of the two main parties in Scotland and Wales, in the smaller inner-city constituencies, and in the areas of low turnout); the Conservatives benefited from the efficiency component, because they had fewer safe seats with massive majorities of surplus votes than Labour, which also tended to waste more votes where it lost to the Conservatives than vice versa. In the 1980s, Labour suffered greatly from one aspect of the efficiency component – its large majorities in its heartland seats (the stacked gerrymander-like effect) – but less so from the other, since the growth of the Liberal Democrats as the second-largest party in much of southern England resulted in a reduction in Labour's wasted vote per seat lost total (the cracked gerrymander-like effect).

Finally, in the 1990s, and especially 2001, Labour tackled the efficiency issue head-on, through its focused campaigning plus its acceptance of both low turnout in its safe seats and tactical voting once the Liberal Democrats became an alternative 'party of the left' (Budge, 1998). Its vote distribution is now much more efficient, with the result that a Conservative comeback is even more difficult than the vote gap between the two parties suggests. This is shown in Figure 10, which gives the number of seats that the Conservatives would win as a result of a uniform shift to them from Labour (in one percentage point increases), with the other parties retaining the same vote percentages as in 2001. Not until the Conservatives have 40.7 per cent of the votes (and Labour 34 per cent) would they obtain a larger

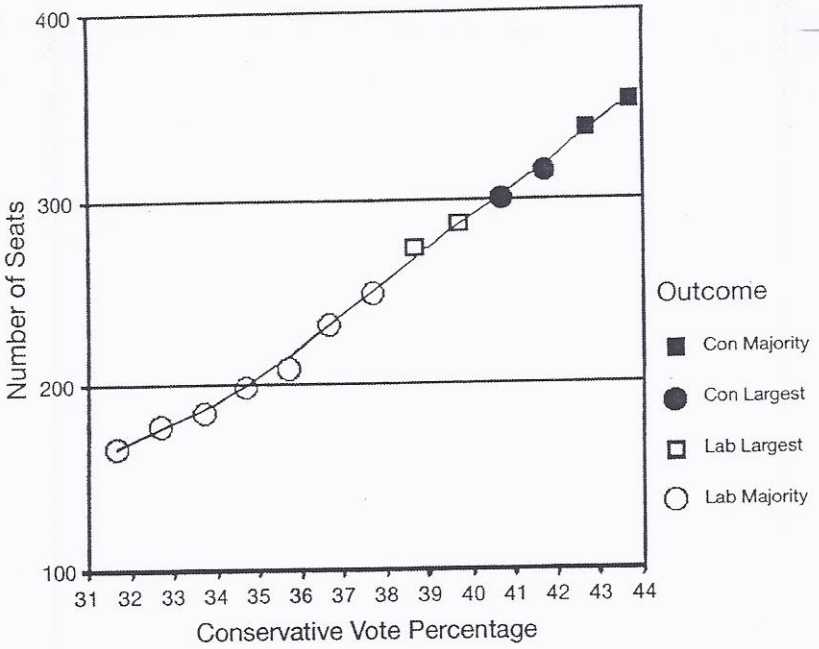
THE NUMBER OF SEATS TH
DIFFERENT SHARES OF THE VOT



Parliamentary complement
have a Parliamentary majo
votes (and Labour just 32 p
see also Curtice, 2001). G
favours geography!

Of course, all could cha
conducting their Fifth Peri
reports between 31 Decem
experience and the current
election will be held using
the pro-Labour malapport
achievement of greater el
against Labour, as also will
(The *Scotland Act 1988* re
to use the same electoral c
et al., 1999 – which is likel
c. 58 MPs. Much of the

FIGURE 10
THE NUMBER OF SEATS THAT THE CONSERVATIVE PARTY WOULD WIN WITH DIFFERENT SHARES OF THE VOTES CAST IN 2001, ASSUMING A UNIFORM SWING TO IT FROM LABOUR



Parliamentary complement than their main opponent, and they would not have a Parliamentary majority (of 15) until they had 42.7 per cent of the votes (and Labour just 32 per cent, basically the Conservatives' 2001 figure: see also Curtice, 2001). Geography now favours Labour – and Labour favours geography!

Of course, all could change. The Boundary Commissions are currently conducting their Fifth Periodic Reviews. They are required to submit their reports between 31 December 2002 and 31 December 2006, and on past experience and the current situation, it is very likely that the next general election will be held using new constituencies. When these are introduced, the pro-Labour malapportionment bias will undoubtedly be reduced: the achievement of greater electoral equality across constituencies will act against Labour, as also will the reduction in the number of seats in Scotland. (The *Scotland Act 1988* requires the Boundary Commission for Scotland to use the same electoral quota as the English Commission – see Rossiter *et al.*, 1999 – which is likely to lead to Scotland being reduced from 72 to c. 58 MPs. Much of the reduction could be at Labour's expense, which

accounts for the concerns expressed by Scottish Labour MPs in late 2001 regarding this requirement.) Nevertheless, even with new constituencies, the pro-Labour bias is likely to remain substantial unless one or more of the following happens:

1) There is a large swing from Labour to Conservative, removing much of the pro-Labour efficiency bias component shown in Figure 8;
2) Turnout increases very substantially, especially in Labour-held seats;
3) There is a collapse of support for the Liberal Democrats in areas of the country where the Conservative party dominates, perhaps countered by increased support for them in pro-Labour areas.

In each case, the resulting bias would favour the Conservatives rather than Labour (or would at least erode Labour's current advantage from the reactive malapportionment and efficiency bias components). Geography would no longer favour Labour – and it may be difficult for Labour to re-engineer geography in its favour. The current, strongly pro-Labour, situation is contingent and not necessary. It could disappear – though in the short-term that seems very unlikely.

NOTES

1. Scotland will lose that benefit, under the terms of the *Scotland Act 1998*, when the Boundary Commission for Scotland completes its Fifth Periodic Review.
2. In previous work we have used the term 'gerrymander'to describe this component, since the purpose of gerrymandering is to alter the relative efficiencies of two parties' vote distributions. This has occasioned some negative comments, since gerrymandering is normally understood – from its origins in the US (Monmonier, 2001) – to refer to explicit drawing of constituency boundaries for partisan advantage. Although there is a small element of this in the UK (Rossiter *et al.*, 1999; Johnston *et al.*, 2001), much of the votes-to-seats distortion that occurs because of where boundaries are drawn takes place within an independent non-partisan procedure. However, as Gudgin and Tayor (1979) have shown, all districting is gerrymandering, however undertaken, because of the interactions of the two geographies – of votes, and of boundaries. Furthermore, as argued here, those interactions are strongly influenced in the UK context not so much by gerrymandering of the boundaries but rather by what is, in effect, gerrymandering of the voter distributions. However, responding to the arguments from commentators (at the EPOP conference and elsewhere) that gerrymandering implies corruption – even though it was 'legitimated' by a recent US Supreme Court decision (in *Hunt v Cromartie*, determined April 2001) – we have decided to use the more neutral term 'efficiency' here.
3. This excludes the interactions among the six components, which amount to 11 seats in 2001.
4. The Liberal Democrats held a majority of the seats on Sheffield City Council at the time.
5. The first inter-election flow-of-the-vote matrices, corrected in order to meet the constraints of the national outcome in both 1997 and 2001, suggest that 23 per cent of Labour's 1997 supporters indeed abstained in 2001.
6. Though when more data are available on constituency campaigning we may need to revisit this issue.

7. The Conservatives lost Dor vote share increased by 2.7 was lost to Labour, whose Democrats' fell by 5.8. In D commensurate increase in t the tactical vote strategists
8. Some of this undoubtedly supporters who voted for her/him in 2001.
9. The small numbers of seats two places in 1997 are exclu of the two leading places.
10. This is entirely in line with *et al.* (2001, Chapter 2).
11. In Figure 9, because the tot Labour together varied son and the equal-shares point the horizontal axis is expres at each election, which is *c.* for each party than the equ

We are grateful to Pippa Norris election result, which enabled o paper at the EPOP conference f for his editorial suggestions.

Blau, A. (2001) 'Partisan Bias in and L. Harrison (eds.) *Brit*
Budge, I. (1998) 'Party Policy a (eds.) *Critical Elections: B* London: Sage.
Curtice, J. (2001) 'General Elec
Denver, D. (2001) 'The Liberal Oxford: Oxford University
Dunleavy, P. and H. Margetts (
Britain Votes 1997, pp.225-
Gudgin, G. and P.J. Taylor (1 London: Pion.
Johnston, R.J. (1979) *Political, I*
Johnston, R.J., C.J. Pattie, D.F. *Operation of the UK Elec* Press.
Monmonier, M.S. (2001) *Bushm Maps and Census Data to*
Norris, P. (2001) 'An Apatheti Oxford University Press.
Rossiter, D.J., R.J. Johnston, an *UK's Map of Parliamentar*

7. The Conservatives lost Dorset Mid and North Poole to the Liberal Democrats, whose vote share increased by 2.7 percentage points whereas Labour's fell; and Dorset South was lost to Labour, whose vote share increased by 6.0 per cent whereas the Liberal Democrats' fell by 5.8. In Dorset West, a drop in the Labour share of 4.1 points, and a commensurate increase in the Liberal Democrats' share, failed to deliver a third scalp to the tactical vote strategists by a majority of less than 1,500 votes.
8. Some of this undoubtedly reflects continued tactical voting – e.g. erstwhile Labour supporters who voted for a Liberal Democrat winner in 1997 and remained loyal to her/him in 2001.
9. The small numbers of seats where Labour and the Liberal Democrats occupied the first two places in 1997 are excluded, as are those with either Plaid Cymru or the SNP in one of the two leading places.
10. This is entirely in line with Gudgin and Taylor's (1979) thesis, as illustrated in Johnston *et al.* (2001, Chapter 2).
11. In Figure 9, because the total percentage of the votes cast won by the Conservatives and Labour together varied somewhat – though not very substantially – across the elections, and the equal-shares point also varied because of their relative proportions of that total, the horizontal axis is expressed as percentage-point differences from the equal share point at each election, which is *c.*38 points. A negative difference indicates a smaller vote share for each party than the equal position; a positive difference equals a larger share.

ACKNOWLEDGEMENTS

We are grateful to Pippa Norris for producing and making available a full data set on the 2001 election result, which enabled our analyses to get off to an early start, to discussants of the paper at the EPOP conference for valuable comments and suggestions, and to Colin Rallings for his editorial suggestions.

REFERENCES

Blau, A. (2001) 'Partisan Bias in British General Elections', in Tonge, J., L. Bennie, D. Denver and L. Harrison (eds.) *British Elections and Parties Review, 11*. London: Frank Cass.

Budge, I. (1998) 'Party Policy and Ideology: Reversing the 1950s', in Norris, P. and G. Evans (eds.) *Critical Elections: British Parties and Voters in Long-Term Perspective*, pp.1–21, London: Sage.

Curtice, J. (2001) 'General Election 2001: Repeat or Revolution?' *Politics Review* 11: 2–5.

Denver, D. (2001) 'The Liberal Democrat Campaign', in Norris, P. (ed.) *Britain Votes 2001*. Oxford: Oxford University Press.

Dunleavy, P. and H. Margetts (1997) 'The Electoral System', in Norris, P. and N. Gavin (eds.) *Britain Votes 1997*, pp.225–41. Oxford: Oxford University Press.

Gudgin, G. and P.J. Taylor (1979) *Seats, Votes and the Spatial Organisation of Elections*. London: Pion.

Johnston, R.J. (1979) *Political, Electoral and Spatial Systems*. Oxford: Oxford University Press.

Johnston, R.J., C.J. Pattie, D.F.L. Dorling, and D.J. Rossiter (2001) *From Votes to Seats: The Operation of the UK Electoral System since 1945*. Manchester: Manchester University Press.

Monmonier, M.S. (2001) *Bushmanders and Bullwinkles: How Politicians Manipulate Electronic Maps and Census Data to Win Elections*. Chicago: University of Chicago Press.

Norris, P. (2001) 'An Apathetic Landslide', in Norris, P. (ed.), *Britain Votes 2001*. Oxford: Oxford University Press.

Rossiter, D.J., R.J. Johnston, and C.J. Pattie (1999) *The Boundary Commissions: Redrawing the UK's Map of Parliamentary Constituencies*. Manchester: Manchester University Press.