



spoiled ballot

why less than three per cent have a fair share
of power in Britain

Spoiled ballot

Less than three per cent of UK voters have anything like a fair share of power in an election according to a new Index of Democratic Power (IDP) which is based on analysis of voters ability to influence the results of general elections from 1954 to 2005.

nef's Index of Democratic Power (IDP) reveals that:

- democratic power in the UK is more unevenly distributed than income. The most powerful electors in the UK have 50 times more power in an election than the least powerful.
- the inefficiency of our electoral system means that only 2.6 per cent of the UK electorate have anything like a fair share of democratic power. Only 1.1 million voters of a voting population of forty-three million have an IDP of over 80.

If each voter in a UK election had their fair share of democratic power, they would have an IDP of 100. However, the IDP reveals that average democratic power in the UK is only 19.4, suggesting that over 80 per cent of potential democratic power in Britain is being wasted.

The Index of Democratic Power confirms the fears of voters in many constituencies that their votes do not count, by revealing for the first time the difference in power wielded by voters in constituencies across the UK. The revelation of this gross disparity in power and the inefficiency of the first past the post system in representing the will of UK voters adds to growing pressure for a more proportional system.

It is clearly time for a system in which the result of a general election is more representative of the will of the UK electorate. Since the 2005 general election significant momentum has gathered behind a movement for electoral reform championed and led by the *Independent* newspaper, the long-established reform group Charter 88, and the Electoral Reform Society, in association with the Liberal Democrats, the Green Party and the nationalist parties in Wales and Scotland. This movement has already forced the formation of a new all-party parliamentary group to discuss reform of the House of Commons.

The IDP's exposure of the gross inequality and inefficiency at the heart of the UK electoral system adds to the body of evidence in support of electoral reform.

Spoiled ballot: the imbalance of power at the heart of the British electoral system

"One person, one vote". Such a fundamental part of our democracy. Yet the value of "one person one vote" depends on each vote having the same power to influence the result of an election. However, in the UK our democratic power is a delusion because our parliamentary electoral system simply doesn't deliver this.

The amount of 'democratic power' that each elector wields varies enormously – with 30 per cent of electors holding over 70 per cent of the available democratic power in the UK – in contrast the other 70 per cent of electors have to make do with sharing under 30 per cent of the available democratic power in Britain. The structure of our electoral system is undemocratic and unequivocally unjust.

This report launches a new Index of Democratic Power (IDP) that demonstrates precisely how much democratic power every voter, within each constituency in Britain, actually has. Democratic Power is defined as the potential power of an individual vote to influence the actual result of an election. An IDP score has been calculated for every constituency in Britain, with the results showing that the vast majority of electors are being denied their fair share of democratic power.



power – as living in a large constituency dilutes the effect of any individual vote. The average number of electors per seat was 68,845 in 2005, whereas the smallest seat (Na h-Eileanan an Iar in the Scottish Islands) had only 21,576 electors and the largest (Isle of Wight) had 109,046.

For each individual constituency the IDP is calculated as follows:

$$\text{IDP} = (\text{Potential to change hands}) \times (\text{Adjustment for size of electorate})$$

Having an IDP score of 100 means that all the electors in a constituency have their full fair share of democratic power. For this to happen, the constituency would need to be very marginal and be of average size. Cheadle in Greater Manchester where the Liberal Democrats had a tiny 0.1 per cent majority over the Conservatives going into the 2005 general election was the closest example of this. Its IDP score was 100.2; it was a Liberal Democrat hold, which illustrates it is not the fact that a seat changes hands that gives it a high IDP score, it is its potential to

The Index of Democratic Power: an explanation

The overall result of a general election is entirely dependent on seats changing hands at a constituency level, so voters' individual democratic power depends on two factors.

Firstly the potential that their constituency has to actually change hands - the more marginal the constituency, the more potential power the voters have to influence the result of their seat and hence the overall general election.

An estimation of the potential of a particular constituency changing hands at an election has been calculated by devising a probabilistic model based on analysing over 6,000 constituency results in UK parliamentary general elections from 1955–2005. During this period of 13 elections there were five changes of government in Westminster yet only 11 per cent of seats actually changed hands.¹

Secondly, the size of a constituency is important to people's democratic

Nation unjust: Constituencies' IDPs

Whilst Cheadle was functioning at full democratic power at the 2005 elections, there were three other constituencies which scored even higher IDPs as they were marginal and smaller than average. There were two in Wales; Brecon & Radnorshire (100.4) and Ynys-Mon (101.6).

The voters with the most democratic power in Britain live in the very small constituency of Na h-Eileanan an Iar in the Scottish Islands. These electors had a huge IDP score of 131, in other words they have over 30% more than their fair share of democratic power. In the election the SNP gained the seat from Labour with a 9% swing.

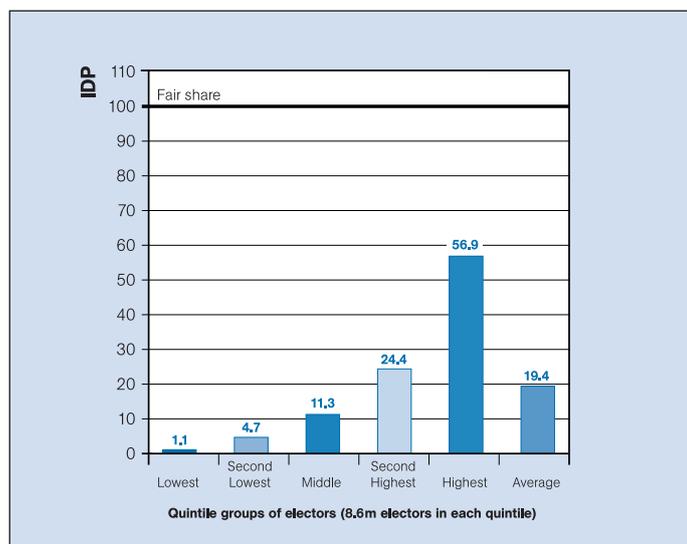
Most voters do not have anywhere near their fair share of democratic power. Electors living in Bootle in Merseyside are the least powerful in the whole of Britain having an IDP score of just 0.07, well over a thousand times less than their fair share. This was because Labour had a 69% majority from the 2001 election, meaning that votes cast in Bootle had very little chance of influencing change at Westminster. Clearly the will of electors in Bootle was for no change at this time, though the majority was slightly down and Bootle had one of the lowest turnouts at just 47.7%. However during Conservative dominated elections from 1979–1992, the Bootle electors wouldn't have had any influence to change the structure of government even though they would undoubtedly wanted to.

An indication of how safe many Labour seats are is that the 100 lowest IDPs were all in constituencies held by Labour in 2001. Only of two of these seats changed hands in 2005, one was Blaenau Gwent in Wales where an independent 'labour' candidate protesting against all-female short lists, scored a comprehensive victory against the official (female) Labour candidate. The other was Brent East, which was an unusual case as it had already been a by-election gain by the Liberal Democrats in 2003, and they held onto the seat in the general election.

The Conservative seat with the lowest IDP score is Richmond in Yorkshire (William Hague's seat) with a Tory majority of 37 per cent in 2001 and a corresponding IDP score of 1.77 (so just 1.77 per cent of its fair share of democratic power) – it is the 101st on the IDP list. The Tories unsurprisingly held the seat with a slightly increased majority of 39 per cent.

A table of the IDP for every constituency in Britain is available from the **nef** web-site at www.neweconomics.org

Figure 1: Levels and distribution of democratic power: UK Parliamentary elections 2005



change. Monmouth in Wales was in a similar position with an IDP of 99.4; here the Conservatives took the seat from Labour with a 5.4 per cent swing.

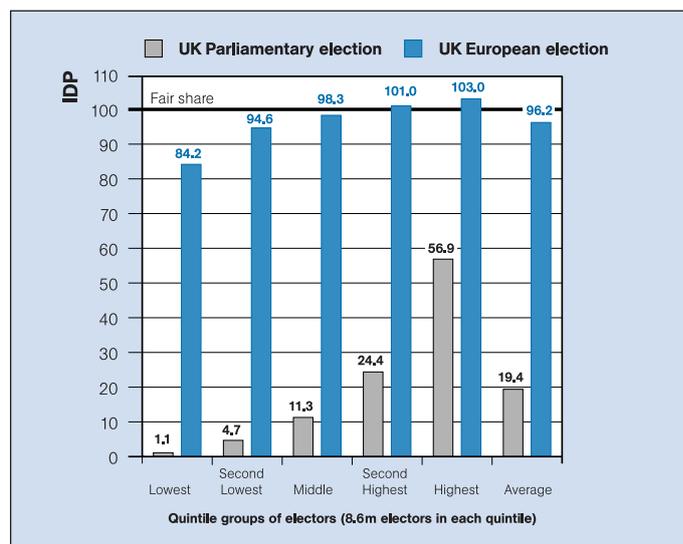
Spoiled ballot: our inefficient and unjust electoral system and its uneven distribution of power

Not only are levels of democratic power low in the UK; the distribution of democratic power across the constituencies in Britain is also exceptionally uneven. If every vote counted equally and fully, every elector would have an IDP score of 100. So the fact that average IDP is only 19.4 suggests that over 80 per cent of potential democratic power in Britain is being wasted – leaking away due to the inefficiency of the first-past-the-post system at translating the ‘will of the people’ into the structure of government.

The system is not only inefficient, it is also monumentally unjust – with a postcode lottery of how much democratic power electors actually wield. The top 20 per cent of the electorate (8.65 million electors) who live in constituencies with the most potential to influence the election results, have over 50 times as much democratic power as the least powerful 20 per cent (see Figure 1).

This is a far more uneven distribution than household income in the UK. Even before the redistribution through taxes and benefits – the richest 20 per cent of households ‘only’ earn 15

Figure 2: Comparison of UK Parliamentary election IDP and UK European election IDP



times as much as the poorest. After redistribution this inequity factor is reduced to under 4 times.

Spoiled ballot: it doesn't have to be this way

In fact not only doesn't it have to be like this, we also have an alternative electoral system already operating in the UK that does devolve much more democratic power to the people, the European Elections.

In 1999 the European parliament elections in the UK changed from a first-past-the-post system to a form of more proportional representation – multi-member constituencies.

An estimated IDP has been calculated for the 2004 UK European Elections and is shown in Figure 2 (for more details of its estimation see Appendix 2). It not only has much higher levels of IDP for all electors, averaging 96.2, power is also much more evenly distributed – the ratio of the top 20 per cent to the bottom 20 per cent is only 1.2:1. Effectively the system is more efficient at harnessing democratic power and more even handed at ensuring everyone's vote counts almost equally.

However, the fact that turnout is lower in the European Elections, does illustrate that despite the effectiveness of the electoral system people won't vote if they are disinterested.

Spoiled ballot: democratic power and turnout

Whilst turnout at the 2005 general election was slightly up at 61 per cent from the post-war low of 59 per cent at the 2001 election, it is still worryingly lower than the average of 75 per cent that was recorded between 1964–1997 (see Figure 3).

The IDP will not explain the changes in turnout between elections, as the system is not becoming more structurally unjust,² but IDP does explain some of the cross-sectional variation in turnout across the country.

Figure 4 splits the distribution of IDP into five quintile groups, with group 1 being the 8.6 million electors with the lowest IDPs and group 5 the same number of electors with the highest IDPs. For each quintile the box represents most of the variation of turnout and the thinner lines the whole variation. For some quintiles there are ‘outliers’ – cases that are out of the ordinary and these are labelled with the constituency name.

As can be clearly seen there is a strong relationship between turnout and IDP. With significantly higher turnout in the seats with more democratic power – indeed the IDP statistically explains 48 per cent of the cross-sectional variation in turnout at the 2005 election.³ The outliers are of interest and we have already mentioned the special case of Blaenau Gwent in Wales, where as well a large Labour majority being turned over, turnout was also higher

Figure 3: UK voter turnout (%) 1964–2005

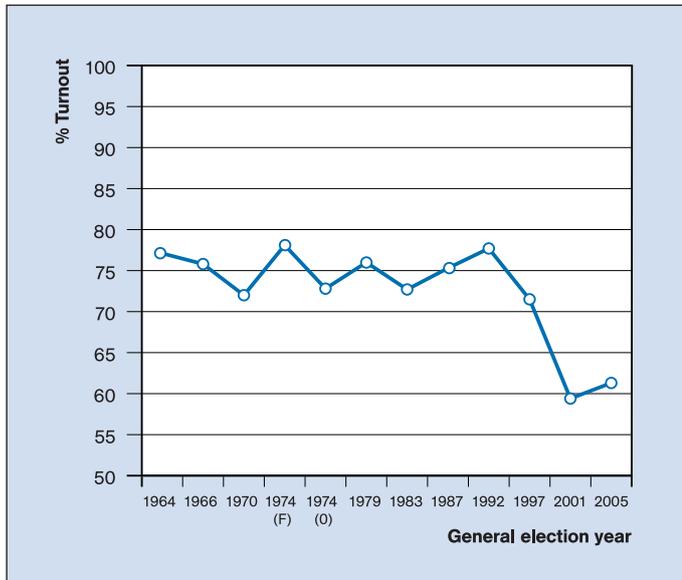
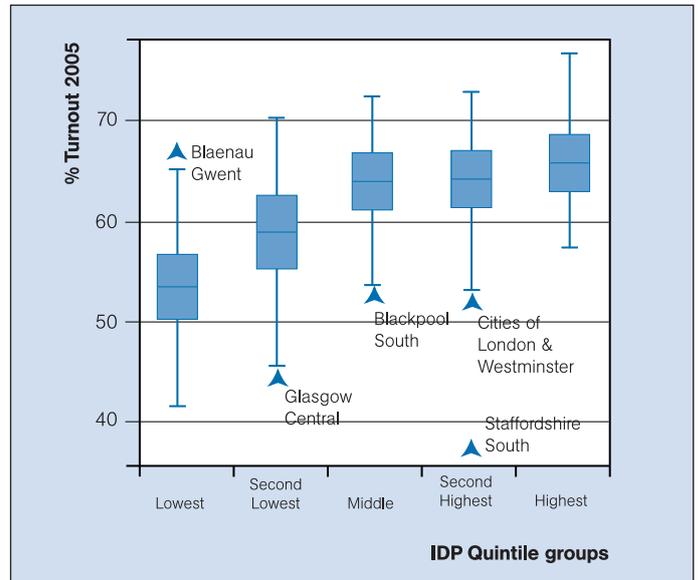


Figure 4: Voter turnout and IDP



than would be expected. However by the far the largest outlier is Staffordshire South, which had its polling day a few weeks late due to the death of the Liberal Democrat candidate before the general election – so there was much less incentive for people to vote.

With turnout down in the last two elections and evidence that the systemic injustice of the electoral system is a disincentive to people, it is clear that more and more electors are voting with their feet by putting them up rather than getting to the polling station.

Spoiled ballot: why do people vote at all?

Why do people bother to vote at all? This is a question that academics have asked themselves and indeed have asked electors. Whilst we all hear about polls before elections, for several years academics have been conducting surveys after elections as well – to try to understand why people vote (or don't).

In an excellent account of the 2001 election, *Political Choice in Britain*, Clarke, Sanders, Stewart and Whitley suggest that the large drop in turnout can be partially explained by people's (lack of) political interest and a model of how much incentive people get for voting. Their incentives model includes factors such as political efficacy (a sense of being able to influence politics), the perceived personal & collective costs and

benefits of voting, people's sense of duty to vote and the satisfaction people get from actually voting for the party that they support.⁴

The IDP is an objective indicator of democratic power which is not quite the same as a subjective indicator of political efficacy as it is not necessarily true that people 'sense' the degree of structural injustice in our current electoral system. However the relationship between IDP and turnout does suggest that people do sense their (lack of) efficacy.

In fact if people only voted because they thought they could influence the result, then it wouldn't be 'rational' for people to vote at all – academics call this the 'paradox of participation'. However as Clarke *et al* have pointed out, political efficacy is only part of the picture, people also vote because they feel it is their duty or because they actually enjoy it.

Spoiled ballot: why political participation is good for us

So is voting actually good for us? Should we care if turnout is falling? Is engaging in the political process a public good as well as a private act?

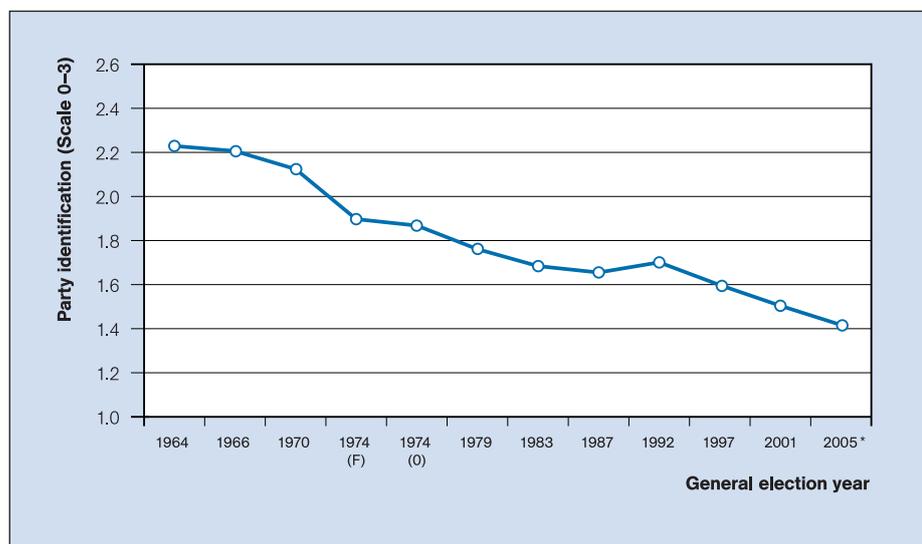
Post election surveys can shed some light on these questions, even if they can't fully answer them. The post election survey in 2001 does suggest there is a strong link between levels of personal well-being and social capital and voting behaviour. People

who voted in the elections tended to be more trusting, have higher levels of civic duty, were more engaged in their local communities and indeed were generally happier people than those who didn't vote.⁵ In other words voting is linked to higher levels of both social capital and personal well-being. Unfortunately what the survey can't tell us is whether voting was a symptom or a cause of these factors.

However, there is research from Switzerland that does indeed show that political participation actually improves people's satisfaction with their lives. Switzerland has a very high degree of political participation with several referenda each year. Some of these are national (for example they had one recently on whether the army should be abolished – it was rejected). Others are more locally organised in the politically devolved cantons (districts). Interestingly the 26 cantons vary as to how much they use referenda to engage with citizens. So the researchers, Bruno Frey and Alois Stutzer, were able to create an index of participation rights for each canton and then compare and contrast citizens' levels of happiness (measured by their satisfaction with life).

What they discovered was that political participation did indeed make people happier, and by a clever trick of comparing foreigners who can't vote but would enjoy the benefits of better policies due to public participation, they could show that two thirds of the extra happiness was

Figure 5: Party Identification 1964–2005



Source: p180; fig 6.3b; *Political Choice in Britain*; Clarke *et al*

*2005 data provisional supplied by Harold D Clarke.

due to the process of participating itself. So it does appear to be true – political participation actually makes people happier.⁶

One of the Swiss researchers, Alois Stutzer, has investigated the effects of enhanced political participation further. He has shown that not only does political participation make people happier but it also makes people better informed citizens. In a sense if people don't have a stake in creating change it is not surprising that they don't bother to go to the effort to find out about the facts. He concludes in his article that "if voter information is to be increased (a claim that is regularly heard), governments and policy advisors often focus on information campaigns... however... [they] consist of one-way communication... higher voter information might be achieved by giving citizens more direct participation possibilities".⁷

So if politicians are really "anti-apathy",⁸ the least they can do is give citizens their fair share of democratic power.

Spoiled ballot: sustained by vested interest?

There is a major problem with our argument about political participation and the structural injustice of the UK electoral system. The only people who can actually change the system are the beneficiaries of the system. The current government benefits from the structural injustices of the electoral

system, it protects their safe seats and makes it much harder for the opposition parties to oust them. Ironically the Conservatives had almost as much domination in the 1980s as Labour do now, as back then they had 70 out the lowest 100 IDP scoring seats.⁹

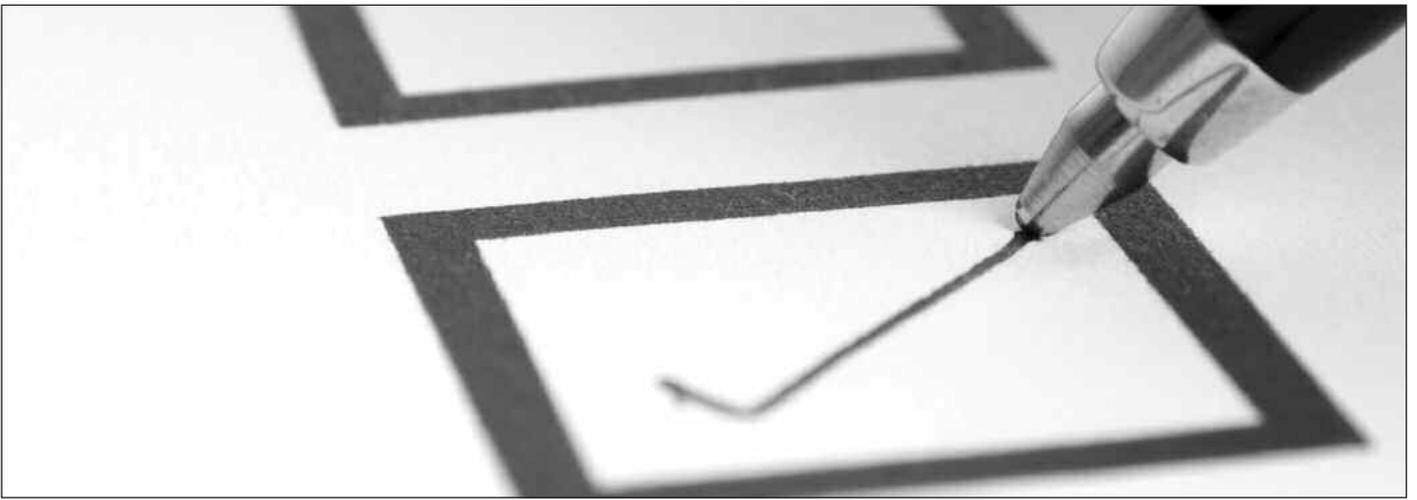
Yet now it is hard to see how to break the log-jam – the current system suits the two parties when they are in power and it seems that they remember this when they are in opposition too. Returning to the Swiss they managed to break this 'political cartel' nearly 90 years ago through their tradition of referenda. In 1918 a popular initiative saw the adoption of proportional representation by a majority of the public and the cantons – the ruling party, ironically named the Radical-Democratic Party lost more than 40 per cent of their seats. The Swiss have continued to publicly reject some initiatives by their *classe politique*. For example, in 1992 they voted against joining the European Economic Area. Whilst there may well be some nervousness about over zealous voters being irresponsible, there is no empirical evidence of this being the case in Switzerland. Indeed the Swiss have a lower public-expenditure share than do most other OECD countries with representative democracies.¹⁰

Spoiled ballot: an explanation for our loss of interest?

However whilst the two dominant parties have vested interests, the electorate seem to be losing interest in them. The data from the post election surveys has shown a steadily falling level of party identification since 1964, both in general and with all major political parties. The fall is so dramatic that if it continues, by the end of the century no one will care about them at all.

In fact what is really perturbing about all this post election data is that most people don't seem to have noticed what is happening to our democracy. Levels of satisfaction with the state of our democracy remain quite stable, though cross-European surveys suggest we are lower than most of our European neighbours.¹¹

However Clarke *et al* do offer the most intriguing analysis of how people seem to make their judgements about how satisfied they are with the state of democracy in Britain. Naturally if you backed the winning party you feel happier, but amazingly everything else being equal, the more interested you are in politics the less satisfied you are with our democracy. So perhaps here lies a sad truth – if you get interested in politics you quickly realise how undemocratic it actually is. Maybe politicians don't want us to be interested – maybe it serves them to keep us in the dark – an unconscious civilisation¹² living under the delusion that we live in a democracy.



Appendix 1: Democratic alternatives models for electoral reform in the UK

There is not the scope here to describe all the alternatives to first past the post. We concentrate on the single transferable vote (STV).

Roy Jenkins' Independent Commission on the Voting System described this as, "the system which commands the enthusiastic support of most of those who have devoted their minds and their energies to the cause of electoral reform".

The Electoral Reform Society provides a clear explanation of how STV works:

"Each constituency would elect between three and five MPs depending on its size. Voters rank the candidates, putting a '1' for their favourite, a '2' for the next, and so on. If the voter's first choice candidate does not need their vote, either because he or she is elected without it, or because he or she has too few votes to be elected, then the vote is transferred to the voter's second choice candidate, and so on.

In this way, most of the votes help to elect a candidate and far fewer votes are wasted. An important feature of STV is that voters can choose between candidates both of their own and of other parties, and can even select candidates for reasons other than party affiliation. Thus, a voter,

wishing for more women MPs could vote for a woman from their own party and then all other women candidates, whatever party they stand for."

The Jenkins Commission rejected STV on two grounds. Firstly, that STV was too different from what we have now. Secondly, that rural constituencies would have to be large and hence the link between MP and constituency would be damaged. The first of these arguments seems weak in that many of us are starting to feel that we need an electoral system radically different from the present one. As to the second argument, the Electoral Reform Society points out that, "The accountability of MPs to their constituency is actually increased in that, unlike British single-member constituencies, no individual MP has a safe seat."

The Jenkins Commission also acknowledged that no system is perfect. Its own solution, the Alternative Vote Plus (AV+), suffers from being a complicated hybrid. The Alternative Vote keeps single member constituencies, although, like STV, voters put candidates in order of

preference. Their second preferences can therefore influence the outcome even if their first preference candidate is not chosen.

The 'Plus' bit of this system means that voters would also choose a candidate or a party from a list to produce "top up" candidates based on the share of the vote. Single member constituencies will result in the seats won by each party being less proportional to the votes they win compared with the multi-member constituencies of STV. The top up is intended to remedy this.

nef believes that our active participation in politics is essential to our well-being. As John Stuart Mill said, a people "among whom there is no habit of spontaneous action for a collective interest – who look habitually to their government to command or prompt them in all matters of joint concern – have their faculties only half developed." And for that there are two pre-conditions: one person, one vote and a more equal amount of influence for each vote.

Alternatives to first past the post

Method	Description	Who uses it?	Effects, +s and -s
Party list system	<p>The country is divided into 12 regions, just as it is in European elections, and seats are allocated in accordance with each party's share of the vote in each region. However, we have also assumed a party has to win 5 per cent of the vote in a region before it wins any seats.</p>		<p>With 247 seats, Labour would have 109 fewer MPs than it has now. The Liberal Democrats would have 148, 86 more. The Conservatives, with 217 seats, would be 19 better off. This result is not perfectly proportional. With 38 per cent of the seats, Labour would still have a slight advantage. This is primarily because the 5 per cent threshold stops smaller parties from winning any seats.</p> <p>+ Either way the coalition would be formed by parties that between them won over 50 per cent of the vote.</p> <p>– Labour would no longer have a majority. The Liberal Democrats would hold the balance of power. Critics of proportional representation would argue that the Liberal Democrats would have more than their fair share of power.</p>
Additional member	<p>Some MPs are elected using the current first-past-the-post system, while others are elected from regional lists in such a way that the overall result is more proportional.ⁱ</p> <p>Voters have two votes, one for a constituency member and a second for a party list 'top-up'. Each constituency elects a first-past-the-post parliamentary member. Second votes determine the share of 'top-up' seats allocated to each party. Top-up seats are filled from central party lists.ⁱⁱ</p>	Used for Scottish Parliament, Welsh Assembly and London Assembly elections.	<p>Better than FPTP, but not perfect. Electing representatives from closed party lists gives a lot of power to party leaders. How much the result reflects the votes cast depends on the split between constituency and "top-up" seats.ⁱⁱ</p> <p>So long as around half of all MPs are elected from the lists, the overall outcome would be similar to that of the regional system. But if substantially fewer MPs were elected from the lists, Labour would win more seats, and the Liberal Democrats fewer.ⁱ</p>
Single Transferable Vote	<p>Constituencies elect between, say, three and six MPs. Under this system, voters do not just say which candidate they like best, but place the candidates in order of preference.ⁱ</p> <p>Large constituencies return three, four or more members. Voters list candidates in order of preference. When first preferences are counted the least popular are discarded and their second preferences redistributed. The process is repeated until the required number of candidates are elected.ⁱⁱ</p>	<p>It is already used in Northern Ireland for all elections other than to the House of Commons, and will be used in Scottish local elections from 2007.ⁱ</p> <p>The Irish Republic and Northern Ireland Assembly elections use STV systems.ⁱⁱ</p>	<p>The STV system maintains a link between elected politicians and the community that elected them. However, because constituencies are large, that relationship is diluted. There are also concerns that the system can favour "second choice" candidates.ⁱⁱ</p> <p>Locally popular independents and minor party candidates like George Galloway could win the occasional seat under STV, though overall they would still be under-represented. For the rest, STV places a premium on an ability to pick up the second preferences of other parties' supporters, a feature which at present would be likely to benefit Labour and the Liberal Democrats, but would hurt the Conservatives.ⁱ</p>

Method	Description	Who uses it?	Effects, +s and -s
Alternative vote plus	A complex hybrid system drawn up by Lord Jenkins' commission on electoral reform. Constituents would vote for representatives on the alternative vote system. Voters would also choose a candidate or a party from an "open" county list to choose "top up" candidates based on the share of the vote. ⁱⁱ	No one. The system was drawn up for Westminster parliamentary elections. ⁱⁱ	Maintains a link between representatives and local voters, while giving greater powers to voters as in the alternative vote system. It also allows a greater reflection of the national share of the vote, but would allow governments to form with a minority of the vote. ⁱⁱ
Alternative Vote	<p>This is a variant of STV. Under this system, voters still rank the candidates in order of preference, but only one MP is elected in each constituency.ⁱ</p> <p>Similar to STV, but only one candidate is elected per constituency. Candidates need more than half the votes to win. Voters put candidates in order of preference. If no one gets more than half, the votes of the lowest-scoring candidates are redistributed until one gains a majority.ⁱⁱ</p>	Used to elect members of Australia's law-making House of Representatives. ⁱⁱ	<p>Slightly better, because it gives voters a bit more power by ensuring that they can still have some voice even though their first-choice candidate might be unlikely to win. But does not help candidates for smaller parties.ⁱⁱ</p> <p>This would have produced an even more disproportional result, a Labour majority of 98.ⁱ</p>

Almost any other voting system would be fairer than the present one for political parties, but most would increase the power of the party machines. Only the single transferable vote would be fair to voters, give them more choice and decrease the power of party machines. *Anthony Tuffin* ⁱⁱⁱ

While no system is perfect, the single transferable vote (STV) in multimember constituencies gives voters the greatest choice, so that they and not parties in effect select who represents them, from a shortlist which can be overturned: if a particular candidate is unpopular, people can still vote for another candidate from that party.

Furthermore, STV minimises the chances of extremists getting elected, let alone seizing power: judging by elections in the Irish Republic. Votes are not transferred to Sinn Fein, and so they get roughly half the seats in Dáil Eireann that they would expect from their first preferences under any form of list system. *David Nowell* ⁱⁱⁱ

A lot of people think that AV would be a form of proportional representation but it isn't. Under an AV system in 1997, Labour would have had an even greater majority. *David Kidney MP* ⁱⁱ

The French voting system has a lot going for it. Candidates win outright if they have 50 per cent plus one of all votes. Seats where there is no clear winner have a run-off between the top two candidates.

This avoids one of the big disadvantages of PR systems. Here, winners can be declared once second-preference votes are counted. Yet second-preference votes cannot be the same value as a first-preference choice. *Frank Field* ^{iv}

The great merit of the second-ballot system used in France and commended by Frank Field (13 May), is that it ensures that those who have the majority in Parliament have the support of the majority of the voters in the country. *Nicholas Boyle* ^v

Sources

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- ⁱⁱ 100 Labour MPs back vote reform, Marie Woolf, Chief Political Correspondent, *The Independent*, 12 May 2005.
- ⁱⁱⁱ Letters, *The Independent*, 12 May 2005.
- ^{iv} Fiddling around yet again with the Lords is a diversion, Frank Field, *The Independent*, 13 May 2005.
- ^v Letters, *The Independent*, 14 May 2005.

Further reading

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- Various Letters, *The Independent*, 11, 13 and 16 May 2005.

Appendix 2: Index of Democratic Power

the statistical basis

UK national government elections back from 1954 to 2005¹³ have been analysed to establish a model of the likelihood of any constituency seat changing hands between political parties.

Seats were categorised by the size of the margin between the first and second placed candidates for every election and then the number that changed hands in the next election was observed. Table 1 shows the proportion of seats changing hands split by different categories of marginality.

An exponential regression analysis was carried out with the resulting curve fitting the data very well (R-squared = 97.3%) – see Figure A1. This analysis shows (unsurprisingly) that the more marginal the seat the higher probability of the seat changing hands at the subsequent election.

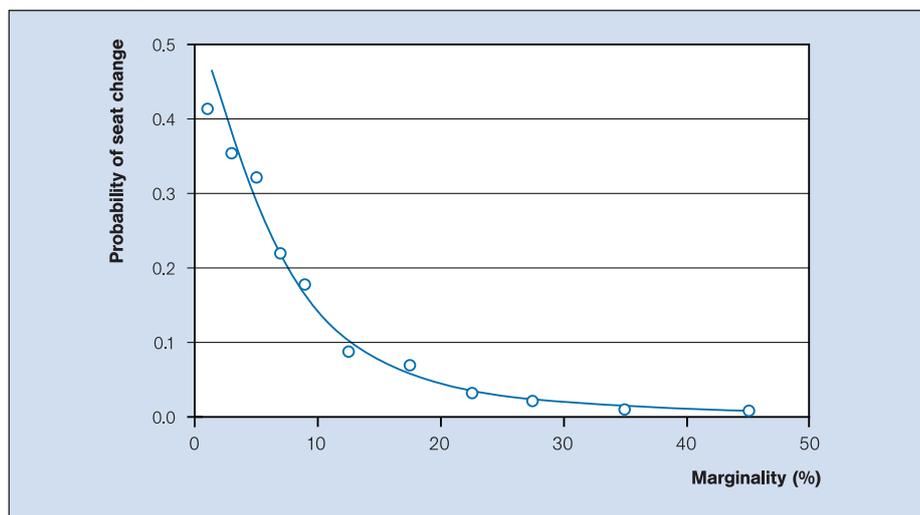
The regression curve enables an estimation of the probability of each seat changing hands – this is the ‘Probability of changing hands’ – P(change) for each constituency.¹⁴ For the most marginal seats the P(change) approaches 0.5, which means it becomes like tossing a coin (over many elections) as to which party (between the top two) would win the seat.

No direct estimations for second order effects are directly allowed for, though it is possible that a party can win a seat from third position. This is always more unlikely than a party from second place winning the seat – constituencies are normally two-horse races. However, in the model these events have already been partially allowed for, as the proportion of seats that change hands, detailed in Table 1, does not distinguish between whether

Table 1

<i>Marginality</i>	<i>No. of seat changes</i>	<i>Total No. of Seats</i>	<i>Proportion changing hands</i>
0–2%	136	329	0.413
2–4%	103	292	0.353
4–6%	105	326	0.322
6–8%	77	352	0.219
8–10%	59	332	0.178
10–15%	75	862	0.087
15–20%	55	787	0.070
20–25%	25	771	0.032
25–30%	13	617	0.021
30–40%	8	827	0.010
40%+	5	627	0.008
Total	661	6122	0.108

Figure A1: Plot of marginality of seat to probability of a subsequent seat change



a seat changed hands to the party placed second or third (or indeed a new party or independent candidate).

To estimate the amount of democratic power that an individual voter has to influence the outcome of a seat, the P(change) has to be adjusted by the relative size of the constituency. An adjustment for constituency size (Adj) is calculated by dividing average number of electors per seat (68,845) by the number of electors in a particular constituency.

A fair share of democratic power is defined as equalling 100 – this will occur when a seat is totally marginal and of average size. A further multiplication by 200 is needed to create an index ranging from 0–100 (though there is no theoretical or practical maximum due to the adjustment factor).

IDP = P(change) x Adj x 200

The IDP is therefore the same for every elector living in the same constituency, and has been calculated for all seats in Britain (not Northern Ireland).

Estimated Euro-IDP

In order to create a comparison to the IDP for the UK national elections an estimation has been made for an equivalent Euro-IDP for the UK European elections which use a multi-member constituency system.

Within each of the eleven regions in England, Scotland and Wales, seats are allocated in rounds, with as many rounds as there are seats to be awarded. In the first round the party with the most votes is awarded a seat, and this 'costs' them half of their votes. In the next round the seat is allocated to the party with the most votes left – if a party wins a second seat on this basis they only lose a further third, another seat and it is a quarter, a fifth etc. In the final round of allocations the 'margin' between the party that wins the final seat and the party that comes second in that final round can be calculated. This defines the marginality of the region in that it would only take this swing for a different allocation to have taken place, and hence an ability to influence the outcome of the election.

As European elections are multi-member constituencies, an estimation is made of second order effects (they are never just two-horse races) and a change in seats allocated is likely to

come from any direction. However no third order effects (a party winning from fourth place) are included, this assumption has the effect of creating a marginally lower IDP than may be genuinely the case.

The European elections started in 1979 but only became multi-member seats in 1999, so it was not feasible to create a detailed probabilistic model such as for the UK parliamentary elections. So instead the regression model from UK elections is used to estimate the probabilities of swings occurring in the European elections – this does not seem unreasonable as they occur within a similar political context and if anything will underestimate the volatility of the European elections (eg UKIP's strong performance). A similar adjustment for constituency (region) size is made though this is not nearly such an important factor for European elections.

Euro-IDP = Probability of changing (to 2nd or 3rd party) x Adj x 200

Endnotes

- 1 This figure of 11% does not mean it was the same 11% each election – in some elections more changed hands, others less. The most dramatic was Labour's victory in 1997 when nearly 30% of all seats changed hands – though of course this still means 70% didn't.
- 2 In fact regular boundary changes, most recently in Scotland in 2005, have at least addressed some of the issues associated with different sized constituencies
- 3 This is with a curved logarithmic fitted regression, which effectively cancels out the estimation of actual democratic power and returns to straightforward marginality – for a linear regression the $R^2 = 26\%$. This suggests that people judge their decision whether to vote, on the marginality of the seat, which is information they may know, rather than the more accurate, but complex, potential to change hands.
- 4 Clarke, HD, Sanders, D, Stewart, MC & Whiteley, P (2004) *Political Choice in Britain*, Chapter 8, Oxford University Press.
- 5 Author's own analysis of the 2001 British Election Survey dataset – all of these factors were statistically significant at 99% confidence intervals. www.essex.ac.uk/bes
- 6 Frey, B & Stutzer, A (2005); 'Beyond Outcomes: measuring procedural utility', *Oxford Economic Papers* 57, pp. 90–111.
- 7 Benz, M & Stutzer, A (2004) 'Are voters better informed when they have a larger say in politics?', *Public Choice* 119, pp. 31–59.
- 8 Anti Apathy is the name of a campaign to engage young people with social and political issues. See www.antiapathy.org
- 9 An IDP-1987 was estimated in exactly the same manner as IDP-2005 for this statistic.
- 10 Example based on article by Bruno Frey (1994) 'Direct Democracy: Politico-Economic Lessons from the Swiss Experience', *The American Economic Review*, Vol 84, Issue 2.
- 11 Author's own analysis of the 2001 European Social Survey. UK scored 5.08 compared to European mean of 5.51. Switzerland scored 6.60 on the same scale (on a scale of 1–7). www.europeansocialsurvey.org
- 12 For the links between passivity, corporatism and citizens participation see John Ralston Saul (1997) *The Unconscious Civilisation*; Penguin Books, UK.
- 13 1970–4 and 1979–83 are excluded due to significant boundary changes, making direct comparisons impossible.
- 14 The regression curve is exponential. The equation for calculating P(change) is:
P(change) = 0.5 x EXP(-0.108 x Marginality)
The curve was forced through the point (0,0.5).

nef (the new economics foundation) is Britain's leading independent 'think and do' tank. **nef's** work informs key policy areas from building thriving local communities to combat 'clone town britain', to re-invigorating democracy, tackling climate change, and defining and shaping a new economy that is based on well-being, not wealth. We believe in economics as if people and the planet mattered.

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