

Voter choice and local representation

Prof. Denis Mollison, Heriot-Watt University, Edinburgh

www.macs.hw.ac.uk/~denis/

I very much welcome the open and inclusive approach to electoral reform taken by the Canadian Parliament. The British Columbia Citizens Assembly of 2002-04 set a standard for thoughtful deliberations in this area that I hope you will emulate.

This paper compares alternative forms of proportional representation, suggesting that STV comes closest to meeting the reform criteria set out by ERRE, especially in ‘strengthening the link between voter intention and electoral results’, and in providing local representation.

It draws on experience in the UK, where three different PR systems have been used for political elections in recent years. More particularly, I designed a scheme implementing STV for the UK Parliament that was put forward by the Liberal Democrats but voted down by the two major parties in February 2010. This scheme (see Appendix) illustrates how STV has the flexibility to fit natural communities, and to make allowance for the difference between densely and sparsely populated areas.

Voter intention and election results

The Single Transferable Vote (STV) was specifically designed to take voter intentions, expressed by each voter putting the candidates in order of preference, and translate this into a result that implements those preferences, with each voter having equal weight. Each elected member represents the same number of voters: wasted votes are avoided by transferring the surplus fraction of votes for elected candidates, and all of the votes of insufficiently supported candidates, to their voters’ next preferences. The latter feature in particular allows voters to express preferences for minority or independent candidates, when under other systems they would hold back for fear that their vote be wasted. STV leads to broadly proportional results, where the proportionality is in respect of what the voters think important, which may not always divide on party lines.

At the other extreme, closed-list proportional representation (CPR), as used in the UK for elections to the European Parliament¹, gives much less voter choice. It only allow votes for parties, with the preference order among a party’s candidates determined by that party. Many votes, typically perhaps one-third, are wasted as surpluses or votes for parties that fail to reach the threshold.

Mixed Member Proportional (MMP), as used for the Scottish Parliament and Welsh Assembly, combines CPR with traditional plurality or ‘first past the post’ (FPTP). Its main virtue is that, while maintaining a form of local representation, it does achieve approximately proportional results: the percentages of seats for votes in Scotland have been broadly similar for the parliamentary MMP elections (in regions of 15-17 seats) and council STV elections (in 3 or 4 member seats). [In Wales the results under MMP have been less proportional, because the ‘top-up’ element is insufficient, only having half as many CPR as FPTP seats.]

However, MMP suffers many of the disadvantages of both CPR and FPTP, with some additional problems arising from having two types of elected member. In the FPTP seats, votes are largely wasted unless they are for one of the parties in contention in a marginal seat. In the CPR seats, votes can be wasted either in the usual way under CPR or because the voter’s preferred party has won its share or more from the FPTP seats. It is quite possible for one voter to be in the position where it is not worth voting for their preferred

¹except for Northern Ireland, which uses STV

party with either of their votes, while another voter can help elect candidates of their first and second preference parties with theirs.

There is also a problem of perception shared by most voters. The FPTP contests are viewed as the most exciting, and almost all media coverage is concentrated on them. Yet if the system is working in the proportional way intended, the result of a victory in an FPTP seat is that the party loses a 'top-up' (CPR) seat, so the overall effect is simply to replace two representatives of the parties concerned by two others of the same parties; and in such an indirect way that it cannot fairly be ascribed to voter preferences between the candidates involved.

Local representation

FPTP with its one-member seats is the most local system. Its faults as regards local representation are that typically only around half the voters will have an MP they voted for, and that constituency boundaries will not fit well to natural communities, and will likely be significantly changed from time to time.

In contrast, proportional systems give each voter a number of representatives, so that each voter is likely to have a range of representatives including at least one that they have voted for; as mentioned above, the latter is more likely under STV. Under MMP the new constituencies would need to be about twice the size of existing FPTP constituencies (to allow for the approximately equal number of top-up seats), and the top-up regions preferably at least 10 times as large - Scotland uses the range 15-17 seats per region, New Zealand the whole country (121 seats). STV achieves a high level of proportionality using constituencies with a smaller number of seats, typically 3 to 6.

In both kinds of proportional systems, but especially if there is flexibility in the number of seats per constituency, it is possible to have permanent boundaries fitting natural communities, changing the number of seats in the constituency rather than its boundaries if its population alters.

Other criteria

Any of the proportional representation systems considered should encourage greater engagement and participation; STV has an edge in emphasising individual candidates and making it easier for minority and independent candidates to get established. The fact that no one party can win a majority without coming close to 50% of the vote should encourage more civil and consensual politics.

One of the strengths of STV is giving diverse representation within the smallest possible constituency (typically 3 to 6 members), making politics more accessible to all. As to complexity in the voting process, it is simpler to put down the names of some candidates in your real order of preference, as STV encourages, than to mark 'X' against one candidate when if your vote is to be effective you need to think tactically. In the latter respect, MMP with its need for two separate votes, where for both tactical considerations enter if the voter does not want their votes wasted, is a particular problem.

As to integrity, the combination of paper ballots with electronic vote-counting, as with STV in Scotland, provides a robust audit trail. Electronic, including online, voting is a different matter: there are obvious attractions, encouraging more people to vote, but vulnerabilities to hacking and coercion make its adoption questionable.

Some details

Here I discuss a number of the finer details of STV vote-counting. First, it is important to point out that the version used by the Australian Senate from 1984 to 2016, which is given as example in ERRE's background information, is a travesty of STV, degrading it into essentially a party list system, and encouraging huge lists of candidates too long for a voter to assess - under proper STV it is normal to have at most 2 to 3 times as many candidates as seats. Australia have just made substantial improvements to their system, but it is still a very poor model, illustrating what can go wrong when the electoral system is chosen by political parties for their advantage.

In contrast, the system proposed by the Citizens Assembly, BC-STV, is the best system that can be counted by hand; it is essentially the same as that used in Scotland, except that BC-STV allows more flexibility in number of seats per constituency.

However, now that reliable electronic vote-counting is possible, as demonstrated over two sets of elections in Scotland's 32 councils, it would be possible to use Meek's version of STV, as devised in 1971 for the computer age. This implements the basic principles of STV in a robust and conceptually very simple way, so that the outcome is actually easier to explain to the voter than that of the various hand counting methods. It has been used for many years by various organisations, including the Royal Statistical Society and New Zealand local elections. It also has the advantage that it can be adapted to allow voters to give equal preference to some candidates: this sophistication has been used successfully by the conservation charity the John Muir Trust since 1998.

One problem that has emerged in STV elections in Scotland, as elsewhere, is that among candidates of the same party the one first on the ballot paper tends to get more votes. The answer to this is to rotate the order of candidates on the ballot paper - an Australian idea known as Robson rotation.

Discussion

The British Columbia Citizens Assembly provides a model both as to process and in its conclusions. Its Final Report of 2004 covers many points for which there is not space here.

There is an interesting discussion in Blais's *To Keep or To Change First Past The Post?: The Politics of Electoral Reform* (Oxford University Press 2008) explaining how the Citizens Assembly's choice of STV came from their emphasis on their three key principles of fair elections, voter choice and local representation, which in turn seem very close to the criteria set out by the Canadian Parliament for this consultation.

In taking forward your choice, I think this must be for Parliament, having heard all the evidence. I would not recommend a referendum: recent experience in the UK, particularly of the 2011 referendum on the Alternative Vote, showed a very poor level of engagement with the actual issues, the result being far more decided by party politics.

Recommendation

I recommend that the Canadian Parliament adopt the Single Transferable Vote electoral system for elections to the House of Commons, using constituencies as far as possible based on natural communities. Constituencies in densely populated areas should each elect between 4 and 7 MPs, with smaller numbers in sparsely populated areas, including possibly single-member constituencies for the territories and Labrador.

I recommend more specifically that the form of STV used should be Meek STV, with paper ballots and electronic counting; but if electronic counting is not feasible, the system should be BC-STV.

Appendix

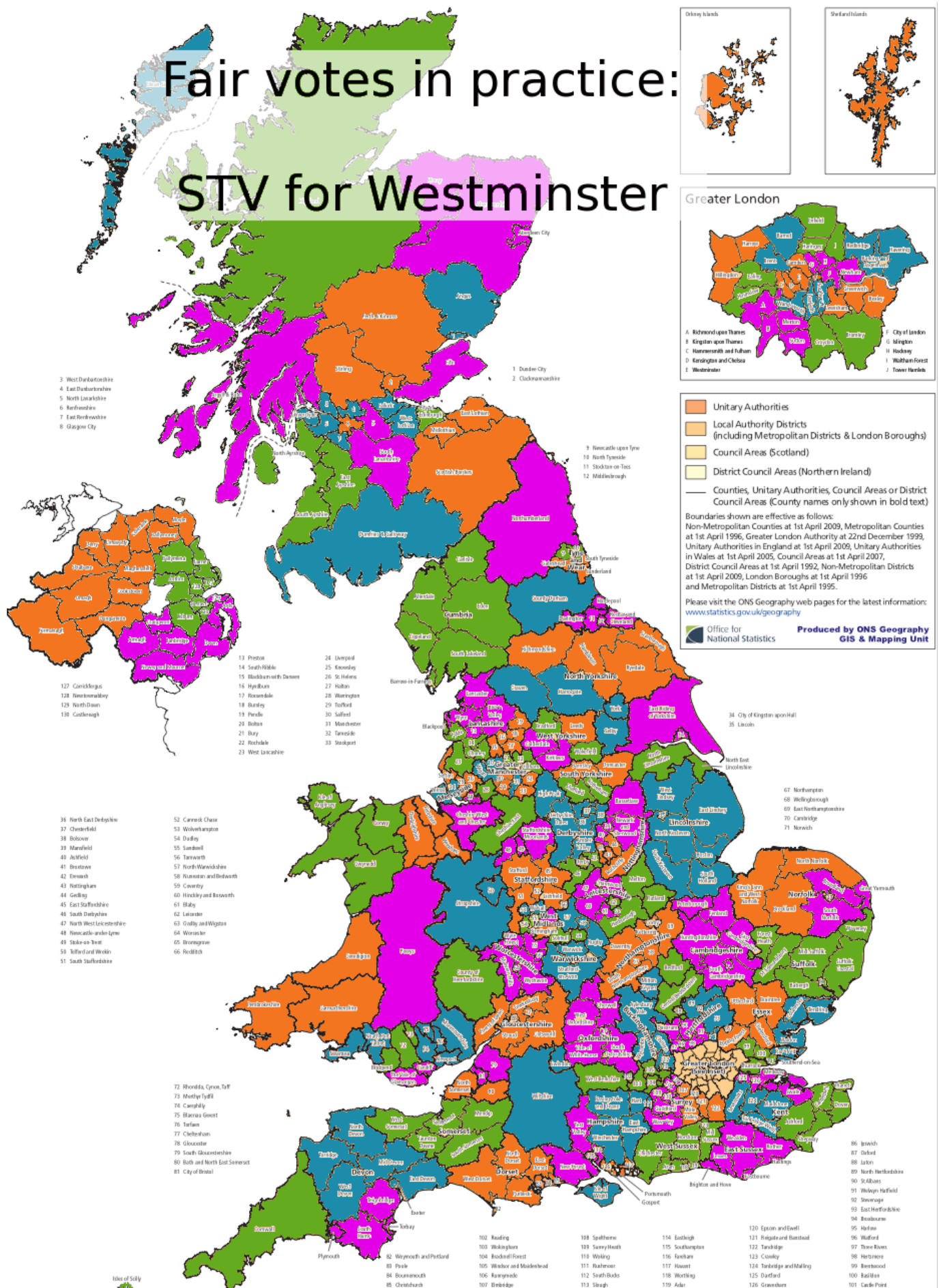
The Appendix following describes an STV scheme for the UK Parliament that I designed, that was put forward by the Liberal Democrats in the UK Parliament in February 2010.

I appreciate that the UK's geography is very different from Canada, but believe that in its fitting of natural communities and treatment of our relatively sparse/remote areas it could be a useful example for Canada.

This Appendix is also available online at

`www.macs.hw.ac.uk/~denis/stv4uk.pdf`

Fair votes in practice: STV for Westminster



Council Areas in Scotland and District Council Areas in Northern Ireland are equivalent to Unitary Authorities in England and Wales, but are shown separately.

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2000. All rights reserved. Ordnance Survey Licence number 0100272183.

FAIR VOTES IN PRACTICE: STV FOR WESTMINSTER

Denis Mollison (*Heriot-Watt University*)

The map overleaf illustrates how well proportional representation using the Single Transferable Vote (STV) could work for the UK Parliament.

Constituencies are based entirely on local authority areas, mostly electing 4 or 5 MPs; this gives a high level of proportionality, while maintaining a strong local connection. In England and Wales it is based as far as possible on traditional (“ceremonial”) counties.

Such a scheme can combine the usual advantages of STV, including ...

- votes are cast for individuals not party lists;
- there are no safe seats, so every vote matters;
- the great majority of voters end up with at least one MP they voted for;
- the overall result is broadly proportional, at least among parties attracting around 15% support or more;
- minority parties and independents can get elected if they can attract a similar level of support locally;
- it is more difficult for extremist parties, because they tend not to be anyone’s second preference

... with some additional advantages:

- the larger size of constituencies is compensated for by their being natural areas with which voters will find it easier to identify;
- boundaries would need to be changed only very rarely; population changes can instead be accommodated by changing the number of MPs for the constituency;
- the overall size of Parliament could be significantly reduced; the scheme shown on the map is based on a maximum of 100,000 electors per MP, to give a total of just over 500 MPs, about 20% fewer than in the present Parliament.

Fair votes in practice: STV for Westminster

DETAILS

Introduction

Rules

A map of constituencies

The 2005 General Election re-run

Discussion

Notes

INTRODUCTION

A fairer voting system is one of the key steps needed to restore public faith in UK democracy. A new campaign, www.voteforachange.co.uk, is calling for a referendum. The Electoral Reform Society has for many years pressed for the introduction of the Single Transferable Vote (STV), and this has the support of the Liberal Democrats and many of the wider public. However, there does not seem to be any recent detailed scheme to show how STV might work in practice.

This paper describes how STV could work for the UK Parliament: showing that it is possible to introduce a much fairer and more inclusive voting system while retaining the principle that one votes for an individual, not a party list, and that representatives retain a strong local tie.

We first set out some simple rules that can be used to choose constituencies, then describe how that might work out in practice (as illustrated on the cover map). This is followed by estimates of the electoral effect of the scheme, using the votes of the 2005 General Election as an example.

We conclude with a discussion of what is important in the scheme and what inessential.

RULES

The proposed scheme is derived using the following rules:

1. Constituencies preferably elect either 4 or 5 MPs; where the other rules make this difficult, either 3 or 6 is allowed.
2. Constituencies are assigned one MP for every 100,000 electors or part thereof; thus a constituency with between 400,001 and 500,000 electors is assigned 5 MPs.
3. Constituencies are based on Local Authority areas. No unitary or district Local Authorities are split¹; county and metropolitan authorities are divided if their electorate exceeds 600,000, in all cases respecting district boundaries within them.
4. *Exceptions to Rules 1 and 2*: in line with current practice, some allowance is made for sparsely-populated and isolated areas. Smaller numbers of MPs (generally 2 or 3, but in three cases² just 1) are allowed in sparsely populated areas; and the ceiling on the number of electors per MP is reduced to 90,000 for areas where the population density is less than 150/sq km, and 80,000 where it is less than 30/sq km.

While constituencies are inevitably larger than for single-member seats, this scheme is in other respects better in representing local identity. Because of the flexibility of allowing a variable number of MPs per constituency, it fits better with the pattern of Local Authorities. Further, constituency boundaries can remain constant over a long period. If for example, the electorate of a constituency with 5 MPs either falls below 400,001 or rises above 500,000, the number of MPs is simply adjusted down or up. The price paid for this flexibility is that the electorate per MP must be allowed to vary; but this variability (between 75,000 and 100,000 for a 4 or 5 member constituency) is less than the variability under the present system, as is illustrated in the Figures on the next page. Note also that this kind of adjustment can be made automatically each time the Electoral Register is updated; a Boundary Commission would only be required where a constituency's entitlement goes outwith the usual range of 3-6 MPs.³

¹With one exception, Birmingham, which is divided in two because it has over 600,000 electors.

²The Western Isles, Northern Isles, and Argyll and Bute.

³In contrast, present Boundary Commissions take at least 5 years for each revision; the new boundaries to be used from the 2009/10 election onward are based on electoral data for 2000.

A MAP OF CONSTITUENCIES

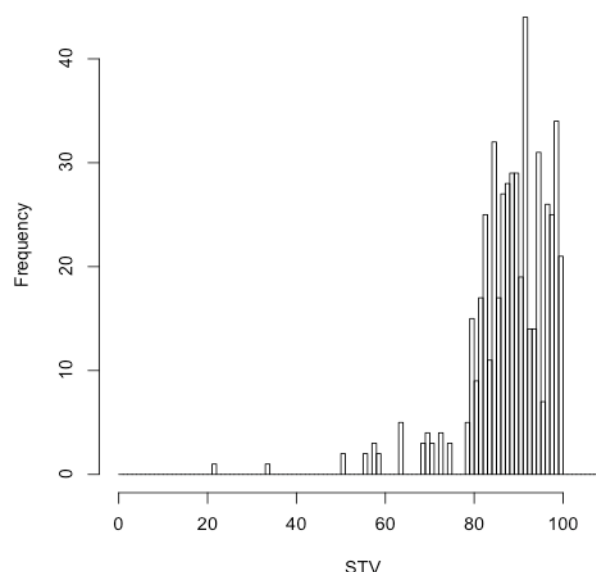
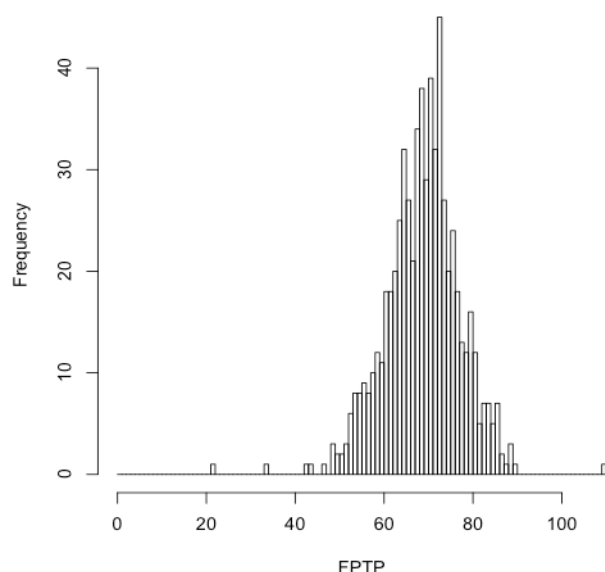
The map on the front cover shows the result of applying the above rules, using data on the electoral roll current in 2009. It gives a Parliament of 513 MPs, just over 20% fewer than at present⁴, in 118 constituencies.

For England, roughly half the traditional (ceremonial) counties can be used as single constituencies. The larger counties and metropolitan areas are split into a number of constituencies, ranging up to 11 for Greater London, with each being a grouping of one or more district or unitary Local Authorities.⁵

For Wales, the eight ceremonial counties are each used as a single constituency, with number of MPs varying from 2 for the sparsely populated counties of Gwynedd and Powys up to 5 for Gwent. For Scotland, the 32 Councils are grouped into 16 constituencies. For Northern Ireland, the 11 Councils⁶ are grouped into 3 constituencies.

The distribution of the number of MPs per constituency is

Number	1	2	3	4	5	6
Frequency	3	5	13	38	45	14



A comparison of the variability of electorate per MP for the present UK constituencies (FPTP) and the proposed scheme (STV). On a variety of standard statistical measures, the proposed scheme has significantly less variability.

⁴There are at present 646 MPs, to be increased to 650 at the next election.

⁵There are two exceptions: Teesside, which straddles the Durham/ North Yorkshire boundary, and Rutland, which is included with Leicestershire.

⁶These are the new Council areas to be used from 2011.

THE 2005 GENERAL ELECTION RE-RUN

As an example, let's look at the most recent UK General Election, and estimate how it might have turned out using STV rather than the present "first past the post" (FPTP) system.

Assume for the moment that the votes cast in 2005 represented genuine first preferences, and that we can estimate second preferences using data from the Scottish local elections held under STV in 2007.

The following table shows how the percentages of seats for the main parties under STV would have been much closer to the voters' first preferences⁷:

Party	Con	Lab	LD	Nat	Other
Votes	33.2	36.2	22.6	2.2	5.7
MPs under STV	34.9	39.5	23.2	2.2	0.2
MPs (actual)	31.5	56.8	9.9	1.3	0.5

STV gives a result very close to proportionality, certainly far closer than the present system, which gave one party a large overall majority on only 36.2% of the votes (indeed, Labour won 25% more seats than the Conservatives, despite having only 3% more votes). The main difference from proportionality under STV is that minorities and independents with less than 10% of the vote get very few MPs (as they do of course under the present system). The Nationalist parties get their fair share of seats (2.2%), because their vote is concentrated locally.

In practice, minority parties and independents can be expected to win more seats, because voters can express their real preferences under STV without fear of their vote being wasted. It is relatively easier for moderate parties to win seats than for extremists, because the latter are unlikely to attract the transfers of second preferences they need to build the vote required to win a seat (16.7% in a 5-member constituency).

If we look at the breakdown of MPs in each constituency, we find that there are no safe seats: there are no single-party seats (except for the three special single MP cases). Indeed, the great majority of constituencies have representatives of all 3 main parties; and 91% of voters end up with an MP of their first preference party, compared with only 48% under the present system.

⁷Northern Ireland is excluded; the estimated result there is also very close to proportional, among the main Northern Irish parties.