Proportional Representation, Local Representation and More Voter Choice

by David Huntley and Michael Wortis

The citizens of British Columbia will have a second opportunity to vote for a new voting system at a referendum in May 2009. Here we review the disadvantages of the first-past-the-post (FPTP) system now in use and the advantages of a preferential voting system – the Single Transferable Vote (STV) system – recommended for British Columbia by the Citizens' Assembly on Electoral Reform.

The legislature we get is not the legislature we voted for, and other problems

There are many reasons to consider changing the voting system now used for both provincial and federal elections. The system now in use is formally called a Single-Member Plurality system, commonly known as first-past-the-post (FPTP). In this system, a province is divided into a number of single-member ridings. In each riding the candidate receiving the largest number of votes is declared elected. Because there are usually several candidates in a riding, the winner is frequently elected with significantly less than 50% of the votes cast; many voters are therefore represented by an MLA for whom they did not vote. This system is a relic of British rule. It is found today primarily in countries that were part of the British Empire; it is seldom used elsewhere.

FPTP often produces a legislature whose composition does not accurately reflect voters' preferences, thus:

1. It commonly leads to one party having a majority of the seats, even though a majority of the voters cast ballots for other parties. For example, in only three of the federal elections since 1921 – those in 1940, 1958, and 1984 – has a party that gained a majority of the seats received a majority of the votes.

2. Less commonly but still with disturbing frequency, FPTP leads to situations in which the party that won the largest number of seats received fewer votes than a competing party. This happened in the 1957, 1962, and 1979 federal elections. It happened in B.C. in 1996, in Saskatchewan in 1986 and 1999, in Québec in 1998, and most recently in New Brunswick in 2006.

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3. The distortions of voter preference produced by FPTP leads to a legislature which does not represent the will of the voters, thus leading to public policy which is not what the public wants. The distortions can also produce a legislature in which the government has little or no opposition, even though opposition parties received a substantial portion of the vote. For example, in the 2001 B.C. election, 42% of the voters did not vote for the winning Liberal party, yet were represented in the legislature by only two of a total of 79 MLAs. In New Brunswick in 1987, the Liberal Party took all 58 of the legislature's seats, leaving the 40% of the voters who voted for other parties completely without representation. When legislative opposition is this weak or absent, a government cannot effectively be held to account. The absence of an effective opposition deprives us of effective governance.

4. Another problem with FPTP is that the candidates in each riding are selected by a relatively small number of party members (or even just by the party leader). Voters supporting a particular party thus usually have no way of selecting the person from that party they wish to be represented by, and they may be unhappy with the one offered.

5. As well, voters have a particular difficulty when the party of choice has endemic corruption. What are voters to do? Vote for the party? Vote for another party which has a platform the voter does not support? Or not vote at all?

6. Finally, under FPTP, voters who prefer an independent candidate or one from a smaller party are routinely placed in the frustrating position of "wasting" their vote on a candidate they know will not be elected or voting for someone who is not their first preference. In this situation they may, indeed, decide not to vote at all.

In short, the legislature or parliament we get with FPTP is not the one the voters wanted or voted for, resulting in public policies that are different from those wanted by the public – a

situation which risks leaving voters cynical and weakening democracy.

Many of these problems can be solved or, at least, alleviated by adopting an alternative electoral system. In our opinion, the Single Transferable Vote (STV) is a far better system. It is arguably the best available and rewards careful study.

The Citizens' Assembly recommendations

STV was the overwhelming recommendation of the Citizens' Assembly on Electoral Reform of British Columbia. The Assembly was set up by the B.C. government to make a recommendation on which voting system should be used in the future. The 160 members of the Assembly were chosen from voter lists, one man and one woman from each riding, and two from First Nations. Selection was random, except for the requirement of willingness to serve. Members of the Assembly spent most of 2004 at their task. The first phase was learning about different voting systems. The second phase was consulting with the public by holding discussions with citizens in their ridings, listening to public presentations, and reading written submissions. A summer recess allowed time for relaxed thinking. There followed the deliberation phase. The Assembly then decided that their top three priorities in selecting a voting system were:

1. proportional representation,
2. local representation, and
3. more voter choice than at present.

The Assembly also recognized the need for a better balance of power between voters and parties.

Having decided on these criteria, the Assembly concluded that the system that best met them all was STV. The members chose a version of STV that in their opinion best fitted the needs of British Columbians. They called it BC-STV. In the final choice of electoral system, the vote was 123 to 31 for BC-STV over the Assembly's next alternative, a Mixed-Member Proportional (MMP) system. The final vote on the recommendation was 146 to 7 in favour of recommending BC-STV over the present FPTP electoral system.

Assembly Priorities

Proportional Representation

Local Representation

More Voter Choice

In the province-wide referendum that followed in May 2005, the people of British Columbia voted in favour of BC-STV in 77 of the 79 ridings, well over the requirement of 48 or more. The overall vote was 57.7% in favour of BC-STV, just under the 60% that the government had established for adoption. On the basis of this majority, the government has scheduled a second referendum to be held on BC-STV at the time of the next provincial election on May 12, 2009. In the meantime, the B.C. Electoral Boundaries Commission has prepared two new maps of electoral boundaries, one for FPTP and one for the recommended BC-STV. If the result of the referendum is that BC-STVis approved by 60% of the voters overall and by at least 50% in 60% of the ridings, it will be instituted for the subsequent provincial election.

STV advantages

Having studied STV, we believe that it has many advantages over the current system. In particular, we expect that STV will achieve:

- reasonably proportional representation of parties; the number of MLAs of each party will be in close proportion to its fraction of the popular vote, resulting in a broader representation of public opinion in the Provincial legislature;
- enhanced voter choice in two senses: (1) voters will be able to vote for their preferred candidates without fear of wasting their votes and (2), since the parties will generally nominate more than one candidate per riding, voters will be able to select between candidates of their preferred party;
- increased opportunity for independent popular local candidates to be elected;
- better representation of voters by their elected MLAs;
- increased likelihood that government will not pass legislation that a majority of voters does not want;
- less polarization in provincial politics;
- a lower tendency towards dramatic policy swings; and
- a greater tendency towards consensus legislation.

STV voting

To understand how these advantages accrue, it is necessary to explain the BC-STV system. As recommended for B.C. by the B.C. Citizens' Assembly, under BC-STV:

1. Existing electoral ridings will be grouped to form 20 new electoral districts, each of which elects the same number of MLAs as did the original group. These new districts will be composed of between two and seven existing ridings and thus have between two and seven MLAs. The smaller number will be used for large sparsely populated areas where travelling difficulties make it difficult for MLAs to serve their constituents effectively; the larger number will be used in higher-density urban areas in order to assure better proportionality and more voter choice.

2. Any party can nominate as many candidates in each riding as it chooses.

3. The ballot paper will list candidates grouped by party affiliation, with another group for independent candidates. On individual ballots, the groups will be listed randomly, and the candidates within each group will be listed randomly. Thus, no candidate or party will have a preferential position on the ballot.

4. Each voter will rank candidates on his or her ballot in order of preference (1 for the first preference, 2 for the second

preference, 3 for the third, and so on, as far as the voter wishes to rank). A first preference must be indicated for the ballot to be valid. It is in the voter's interest to rank several candidates.

5. The ballot counting system is designed to maximize the likelihood that each voter will have a preferred candidate elected. The counting is done according to a set of rules outlined separately below. Broadly, the effect of these rules is that each vote will go initially to the voter's first choice but, as counting proceeds, may be transferred in whole or in part to lower-preference candidates, if (a) the first preference candidate does not need the whole vote in order to be elected or (b) the first-preference candidate has too few votes to be elected.

BC-STV will have:
Larger electoral districts
2-7 MLAs per district
Preferential ballot

STV outcomes

What changes would STV produce compared to the present FPTP system? The principal advantage of STV is that it is guaranteed to produce nearly proportional representation, while at the same time preserving the principle of local representation. This will have significant consequences:

(1) Legislatures in which one party has more than half the seats will be less common. They will occur when a majority of voters cast their ballots for a particular party, but this happens rarely in B.C. Thus, majority governments will become less frequent, and MLAs will have to work together, either in minority governments or, more likely, in coalition governments.

Some people find minority governments undesirable because they are perceived to be unstable. In fact, the history of proportional and FPTP systems shows that both can lead to stable governments and both can lead to unstable ones. Some people prefer minority governments because they are usually unable to pass legislation that the majority of the people do not want and because they are more likely to find common ground through compromise and accommodation. Minority governments in Canada have been responsible for some of our most progressive legislation, including Medicare and the Canada Pension Plan.

Under BC-STV, about 90% of the votes in a 6-member riding will help to elect someone.

Coalition governments are ones in which two or more minority parties have a formal working relationship in order to form a majority. This is what occurs in most European countries because they use some form of proportional representation for their elections. It is no coincidence that those countries have, by several measures, the most equitable societies.

(2) Because STV is a proportional system, the make-up of the legislature will reflect the party preferences of the voters. These party preferences will change from one election to the next; but, since they cannot be distorted as they are under FPTP, there is a lower probability of large policy swings from one election to the next. This seems likely to lead to increased political stability.

(3) The major parties will probably nominate several candidates in each of the ridings under STV. Each major party will tend to put forward one more candidate than the number of MLAs it expects to elect. This will give the voters a choice which they do not now have between the competing candidates of their preferred party. This will:

- help weed out undesirable sitting MLAs
- shape each party's policy perspective
- shift power from the party to the public

(4) Voters with a strong preference for an independent candidate or one from a smaller party can give their first-choice votes to such candidates without fear of "wasting" their ballots. If such candidates receive relatively few votes, the votes are transferred to the voters' second preferences, and possibly third preferences, etc., during the counting process.

(5) Larger ridings under STV will mean that there will be more names on the ballot, so the conscientious voter will need to learn the views of more candidates than at present. This will not be as difficult as might be feared, since the various candidates for a particular party will generally have similar views on important matters. The number of names will usually still be less than the number in a civic election. More names means more voter choice.

(6) Some people express concern that the larger ridings will mean a dilution of local representation, especially in sparsely populated rural ridings. This is not true. There will be the same number of MLAs and the average distance for a voter to his or her nearest MLA will be the same as at present. It is likely under STV that many ridings will be represented by MLAs from two or more different parties. The voter will thus have a choice of MLAs to go to for assistance and will be able to select the one perceived to be most sympathetic to his or her concerns. For some voters this MLA may be more distant than at present while for other voters the preferred MLA will be closer.

(7) After the election, each voter will be able to see which candidate or candidates his or her vote helped to elect. Under FPTP, it is usually the case that less than 50% of the votes are for the candidate who is elected. By contrast, under STV about

90% of the votes in a six-member riding will have contributed to the election of at least one MLA. Thus a far higher number of voters will feel they are represented in the legislature, and this should contribute to increased voter participation and satisfaction.

Consensus democracies are better

FPTP normally results in the winner-take-all (majoritarian) governments that we are used to. In contrast, proportional representation (PR) usually leads to governments that work by consensus. Which is better? In a study of 36 democracies, Arend Lijphart has shown that consensus governments do significantly better in the quality of democracy, as measured by several indicators of quality, including women's representation in parliament and in cabinet, ratios of the highest to lowest incomes, distribution of economic power, voter turnout, voter satisfaction, and proximity of government policy to voters' preferences. Consensus democracies tend to be kinder and gentler as judged by social policies that enable all people to maintain a decent standard of living, environmental performance, energy efficiency (GDP/energy used), incarceration rate, use of death penalty, and foreign aid. None of the indices examined by Lijphart were significantly better for majoritarian governments than for consensus governments.

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>
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> University of Manchester, England.

But, it is commonly thought that majoritarian governments are more decisive and hence more effective. The logic of this appears to be strong; but, when it is tested, it has been proven to be false. Lijphart has shown that there is no significant difference between the two types of government when it comes to economic growth, consumer price index, unemployment, strike activity, and budget deficits. For one economic measure there is a difference: consensus governments lead to significantly less inflation.

Thus, there is no trade-off, as some people think. As Lijphart states ".. consensus democracies clearly outperform majoritarian democracies with regard to the quality of democracy and democratic representation as well as the kindness and gentleness of their public policy orientations".

STV is better

STV is not the only way to achieve proportional representation, but we believe that it is the best way. Strict proportional systems are often based on ranked lists prepared by the political parties. Such systems do not naturally provide local representation and tend to make representatives more responsive to the party hierarchy than to the general voter. Mixed systems, like the Mixed Member Proportional (MMP) system advocated by some, elect some members by the present FPTP system but supplement these by party-based seats to achieve proportionality. This provides for some local representation but retains the unsatisfactory features of FPTP, and fails to offer the voter choice that is a feature of STV. Nor does it provide the increased opportunity for the election of independent and community-based candidates found with STV.

Every voting system has advantages and disadvantages; no system will produce results that everyone will consider satisfactory in all circumstances. So, in considering alternatives, it is important always to keep the big picture in mind. The FPTP system now in use is seriously unrepresentative, routinely producing false majorities and sometimes even producing wrong winners. Anyone considering STV may find something to criticize, and many people have done so, but these criticisms are minor compared to those leveled at FPTP.

We believe that STV would be a significant improvement, maintaining and improving local representation, improving citizen representation and providing more voter choice.

STV critics

We may expect politicians to be critical or suspicious of STV because it will reduce their power to some extent. Big corporations will probably not like it, since it may reduce their ability to influence government. On the other hand, the voting public should like STV because it will give the people more say in government. STV has been used in Ireland for over 80 years; the politicians have twice tried to get rid of it in two separate referendums, but the voters voted to keep it.

If politicians are left to decide on a voting system, they usually do not choose STV, which is why it is not found in common use. Besides Ireland, it is used in Malta, for the Australian Senate, the Upper Houses of all the Australian States, the Lower House of Tasmania, and the Australian Capital Territory Legislative Assembly. Northern Ireland uses STV, and STV is used in local elections in several places.

Opposition to BC-STV in 2005 was led by former politicians. Our voting system is the one feature of our governance that should be put in the hands of the people and not the politicians, for whom there is an obvious conflict of interest.

Conclusion

Perhaps the best way to sum up is to quote from David Farrell: "The STV system perhaps comes closest to an ideal electoral system. It combines the virtues of proportionality with those of preferential voting. It is a system which politicians, given a choice, would probably least like to see introduced but which voters, given a choice, should choose."

The pages that follow explain how the votes are counted.

Rules for counting ballots in the recommended BC-STV system

Ballot-counting is more complicated than for FPTP, but the results are much fairer

Here is a summary of the rules for counting ballots in the particular version of STV recommended by the B.C. Citizens' Assembly on Electoral Reform. STV systems used elsewhere differ in details but not in substance.

Recall that on each ballot the voter has indicated a rank ordering of candidates (1 for the 1st-preference candidate, 2 for the 2nd-preference, and so on). In this section, we explain how the ranked preferences are translated into whole or fractional votes for one or more of these candidates. The principle is that each ballot always represents exactly one vote but that this vote may, during the counting, be divided into fractions which go to two or more candidates.

After the ballots are gathered, the first step is to calculate the number of votes that a candidate must receive in order to be declared elected. This number is called the quota, Q, and is calculated as:

$$Q = \frac{number\ of\ valid\ ballots}{(number\ of\ MLAs\ to\ be\ elected\ in\ the\ riding\ +\ 1)} + 1$$

Thus, for example, if there are 40,000 valid ballots and four MLAs to be elected, a candidate needs 8,001 votes to be elected.

Why does one need a quota? One objective of the system is to achieve proportional representation. One would like each MLA to be elected by the same number of voters, something that does not happen under FPTP. One would also like as many of the voters in the riding as possible to be represented in the legislature. In this example, any candidate who received the support of over 20% of the voters is elected. Four candidates can get over 20%, but five cannot. If seven MLAs are to be elected, the formula shows that a candidate needs just over 12.5% of the vote to be elected; thus, it is seen that ridings with larger numbers of MLAs are to be preferred in order to give candidates from smaller parties and independent candidates better chances of being elected. This formula, combined with the rules that follow, is guaranteed to produce exactly the required number of elected MLAs.

The next step is to distribute each ballot as one vote for the voter's indicated 1st-preference candidate. These are counted and any candidate whose total is equal or greater than the quota is declared elected. If a candidate has received exactly Q votes, the corresponding ballots are retired from further use; these voters have elected their preferred candidate.

On the other hand, if, as will usually be the case, the number of votes, V, exceeds the quota, then the excess, V-Q, are "surplus" votes. Suppose that a candidate, Ann, received 10,001 1st-preference votes in the example above. Then, Ann is declared elected and she has a surplus of 10,001-8,001 = 2,000 votes, which were not necessary for her election. Under STV, these surplus votes are not wasted, but the fraction of each vote not needed is reassigned to the 2nd-ranked candidates on these ballots. The reassignment is simple and rational: Ann actually only needed 8,001 votes of her total of 10,001 to be elected. Thus her election is regarded as using a fraction (8,001/10,001 = 0.800) of each vote to elect her, leaving the remaining fraction, 2,000/10,001 = 0.200 of each vote to be transferred to the 2nd-ranked candidate.

This transferable fraction, called the "transfer value," is calculated as

$$\frac{surplus\ votes\ cast\ for\ the\ elected\ candidate}{total\ number\ of\ 1st\ preference\ votes\ for\ that\ candidate} = \frac{V - Q}{V}.$$

In our example, each 1st-preference ballot for Ann is re-examined and 0.200 is added to the number of votes for the candidate shown as the second preference. Voters who cast these ballots can think of their vote as being 0.800 of a vote to Ann and 0.200 of a vote to their second preference. Let us suppose that 7,000 of the 2nd-preferences were for Bill, 1,000 for Chris, and 2,001 for Dan. Multiplying 7,000 by the transfer value of 0.200 yields 1,400 votes to be transferred to Bill. Similarly, 200 votes go to Chris and 400 votes go to Dan. In this way, the surplus of votes for Ann are not wasted, but are reassigned according to the voters' preferences. If the voter's 2nd-preference candidate has already been declared elected, the next available voter's preference (3rd-preference, 4th-preference, etc.) is used instead.

When these fractional transfer votes from all the elected candidates are added to the 1st-preference votes of the other candidates, one or more of them may exceed the quota. Such candidates are now declared elected, and their surplus votes are reassigned, with new transfer values using the same principles. This may involve a fraction of a fraction, but the logic is the same. This transfer process continues until no further candidates reach the quota.

The two new ideas to get used to:

1. Your vote may be divided amongst two or more candidates who you have ranked.
2. Your vote may be transferred to your 2nd, 3rd, etc ranked candidate.

If there are still seats to be filled then the next step is to consider the candidate with the lowest total number of votes (including transferred votes). This candidate is now eliminated from the process and each of his or her 1st-preference votes is transferred to the 2nd-preference candidate on the ballot. A vote that resulted from a transfer is transferred at its transfer value to the voter's next-listed preference. If the voter's 2nd-preference candidate has already been declared elected, the next available voter's preference is used instead. If, as a result of these transfers, a candidate reaches the quota, the candidate is declared elected and any surplus is distributed using the principles described above.

This process of elimination and transfer is cycled through until the required number of candidates have been elected. Transfers are always to the next available preference, skipping candidates who have been declared elected or eliminated. It may happen that at the end there are only two candidates left with one to be elected; in this case the candidate with the larger number of votes is declared elected, even though the candidate may not have reached the quota.

During this process, if a ballot cannot be used because the voter's preferences have all been declared elected or eliminated or because the voter indicated only one or a small number of preferences, then no further use is made of the ballot.

There are sensible rules to be used in the cases of ties.

In order to understand how these rules lead to a degree of proportional representation, it is necessary to work through some examples. You can create your own, or, if you would like to see a simplified animation of this process, look up the Citizens' Assembly web site *(http://www.citizensassembly.bc.ca)* and click on "animation" in the top-right box.

Note that:

- this procedure is guaranteed to produce the required number of elected MLAs; and
- each ballot is counted as exactly one vote at all stages; thus, one vote may consist of fractions of a vote for two or more candidates, but, at each stage of the counting, these fractions always add up to exactly one.

The above is a summary of the detailed description given in the Citizens' Assembly technical report. It can be found in public libraries or downloaded from *http://www.citizensassembly.bc.ca/public/inaction/reports*. The report is 265 pages long. The only pages one really needs to read are pages 1-20. The details of the ballot counting are on pages 17-20.

If you want to see the transfer process in a real election, look up the web site:

http://election.polarbears.com/online/da2002.htm.

This site provides detailed results for all ridings in all national Irish elections since 1982. The rules are not precisely the same as for BC-STV, but the site will give you a general idea of how STV works, and you will notice that the voters preferences are not always restricted to a particular party.

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http://www.citizensassembly.bc.ca -- the website of the Citizens' Assembly on Electoral Reform of British Columbia. It contains much information, including its excellent final report, the technical report, an STV animation, the 1,603 submissions by the public, and links to other relevant web sites.

http://www.bc-stv.ca -- this is the website of the B.C. Citizens' Assembly Alumni. It also contains much information and useful links, and includes several descriptions of the ballot-counting process.

http://election.polarbears.com/online/da2002.htm -- here you can see the detailed results, and follow the transfers, of the STV elections in Ireland since 1982.

http://demochoice.ca/ – Here you can try out an STV ballot, see the vote transfers, and find out how your vote contributed to the election of the various candidates you indicated a preference for in several mock BC elections. The actual results are meaningless because the voters were not representative and could vote repeatedly.

http://www.stv.ca - The Fair Voting BC web site for the BC-STV campaign.