Electoral Reform:

Which Voting System is Best For Canada?

By David Piepgrass

While watching the election coverage last Monday night, I was disconcerted by claims from party leaders and even journalists, suggesting that Canadians had "asked" for various things by their voting:

"Canadians have asked our party to take the lead"

"Canadians have selected a new government."

"Although Canadians have voted for change, they have not given any one party a majority in the House of Commons. They have asked us to cooperate, to work together, and to get on with tackling the real issues that matter to ordinary working people and their families."

     - Stephen Harper

"Canadians have asked the Conservatives to form a government – in a minority Parliament"

"while the people of Canada asked Mr. Harper to form a minority government, the people of Canada also asked New Democrats to balance that government..."

     - Jack Layton

But I voted in the election, and guess what I didn't see on the ballot?

I wonder what they based their statements on. Probably, it was either the popular vote or the makeup of the government, but isn't it odd that the two are different? You can see the dichotomy between the popular vote and the seat allocation on the right. It looks like the NDP and Bloc have somehow confused each other's seats, but actually, as Canadian elections go, this one isn't too bad.
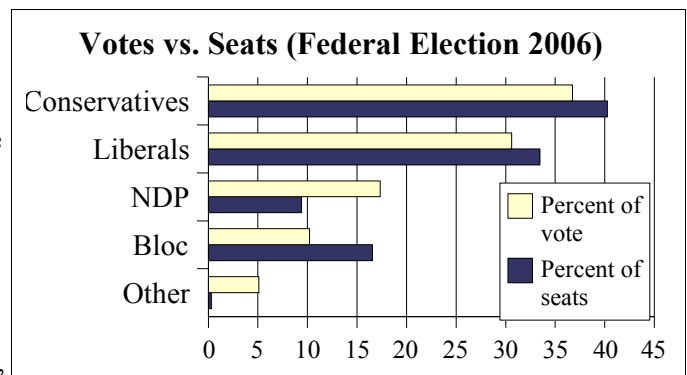
In 1993, Reform received 18.7% of the vote and Progressive Conservative, 16%. Reform got 52 seats, but the PCs got only 2. The two parties together had 35% of the vote, but only 18% of the seats. Meanwhile, the Liberals had a 60% majority in the House with only 41% of the vote—a 113% increase in seats from a 32% increase in votes. The phenomenon where the Bloc gets more seats with fewer votes has happened repeatedly ever since the party was formed. In the last 12 years, the Liberals have had three majority governments with less than 42% of the popular vote.[12]

If none of this bothers you, then you're not alone—but I'm not writing this for your kind. I am making an assumption: "democracy is good"—even an ordinary representative democracy. This is certainly debatable, but as you'll see, the topic of electoral systems is complicated enough without worrying about whether we should even have democracy. My opinion is that if we're gonna do democracy, we should do it right.

To me, the "best" system is a system that carefully considers the opinion of every person that votes, and forming a legislature that reflects those opinions. That means

1. The system should honestly try to determine what those opinions are. It should allow voters something more detailed than a single tick mark on a ballot, and it should not reward strategic voting. *Strategy* means giving a false opinion on a ballot, and is readily apparent in our first-past-the-post (FPTP) election system, where people frequently vote for one of the two candidates who have a chance at winning—they vote for someone they don't really want as a negative vote against someone they dislike more. Notwithstanding Jack and Stephen's comments, the election results can't accurately record Canadians' opinions.

2. The relevance of your vote shouldn't depend on where you live. If you voted NDP last week in Calgary, or even Liberal, it really makes no difference, since the conservatives have roughly two-thirds of all Calgary votes—indeed, with numbers that high, even voting Conservative is hardly worthwhile. But if you voted NDP in Calgary West, even the Green candidate, with 10.3% of the vote, beat your man 6653 to 5370. On the other hand, in the Vancouver Island North riding, your vote for NDP would have been a worthwhile part of the NDP candidate's victory over the incumbent Conservative by just 630 votes. The problem here naturally leads to my third point:

3. Practically speaking, I'm pretty sure most people usually vote for parties, not individuals, even though our electoral system expects us to decide between specific candidates. Thus, unless

there's some way to change the people to match the system, the system should be changed to assign seats in the legislature proportionally to party votes. On the other hand, many citizens feel that having a specific person to represent their region is a good thing, and also that there should be a way to vote out "bad" representatives. If there is a way to balance parties and single candidates, we should consider it.

For this essay, I investigated a variety of electoral systems, and came to the conclusion that "the voice of the people" is greatly affected by which system we use. Even "the voice of the politicians" is affected by the electoral system—where they campaign, what they say, and probably what they do once in power.

There are various ways to classify electoral systems, but a basic distinction is between methods designed to choose one candidate from several, and those intended to choose many candidates from many. Let's talk about the single-winner systems first.

Single-winner voting systems

In this area there are at least five that are often cited. Besides Canada's first-past-the-post (FPTP) system, these are Condorcet, Instant-Runoff Voting (IRV), Approval, Cardinal, and Borda.

To demonstrate the impact of the system, imagine a small constituency where four candidates are running ('A' through 'D'), and voters' preferences are as follows (first preference first):

100 voters:	**A** > B > C > D
80 voters:	**B** > D > C > A
70 voters:	**C** > D > B > A
60 voters:	**D** > C > B > A

Example 1. A set of voters and their preferences.

Now, these hypothetical ballots were merely the first thing that came to mind, but they serve to illustrate how important the electoral system is to selecting the winner. Let's apply the above electoral systems to these ballots according to the following assumptions:

- That voters vote honestly in every system. For FPTP, that means each voter selects his favorite.
- That each voter *likes* his first two preferences and *dislikes* the last two. This assumption is needed for Approval, which, like FPTP, is not a preferential ballot.

Before we look at the results, let's discuss what the ballots say:

- "A" is liked by 100 voters but disliked by the other 210. He appears to be a polarizing candidate, like Abraham Lincoln was or Osama Bin Laden might be in Afghanistan[1]. From a democratic perspective, he should not be chosen due to his overall lack of support.

- "C" and "D" are clone candidates, meaning they always appear next to each other in preference. This suggests they are similar to one another, so it would make sense if the results also listed them together.

The results are:

System	Winner and runners-up (winner first)	Notes
FPTP	**A** > B > C > D	Votes: A=100, B=80, C=70, D=60
Condorcet	**B** > C > D > A	In pairwise races, B wins a majority against A, C, and D.
IRV	**C** > A > B > D	D is eliminated first, then B, leaving C with a majority.
Approval	**D** > B > C > A	Votes: A=100, B=180, C=130, D=210
Borda	**B** > C > D > A	Points: A=300, B=570, C=510, D=480
Cardinal	This system needs voters to assign numbers to candidates, which I have not done.	

The first four systems gave four different winners, while Borda, coincidentally, gave the same result as Condorcet. FPTP declares A the winner, while three other systems say that A came in dead last. IRV eliminates D from the race immediately, while Approval finds D to be the winner. Condorcet is actually a family of electoral systems, which may give different results in some elections, but all give the same result in this case.

From this it's clear that the system can have a big effect on the outcome. Is there a way we can objectively decide which way is best? Well, to help us, we can determine the mathematical properties of each of the systems. Many criteria for grading electoral systems have been developed; I found the following [4,5]:

Name of criterion	FPTP	IRV	Condorcet	Approval	Cardinal	Borda
Monotonicity criterion	Yes	No	Yes	Yes	Yes	Yes
Condorcet criteria	No	No	Yes	No	No	No
Strategy-free criteria	No	No	Yes	No	No	No

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1   I don't mean to suggest Osama actually has 30% support in Afghanistan. I'd sure be curious to know, though.

Name of criterion	FPTP	IRV	Condorcet	Approval	Cardinal	Borda
Strong defensive strategy c.	No	No	Yes	No	No	No
Weak defensive strategy c.	No	No	Yes	Yes	Yes	No
Favorite betrayal criterion	No	No	No‡	Yes	Yes	No
Majority criterion	Yes	Yes	Yes	No‡	No‡	No
Consistency criterion	Yes	No	No**	Yes	Yes	Yes
Participation criterion	Yes	No	No	Yes	Yes	Yes
Condorcet loser criterion	No	Yes	Yes*	No	No	Yes
Independence of irrelevant alternatives	No	No	No**	Yes	Yes	No
Clone independence	No	Yes	Yes*	†	†	No

* Ranked Pairs and Schultz are Condorcet methods that pass this criterion; Minimax fails it.

** Ranked Pairs and Schultz pass this criterion provided there is a single Condorcet winner.

† Wikipedia states that it is "ambiguous" whether the criteria is met, since it was designed for preferential voting systems.

‡ While not strictly meeting the criterion, the voting system seems unlikely to fail in practice.

Unfortunately, it is not possible for an electoral system to meet all apparently desirable criteria, as shown by Kenneth Arrow's "Impossibility theorem", which identifies three criteria that can't always be met simultaneously. [3] Certainly, all criteria are not created equal, but it is debated which are most important.

Unfortunately again, this essay would become excessively long[2] if I were to explain all these criteria. Instead I will describe the voting systems themselves, mentioning notable pros and cons along the way. Please note that all of these methods give the same result when only two candidates are running.

First-past-the-post: also known as single plurality, FPTP allows a single vote per person. FPTP is the simplest and most common system in the world for choosing single candidates, but gathers the least amount of information from the voter.

FPTP has a variety of problems, and really nothing to recommend it:
- It is strongly subject to strategic voting: voters will usually choose one of the two candidates that are known to be likely to win, rather than voting for their favorite. This is the main factor

2   Well, it may be excessively long already.

behind Duverger's law—the empirical rule that FPTP naturally leads to a two-party system. [6] Indeed, from observing U.S. politics, I have the impression that this tendency has become so entrenched that most voters classify themselves as "Democrats" or "Republicans" as though there were only two kinds of people in the country.

- Vote splitting usually becomes a problem whenever voters vote honestly. For example, suppose that everyone votes honestly and 60% of voters prefer both "A" and "B" over "C", but their opinions are evenly divided about which of "A" and "B" are better. Then "C" will win with 40% of the vote, having beaten "A" and "B" which received 30% each.
- Voters are not allowed to fully describe their preferences, thus hiding voters' desires.

Instant runoff voting: used in Australia, and also known as "Alternative Vote" (AV), IRV is a preferential system in which voters must rank the candidates in order of first choice, second choice, etc. Voters are not allowed to state an equal preference for two different candidates. The IRV method begins by examining the first preference of every voter, much like FPTP. If no candidate has a majority of the votes, then the candidate with the fewest first-place votes is eliminated. On the ballots of those people who chose the eliminated candidate first, their second choice is used instead, as though it had become the first choice. This process is repeated until some candidate reaches majority standing, at which point, that candidate is declared the winner. IRV was invented around 1870 by William Robert Ware, an architect. [1]

IRV has no mathematical basis behind it. Unlike the other methods mentioned here, it fails the Monoticity criterion, which says "*a candidate* X *should not be harmed* [i.e., change from being a winner to a loser] *if* X *is raised on some ballots without changing the orders of the other candidates.*" [7]

38: A > B > C	38: A > B > C
05: A > C > B	05: A > C > B
09: B > A > C	09: B > A > C
18: B > C > A	18: B > C > A
25: C > B > A	25: C > B > A
05: C > A > B *	05: A > C > B *
(a) A wins	(b) B wins

* changed ballots
Example 2. IRV failing monoticity

For example, consider the ballots in example 2(a). Here, B has the fewest votes (27) and is eliminated. This gives 9 more votes to A and 18 more votes to C, so A beats C, 52 to 48. In example 2(b), 5 voters apparently decide that they like A better after all, so they make A their first preference. This time, C has the fewest votes (25) and is eliminated. This causes B to gain 25 more votes, so this time B defeats A, 52 to 48. This reversal effect seems most likely to happen in a close 3-way race, thus making me suspect that IRV isn't the fairest way to avoid a 2-party system.

Overall, IRV seems better than FPTP because it gives some consideration to voter preferences, and has clone independence, so vote splitting shouldn't be a problem. However, its strange and somewhat unpredictable behavior makes it difficult to recommend.

The Condorcet family: Condorcet (Con-door-SAY) gives voters a preferential ballot, like IRV, except that voters are typically allowed to state an equal preference for different candidates. However, calculating the winner is a much different affair than IRV. Condorcet is actually a family of different methods that all satisfy the "Condorcet criterion". This criterion, designed by the mathematician Marquis de Condorcet, considers all possible pairs of candidates in a series of 2-way races. If there is a candidate that receives the majority of votes in *all* the two way races, then the criterion requires that that candidate is declared the winner. For example, if a single ballot specifies candidate "A" as the 2nd choice and "B" as the 4th choice, then we may say that this ballot gives a vote to A in the race between A and B. Now, if "A" wins the race against every one of his opponents, then A is declared the winner. If there is not a clear winner, then a "Condorcet paradox"[3] has occurred, and some alternative criterion or method is required to determine the winner.

Condorcet is a popular criterion, if we judge by the number of methods that use it; James Green-Armytage [8] describes ten distinct methods and specifically recommends "Ranked Pairs" or "Beatpath". I have read about Ranked Pairs elsewhere and find it quite agreeable.

One of the things that makes Condorcet appealing is its ability to select a "compromise candidate". For example, suppose there is an ideologically far left candidate L, a middle candidate M and a far right candidate R. Suppose also that the people are somewhat polarized, so they vote as in example 3. FPTP would choose R by a tiny margin,

36%: R > M > L
35%: L > M > R
29%: M > R = L

Example 3.

whereas L would have won with 2% more votes. However, the supporters of R might be quite unhappy if L wins and vice versa. Condorcet identifies the broad appeal of M, since M has a 65% majority over L and a 64% majority over R.

Approval: Approval is much like FPTP, except that the voter is allowed to vote for or against each

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3   Condorcet's paradox states that it is possible for a majority to prefer A over B, another majority to prefer B over C, and another majority to prefer C over A, all from the same electorate and same set of ballots. [2]

candidate separately. True negative voting is possible in this system by voting for every candidate except the hated candidate. The voter can also vote for a party that is expected to lose, without "wasting" his or her vote; over time, this allows third parties to gain traction and become real contenders in elections. Blank and full ballots may be allowed—they do not affect the outcome, but they can be used as protest votes or to suggest how blissfully happy the voter is with all the choices.

Approval's advantage lies in its simplicity and lack of any major defects.

Cardinal: also called Range Voting, Cardinal may be considered a generalization of Approval, wherewith, rather than choosing to give one vote or zero to each candidate, a wider range of rankings is allowed, such as zero to ten. In the right circumstances, Cardinal can fulfill a desirable criterion, that "the candidate who is rated most highly by voters on average" should win. Unfortunately, on the whole, voters cannot be expected to rate honestly in a cardinal system, because they will strategize in the hope of producing the outcome they desire. This can be witnessed by visiting a website that allows visitors to vote on the quality of something on the site. If it offers a graph, it will probably look something like Fig. 1. Here you can see that some people strategize by voting "1" if they think the score is too high, and "10" if they think it is too low. Likewise, in an election, I think most voters would give rankings of "0" or "10" to most of the candidates rather than giving a true, nuanced opinion. Thus the Cardinal system would probably give similar results to Approval, but I consider it a benefit that voters can specify their feelings accurately if they wish.

Fig. 1: A typical web rating histogram
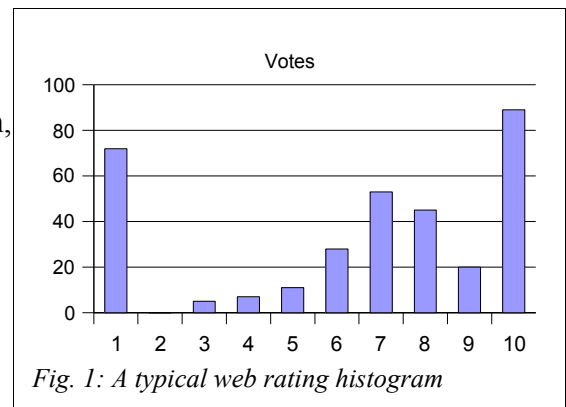
Some people—or so I've heard—insist on having a system that is simple, which is the only reason I can imagine to choose Approval over Cardinal. On the other hand, if you want a mathematically elegant system and are not overly concerned with simplicity, you should probably go with Condorcet. I think Cardinal has trouble gaining followers because it is neither simple nor complicated, hasn't got special mathematical properties, and has not been used in major elections[4].

Borda: Borda is another kind ranked ballot that normally requires distinct preferences, like IRV. The Borda system assigns points to each slot in the ballot, with the worst slot receiving zero points. For

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4   ... as far as I could determine.

example, in a four-way race, the first preference is worth 3 points, the second is worth 2 points, and the third is worth 1 point. The points are tallied and whoever has the most points, wins.

This is interesting, but strikes me as arbitrary. In a race with 7 candidates, the first choice gets 6 points, which is 20% more than the second choice (5 points). Meanwhile, if there are 4 candidates, the first choice gets 50% more points than the second (3 vs. 2). But what does the number of candidates have to do with how much a voter prefers his first choice over his second? Well, nothing.

Borda is vulnerable to a preference-reversal strategy. Also, it is not clone independent; it seems that two candidates with similar ideologies may be able to increase the odds that *one* of them will win against some third party, if they run "against" each other.

Er, So which is best?

Ahh, I can see you're salivating with anticipation of my conclusion. But first, notice that I've been talking about these systems in hypothetical terms. To accurately appraise them, they ought to be tried in actual elections—perhaps by using two different methods, and, when the results come out different, asking voters which result pleases them more, and by how much. However, the only major examples I found of single-winner systems in major elections were FPTP and IRV. Since IRV's behavior is very irritating, I feel Condorcet is best (Ranked Pairs, at least), followed closely by Cardinal and Approval.

But what if I told you none of them is best? These methods are designed to choose one person from many, not many from many. So they meet criteria (1)—remember my criteria?—but not (2) and (3). Suppose you take a city and divide it up into a bunch of equally-populated one-seat "ridings":
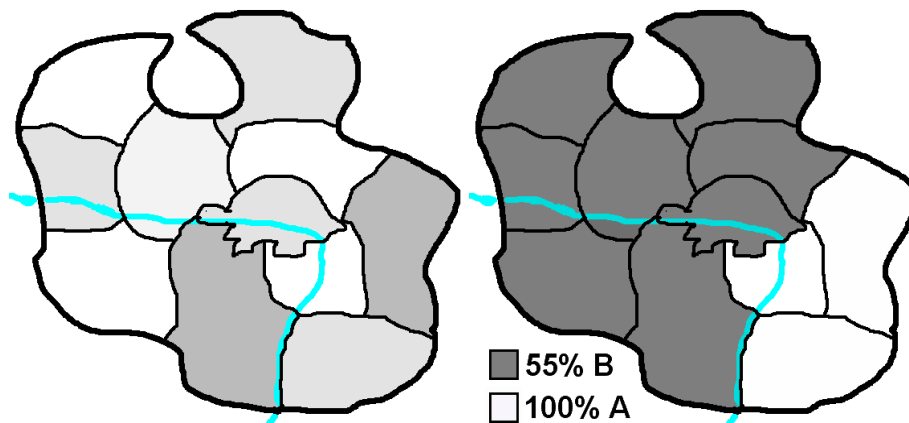

Figure 2: The city of "Kalgory" - Left: the ridings; Right: An unlikely distribution. of supporters

Suppose that parties "A" and "B" are running and A manages to get 60% of the popular vote. In how many of the 11 ridings do they win? Well, that depends entirely on the distribution of the population. If you pick up all the people and toss them in the air so that they land in a random place of residency, then A is sure to win all 11 seats. However, if the B supporters could magically disperse themselves in a strategic fashion throughout the ridings, they could obtain 8 of the 11 seats (72%) by evacuating 3 ridings completely (getting 0% of the vote), and winning 55% of the vote in the remaining ridings.

My point is not that people should learn the ways of magic to win an election; rather, it is that regardless of the single-winner method you choose, the results of this kind of election depend heavily on where people live.

Because support for largest-minority parties is relatively evenly distributed through the country, these parties tend to get more seats than they deserve. For example, the Conservatives got all 28 seats in Alberta with 65% of the vote, whereas 18 seats (64.3%) would be proportional. This "inflation" normally happens at the expense of parties with less support, such as the NDP, which got 17% of the overall vote and 9.4% of the seats. However, small parties can also get many extra seats if their supporters are concentrated. That's why the Bloc Quebecois received 16.6% of the seats with just 10% of the vote. I've never heard a reason why this should be so, so we should look for a better way.

The logical way to give out seats is proportionally—so in our example, party A should get 6.6 seats and B should get 4.4. I didn't fully realize that before writing this essay; thus, while it may appear I've been leading you carefully into following my opinion this whole time, some of this is new to me, too.

There are actually a whole slew of proportional-representation (PR) systems and they can vary in all sorts of ways. There are also many non-proportional and somewhat-proportional voting systems for choosing many candidates from many, including Single Non-Transferrable Vote, Cumulative voting, Bloc Voting and parallel voting. [4] I don't have time to cover these, so let's talk PR.

The simplest proportional system would be to give one vote to each person, gather the votes from all over the country, and assign seats proportional to votes. If the NDP has 17.1% of the votes, they should be entitled 52.7 seats, which would likely be rounded up to 53 seats. There are many different approaches to rounding, but when there are so many seats up for grab, the method chosen doesn't matter much. If NDP gets 52 instead of 53, for instance, the impact on the country is likely negligible.

This system is in the family of party-list proportional representation (PLPR) systems because it would use an ordered party list is used to indicate who in each party will receive seats and with what priority.

Many argue that this system is too disconnected from the people, and lacks accountability. If there are particular candidates that people don't like, for instance, there's no way to vote them out of (or lower on) the list during the general election (though within the party itself there may—or may not—be a mechanism to do so.) Also, candidates are not assigned to groups of people, so you cannot call or write "your" representative in parliament. Finally, candidates can't run as independents.

Many PR systems divide the country into districts, with a few seats per district. As the number of seats decreases, the way votes are rounded off into seats becomes important, and there are various ways to do so. Also, proportionality is decreased and it becomes harder for small parties to get a seat (which is good or bad, depending on who you ask.)

Due to these concerns, other systems might be better, at least in Canada. The following two are often proposed:

Single Transferrable Vote (STV): I was surprised to learn that BC actually had a referendum on electoral reform last year, and proposed STV to its citizens as a way to elect the legislature. 60% of the vote was required to change the system, but only 58% of voters supported it. According to polls, "a majority of 'no' voters gave their reason as 'wasn't knowledgeable' when they were asked why, specifically, they voted against STV." [9]

Indeed, the STV calculation procedure is unusually complicated, although the basic idea can be grasped by the common man. The country (or province, etc.) is divided into districts with a certain number of seats assigned to each district (2 to 7, for BC-STV.) Individuals run rather than parties, which means the number of available seats must be kept relatively low to avoid an excessive number of candidates: each party can be expected to run the maximum number of candidates that might win.

Before I explain STV, you need to know that the "quota" is defined as the number of votes needed by a candidate to be elected. In a seven-seat election, the quota might be one-seventh the number of voters, or it might be less. Now, each voter specifies a list of preferences. When the ballots are first counted,

only your first choice matters. If a candidate receives a whole quota of first-choice votes, that candidate gets a seat. Now, there are normally more votes than needed to elect the candidate, so there is a compensation system to avoid "wasting" these excess votes: the second choice is examined and used as a new vote. For example, if a candidate "A" had enough votes for 1.5 seats, then the votes for A are reexamined. The first choice is now ignored and the second choice becomes a new vote. However, notice that the number of excess votes is worth only 0.5 seats, which means that only one third of the votes cast for A are excess votes. Therefore, the vote counters either discard 2/3 of the ballots, or they consider all the ballots but reduce their worth by a factor of 3. This process is repeated as long as someone still has more than one quota. Next, the candidate who is least popular as a first choice is declared a loser (no offense), and the second-choice votes of those who voted for him or her are taken and added to the vote tallies for the rest of the candidates. Then, the process is repeated from the beginning (still keeping in mind who's been discarded and how much each ballot is worth) until all the seats have been taken.

I admit, even I have trouble swallowing STV. But, even though it doesn't have a rigorous mathematical rationale behind it, I suspect it chooses candidates fairly fairly (fairly fairly!) And for what it's worth, it's used been used for major elections in multiple countries.

Mixed-Member Proportional (MMP): Adopted in New Zealand ten years ago to replace FPTP, and proposed by the BC NDP for BC's electoral reform [10], MMP combines single-seat constituencies with proportional representation in an interesting way.

In an MMP election, you vote for a representative in your riding using a single-winner voting system such as Approval or FPTP. You also vote for a single party that you would like in power, and the party you vote for can differ from the party of the candidate for whom you vote—you might do this if you don't like the local member of your favorite party. Now, as you've seen, single-seat voting systems produce non-proportional legislatures. Therefore, MMP sets aside a certain number of seats (usually 50% or less) to restore proportionality.

To demonstrate this in action, we can use an example derived from the last election. For this example, suppose that the single-seat race (SSR) voting system is still FPTP, so the SSR results remain similar to the results last Monday, except that there will be only half as many ridings (the other half will restore proportionality). There are 308 seats in the House of Commons, so there would be 154 ridings and 154

compensation seats. Then the results for the SSR election are as follows:

Seats and votes - before MMC compensation
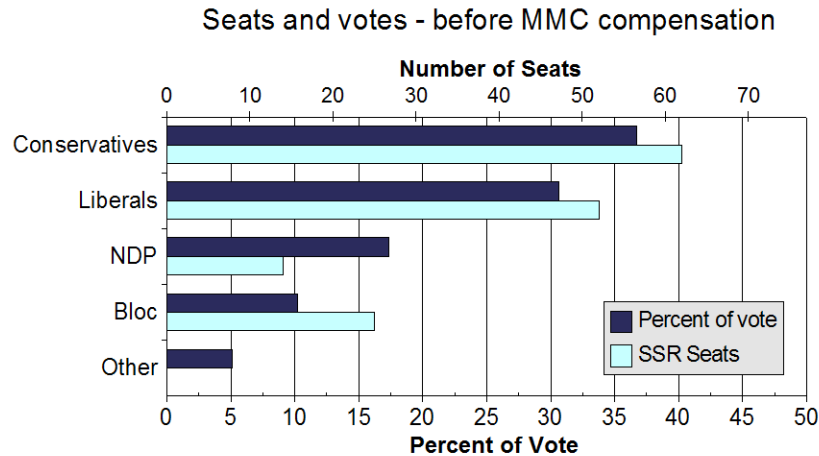
If people vote for the same party in the two races, then the compensation seats give this result:

Seats and votes - after MMC compensation
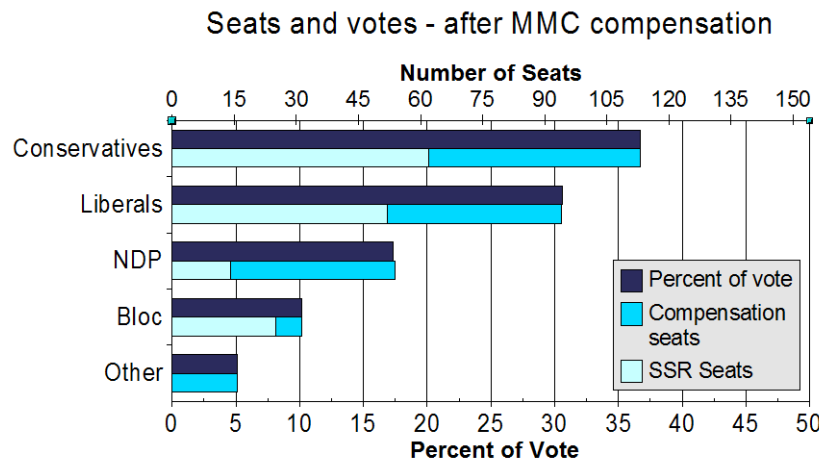
The "other" party in this case would consist mostly of the Green Party, which, since it now would have up to 14 seats, would no longer be referred to as "other".

Note that the compensatory seats would be chosen from a *closed* party list, meaning the electoral system has no control over who is on the list. Personally, I don't mind this.

Wikipedia lists 8 countries that use MMP, and 5 that use STV.

Which one is best this time?

Well, I like the MMP system for its simplicity, its nearly perfect PR effect, and for the sheer educational value it offers by contrasting the single-seat race results with the proportional results. Since it elects two kinds of candidates, it would be interesting to discover whether there are any differences on a human level between the two types: might it be a different breed of politician?

Doubtful. MMP also keeps our tradition of assigning voters to specific representatives, which in my view is at least marginally beneficial. Finally, it gives instant results—the results of an election can be predicted before the votes are fully counted, whereas STV requires a very long and tedius counting process. On the plus side, STV does allow voters better control over who is elected in their area. Neither system, however, allows citizens to have a say about candidates who are running elsewhere. Having written thirteen pages, however, I have to admit: it doesn't matter much to me anymore.

Conclusion

This topic turned out to be much more complicated than I thought it would be. Consider all the issues I haven't discussed:

- Logistics. Some voting systems, such as FPTP, Approval, and simple PR are easy to count; others, like Condorcet, IRV and especially STV require a long and tedius counting process that could take several days to finish.

- Progressive election results and victory/defeat margins. Not all election systems allow the results to be guessed easily before all the votes are counted.

- What kind of legislature is desirable? The voting system, as well as the culture of a country, can determine the makeup of the parliament. Is it undesirable to have a large number of small parties represented? Is it undesirable to have no very strong parties? Or both? If so, many electoral systems can be "tweaked" to discourage a "peanut gallery" from forming. Should we mess around with the electoral system for such purposes, at the expense of proportionality?

- The tendency of proportional systems to create minority governments. In a poll shown on Global TV, 46% of Canadians preferred a majority government and 54% preferred the opposite. Who's right? Is this moderate liking for majorities caused by force of habit or are majorities worthwhile, even though only 40% of the people may have voted for the party in power?

- Why do all seats have to be created equal? We've been assuming there's a fixed number of seats of equal value up for grabs. Direct Representation is an intriguing proposal that gives each representative a different amount of power depending on his or her portion of the vote. [11]

- Just as the voting system can have a substantial impact on the outcome of elections and, perhaps, the campaign and platform strategies of candidates and parties, the structure of government also affects how the government is run. For instance, if Canada had a president like the U.S., would that be better or worse? Or what if, as I ponder in my blog [13], the

government were still democratic, but structured radically differently?

- Interesting "bonus features" that can be tacked onto Condorcet and other methods.

- Is there a relationship between the voting system and our culture?

- Can a voting system encourage increased voter turnout? Should it?

However, despite my inadequate coverage of the matter, I will make my conclusions anyway:

- We should have some form of Proportional Representation in Canada, and MMP looks the coolest to me. It would be nice if they'd give each person 3 to 5 votes instead of just one, so that we can express our mixed loyalties. Not using all your votes ought to be an option.

- MMP should be use Condorcet, Cardinal or Approval as its subordinate voting system.

- A voting system should be chosen very carefully and very objectively. In this light, we shouldn't have a Condorcet referendum where a ballot can be cast by any shmuck that has given two minutes' thought to electoral reform. Sometimes, pure democracy isn't the best way.

References

[1] http://en.wikipedia.org/wiki/Instant_runoff_voting

[2] http://en.wikipedia.org/wiki/Condorcet

[3] http://en.wikipedia.org/wiki/Arrow's_impossibility_theorem

[4] http://en.wikipedia.org/wiki/Voting_systems

[5] http://web.archive.org/web/20041010135731/http://electionmethods.org/evaluation.htm

[6] http://en.wikipedia.org/wiki/Duvergers_Law

[7] http://en.wikipedia.org/wiki/Monotonicity_criterion

[8] http://fc.antioch.edu/~james_green-armytage/vm/survey.htm

[9] http://en.wikipedia.org/wiki/Single_Transferable_Vote#Issues

[10] http://nid-168.issuedetail.bc.ndp.ca/upload/20040510092528_BCNDPElectoralReformReport.pdf

[11] http://www.directrep.org/

[12] http://en.wikipedia.org/wiki/Canadian_federal_election_results_since_1867

[13] http://qism.blogspot.com/2006/01/is-better-government-structure.html

Further reading: http://accuratedemocracy.com/

"All of our parties have different philosophies, but we are all democrats."

- Stephen Harper's victory speech, Jan. 23