

A BRIEF

Submitted to the Special Committee on Electoral Reform

Proposing a new voting method for Canada: The “Every Vote Counts” (EVC) Electoral System

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SUMMARY

This brief presents a condensed account of an original voting method called the “Every Vote Counts” (EVC) electoral system. A fuller explanation of this method is contained in two documents currently in the possession of Committee members: (1) a booklet with white cover subtitled “An original, made-in-Canada voting method that guarantees fair and representative results,” and (2) a supplement with green cover subtitled “Recommendations for implementation of EVC and a critique of alternative voting systems.” When referenced for clarification or detail in the text of this brief, these two documents are referred to simply as the *Booklet* and the *Supplement* respectively.

The EVC method is a system of mixed member representation (MMR), meaning that two types of seats are awarded via the electoral process: constituency seats and proportional seats. It thus resembles Mixed Member Proportional (MMP) systems in certain respects but incorporates several innovative and beneficial features.

Part A of this brief introduces the EVC method by explaining its rationale and basic operation, focusing on the unique manner in which it remedies some serious defects of our current first-past-the-post (FPTP) system.

In the second section (Part B), the operation of EVC is illustrated via its hypothetical application to the 2015 Canadian Federal Election. This example, along with a short discussion of vote weight ratios in the subsequent section (Part C), clearly demonstrates some of the specific advantages of EVC over FPTP and MMP.

The fourth section (Part D) describes some possible ways of assigning actual members to elected proportional seats.

The next section (Part E) explains briefly how EVC satisfies the five criteria or principles enunciated in the Parliamentary order paper establishing the Electoral Reform Committee.

A concluding section (Part F) summarizes the many merits of EVC, suggests that Canadians would prefer a simple, made-in-Canada system like EVC over a complicated foreign import like MMP or STV, and closes by recommending that the Committee study EVC further to its adoption.

A BRIEF SUBMITTED IN PROPOSAL OF A NEW VOTING METHOD FOR CANADA: The “Every Vote Counts” (EVC) Electoral System

A. Introduction to the EVC Model: Rationale and Operation

The current drive to scrap our antiquated “first-past-the-post” (FPTP) electoral system has been fueled by rising discontent over its two major defects. First, all the votes for losing candidates, usually around half the total, are wasted votes. Those who cast them are denied any influence on the makeup of their government; in effect, they’re disenfranchised the moment the ballots are counted. And second, under FPTP the distribution of seats among the competing parties rarely corresponds closely to the popular vote profile. In simpler words, seat counts don’t match vote counts. In the recent federal election, for instance, the Liberals gained a solid majority by winning 184 of the 338 seats (54.4%) with only 39.5% of the votes. This page and the next could easily be filled with examples of similar cases, many even more egregious, but why bother? Everyone knows the system is unfair.

FPTP has a third serious defect as well, one that is rarely acknowledged. Not only are all the losing votes wasted, but so are many of the *winning* votes. Since a constituency winner needs only one vote more than the closest competitor to secure the seat, all the winning votes in excess of that number are redundant or *superfluous votes*. The voters who cast those ballots could have just stayed home on election day without affecting the outcome. Like losing voters, but in a different way, they’re deprived of any direct influence on the composition of their own government.

In choosing a voting method to replace FPTP, we need to repair these three defects. The new electoral model proposed here, called the “Every Vote Counts” (EVC) system, achieves that goal in one fell swoop. It allows both losing and superfluous votes to count towards determining final seat distributions which – miraculously and without deliberate effort – always correspond well to popular vote percentages. What’s more, it does so in a simple, straightforward manner that voters will find easy to understand.

EVC is a system of mixed member representation (MMR), so-called because two types of electoral seats are awarded: (1) constituency seats (henceforth C-seats), and (2) proportional seats (P-seats). Different ratios are certainly possible, but in the version of the system proposed here, the P-seats are set at 2/3 the number of C-seats. In a future Canadian federal election, for example, a good balance would be 210 constituencies and 140 P-seats, for a total of 350 seats (only 12 more than the present 338). Constituency reorganization would certainly be feasible under such a scheme.

Here’s how the method works. In each constituency, voters mark their choice of candidate with an X, the same as now. The candidate with the most votes wins the C-seat. All the losing votes are then entered, according to party, into an election-wide pool of votes called the *proportionality pool* (PP). Also assigned to the PP, by party, are all of the riding winners’ superfluous votes. Each party is awarded a share of the P-seats commensurate with its share of

the votes (losing plus superfluous) in the PP. The P-seats are then added to the C-seats to yield each party's final seat count. That's all there is to it.

Well, not quite all. There's a flaw in the above depiction of the role of superfluous votes, so a modification to this scheme is necessary. As argued, these votes aren't directly necessary to the election of constituency winners, who would have won anyway if the voters who cast them had just stayed home. That's the truth, but not the whole truth. Those voters didn't in fact stay home, and in opting to vote for the winning candidates, they impacted the outcome by virtue of *not voting for any of the losing candidates*. If their choices had been different, some of those losers might have amassed enough votes to defeat the actual winners. The whole truth is that while superfluous votes don't count *directly* towards the election of constituency winners, they contribute *indirectly* by withholding votes from other candidates.

This "dual value" poses a problem for the EVC model. It wouldn't be fair for superfluous votes to play both an indirect role in deciding C-seats and, simultaneously, to contribute their full value towards electing P-seats. To rectify this imbalance, EVC splits the value of superfluous votes into two parts, assigning one fraction to the nebulous indirect function and the other to the PP. Fairness is achieved because it's this reduced value of the superfluous votes, not the total number, that is used in proportionality calculations. The reduction process is accomplished by introducing a new variable, denoted by "q," into the EVC model. This factor q is a decimal fraction between 0 and 1. Various principled methods exist for determining the value of q in any election (see *Supplement*, pp. 7-12). Omitting details here, q is multiplied by each party's total number of superfluous votes to determine the reduced value of these votes entered into the PP.

Notice that EVC retains some of the advantages of FPTP, such as local representation and the possibility of independent candidates running and winning in their ridings. Note also that EVC differs from other MMR systems like MMP in its provision that every vote counts towards electing some candidate, but *only one*. The votes that elect the C-seats are disallowed from entering into proportionality calculations, so no votes get "double-counted." This gives losing votes somewhat more "weight" vis-à-vis winning votes than is possible under other systems, although exact parity is unattainable (see the section on vote weight ratios below). Finally, it should be clear that badly skewed election results are impossible under EVC because the losing votes always win a certain share of seats, and smaller parties earning enough votes are rewarded with some seats even if they don't manage to win any constituencies.

B. Example: Application of EVC to the 2015 Canadian Federal Election

EVC has never been used, but its potential effectiveness can be tested by hypothetically applying it to the results of past FPTP elections. The simulation process entails augmenting the actual number of C-seats (i.e., constituencies) by a set of P-seats. The competing parties are awarded the same number of C-seats they really won, plus a share of P-seats calculated using the EVC method. The *Booklet* (pp. 5-18) analyzes nine past elections, eight provincial and one federal, using this procedure. Every single one substantiates the viability of EVC. Note that those extrapolations set the number of P-seats equal to the number of constituencies rather than 2/3

of that, as recommended in this brief, but the imaginary outcomes wouldn't have been significantly different had the 2/3 option been used. Also note that although the expanded seat totals would have been unfeasible in reality, it's only the percentages of seats won by the various parties that matter, and these wouldn't change if the total seats were reduced in number.

To illustrate how the EVC system works, one example must suffice here. The hypothetical EVC results of the 2015 Canadian Federal Election are summarized in the table below. Before examining it, note the following preliminary points.

- Vote totals for individual parties are denoted by lower-case letters (t for total votes, w for winning votes, etc.). Upper-case letters (T, W, etc.) represent overall election totals in each category, though these don't appear in the table.
- The value of q used in this example is 0.628.
- The votes that are necessary to elect any constituency winner (namely the closest competitor's total plus one) are called *instrumental votes*.
- In this extrapolation, the number of C-seats remains at the actual 338, with 226 P-seats (approximately 2/3 of 338) added for a total of 564 seats. (The final row of the table shows the hypothetical outcome when the number of EVC seats is shrunk proportionally to 339.)
- The total number of votes in the PP, given by $P = qS + L$, is 10,966,597 (not shown in the table). Since 226 P-seats are at stake, the number of votes needed to elect one seat is the quotient $10,966,597 \div 226 = 48,525$. Each party's share of the P-seats is determined by dividing its contribution to the PP (i.e., p) by 48,525. After division, 3 seats remain to be awarded. These are assigned to the parties with the largest remainders.

Notice from the table that the EVC seat percentages correspond quite closely to the popular vote shares, especially for the losing parties. EVC doesn't purport to be a precise PR system like MMP or List PR. It can be termed a "quasi-proportional" system in which seat counts always (repeat, *always*) correspond roughly, but not exactly, to vote counts. Perfect correlation isn't really essential, and there's an advantage to this slight imprecision, as we'll see.

As indicated, the Liberals would have fallen short of a majority under EVC, gaining only 45.2% of the seats (compared to the 54.4% they won under FPTP). This can't be considered unfair, since they earned only 39.5% of the popular vote. Note, however, that their seat percentage would have exceeded their vote percentage by a significant margin, about 5.7%, gained at the shared expense of the other parties. This is, in fact, the normal result in EVC simulations. The party that wins the most C-seats has a "leg up" on the other parties prior to the proportionality calculations, but this advantage may not be enough to compensate for winning only a minority of the P-seats. As should be expected, most of the latter (here, 155 out of 226) go to the losing parties because they own the majority of the losing votes.

| | Liberal | Con | NDP | B.Q. | Green |
|-----------------------------------|--------------|--------------|--------------|-------------|-------------|
| Total votes (t) | 6,963,773 | 5,613,463 | 3,590,296 | 821,144 | 602,326 |
| Winning votes (w) | 4,649,863 | 2,748,301 | 1,024,970 | 190,704 | 37,070 |
| Instrumental votes (i) | 2,858,957 | 1,579,333 | 814,473 | 157,933 | 13,261 |
| Superfluous votes (s) | 1,790,906 | 1,168,968 | 201,497 | 32,831 | 23,809 |
| qs = 0.628s | 1,124,689 | 734,112 | 132,192 | 20,618 | 14,952 |
| Losing votes (l) | 2,313,910 | 2,865,162 | 2,565,326 | 630,380 | 565,256 |
| Contribution to PP (p = qs + l) | 3,438,599 | 3,599,274 | 2,697,518 | 650,998 | 580,208 |
| p ÷ 48,525 | 70 | 74 | 55 | 13 | 11 |
| Remainder | 41,849 | 8,424 | 28,643 | 20,173 | 46,433 |
| Remainder seats (3) | 1 | - | 1 | - | 1 |
| Total P-seats (226) | 71 | 74 | 56 | 13 | 12 |
| C-seats (338) (as won under FPTP) | 184 | 99 | 44 | 10 | 1 |
| Total EVC seats (564) | 255 | 173 | 100 | 23 | 13 |
| % EVC seats | 45.2% | 30.7% | 17.7% | 4.1% | 2.3% |
| % Popular vote | 39.5% | 31.9% | 19.7% | 4.7% | 3.5% |
| Total EVC seats, adjusted (339) | 153 | 104 | 60 | 14 | 8 |

It's quite possible for a party to win a majority of the EVC seats, and hence a majority government, with a minority of the popular vote, but only if public support is sufficiently robust. Extensive research on previous provincial elections indicates that a party has a chance to achieve a slim EVC majority if it manages to win around 46% of the popular vote and at least 60% of the C-seats. The federal Liberals fell far short of these benchmarks. Nonetheless, the potential ability of EVC to produce majority governments with a minority of votes must be considered an asset in this modern era of multiple competing parties. Such outcomes are improbable under more rigid PR systems.

C. The Concept of the Vote Weight Ratio

In most voting systems, EVC being no exception, losing votes aren't worth as much as winning votes. Putting this another way, we could say that winning votes have more "weight" than losing ones. EVC formalizes this difference by specifying a quantity called the *vote weight ratio*. This is defined as the ratio of *the average number of losing votes required to elect one seat to the average number of winning votes required to elect one seat*. In MMP elections, for reasons explained in the *Booklet* (see Appendix C), the vote weight ratio tends to average around 3 to 1, meaning that 3 times as many losing votes than winning votes are necessary to elect a single seat. (If the calculation were performed inversely, the ratio would be 1/3, meaning losing votes would have about 1/3 the weight of winning votes. The first way is slightly easier to conceptualize.)

Vote weight ratios under EVC are always much better than this. As demonstrated in the *Supplement* (pp. 8-12), these tend to fall in the 2.0 (i.e., 2 to 1) range. It would have been 2.13 in the above simulation. Note that a ratio of 1.0 is impossible without drastically increasing the number of P-seats.

What about other systems? In FPTP, the vote weight ratio is infinite because the value of losing votes is zero. Under transferable vote systems like IRV and STV, the concept has no meaning because the word “vote” lacks any coherent operational definition (see *Supplement*, pp. 16-22). In List PR, the concept is inapplicable because no votes are losing votes.

D. Assignment of Members to P-seats

Like MMP, EVC awards only *seats* on the proportionality side, but these seats would obviously have to be filled by real people. How could (or should) this be done? A detailed discussion of this matter can be found in Appendix B of the *Booklet*. Unfortunately, there’s no room in this brief for more than a brief sketch, but clearly this is an important issue that would need to be thoroughly addressed if the computational aspect of the EVC model were adopted.

Obviously geography is a major consideration here. P-seats would best be distributed regionally, either in a predetermined fashion (i.e., a fixed number of P-seats could be allocated to each province or region) or according to the share of PP votes cast within each region. The process of filling seats could be left up to the parties themselves, which would assign members to seats according to criteria acceptable to their supporters. Either a “closed list” or “open list” system could be used, although the latter would doubtless demand a more complicated ballot and therefore diminish the simplicity of EVC. Some important factors that parties might take into account in appointing proportional members are ethnicity, gender, professional expertise, and political experience.

E. EVC Satisfies All Five Criteria Specified in the Parliamentary Order Paper

Appendix H of the *Booklet* explains in some detail how EVC meets the five criteria or principles enunciated in the order paper establishing the Special Committee to study electoral reform. Some points worth highlighting are as follows, omitting the fourth principle (integrity), which should obviously be a feature of any electoral system.

- **Effectiveness and Legitimacy.** Summarizing briefly, *any new system should increase confidence among Canadians that “their democratic will, as expressed by their votes, will be fairly translated” and the system “strengthens the link between voter intention and the election of representatives.”* This criterion reads as though it were written expressly with EVC in mind. Canadians would obviously place high confidence in a voting system guaranteeing (1) that all votes count towards the election of their representatives, (2) that their first preferences, not second or lower choices, are registered, and (3) that the party-by-party distribution of representatives closely corresponds to the popular vote profile.

- **Engagement.** *The new system should “encourage voting, ... foster greater civility and collaboration in politics,” and “offer opportunities for inclusion of underrepresented groups in the political process.”* At present, many people don’t bother voting because their preferred candidate either has no chance in their riding or will probably win handily anyway (i.e., their votes are destined to be losing or superfluous). EVC eliminates these disincentives. As for collaboration, it would be essential in the minority (or slim majority) governments that EVC would generate. Finally, parties could strive to assign members to P-seats, at least in part, along racial, ethnic, gender, professional, and other lines.
- **Accessibility and Inclusiveness.** *The new system should “avoid undue complexity in the voting process.”* In EVC, voters mark their ballots with an X, the same as now. Nothing could be simpler.
- **Local Representation.** EVC maintains the advantages of local representation. More than half the seats are C-seats, and the P-seats can be awarded on a regional basis.

F. Conclusion and Recommendations

To conclude, this brief description should be enough to demonstrate how EVC works. It’s a relatively simple system compared to the alternative PR models currently under consideration. Voters mark their ballots with an X as they always have, and will easily catch on to the notion that even if their votes are losing or superfluous ones, they’ll still count towards the election of a proportional seat. No votes are wasted, and the final seat allocation is guaranteed to come close to mirroring the popular vote profile. Local representation is maintained, independents can run and win in their ridings, badly skewed election results and shutouts never occur, small parties are treated equitably, majority governments are possible with a minority of votes, vote weight ratios are fair, proportional seats are filled on the basis of regional and other important criteria, and no specious vote transfer processes are necessary for all voters to have their say in determining the ultimate results. What’s not to like?

It’s unfortunate that the search for a suitable replacement for FPTP seems to be steering itself, willy-nilly, towards some imported system like MMP or STV. EVC is superior to both of these methods in many important respects. Wouldn’t Canadians be more accepting of a fair, effective, home-grown system that they can easily understand? Assuming that they would, two recommendations are in order.

1. That the Committee pursue its own independent research to confirm the viability of EVC. Using a spreadsheet like Excel, researchers could easily conduct hypothetical analyses of other past elections in the manner shown in the *Booklet*. They could also perform trial redistributions of constituencies, reducing the current number from 338 to 210, to see how various past federal elections might have turned out using EVC.
2. That if these investigations produce positive results, the Committee recommend EVC as a practical and effective new electoral system for Canada.