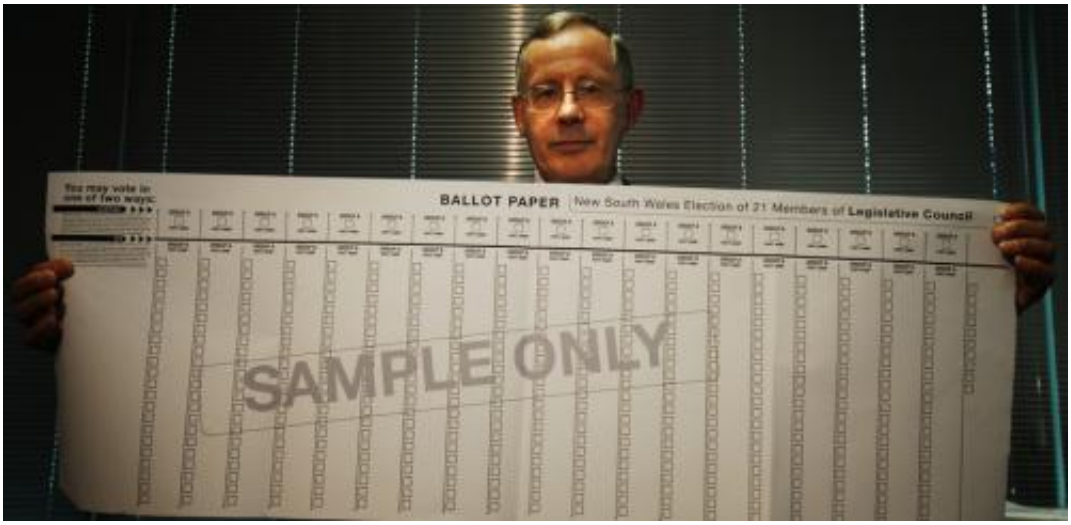
Humans struggle with decisions – why make elections so difficult?

December 18 2013, by Guillermo Campitelli



With so many choices 'below the line' how are voters confident they've ranked candidates correctly? Credit: AAP/Dean Lewins

It's been a crazy year for decision making. Not only did we have an election, we now have the threat of a double dissolution if the Federal Senate keeps knocking back bills from the House of Representatives.

Meanwhile, Western Australians are likely to be headed for fresh Senate by-elections next year after the Australian Electoral Commission (AEC) misplaced 1,375 votes in the last election.

Problems with voting for the Senate are ingrained in the system itself.

The electoral system of the Australian Senate has a number of unique and progressive features: preferential voting, proportional representation and choice at the candidate level.

Because of this complexity, flaws in the system have emerged. Here, briefly, is an explanation of the system's problems and a number of easy-to-implement solutions.

The Senate model

Currently, the Senate ballot paper has two parts:

1. "above the line" with the name of the parties
2. "below the line" with the names of the candidates of each party.

Voting "below the line" requires determining the order of preference of at least 90% of the candidates. This can take some time – for example, in the 2013 federal election, New South Wales had 110 candidates.

This is the first defect of the system. Research into the psychology of decision making has shown that people struggle to make rational choices even with two options.

In a 1981 *Science* article, psychologists Amos Tversky and Nobel laureate Daniel Kahneman asked participants to make a choice in the following situation:

Imagine the US is preparing for the outbreak of an unusual disease, which is expected to kill 600 people. Two alternative programs to combat the disease are proposed:

If Program A is adopted, 200 people will be saved.

If Program B is adopted, there is 1/3 probability that 600 people will be saved, and 2/3 probability that no people will be saved.

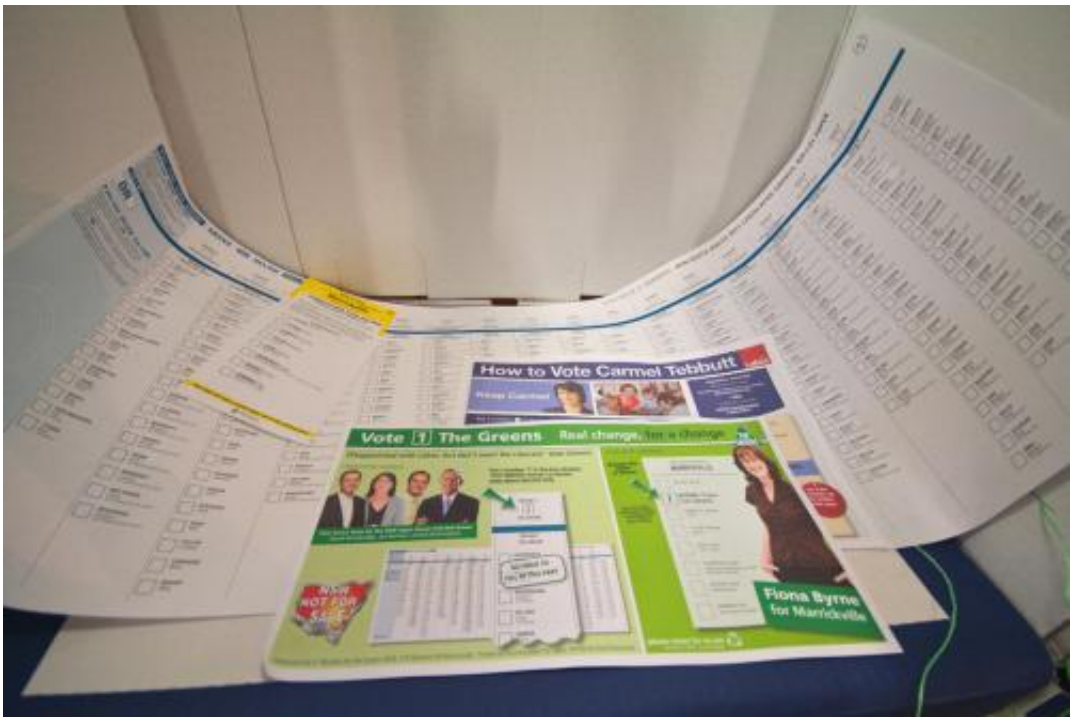
In this study 72% of participants chose Program A and 28% Progam B. In another study the same information was presented in a different way:

If Program A is adopted 400 people will die.

If Program B is adopted there is 1/3 probability that nobody will die, and 2/3 probability that 600 people will die.

Given that the information is the same you may expect that the percentage of people choosing each option is similar. In fact, there was a massive reverse of preferences: 22% chose Program A and 78% chose Program B.

This is one among a number of decision making studies showing that most people find it difficult to make rational choices. Taking this into account, the design of instruments for people to make choices (such as electoral systems) should be as simple as possible, so people's choices reflect their true preferences.



Huge ballot papers are nothing new – here's one from 2011. Credit: yewenyi

Needless to say, having to establish preferences for 110 options is not simple at all.

Unsurprisingly, the great majority of people refuse to vote "below the line", instead they vote "above the line" by writing "1" in the box of the party they prefer. By doing so, people accept the preferences predetermined by their preferred party.

Disproportionate outcomes

Although proportional representation is achieved, the system delivers bizarre outcomes. In Victoria the Australian Motoring Enthusiast party obtained a seat with only 0.51 % of first preference votes.

Similarly, pending the outcome of a Court of Disputed Returns hearing, the Australian Sports Party may have obtained a seat in Western Australia with 0.23% of first preferences.

Another problem of the system is that minuscule changes of preference can produce a dramatic change of outcomes. This is called quasi-chaotic behaviour and is exactly what happened in Western Australia.

A difference of 12 votes (that is, less than 0.0001% of the total vote) produces a change of two seats. The Australian Sports Party and the Greens were assigned the fifth and sixth seats, respectively, over the Labor Party and the Palmer United Party (a verdict that is currently being disputed in the courts).

Curiously, the 12-vote difference was not between those parties, but rather between two other minor parties.

A better method

This proposal has the following features: elimination of party tickets, simplification of voting and simplification of counting, while maintaining the preferential system and proportional representation.

Voting is simplified by requesting voters to establish their preferences for parties, not for candidates. This would reduce—in New South Wales, for instance—the choice space from 110 options to 42 options.

This may seem an important cost, but in fact previous elections showed that most people choose not to give preferences to candidates. A corollary of this is the avoidance of "tablecloth" ballot papers.

There are several ways to maintain proportional representation without the "single transferable vote". The one that requires fewer changes is the

Borda count. Here's how the Borda count works:

A simpler system would reduce polling day queues. Credit: andy@atbondi

Let's assume there are 20 parties, and voters assign a rank from 1 to 20 to each of the parties. The full 20 points are assigned to the party ranked first, 19 points to the party ranked second, 18 points to the party ranked third, and so on until 1 point is assigned to the party ranked 20th.

After this, the total number of points received by each party is easily calculated by adding up the points that each party received by each voter.

Then, a quota is calculated (alternatively, divisor systems like D'Hondt or Sainte-Laguë could be used) by dividing the total number of points by the number of seats plus 1 (this is the Droop quota; other quotas – the Hare or Imperiali quota – could be used).

Finally, seats are assigned to each party according to the number of quotas obtained by each party, and the remaining seats are allocated to the parties with the highest remainders. This counting method is so simple that anyone can do it with an Excel file at home.

Instead of asking voters to rank parties, a more progressive alternative consists of asking participates to evaluate them—for instance, by giving 2 points to their most preferred parties, 1 point to parties in a second level of preference and 0 points to the least preferred parties. Any scale can be used, including ones with positive and negative numbers.

This system is called utilitarian voting or evaluative voting, of which the approval voting method (assigning 1 to the candidates one approves and 0 to those one disapproves) is the simplest and most popular form.

This system is more progressive because, in the ranking method, people are not allowed to express indifference. That is, most people may feel indifferent towards two parties they haven't heard of before, or they may equally like two parties.

In the current ranking system, voters are obliged to decide which one they prefer, but in utilitarian voting, two parties can have the same score, with the counting then following the same procedure as the Borda count.

In research conducted during the 2012 French presidential elections, it was found that "inclusive candidates"—such as current president François Hollande—would have been favoured by this system, and "exclusive candidates"—such as nationalist Marine Le Pen—would have fared worse if the evaluative voting had been used.

In Australian politics, communications minister Malcolm Turnbull would be considered an inclusive candidate because he would receive good evaluations from Liberal voters for his generally liberal views, but also by progressive voters in the Labor and Green parties for his views on climate change and same-sex marriage.

On the other hand, Prime Minister Tony Abbott would be considered an exclusive candidate, receiving top evaluations from conservative voters but low evaluations from most others.

Source: The Conversation