

# Submission to the Joint Committee on the Draft House of Lords Reform Bill on Sequential Proportional Approval voting as an alternative to the Single Transferable Vote electoral system

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1. In this submission I will propose that the Committee consider the use of Sequential Proportional Approval Voting (SPAV), a proportional multi-winner variant of Approval voting, as an alternative to Single Transferable Vote (STV) as the method of electing members in each of the proposed electoral districts. I will argue that the British electorate indicated a dislike of having to rank candidates in order of preference in the recent AV referendum; SPAV will avoid the necessity for this whilst achieving the goals of STV. In addition, unlike STV, SPAV has the desirable property of being monotonic.
2. The recent referendum on the use of the Alternative Vote in general elections showed that the electorate were against the change by over 2:1. One of the main reasons for this (or, at least, one of the three main reasons articulated by the ‘No to AV’ campaign<sup>1</sup>) was complexity: The electorate apparently prefer First Past The Post style ballots over having to rank candidates in order. Unlike STV, SPAV would give this simplicity since it uses a ballot paper almost identical to that of FPTP (whilst still being appropriate for multi-winner elections where proportionality is required).
3. Plain approval voting (as it applies to single-winner elections) is conceptually simple: You vote all the candidates that you approve of and would be happy to see elected. The winner is the candidate with the most votes. This maintains the major advantages of ranked-preferences systems (Being: By allowing multiple votes it reduces the need for tactical voting; it allows you to vote for a compromise candidate without abandoning your favorite candidate; by not requiring you to vote for only a single candidate it reduces the incentive for negative campaigning), whilst dispensing with the need for the voter to rank candidates in order.
4. Approval voting when used for multi-winner elections, known as “block approval voting”, is not proportional with respect to party. Indeed, if most voters do not distinguish between candidates of a single party, it is quite likely to give landslide victories to the party most approved of a highly non-proportional way, similar to block voting. Various variations to it have been proposed that make it proportional. The one I am advocating in this submission,

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<sup>1</sup> <http://www.no2av.org/why-vote-no/>

Sequential Proportional Approval Voting, was invented by Danish mathematician Thorvald N. Thiele around 1890.<sup>2</sup>

5. The details of the counting procedure are described in citation 2, but in short, the process is as follows:
  - a. Sum the weighted votes for each candidate from all the ballot papers; the highest is elected.
  - b. The weighting of a ballot paper from a voter who already has  $n$  of their approved candidates elected is reduced to  $\frac{1}{1+n}$ .
  - c. Repeat until the desired number of candidates are elected.

So whilst STV achieves proportionality by redistributing unneeded and unused votes to the voter's next preference, SPAV achieves it by reducing the potency of a vote according to how many of its approved candidates have already been elected.

6. The Government's proposals highlight the major advantage of STV over a party-list system as that "votes are cast for individual candidates rather than parties ... [which] places more power in the hands of voters..."<sup>3</sup> SPAV shares this property with STV, so maintains this advantage.
7. There is a further, more subtle, advantage of SPAV over STV than the simplicity of the ballot paper. An electoral system is "monotonic" if it is not possible that, given that the system would elect a candidate X, if that candidate were to be raised in rank on some ballots (leaving unchanged the relative ranks of the other candidates), X would then not be elected.<sup>4</sup> In other words, if an electoral system is non-monotonic, you can hurt a candidate by ranking them higher. This is evidently a desirable property of an electoral system: you do not want to hurt a candidate by approving of them or ranking them higher. STV is not monotonic; STAV is.
8. However, there are downsides to SPAV. Given that the proposals are to have the Lords elections take place at the same time as the Commons one, the relative similarity of the instructions between an FPTP ballot and a SPAV ballot may lead to confusion between them. However, this is also a danger with STV, and at least a valid FPTP ballot is still a valid SPAV ballot (though the reverse is not true).

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<sup>2</sup> *Handbook on Approval Voting*, Jean-François Laslier, Ch. 6

<sup>3</sup> House of Lords Reform Draft Bill Proposals, paragraph 33

<sup>4</sup> *Handbook of social choice and welfare*, Arrow, Kenneth J & Sen, Amartya K (2002)

9. The other consideration is that it is even more likely to elect 'compromise candidates' than STV. For example, a candidate preferred by 55% of the electorate would be elected only after a compromise candidates who is at least acceptable to 75%; under STV, the reverse would be true. However, given the goals of a reformed House of Lords as expressed in the proposals (to be as representative as possible), whether or not this should be considered a true downside is a question I leave to the Committee.
10. Approval voting is used by several mathematically inclined societies including the Mathematical Association of America<sup>5</sup> and the American Statistical Association,<sup>6</sup> and is used as part of the process of choosing a Secretary-General of the United Nations;<sup>7</sup> but is not currently used as part of any country's democratic process, and nor is SPAV.
11. SPAV therefore shares the advantages of STV over a party-list system and plurality systems, whilst better conforming to the apparent wishes of the electorate as expressed in the AV referendum against having to list candidates in order of preference; and, in being monotonic, does not share a significant disadvantage of STV. I submit that it is therefore more appropriate as the electoral system for a reformed House of Lords.

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<sup>5</sup> <http://www.maa.org/aboutmaa/bylaws.html>

<sup>6</sup> <http://www.amstat.org/about/bylaws.cfm>

<sup>7</sup> <http://www.unsgselection.org/files/WisnumurtiGuidelinesSelectingCandidateSecretary-General.pdf>