

Four Evaluative Criteria for Comparing 'First Past the Post' and the 'Alternative Vote'

Majority criterion: if a majority of voters prefers a single candidate to all other candidates, then that candidate wins.

Both AV and FPTP satisfy the majority criterion.

If a candidate secures more than 50% of the vote (first-preferences) in a constituency, he/she will win.

Condorcet loser criterion: if a majority of voters prefers every other candidate over a given candidate, then that candidate must not win.

AV satisfies the Condorcet loser criterion whilst FPTP fails it.

Take the example of a fictional constituency (with no possible analogy to be taken of Scotland and independence) where the vote is split as such:

<u>Party</u>	<u>Vote Share</u>
Unionist Party A	30%
Unionist Party B	30%
Independence Party C	40%

Independence Party C wins the election under First-Past-The-Post as they received the most votes.

If, however, we consider that voters of both Unionist Party A and Party B prefer Party A or B to the Independence Party then the result achieved under FPTP doesn't seem fair.

First-Past-The-Post fails the 'condorcet loser criterion' because a majority of voters can dislike a candidate who can win an election under First-Past-The-Post. With AV, which requires a majority of voters to vote for a candidate, a majority of voters will always prefer the winning candidate.

Later-no-harm criterion: a voter giving an additional ranking or positive rating to a less preferred candidate cannot cause a more preferred candidate to lose.

AV satisfies the Later-no-harm-criterion whilst it is not applicable to FPTP which does not rank preferences.

The 'later-no-harm' criterion is important because it has direct strategic consequences. With AV for example, which passes the 'later-no-harm criterion', choosing the Liberal Democrats as a second choice to your first choice of the Labour Party will not be detrimental to your first-preference Labour vote.

Monotonicity criterion: 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.

AV fails the Monotonicity criterion whilst FPTP passes.

Suppose there are three candidates, and 100 votes cast in a constituency. The number of votes required to win is therefore **51**.

The votes are cast as follows:

Election 1: First Round of Counting		
<u>Number of votes</u>	<u>1st Preference</u>	<u>2nd Preference</u>
39	Andrea	Belinda
35	Belinda	Cynthia
26	Cynthia	Andrea

Cynthia is eliminated, thus transferring votes to Andrea, who is elected with a majority:

Election 1: Second Round of Counting		
<u>Number of votes</u>	<u>1st Preference</u>	<u>2nd Preference</u>
39 + 26 = 65	Andrea	Belinda
35	Belinda	Cynthia
26	Cynthia	Andrea

She then serves a full term, and does such a good job that she persuades ten of Belinda's supporters to change their votes to her at the next election (39+10).

This election, a few years later, looks thus:

Election 2: First Round of Counting		
<u>Number of votes</u>	<u>1st Preference</u>	<u>2nd Preference</u>
49	Andrea	Belinda
25	Belinda	Cynthia
26	Cynthia	Andrea

Because of the votes Belinda loses, she is eliminated first this time, and her second preferences are transferred to Cynthia, who now wins 51 to 49.

Election 2: Second Round of Counting		
<u>Number of votes</u>	<u>1st Preference</u>	<u>2nd Preference</u>
49	Andrea	Belinda
25	Belinda	Cynthia
26 + 25 = 51	Cynthia	Andrea

In this case Andrea's preferential ranking increased between elections - more electors put her first - but this increase in support appears to have caused her to lose. Counter intuitively, it was the increase in support for Andrea, at the expense of Belinda that hurt her.

One should however note that failures of the Monotonicity criterion under AV are relatively unlikely. Moreover, the ability to tactically vote in this regard is almost impossible.