The Center for Voting and Democracy

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# ELECTING CANDIDATES WITH FAIR REPRESENTATION VOTING: RANKED CHOICE VOTING AND OTHER METHODS

A voting system translates peoples' votes into seats. Because the same votes in different systems can produce different results, the selection of a voting method can have a powerful impact on governance, representation and voter participation. The winner-take-all, single-member district system used to elect the U.S. House of Representatives leaves tens of millions of Americans without representation, increases partisan polarization, and undercuts participation. In contrast, fair representation voting systems provide nearly everyone with a real chance to elect a preferred candidate in every election and make it likely that large groups of like-minded voters (those who vote for similar candidates) will win seats in proportion to their share of the vote. Grounded in the principle of one person, one vote, *one value*, fair representation systems allow voters to vote directly for candidates. They have a proven track record in local and state elections in the United States.

Fair representation systems depend upon electing representatives from multi-member districts, something most states have, at some point, already done for their state legislatures. Fair representation voting is consistent with the Constitution and with American traditions. It only requires that Congress repeal a 1967 law mandating single-member congressional districts or, more ambitiously, replace it with a mandate that states elect their congressional representatives with fair representation voting. Once this statutory change has been made, states could elect representatives from "super districts," each consisting of three or five seats. Because there would be a smaller number of super districts, the size of the House would not change.

Under this proposed legislation, each state would have the flexibility to choose which fair voting method to adopt. Based on the structure of our institutions, the history of our elections, and the experience of voting methods in practice, we recommend states elect their Members with **ranked choice voting.** Used in many nations and a growing number of American cities, ranked choice voting allows voters to express their full range of preferences on the ballot. It upholds majority rule, ensures fair levels of representation to voters in the minority, avoids "vote-splitting" and "wasted" votes, and encourages candidates to reach out to more voters.

Other voting methods should also be considered. We recommend three alternative plans: **open ticket voting**, **cumulative voting**, and **the single vote system**. As with ranked choice voting, these methods are constitutional and consistent with the American tradition of voting for candidates.

Each of these systems elects candidates and groups of candidates when they exceed vote thresholds corresponding to the number of seats being elected. For example, in a single seat district, a candidate is guaranteed to be elected if he or she receives more than 50% of the votes, because that is the minimum amount that no more than one candidate can possibly win. In a three-seat district, candidates are elected when they receive 25% + 1 votes, because that is the minimum amount that no more than three candidates can possibly win.

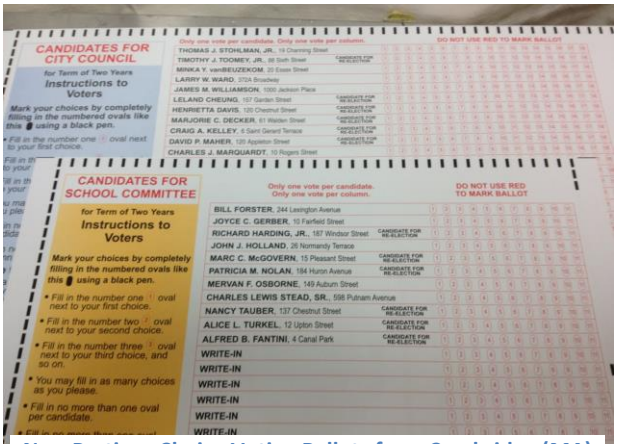
**Ranked Choice Voting**

Ranked choice voting (also commonly known as "single transferable vote" or simply "choice voting") is a system in which voters maximize their votes' effectiveness through ranking candidates in order of preference. Ranked choice voting reliably allows most voters to elect a candidate of choice, minimizes wasted votes and the impact of tactical voting, increases ballot choices for voters, and encourages positive campaigning and coalition-building. It upholds both minority voting rights and the principle of majority rule. Because of its proven history, its candidate-centric nature, and its ability to allow voters to express their full, honest preferences on their ballots, ranked choice voting is the best fair voting system for use in U.S. elections.

Ranked choice voting spread throughout the English-speaking world, including the United States, in the late nineteenth and early twentieth centuries. In the United States, it was embraced by leaders in the progressive reform movement for good municipal government, leading to its adoption in many U.S. cities, including New York and Cincinnati. Its progress was set back by a combination of voting equipment barriers (it required hand-tallies at that time), strong opposition from local "bosses" who reformers were attempting to eliminate, and majority intolerance to representation of minorities such as leftists and people of color.

Because ranked choice voting upholds majority rule, allows fair representation for minorities, and avoids "split votes," it has been recommended for use in jurisdictions subject to liability under the Voting Rights Act. Cambridge (MA) uses choice voting to hold citywide elections for nine seats on its city council and six on its school board. With a 15% African American population, Cambridge has had at least one African American representative on its city council since the 1950s and has nearly always had an African American on the school committee. When Cincinnati (OH) used choice voting to elect its city council from 1925 to 1955, it regularly elected either one or two black representatives at a time when the African American population was under 20% and African Americans rarely achieved election to public office in places with a white voting majority.

One great value of ranked choice voting – for those in the minority and majority alike – is that candidates will not "split" the vote if they receive below the threshold of support necessary to win, ensuring that all voter groups exceeding the threshold elect a proportionate number of candidates. This quality is particularly important given that the fair voting plan outlined in this report require relatively large shares of the vote to win a seat. Candidates who end up below that threshold will not be 'spoilers'; instead, their backers will have their votes added to the total of their next choice candidate.



Non-Partisan Choice Voting Ballots from Cambridge (MA)

***To vote:*** Under ranked choice voting, voters rank their preferences among candidates. In doing so, voters mark their favorite candidate, but may also then indicate their second and additional choices in order of preference. Voters may rank as many or as few candidates as they want, knowing that indicating a lower choice candidate will never hurt the electoral chances of a higher choice.

***To determine winners*:** After counting first choices, candidates who meet or surpass the winning threshold are elected. Then, "surplus" ballots beyond the threshold are added to the totals of remaining candidates according to voters' next-choice preferences. In the most precise method, every ballot is allocated to its next choice at an equally reduced value.

Once surplus ballots are re-allocated, the candidate with the fewest votes is eliminated. Each ballot cast for that candidate is allocated to its next-choice preference at full value. This process of allocating surplus votes and eliminating last-place candidates continues until all seats are filled. The count can be done by hand or using software.

***Example***: The chart below illustrates a partisan race using ranked choice voting, with six candidates running for three seats in a district with 1,000 voters: Perez, Chan and Jackson are Democrats; Charles, Murphy and Smith are Republicans. The district is majority Democratic, with its nominees earning a total of 60% of first choices. But that leaves a substantial number of voters who prefer non-Democrats. In our simulation, Jackson is a traditional Democrat while Perez and Chan are able to reach out effectively not only to Democratic voters, but to some independent and Republican voters as well. Similarly, Murphy and Smith are more traditional Republicans, while Lorenzo is better able to reach out to a broader range of voters.

With 1,000 voters, the threshold of votes needed to win is 251: (1,000/4) + 1.

The first count elects the most popular Democrat, Perez. Perez has 19 more votes than necessary to win, meaning every ballot ranking Perez first is then added to the totals of the next-ranked candidate at a "surplus value" that adds up to a total of 19 votes. More than half of Perez voters ranked Chan second, resulting in Chan picking up 10 votes. Jackson gets six votes, and Republicans earn a total of three votes.

| **Candidate** | **1st Count** | **2nd Count** | **3rd Count** | **4th Count** | **5th Count** |
|---|---|---|---|---|---|
| | Perez wins, with more votes than needed. | Perez's surplus votes added to vote totals of second choice. Smith is in last place and loses. | Smith's votes added to totals of next choice. Jackson is in last place and loses. | Jackson's vote added to totals of next choice, Chan wins, and has surplus votes. | Chan's surplus votes added to vote totals of 2nd choice |
| Chan (D) | 175 | +10 = 185 | + 10 = 195 | + 150 = **345 Win** | - 94 = **251** |
| Perez (D) | **270 Win** | - 19 = **251** | - | - | - |
| Jackson (D) | 155 | + 6 = 161 | + 6 = 167 loses | - 167 = 0 | - |
| Lorenzo (R) | 130 | + 2 = 132 | + 75 = 207 | + 14 = 221 | + 44 = **265 Win** |
| Murphy (R) | 150 | + 0 = 150 | + 30 = 180 | + 3 = 183 | + 5 = 188 *Loses* |
| Smith (R) | 120 | + 1 = 121 l*oses* | - 121 = 0 | - | - |
| *No Candidate* | - | - | - | - | *+ 45 = 45* |

The remainder of the count resolves vote-splitting among the three Republicans and the two remaining Democrats and rewards the candidates better able to reach out beyond their base.

Here's how it plays out: After the second count distributing Perez's surplus votes, Smith is in last place and has been defeated. Most of Smith's voters picked fellow Republican Lorenzo as a second choice, with Murphy also

gaining votes and some independent-minded voters preferring Democrats. These new totals put Jackson in last place, with Jackson doing less well than fellow Democrat Chan in drawing second choice support in the previous rounds. In the fourth round, Jackson's ballots largely go to Chan, who wins the second seat. In the fifth and final round, Lorenzo picks up far more of Chan's surplus votes than Murphy and comfortably wins the third seat, despite trailing Murphy in the first round. Note that 45 ballots are "exhausted" because nearly half of Democrat Chan's voters were indifferent to the two remaining Republican candidates.

As the district's voters mostly prefer Democrats, they easily elected Perez, a traditional Democrat. The other two candidates elected were rewarded by coalition-building among the district's remaining center-left and center-right populations. In the end, 96% of voters can point to a candidate who they helped elect and who will go to Congress with their interests in mind.

Had these three seats been elected by an at-large winner-take-all system, the Democrats likely would have swept all three seats, with each of its candidates receiving close to 60% of the vote and each of the Republicans 40%. Under the single vote system described below, the Democrats would still have won all three seats due to the Republican vote being split among its three candidates. Had these three seats been instead filled by winner-take-all in single-seat districts, the outcome would depend on how the district lines were drawn. Quite possibly, each district's primary elections would have shut out the candidates who won by coalition-building. Even worse, the districts easily could have been gerrymandered in order to elect three Democrats or even two or three Republicans. By using ranked choice voting, the three seats fairly represent the region's diversity without any opportunity for partisan gerrymandering.

## Other Fair Representation Voting Systems

Two other fair voting methods have been used in local and state government throughout the United States: cumulative voting and the single vote system. An alternate version of the single vote system is open ticket voting. It has not yet been tried in the U.S., but is based on voting for candidates, is used for national elections in Finland and helps reduce vote-splitting. FairVote has researched and analyzed each of these systems, and they are presented here in order of how well FairVote believes they will perform in American congressional elections if used in "super districts" that elect between three and five candidates.

### Open Ticket Voting

Of these three alternatives to choice voting, the open ticket system (known to political scientists as the "unordered open list system") combines the benefits of fair representation with simplicity for voters and election administrators.

Open ticket voting operates similarly to ranked choice voting, except that it uses party labels as a substitute for ranking candidates. As a result, it assumes that if voters prefer a candidate of one party they will also prefer all the other candidates running for that party over other parties' candidates. That is, if a voter prefers a Republican, he or she will prefer any other Republican in the race to any Democrats, and vice versa. Unlike choice voting, votes for third party and independent candidates with too little support to win are "wasted" for the purposes of representation and do not count for a second choice.

***To vote:*** Voters cast a single vote for one candidate. Typically, most candidates would have party labels and multiple candidates would run under each party label. The ballot would appear identical to most partisan ballots today: there would be a list of candidates, each with a party label or marked as an independent, and the voter would vote for one.

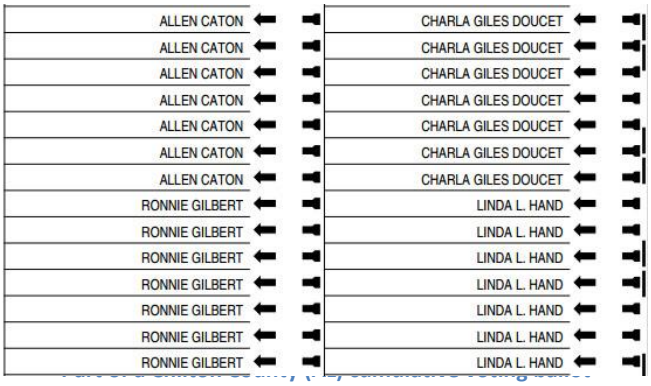
***To determine winners****:* The votes for each candidate are totaled and candidates are elected when they surpass a certain threshold, as in the other systems. To avoid vote-splitting, votes are counted for a candidate's party as well, and that party vote is used to determine the winner of any remaining seats. For example, if 51% of voters support candidates from a particular party in a district that has five seats, that party has earned a majority of three out of five seats. The party's share of three seats would be filled by its three nominees who received the most individual votes.

***Example****:* Suppose there were a three-seat district that leaned toward Republicans, with 200 Republican-leaning voters and 150 Democratic-leaning voters. The Republican nominees are Ronald Reagan, George W. Bush and Gerald Ford. They collectively earn 200 votes: 135 votes for Reagan, 40 votes for Bush, and 25 votes for Ford. Meanwhile, the Democrats run Bill Clinton and Jimmy Carter, with Clinton earning 100 votes and Carter earning 50 votes. Under a winner-take-all system, the 200 Republican-leaning voters would have likely elected all three Republican nominees. Using the single vote system, the Democrats actually would have won two seats with a minority of the vote. But with the open ticket system, each party earns their fair share, and Reagan, Bush, and Clinton win election.

**Cumulative Voting**

In winner-take-all, multi-seat elections, voters ordinarily have a number of votes equal to the number of seats to be elected, but they are restricted to assigning each vote to a different candidate. This system can be made into a fair voting system by extending *cumulative voting rights* to voters – that is, the right to give more than one vote to a single preferred candidate.

In the simpler form of cumulative voting (the "equal allocation" method), a ballot lists the candidates, and voters can vote for up to as many candidates as there are seats (just as with a traditional winner-take-all, multi-seat election). Their votes are allocated equally to the candidates they have selected. In a five-seat race, for example, voters selecting one candidate would give that candidate 5 votes, those selecting five candidates would give those candidates 1 vote each, and those backing two candidates would provide each candidate with 2.5 votes. Another form of cumulative voting allows voters to allocate uneven numbers of votes – for example, four votes for one candidate and one vote for another. In all of these approaches, the candidates with the most votes are elected.




Because the simpler form of cumulative voting uses the same ballot as winner-take-all, multi-seat voting, it can be an easy system to adopt in places that currently use multi-seat elections. Eight states use multi-seat elections for their state

legislatures, including Arizona (two-seat districts), Maryland (three-seat districts), and New Hampshire (varying district sizes).

Cumulative voting will grant voters in the minority a degree of representation. However, if the minority group splits its votes among two or more candidates, they may fail to achieve fair representation. Cumulative voting also sometimes results in majority groups failing to split their votes effectively, resulting in the majority being underrepresented. Voters whose preferred candidate does not have enough votes to win will not have a second chance to have their votes count. As a result, cumulative voting creates incentives for parties to limit candidacies to the number of seats they expect to have a chance to win.

Illinois elected its State House of Representatives from three-seat districts using cumulative voting from 1870 to 1980. The use of cumulative voting ended the partisan polarization that plagued Illinois in the aftermath of the Civil War, when northern Illinois was controlled by Republicans and southern Illinois by Democrats. Cumulative voting has also been used to resolve a number of cases brought under the Voting Rights Act, and it continues to be used in several jurisdictions in Alabama, New York, South Dakota, and Texas as a result of Voting Rights Act activity in those states.

**The Single Vote System**

The simplest fair representation voting method is a variant of "limited voting" (an unfortunate term for a system that expands representation) called the single vote system. Under winner-take-all multi-seat elections, voters ordinarily have a number of votes equal to the number of seats elected, allowing a majority group to decide the outcome of every single seat. In the one-vote system, voters have a single, more potent vote. The candidates that receive the most votes are elected.

The single vote system suffers from the same susceptibility to vote-splitting and strategic voting that characterizes cumulative voting and, for small parties, open ticket voting. Like all fair representation voting systems, however, it significantly increases the likelihood that voters will participate in meaningful elections that result in fair representation when compared to a winner-take-all system.

Many jurisdictions throughout the U.S. use either the single vote system or some other variant of limited voting in which voters have more than one vote but fewer votes than the number of seats to be elected. When using at-large elections, counties in Pennsylvania and cities in Connecticut are required to use limited voting with limited nominations, so that one party cannot win every seat. Alabama and North Carolina have adopted other forms of limited voting in response to lawsuits brought under the Voting Rights Act.