Ranked Choice Voting

Down the Rabbit Hole of Social Choice Theory

RCV Set Up

Type 1. 7 voters: a b c d

Type 2. 6 voters: b a c d

Type 3. 5 voters: c b a d

Type 4. 3 voters: d c b a

Problem 1: Perverse Outcomes

- Because no candidate has a simple majority of 11 first- place votes, the candidate with the fewest first-choice votes, d, is eliminated first.

- Then d's 3 votes go to c, giving c 8 votes.

- Because none of the remaining candidates has a majority at this point, b, with the new lowest total of 6 votes, is eliminated next, and b's second- place votes go to a, who is elected with a total of 13 votes.

- Now assume the three type 4 voters raise a from fourth to first place in their rankings without changing their rankings of the other three candidates.

- Now a has a total of 10 first- place votes, which is not a majority.

- Hence, the candidate with the fewest first-place votes, c, is eliminated, and his or her 5 votes are given to b, who wins with a total of 11 votes.

- This is indeed perverse: a loses when he or she moves up in the rankings of the three type 4 voters from fourth to first place and thereby receives three more first-place votes.

Problem 2: Discarded Ballots

- Some proponents of municipal election reform advocate for the adoption of Instant Runoff Voting (IRV), a method that allows voters to rank multiple candidates according to their preferences. Although supporters claim that IRV is superior to the traditional primary-runoff election system, research on IRV is limited. We analyze data taken from images of more than 600,000 ballots cast by voters in four recent local elections. We document a problem known as ballot "exhaustion," which results in a substantial number of votes being discarded in each election. As a result of ballot exhaustion, the winner in all four of our cases receives less than a majority of the total votes cast, a finding that raises serious concerns about IRV and challenges a key argument made by the system's proponents.

Why Ballots Are Discarded

- First, some research suggests that, by requiring voters to rank multiple candidates rather than simply identifying the one they most prefer, IRV can become more difficult and confusing for voters.

- Second, IRV does not guarantee that the winner in the final round actually secures the majority *of all votes cast*. This occurs because, in practice, a large number of ballots are eliminated during earlier rounds of redistribution due to exhaustion, and are thus excluded from the final vote tally.