

Complications with Using Ranked Choice Voting

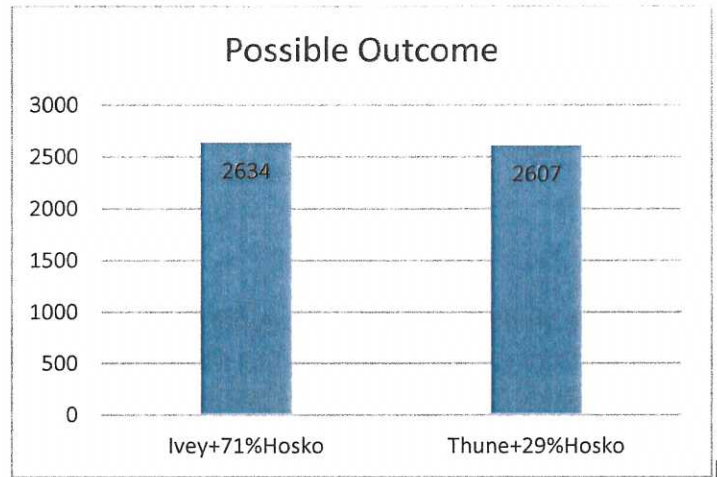
Eric Erdmann

UMD Mathematics Instructor and Member of the City of Duluth's Charter Commission

Using data from St. Paul, MN elections I will highlight just a few of the complications that can arise when using Ranked Choice Voting (RCV). The data available from St. Paul is not complete enough to reconstruct the elections, because the ability to view the actual ballots is not available, so in some cases hypothetical situations are used that fit within the context of the data available. Data from other municipalities that publish their results more thoroughly can be used to highlight the discussed violations, which have happened.

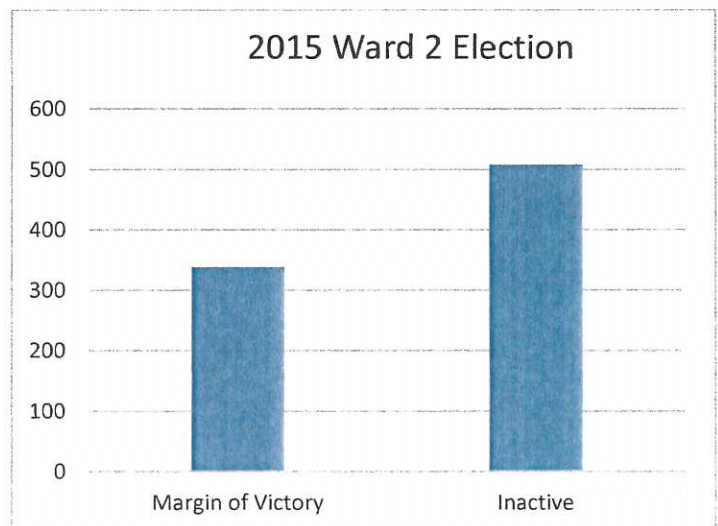
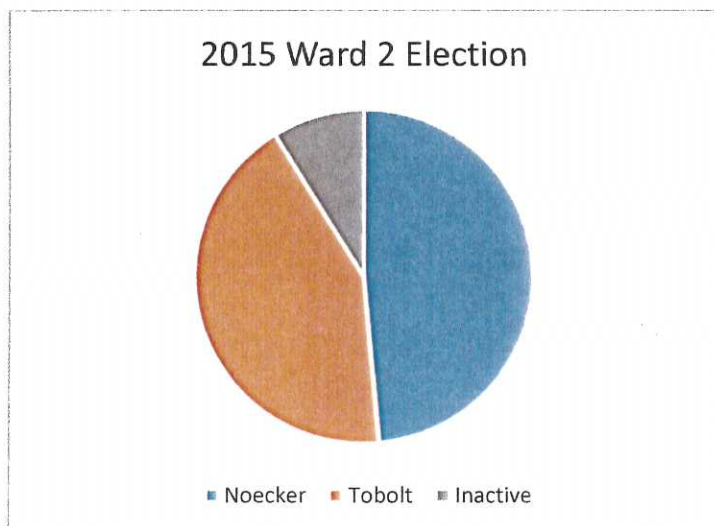
In St. Paul's 2011 Ward 2 election, the 2nd and 3rd place candidates start at a relative close position, and we only know what happens when Ivey is eliminated (But, not how Ivey and Thune compare directly). If instead Hosko is eliminated, Ivey could have beaten Thune had he gained 71% or more of Hosko's voter support.

Candidate	Round 1	Round 2	Round 3
Dave Thune	2078	2153	2870
Jim Ivey	1435	1521	-----
Bill Hosko	1378	1567	2064
Others	472	-----	-----

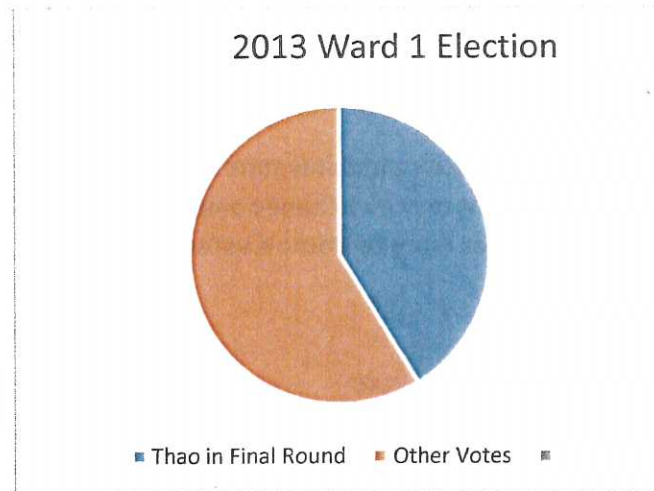


If Hosko (a candidate that does not win) would have not been in the election's subsequent rounds, it could have changed the winner. This is problematic because RCV allows a non-winning candidate to significantly affect the outcome of the election, and in some cases, can cause a candidate with the greatest overall support to lose in an earlier round.

Another issue with ranked choice voting is that ballots can become inactive. This can happen when a voter does not fully fill out a ballot or the election requires more rounds of elimination than ranking positions allowed on the ballot. This can result in a voter who may have a preference between candidates in the final round not being able to express their preference. Voters whose ballots were inactive could have swayed St. Paul's 2015 Ward 2 election where the margin of victory was 170 voters less than the amount of inactive ballots.



Finally, proponents of ranked choice voting often claim that the winner of RCV elections will obtain the support of a “majority of voters” to win the election. In St. Paul’s 2013 Ward 1 election, the winner won with support with just over 41% of the voters even after the final round of runoffs.



An alternative voting method does have the potential to improve municipal elections. The more information a voting method can collect from voters the better it can determine the will of the people. In this way, RCV is an improvement on the plurality method. However, the way the information is used with RCV creates some major drawbacks. The order in which votes are uncovered can affect RCV elections and cause a more desirable candidate to lose and ballots can become inactive, restricting voters from deciding between the final two candidates despite filling out a complete and correct ballot. Therefore, while the idea of using an alternative voting method may be a good change, choosing RCV as the method leads to several complications, and unintended consequences.