

My name is David Rybka and I am a resident of Rochester, New York in Monroe County. I work primarily as an online mathematics tutor. I have a master's degree in mathematics from SUNY Brockport and a bachelor's from Roberts Wesleyan College. This does not make me an expert on the game theory of voting systems, but I have done some research on the subject. Our society is deeply divided right now as political factions see each other as intractable enemies. Currently we seem to be heading into what game theory calls a death spiral, because each side feels they cannot trust the other. The distrust and corruption that has caused this will take generations to heal, but one way to start that fix is to reform voting systems so the winners reflect the actual voting population.

Most, elections in New York State and the rest of the United States use what is called plurality voting. This means that, in a voting range, the population expresses support for a single candidate and the candidate who receives the most votes are dubbed the winner. This system seems extremely simple and effective, but there are major problems which are easy to miss. The first problem is called the spoiler effect where if there are more than two candidates in a race the "spoiler" candidate gains votes at the expense of what should be their closest political ally and cause their enemies to gain a majority of the vote. This discourages candidates with different perspectives from participating in the political process and forces voters into tribal voting patterns. If you vote for the spoiler, you will not get enough votes to win and you will prevent a candidate with similar but more mainstream views from winning. By limiting the candidate pool, you can also entrench corruption. For instance, you may know your mayor is corrupt, but voting for the other candidate would mean voting for policies that are deeply harmful to yourself or your family. So, you continue to support the corrupt candidate, even though it is harmful to your community.

Another potential pitfall is gerrymandering. Gerrymandering is a word for drawing voting districts in a way that prevents competition for political candidates. Specifically, a political party can draw the lines so even with a sever minority of overall votes a group can still retain a majority in a lawmaking body. This means laws that are needed by the majority of the population will not get passed and politicians will actively ignore the needs of those they represent, preferring their own interests. This can seem ideal to a politician or a party hoping to maintain power, but it is devastating to the country as a whole. Plurality voting is particularly susceptible to this type of manipulation as well as other voting suppression efforts.

Fortunately, there are voting systems that can respond to these types of systemic drawbacks as well as others like them. Two categories of voting system are called ranked choice voting and approval voting. There are multiple versions of both these systems usually involving the number of candidates being selected per district or the number of candidates the voter is allowed to choose.¹ Ranked choice voting is a system where instead of picking a single candidate, the voter ranks their choices for office. The candidates are chosen by setting a voting threshold, usually the total votes divided by the number of open positions plus one. If a candidate gets votes beyond that threshold the percent above also goes to their second choice, then they eliminate the candidates with the least votes and send those to their next choice. This elimination occurs until you have the number of candidates that are needed. This tactic removes the potential spoiler effect and if you have around 4 candidates per district you can also eliminate gerrymandering.

There are other voting systems with similar tactics, like approval voting. This system is also better than plurality voting in it doesn't have as much of a spoiler effect and with the right number of candidates it is hard to gerrymander. Approval voting has the advantage of being simpler. You simply allow voters to vote for as many candidates as they wish.ⁱⁱ This is easy to implement compared to ranked choice voting, but it has other technical disadvantages that are hard to get into. In my opinion, it is still better than the current systems.

I can understand the reluctance of politicians to change the systems that put them in power. But at the moment, we have a system that encourages politicians not to govern or to actively harm their constituents. Democrats in New York elect corrupt politicians because the alternative are a group of politicians that actively have the interests of Democrats or society as a whole. Republicans have good reason to also be concerned because Democrats have the chance to prevent Republicans from having any say in government. While I may not always agree with republicans, their views need to be represented and that can't happen if it is in the interest of the ruling party to simply quash their views. So, I want an approach that allows both to be represented. I want multicandidate districts with a ranked choice voting election method. This would allow voters to be represented by candidates that have to listen to their constituents and represent a variety of perspectives in each district. It would also force a representative to hear from aspects of the community they would normally have to ignore and prevent them from picking their voters instead of voters picking their leaders. Thank you for reading.

ⁱ https://www.fairvote.org/electoral_systems#research_electoralsystems101

ⁱⁱ <https://electionscience.org/approval-voting-101/>