

Negotiated Consensus: A more representative way to vote.

Author: Greg Blonder

email contact: gblonder@alum.mit.edu

Abstract: Despite thousands of years of practical voting system experience ranging from ancient Greek *ostraca* to paper ballots to electronic ranked choice voting, no universally accepted scheme has emerged capable of balancing transparency, cognitive load, and “fairness”. Indeed, given the situational and fluid dimensions of “fairness” as a foundational criterion in a democracy, the hope for a universal methodology is a mirage. Here we narrow our focus to single and multi-member democratic races where the electorate’s preferences are split, but voters are willing to accept a consensus candidate willing to modify their positions to incorporate minority party policies. If no candidate receives a simple majority, then all candidates negotiate among themselves to transfer votes in exchange for concessions until a majority winner is realized. We call this method “Negotiated Consensus”, leveraging a related suggestion made by Charles Dodgson in 1885.

Introduction: The promise of “representative majority rule” remains a cornerstone of democracy, but this ideal is often undermined in conventional “first-past-the-post” (FPTP) elections. When three or more candidates compete and voter preferences are split—an all-too-familiar occurrence—the winner is determined by a mere *plurality*, rather than a true *majority*, of votes. As a result, a niche candidate, supported by only one-third of voters, can end up representing an entire electorate—casting doubt on the democratic legitimacy of the outcome. Even more concerning, vote splitting induced by spoiler candidates¹ can lead to the defeat of a consensus candidate—one whose policies reflect a clear majority preference.

A democracy without fair representation is a democracy in name only².

To address these inequities, **Ranked Choice** or **Preference Voting (RCPV)** methods have been proposed and, in a few cases, adopted³. Here, voters declare their 2nd, 3rd, etc. choice candidates on the ballot. If no candidate receives a majority on the initial round of voting, their preferences are automatically applied to alternate candidates in the second round, and so on until a synthetic majority winner is declared. Thus, citizens can vote pragmatically while still voting their conscious.

Which makes sense, in principle.

But RCPV demands voters invest the time, knowledge and interest to pre-record their alternate choices for subsequent automatic vote-preference reallocation. It’s hard enough to pick a single favorite candidate from a large field, let alone justify a third and fourth choice among similar or unknown candidates.

While intellectually fascinating to design and debate, RCPV systems can also be opaque and complex. Lazy or misguided voters can undermine even the most carefully planned voting schemes by ranking erratically. Dishonest voters may try to “game” the system by strategically de-rating hated political rivals. Or, the algorithm can misfire, leading to sometimes embarrassing disconnects between election results and common sense.

Despite hundreds of years of experimentation, no universally acceptable RCPV system has emerged that can challenge FPTP. Worse yet, while proponents of each RCPV sect share many of the same democratic goals, they argue vigorously against each other over the smallest nuances, further muddying the electoral waters⁴.

Negotiated Consensus: As an alternative to RCPV and FPTP we take our inspiration from an 1880’s suggestion by Charles Dodgson (Lewis Carroll): let the candidates themselves reallocate votes until a majority winner emerges.

The Reverend Dodgson was fascinated by voting system design⁵. He invented⁶ some of the earliest proportional voting methods, balancing mathematical optimization methods against real-world concerns over voting privacy and manipulation⁷.

*May I, in conclusion, point out that the method advocated in my pamphlet (where each elector names one candidate only, and the candidates themselves can, after the numbers are announced, **club their votes** (my emphasis) so as to bring in others besides those already announced as returned) would be at once perfectly simple and perfectly equitable in its result?*

We call our related proposal **Negotiated Consensus (NC)**⁸. In the absence of a simple majority after election day, the candidates negotiate, for a concession, to transfer all (or some) of their votes to other aspirants. With NC you vote for your preferred candidate, grant them your proxy, and trust them to reach an accord on your behalf during real-time, post-election negotiations. Similar to forming a ruling coalition in a parliamentary system. Any candidate accumulating a majority of the votes, including pledged transfers, wins.

Unlike RCPV (see next section) where your alternate-votes are given away having received nothing tangible in return, in NC small parties and independents gain influence for their constituents during negotiations. Perhaps swapping votes for a future cabinet seat. Or agreeing to soften their position on climate adaptation.

In fact, small parties may prefer a skilled negotiator rather than a charismatic politician as their “candidate” as the most pragmatic route to influence policy.

The pattern of these negotiations will vary from election to election. In some cases, where there are two main contenders and a single third-party candidate with similar views to one of the leaders, the smaller constituency will transfer their votes in exchange for policy concessions and election of a like-minded contender. With five candidates and three

leaders, negotiations will be more intense and the concessions greater. Forcing the winner to align more closely to the electorate.

A win for democratic representation.

No doubt small parties may prove to be intransigent, and larger parties arrogant. But the risk of losing the election because your opponent assembled a majority coalition will bring everyone to the table.

What happens if an agreement cannot be reached? Certainly, public pressure will increase but if, after three weeks there is no winner, the top two candidates (after any vote transfers) hold a runoff election⁹. Unlike conventional runoff elections where the top two are merely plurality leaders, in NC vote transfers may determine the top two candidates; third-party influence is baked into the runoff. This should also encourage small party voters to vote in the runoff as they now have a direct stake in the outcome.

NC eliminates the spoiler effect, disingenuous clones, plurality winners, mathematical voting incongruities, complexity and wasted votes. Negotiations force compromise and, over time, the pragmatic candidate's best tactic is to behave more like a virtuous representative.

Fairness Criteria: How does one compare voting systems in a democracy? There is no generally accepted legal or political understanding. Political scientists often defer to some kind of general "satisfaction" with the outcome as a metric. The democratic goal is maximizing election satisfaction, presumably with at least a majority of the voters.

It is possible for 70% of the voters to be satisfied despite the winner only garnering 55% of the votes, as the losers might still agree the election was fair. The converse is also true- 40% could be satisfied even though they reluctantly voted for the majority winner, because they preferred a different candidate as their standard bearer and thought the primary system mis-fired.

In the spirit of maximizing representation and voter satisfaction, ranking systems are generally designed to improve the chances of independent or smaller parties participating and winning. Studies indicate that enhanced competition may slightly encourage candidates to become more moderate or centrist¹⁰, but unless moderation improves overall voting satisfaction, this is a side-effect and not a democratic goal.

Among the dozens of proposed voting systems two seem closest to adoption: some variation on the theme of *Ranked Choice Voting (RCV)* or *Ranked Preferences (RP)*.

There are numerous technical and practical issues with RCV¹¹. Because the vote-aggregation steps are non-linear, you cannot simply sum the outcomes from different precincts, but must wait until all votes are certified and merged. This can delay or call into

question the outcome. Standard voting machines are not suited for RCV, so a few percent of people regularly spoil ballots by inadvertently declaring two second choices (and a few percent may be critical in tight elections). Exhausted ballots¹², where the automated process could not match a voter to the final two contenders due to the order of their choices, may disenfranchise 10% to 15% of the electorate.

RCV has failed in the field¹³, for example, in the 2009 Burlington, VT mayoral election¹⁴ neither the plurality nor the head-to-head preferred candidate won, leading to low voter satisfaction with the outcome. RCV was repealed later that year.

RCV may also prematurely eliminate the consensus candidate, which, to the extent they are the candidate satisfying most voters, implies the least democratic choice won. For example, imagine Alex receives 38% of #1 votes, Blake 35% and Carey 27%. No one has a majority on the first round, so an automated reallocation occurs. Alex's and Blake's voters hate each other's guts, so only a few will rank each other as #2, but they generally approve of Carey. However, in RCV, after each round the bottom vote-getter is dropped, which means the consensus candidate Carey loses. True, Carey's second-choice selections will help tip the election in a direction they prefer, but fewer people will be happy with that outcome compared to Carey winning. This effect is only amplified when there are spoiler or clone candidates splitting narrow differences, so the consensus candidate keeps falling to the bottom and is eliminated.

There is also an existential question. Is your #2 ranked candidate slightly worse than #1, or just over the bar? In either case they receive a fully transferred vote on the second round, which may over or under-estimate voter intent. That is, if maximizing voter satisfaction is the goal, should two lukewarm #3 votes be worth twice as much as one strong #2?

STAR voting¹⁵, a form of Ranked Preferences, was invented to avoid many of these aberrations, and is often compared to submitting a Yelp review. In STAR you don't rank the candidates against each other, but instead compare individuals to an abstract concept of "goodness" on a five-point scale. Similar to a restaurant review, where you rate your experience compared to an ideal meal, not directly to other restaurants. Instead of averaging, the rankings are weighted by the number of diners. So, a restaurant with 100 five-star reviews gains 500 points, while one with 1000 four stars are assigned 4000 points. And thus wins the "Best Of" award. Note the more popular establishment may not actually serve the best food, but satisfies the most people most of the time. Democracy in action.

Unlike Yelp¹⁶, the "AR" in STAR stands for "Automatic Runoff". After the preference scoring round, the top-two highest scorers are compared in an instant-runoff repurposing earlier preference scores, winning points for every head-to-head ballot with a higher preference. The head-to-head winner is elected.

Since all preferences are combined before candidates are compared, every vote counts and there are no exhausted ballots in the scoring stage. However, if you did not indicate a

relative head-to-head score for the eventual runoff candidates, or scored them identically, your ballot has no effect in the runoff. So effectively an exhausted ballot.

In STAR, voters assign preferences from 5 to 1 to each candidate, and thus each step in preference is downgraded by 20% when preferences are averaged. But why 20% and uniform steps, except for mathematical ease? Depending on the degrading factors between levels, different candidates may win.

Dishonest voting is an issue, as are clones and collusion. In addition, the “stars” have no fixed meaning. Similar to RCV, combining preferences is problematical where each voter had a different scale in mind. Averaging your choice for the best car with the best hamburger stand, is pointless.

Moreover, as with all automatic voting systems, ranks/prefs are preloaded into the system BEFORE voters are aware of the results of the first round. In principle, responsible voters should be able to anticipate ever possible combination, pre-rank their choices accurately and let the math output a decision. But as Samuel Johnson noted¹⁷ *‘Depend upon it, sir, when a man knows he is to be hanged in a fortnight, it concentrates his mind wonderfully.’* Often people vote their emotions, won’t rank logically, and when they finally realize their emotional position led to an idiot winning, regret their passion.

Potential Advantages of *Negotiated Consensus*:

- Can vote your conscious and still influence the outcome via your proxy. In response, small parties will emerge and grow in strength.
- No wasted ballots.
- No exhausted ballots.
- Easy to understand- no fancy math or obscure weighting and transfer rules. No need to make fine-grained ranking distinctions between candidates, where none logically exists.
- Works with standard voting machines.
- Linear, so votes can be validated and combined at a district level.
- Small parties are unlikely to win, but may help decide an election in exchange for key concessions. So, third-parties gain indirect political representation well beyond their shadow influence in RPV.
- Spoiler and clone effects minimized during vote transfer negotiations- those with similar political interests are strongly incentivized to work together. Two or three smaller parties could “club” their votes together, settle upon a consensus candidate and policies, and win the election.
- Candidates can poll their voters during negotiation (who now have a better understanding of practical alternatives) and adjust their vote accordingly.
- Proxy transfers create a true majority winner.

Potential Issues with *Negotiated Consensus*:

- Perhaps illegal in some jurisdictions, and certainly unfamiliar. Will definitely raise red flags.
- The cost of holding a potential runoff.
- Possibly lower turnout in the runoff (then again, possibly higher as is typical with primaries vs regular elections).
- Vote buying and collusion is possible, but if you don't trust your candidate in NC, you won't trust them in office.
- Candidate coercion (e.g, their children are kidnapped to force their vote). Sadly, a possibility in the current environment, but same issue applies to voting officials, election machine software developers,
- Small parties may be thrust into the role of "king makers", and may demand narrow and unreasonable concessions. Larger parties can moderate this tendency if they agree to cooperate. Or default to runoff, squeezing out smaller parties.
- Candidates might renege on a promise, but assuming elections are held again in a few years, they will have no credibility in future negotiations. So, everyone has an enormous incentive to honor their commitments. Classic game theory.
- As in many voting systems, a minimum level of support may be required to qualify for the ballot- perhaps via a primary or enrollment stage to weed out niche parties.
- It will take a number of election cycles for the party system to adapt and for new parties to coalesce. Voters may lose patience in the interim.
- Americans expect a winner will be announced the day after the election, and initially may be uncomfortable with NC's longer time horizon.

Random Variations in *Negotiated Consensus*:

Note any rigid forcing-function to break an NC deadlock, such as an instant runoff or preference vote, will be gamed by candidates in their favor. For example, if you knew you would win a runoff you have no incentive to negotiate vote transfers in good faith.

A compelling but unconventional alternative is Athenian randomness¹⁸. If there is no consensus winner after three weeks, instead of facing each other in a runoff election, one of the top three (after transfers) candidates wins by random selection. The random choice could be weighted by the size of their support¹⁹. The roll of the dice allows minority parties a statistical chance of representation in single-member races.

Sortition is hard to game, breaks the two-party stranglehold, and delivers rough justice. But we fear injecting intentional randomness²⁰ into an election will be a hard sell, no matter how efficacious. So NC defaults to a top-two runoff election.

Multi-member Districts and *Negotiated Consensus*:

A similar approach can be used in multi-member districts. Let's say there are three open positions and a dozen candidates. Each voter has three votes they can apply entirely to one, or split among two or three candidates. Any candidate who receives or gains transfers

of 25%+1 of the total cast votes (the Borda threshold, basically a fractional majority criteria) is provisionally elected. Any excess can be transferred to others.

Again, multi-member negotiations will determine the outcome. Rather than decreasing the chance of compromise, sometimes more people at the table enables pragmatic tradeoffs. As President Eisenhower once (apocryphally) remarked “*Whenever I run into a problem I can’t solve, I always make it bigger*”. More voices, more degrees of freedom.

In the event one or more seats are unfilled after three weeks, a runoff election is held. The runoff must include the candidates who already passed the Borda threshold, and the top two or three of the remainder (two, if two candidates achieved the threshold, three if only one).

Why are the “winners” of the first round included in the runoff? To avoid the tyranny of the majority. If the winners of the first round are excluded, then the largest plurality basically double-dips, knowing their preferred candidate is already safe. And can determine the second-round outcome as well. In fact, a large plurality might discourage negotiations and throw the election into a runoff. Instead of splitting the seats, they could win every seat sequentially.

Alternatively, a random winner could be selected from among the top two (or three) to fill any open seats not above the Borda threshold. Avoiding the cost and complexity of a runoff.

Conclusions and Next Steps: There are two main ways to test new voting methodologies—simulation and real-world implementation. While a Monte-Carlo simulation using AI generated candidates and voters may be illuminating and could identify weaknesses with this proposal, model assumptions inevitably heavily bias the results. Thus, we recommend small-scale tests of Negotiated Consensus in private organizations or on town councils, and if promising, gradually build towards broader adoption.

Negotiated Consensus offers numerous advantages over FPTP and RCPV. In particular, it lowers the cognitive burden on voters while still reflecting their policy priorities in the outcome of the election, even if their candidate loses. By substituting face-to-face human negotiations for automated weighting and aggregation, NC is both more flexible and more representative, and thus, a fairer democratic solution to the perennial challenge of designing voting systems.

Endnotes:

¹ Parties often run spoiler candidates intended to draw votes away from their opponent. For example, candidates R and D are in a close race, but D is ahead. So R supports a third candidate with similar views to D and surreptitiously helps them qualify for the ballot. This mini-D candidate draws votes from D, and suddenly R is the plurality winner! Frustrating the majority-will of the people for a D-style winner.

Spoilers put their thumbs on the scale in tens of thousands of local races, and at least five US presidential elections.

https://www.americanbar.org/groups/senior_lawyers/resources/experience/2024-january-february/are-thirdparty-candidates-always-spoilers/

² <https://gregblonder.medium.com/represent-379c1273f5f4>

³ In Europe, some countries “split the baby” with a combination of single-member local districts, combined with national multi-member races. Most countries employ a party-centric “list” system where you vote for a party <https://www.electoral-reform.org.uk/which-european-countries-use-proportional-representation/>, and the fraction of votes for that party determines how many members of the list are elected.

Proportional systems in the EU are mandatory:

<https://www.europarl.europa.eu/factsheets/en/sheet/21/the-european-parliament-electoral-procedures>

Under the amended 1976 Electoral Act, European elections must be based on proportional representation and use either the list system or the single transferable vote system. Member States may also authorise voting based on a preferential list system.

In addition to the voluntary minimum threshold for the allocation of seats of up to 5% of valid votes cast at national level, the recent amendments to the 1976 Electoral Act, adopted by <https://eur-lex.europa.eu/eli/dec/2018/994/oj> establish an obligatory minimum threshold of between 2% and 5% for constituencies (including single-constituency Member States) with more than 35 seats in Member States where the list system is used. Member States will have to comply with this requirement in time for the 2024 elections at the latest.

Pursuant to that decision, Member States may also provide for advance voting, postal voting and electronic and internet voting. Where they do so, they must ensure, in particular, the reliability of the result, the secrecy of the vote and the protection of personal data.

Most Australian <https://www.cogitatiopress.com/politicsandgovernance/article/view/3889> elections have used RCV for over a century, but unlike the US, voting and ranking is compulsory, party affiliation is weaker, and there are no primaries. To leverage (and game) RCV, parties distribute cheat-sheets indicating how voters should rank other candidates, and 30–50% of voters take the hint. Thus, the Australian RCV experience is not applicable to the US.

Cheat-sheet coordination is a weaker form of negotiated policy concessions than NC.

⁴ For example, in 2024 STAR Voting campaigned https://assets.nationbuilder.com/unifiedprimary/pages/1372/attachments/original/1724875027/RCV_Oregon_Fact_Sheet_Measure_117_-_HB_2004_-_LR_403.pdf?1724875027 against RCV in Oregon <https://www.opb.org/article/2024/10/15/think-out-loud-measure-117-oregon-ranked-choice-voting/> ! And FairVote replied in kind. https://fairvote.org/resources/electoral-systems/#single_winner_methods

⁵ The mathematical-political papers of C. L. Dodgson, 1982 Francine Abeles, in [*Lewis Carroll, a Celebration*](#) ISBN 13: 9780517545577

⁶ McLean, Iain, 'Voting', in Robin Wilson, and Amirouche Moktefi (eds), *The Mathematical World of Charles L. Dodgson (Lewis Carroll)* (Oxford, 2019; online edn, Oxford Academic, 17 Apr. 2019), <https://doi.org/10.1093/oso/9780198817000.003.0005>,

⁷ C. L. Dodgson, *The Principles of Parliamentary Representation: Supplement* (Oxford 1885), p7.

⁸ NC is also a variation of “Asset Voting” https://electowiki.org/wiki/Asset_voting , which like NC, has been independently reinvented a number of times. It is also loosely related to proxy voting https://en.wikipedia.org/wiki/Proxy_voting#Delegated_voting . As always, the devil is in the details.

⁹ Nine states conduct runoff elections as part of their party nomination process, and three in the general election https://ballotpedia.org/Runoff_election

¹⁰ <https://effectivegov.uchicago.edu/primers/ranked-choice-voting> and references therein. Also compares RCV to two-round runoff.

¹¹ For a ranked choice voting tutorial, see <https://fairvote.org/our-reforms/ranked-choice-voting/>

¹² Exhausted ballots https://electowiki.org/wiki/Exhausted_ballot

¹³ Election misfire in 2009

https://en.wikipedia.org/wiki/2009_Burlington,_Vermont_mayoral_election

¹⁴ Philip Barut, *Voting Paradoxes and Perverse Outcomes: Political Scientist Tony Gierzynski Lays Out A Case Against Instant Runoff Voting*

<https://web.archive.org/web/20110726125814/http://vermontdailybriefing.com/?p=1213>

¹⁵ <https://www.starvoting.org/star>

¹⁶ <https://blog.yelp.com/news/new-study-compares-yelp-review-quality-with-competitors/>

¹⁷ James Boswell, *Life of Samuel Johnson, LL.D.* (orig. pub. 1791; reprint ed. Chicago: Encyclopedia Britannica, 1952), p. 349 (entry for September 19, 1777).

¹⁸ Athenian randomness applied to modern politics

<https://gregblonder.medium.com/random-acts-of-democracy-a88fccdb37b2> and to the Supreme Court <https://gregblonder.medium.com/a-random-walk-for-scotus-4be26ab19053>

¹⁹ A hard-edged criteria is problematic- it just shifts ballot fights to argue over a single vote which might trigger the random selection process. Instead, a continuous function makes the most sense. For example, in a two-person runoff a gaussian weighting function that peaks at 50% each is settled by a coin-flip, and with a 10% vote difference the coin is weighted so the 55% candidate has a 95% chance of winning the toss.

²⁰ Jobst Heitzig and Forest W. Simmons propose a nice mathematical stochastic voting method allowing minorities to gain leverage when reaching consensus. Heitzig, J., & Simmons, F.W. (2020). Efficient democratic decisions via nondeterministic proportional consensus. <https://arxiv.org/abs/2006.06548>