“This is the site for learning about democracy.”
—Zoe Weil, author of Most Good, Least Harm, president of the Institute for Humane Education.

“... a huge contribution to the democracy cause.”
—John M. Richardson Jr., former Chairman of the National Endowment for Democracy.

“Congratulations on a brilliant piece of work.”
—Robert Fuller, former President of Oberlin College, author of Somebodies and Nobodies, and All Rise.

The primer, games and pictures let you

Read, Touch and See How

The best voting rules are fast, easy and fair.
The results are well centered and widely popular.

They strengthen the votes supporting one chairperson or policy and fair shares of seats or spending.

to Use and Enjoy

Share this illustrated booklet with friends.
Grow support in your school, club or town.
Enjoy better politics, relations and policies, pages 34, 35 and 61.
More Endorsements

1. **Ranked Choice Voting, RCV, elects leaders**
in more and more places: New York City, Minneapolis and Maine, have adopted it; plus Duke, Harvard, Princeton, Rice, Stanford, Tufts, MIT, Cal Tech, Carlton, Clark, GW, Reed, Vassar, UCSC, the Universities of Auburn, Houston, CA, IA, IL, MA, MN, NC, OK, TX, VA, WA and WY.

2. **Multi-Winner RCV elects a whole council**
at Cambridge, Carnegie Mellon, Clark, MIT, Oberlin, Oxford, UC Cal, UC Davis, UCLA, UCSB, Vassar, Whitman, and more. For decades, Australian and Irish voters have used Ranked Choice Voting in local and national elections. fairvote.org/rcv_in_private_organizations_and_corporations

Many groups endorse Ranked Choice Voting.
Organizations: Oscars, Church of England, Common Cause, Sierra Club, UUA, American Academy of Arts & Sciences, Leagues of Women Voters: Arizona, California, Florida, Maine, Massachusetts, Minnesota, North Carolina, Oklahoma, Oregon, South Carolina, Vermont and Washington
Journalists: David Brooks, Hendrik Hertzberg, and more
Celebrities: Jennifer Lawrence, Krist Novoselic, and more
US Senators: John McCain, Barak Obama, Bernie Sanders
US Reps: Keith Ellison, Jamie Raskin, Don Beyer, more
Parties: Democrats of CA, CO, ME and MA; Green Party US; Libertarian Party; Republicans in Alaska and Utah.

www.fairvote.org/ranked_choice_voting_endorsements

About Us

**About FairVote** info@fairvote.org

FairVote is a nonpartisan champion of electoral reforms that give voters greater choice, a stronger voice, and a representative democracy that works for all Americans.

FairVote has a proven record since 1992 as a trailblazer that advances and wins electoral reforms at the local, state, and national level through strategic research, communications and collaboration. Today it is the driving force behind advancing ranked choice voting and fair representation in multi-winner legislative districts that will open up our elections to better choices, fairer representation and more civil campaigns.

**About My Work** VotingSite@gmail.com

In 1990, John R. Chamberlin, and Samuel Merrill III each gave me permission to use their sim statistical research results to advance a hybrid Condorcet-RCV rule. In the 1990s, I created PoliticalSim™ and SimElection™. They compared 30 single- and multi-winner rules from around the world and were used in a few universities. Pages 48-56 show maps from these simulation games. My sim research led to Democracy Evolves¹¹ in 1997. Then I helped FairVote as a webmaster and librarian. For 10 years I’ve cheered Dr. Robert Tupelo-Schneck, Ian Little, Adder and Kathryn Simmons with Twin Oaks Community for developing Fair Share Voting. (page 24) This booklet summarizes Accurate Democracy.com.¹²

My goals are better group-decision results (page 61), through systemic changes (e.g. pages 34, 58), through better tools between people (e.g. pages 24, 27, 33, 35).
Accurate democracy gives groups fair shares of seats and spending. It cuts scams and enacts a policy that tops all rivals. 4 goals

**Mandate** is the legitimacy effective votes loan to a winner. Contrast a wasted vote. *basic goal* ........... 11-17, 57

**Majority** is more than half of the votes. ..............11-, 14-, 30-, 56

**Plurality** has the most votes—often not a majority. " rules use yes-or-no voting; contrast RCV. .... 6, 11, 23, 31-, 61

**Ranked Choice Vote** lets you rank your first choice and backups. *a tool for effective votes and fair shares*..... 14, 33, 39-, 45, 48-

**Threshold** to win or a finish line is the percentage of votes a rule requires for a win. ................... 6, 14, 17, 42-, 48

**Wasted vote** went to a loser, a winner's surplus or a powerless rep. *It measures weakness in a voting result.* ........... 12-18, 23, 27

**Wrecking amendment** ruins a bill’s chances or effects.

**Free-rider"** doesn't relate to the original bill. ........30, 33, 36

See also the **Summary and Index of Benefits** on page 34.

**Acronyms** and Synonyms

Consensus process .................................................. 33, 36-

**CT** Condorcet Tally, Pairwise Comparison .......... 28-30-, 46, 54-56

**EC** Ensemble Council........New ......................... 8-, 31, 54-56

**FSV** Fair Share Voting ..........New .................... 22-24-, 36-, 43-45, 52-

**FR Fair Rep.** Fair Representation (US); see also STV

PR Proportional Representation and MMP.......... 7, 16-18-, 54, 61

RCV Ranked Choice Voting, Choice Voting (US), includes:

**STV** Single Transferable Vote for Fair Rep.......... 42, 48-51, 54

**IRV** Instant Runoff Vote (US), Majority Preferential Vote (Aus), AV Alternative Vote (UK) for SMD. ..................... 14, 39-42, 56

**SMD** Single-Member District elects one rep. ................. 6, 16, 19
We feel this information should be free, but printing this rare color booklet is expensive. So we print few copies and give away the e-book: www.AccurateDemocracy.com/AcDem.pdf

Please let others share this to improve voting in your clubs, schools, city and state. What will you do or give to live in a more educated and accurate democracy? Consider helping FairVote.org

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Kindly send any requests, questions, comments or compliments to me at VotingSite@gmail.com

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I. Voting Primer

Two of Many Tragedies

Old ways of adding up votes fail to represent large groups in many places. In the USA, North Carolina had enough Black voters to fill up two election districts. But they were a minority spread out over eight districts. So for over 100 years, they won no voice in Congress. As voters, they were silenced—with tragic results.¹

The Northwest tore itself apart by changing forestry laws again and again. In a year with weak forestry laws, hasty logging wastes resources. But sudden limits on logging bankrupt some workers and small businesses. If this policy pendulum swings far, it cuts down forests and species, then families and towns, and back again.²

What can big swings in other policies do?

What’s Wrong

We all know how to take a vote when there are only two candidates: We each vote for one or the other. In this simple contest, the yes or no votes say enough.

But as soon as three candidates run for one office, the contest becomes more complicated. Then that old yea or nay type of voting is no longer suitable.³

It's even worse at giving fair shares of council seats, setting many budgets, or finding a balanced policy. Our defective voting rules come from the failure to realize this:

There are different uses for voting, and some need different types of voting.

Will their votes be effective?
Some English-speaking countries still count votes by England's old plurality rule. It elects only one rep from each district—and winning does not require a majority. It merely elects the one who gets the most yes votes.

A district with only one rep tends to develop only two big parties. So voters get only two real candidates. Even worse: a district's bias often makes it a “safe seat,” a captive audience for one party. So plurality voters get either a very limited choice or no real choice.5

The few with some choice can make a council swerve from side to side. Its majority (↑ above) sets all budgets and policies—in another battle of winner takes all.

**Fair Representation** was developed around 1900 to end some major problems caused by plurality rule. Most democracies now use “Fair Rep.” It elects several reps from each election district. It gives a group that earns say, 20% of the votes, 20% of the council seats. Thus Fair Rep delivers fair shares of representation.6 It's often called Proportional Representation or PR.

It leads to broad representation of issues and views. But usually there is no central party (C above) and the two biggest parties normally refuse to work together. So the side with the most seats forms a ruling majority. Then they enact policies skewed toward their side.
Ensemble Councils ⇒ Balanced Majorities

Council Elected By Central And Fair-Share Rules

Ensemble rules will elect most representatives by Fair Rep plus a few reps (C above) by a central rule. So the points of view within the council will have a spread, and a pivotal midpoint, that match the voters more accurately. $O + \bullet = \bigodot$ That's the target.

Later pages will show how a rule can elect a rep with wide support and views near the center of the voters. So winners will be near the center of a Fair Rep council. There they can be the council's powerful swing voters, with strong incentives to build moderate majorities.

Many voters in this wide base of support won't want narrow centrist policies. They'll likely want policies to combine the best suggestions from all groups.

A centrist policy implements a narrow set of ideas. It blocks rival ideas: opinions, needs, goals, and plans. A one-sided policy also blocks rival ideas.

A compromise policy tries to negotiate all the ideas. But contrary ideas forced together often work poorly.

A balanced policy blends compatible ideas from all sides. This process needs advocates for diverse ideas. And more than that, it needs independent moderators. These swing-voting reps can please their wide base of support by building moderate majorities in the council.

A broad, balanced majority works to enact broad, balanced policies. These tend to give the greatest chance for happiness to the greatest number of people.

Excellent policies are a goal of accurate democracy. Measure their success by the typical voter's education and income, freedom and safety, health and leisure.

Older rules often skew results and hurt a democracy. An ensemble is inclusive, yet centered and decisive—to help make its actions popular, yet stable and quick. The best tools to set budgets or pick a policy will also show these qualities in our stories, graphics and games.
1. Electing a Leader

Nine Voters

Let’s think about this election: Nine voters want to elect a leader. The figures in this picture mark the positions chosen by these voters. They stand along a political spectrum from left to right. It is as though we asked them, “If you want high-quality public services and taxes like France or Germany please stand over ↓ here. Stand here ↓ if you want to be like Canada. To be like the USA stand over here ↓. For Mexico's low taxes and government services stand over there ↓.”

Throughout this booklet, we're going to show political positions in this compelling graphical way.

Plurality Election

Here we see three rivals step up, asking for votes.
Each voter prefers the candidate with the closest position. A voter on the left votes yes for the candidate on the left.

Ms. K is the candidate nearest four voters. L is nearest two and M is nearest three. Candidates L and M split the voters on the right.

Does anyone get a majority (over half), Yes or No? Who gets the plurality (the largest number), K, L or M? Who gets the second-largest number of votes, K, L or M?

Answers to questions are at the bottom of each page.

A mere plurality gives the winner a weak mandate.
This is the authority effective votes loan to a winner.
Strong mandates –for the reps, budgets, and policies– support and speed action to achieve popular goals.

By plurality rule, the one with the most votes wins.

Answers: No.  K.  M.
Runoff Election

From the plurality tally, the top two may advance to a runoff. It eliminates the other candidates all at once. The two voters who had voted for L now vote for M. Do they each have more power than some other voter?

Wasted votes fail to turn a loser into a winner. Effective votes succeed; a voting rule with more is more accurate, fair and responsive.

Does the plurality election waste more votes? Does that discourage members from voting? Does the runoff make a stronger mandate?

Runoffs practically ask, “Which side is stronger?” Later, these voters will use another voting rule to ask, “Where is our center?” And a bigger group will use a rule to ask, “Which trio best represents all of us?”

In a runoff, the top two compete one against one.

Four wasted votes. Candidate M wins a runoff.

Politics in Two Issue Dimensions

When more issues (or identities) concern the voters, a voting rule keeps its character.

This photo shows voters choosing positions all across two issue dimensions: left to right plus up and down. A person’s position on the first issue does not help us guess their position on an independent issue.

A voter may rank candidates on any issue(s). He prefers the candidate he feels is closest.

“Please step up for more protective regulations. Please step down if you want fewer protections. Take more steps for more change.”

The chapter on simulation games and research shows more tallies with two and even three issue dimensions.

Seventeen voters take positions on two issues: more or less regulation ß and taxes for services ↔

K wins a plurality. M wins a runoff.
The goal of **Instant Runoff Voting** is this:

**A majority winner, from a single election.**

Voting is easy. **Rank your favorite** as first choice, and **backup choices**: second, third, etc. as you like.* Your civic duty to vote is done.

Now your vote counts for your top-ranked candidate. If no candidate gets a majority, the one with the fewest votes loses. So we eliminate that one from the tally. Your vote stays with your favorite if she advances. If she has lost, then your vote counts for your backup. This repeats until one candidate gets a **majority**.

**Why Support Instant Runoff Voting, IRV**

- **Backups** give you more power and freedom to express opinions with less risk of wasting a vote.
- **No hurting your first choice** by ranking a backup that does not count unless your first choice has lost.
- **No worry about vote splitting** in a faction as votes for its loser(s) can count for each supporter's backup.
- **A majority winner** from one election, so no winner with a weak mandate and **no costly runoff** election.
- **High voter turnout** also creates a **strong mandate**. The turnout for an election runoff often goes down.²
- **More civility** and consensus³ arise as candidates ask a rival’s fans for their backup votes.⁴

---

*Pages 33 and 46 show ballots.

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**Instant Runoff Voting Patterns**

Running for president of South Korea, the former aide to a dictator faced two popular reformers. The two got a majority of the votes but split their supporters. So the aide won a **plurality** (37%, 28%, 27%, 8%). He claimed a mandate to continue oppressive policies. Years later he was convicted of treason in the tragic, government killing of pro-democracy demonstrators.⁵

A voter’s backup is often like his favorite, but more popular. So by dropping one reformer, IRV might well have elected the stronger one with a majority.

From five factions to a majority mandate.

1) **Violet** loses; so backup choices get those votes.
2) **Amarilla** loses; backup choices get those votes.

This **chief executive** starts in a big band of voters on the biggest side, then builds a majority. This helps her work with reps on the biggest side of a typical council.

IRV is helping US women achieve parity in politics.⁶

For 11 years, Papua New Guinea used IRV, then plurality rule for 27 years; ethnic violence increased.‡ They changed back to IRV and the violence decreased.⁷

Irish and Australian voters have used it for decades. They call it the Alternative Vote or Preferential Vote. In the USA, groups call it Ranked Choice Voting, RCV. The inside cover lists many groups using it in the USA.⁸

The workshop’s IRV game starts on page 39.
2. Electing Representatives

Three Single-Member Districts

A class of 27 wants to elect a 3 member committee. Someone says, “Elect a rep from each seminar section.” A candidate needs 5 votes to win a section.

➤ An 11 voter minority got 2 reps; that’s majority power. But with 3 or 4 voters in each section, they’d get no reps. It can waste many votes so it’s erratic and easy to rig.

How many votes were wasted? 12

One Fair-Representation District

A better suggestion says, “Keep the class whole. Change the votes needed to win a seat from 1/2 of a section to 1/4 of the whole class plus 1; that’s 7 votes. A voter may rank a first choice and a backup choice. If his first loses, his ballot counts for his backup.”

How many surplus votes did C get? 4

Final

11 C
7 M
9 K

➤ Now the minority gets 1 rep and the majority gets 2. This is more fair, thus accurate, popular and strong.
The principle of **Fair Representation** is:

**Majority rule by representing the groups in proportion to their voters.**

That is, 60% of the vote gets you 60% of the seats, not all of them. And 20% of the vote gets you 20% of the seats, not none of them. These are **fair shares**.

How does it work? There are three basic ingredients:

- We elect more than one rep from an electoral district.
- You vote for more than one; you vote for a list.
  - You pick a group's list, or you list your favorites.
- The more votes a list gets, the more reps it elects.

### Why Support Fair Representation, Fair Rep

- **Fair shares** of reps go to the rival groups so
  - Diverse candidates have real chances to win so
  - Voters have real choices and effective votes so
  - Voter turnout is strong.¹
- **Women win** two or three times more often¹ so
  - Accurate majorities win—also due to more: choices, turnout, effective votes, and equal votes per rep so
  - Policies match public opinion better.²

Many people call this Proportional Representation, PR.

---

**Chicago** elects no Republicans to the State Congress, even though they win up to a third of the city's votes. But for over a century it elected reps from both parties. The state used a fair rule to elect 3 reps in each district. Most gave the majority party 2 reps and the minority 1. So no district was unwinnable and neglected by 1 party, a captive audience for the other party.

Those Chicago Republicans were usually moderates. So were Democratic reps from Republican strongholds. Even the biggest party in a district tended to elect more independent-minded reps. They could work together for moderate policies.³

![Shares of votes equal fair shares of seats.](image)

**New Zealand** switched in 1996 from Single-Member Districts to a layer of **SMDs** within Fair Representation. This is called Mixed-Member Proportional or **MMP**. A small, one-seat district focuses more on local issues. Fair Rep frees us to elect reps with widespread appeals.

The seats won by **women** rose from 21% to 29%. The native Maoris reps increased from 7% to 16%, which is almost proportional to the Maori population. Voters also elected 3 Polynesian reps and 1 Asian rep.⁴
New Zealand and Germany elect half of their MPs in Single-Member Districts and half from Fair Rep lists. Theirs is the best rule to elect a parliament, some say.\(^5\) The SMDs elect few women; but in the same election, the party lists elect two or three times more women.\(^1\)

The safest nominee for a party in a Single-Member District is from the dominant gender, race, religion, etc. So SMDs often lead to poor representation of others.

Fair Rep leads a party to nominate a balanced team of candidates to attract voters. This promotes women.\(^6\) A team can have class, ethnic, and cultural diversity. And that gives us diverse reps to approach for help.

MORE: Competition, Real choices, Voter turnout, Effective votes, Strong mandates, Diverse reps, Women reps, Popular policies

Some leading women spoke of starting a new party in Sweden, which uses Fair Rep. Under plurality rule, a big new party splits their own side, so it likely loses. But Fair Rep gives every big party its share of seats.

This credible threat made one big party decide job experience was not as important as gender balance. So it dropped some experienced men to raise women higher on their party’s list. And they won.\(^7\) Now they are incumbents with experience, power and allies.

Voting Rules and Policy Results

Local SMDs can elect reps with unequal vote totals. So a majority of reps might not represent most voters. Fair Rep and MMP require more equal votes per rep. So each majority of reps does stand for most voters. This produces policies closer to public opinion.\(^2\)

Less: Wasted votes, Gerrymandered districts, Monopoly politics, Dubious democracy

Many voters see a woman in a multi-winner race less as fighting her rivals, more as supporting her issues.

Councils with fewer women tend to do less for health care, childcare, education and other social needs.\(^8\) Then the poorest schools and clinics are a blight; so are the citizens and workers hurt by poor health or education.

If such urgent needs overwhelm us, we neglect the essential need to reform their structural source:

We often get poor results from poor policies, due to poor representation largely due to poor voting rules.

The countries with the best voting rules give the best quality of life, as measured for the scores on page 60. We would all like better quality-of-life results for our country, and for our towns, schools, clubs and co-ops. So help friends talk about and try these voting rules.

The Fair Rep games and sims will show more.
3. Allocating Budgets

Fair Shares to Buy Shared Goods

Elected reps is the most obvious use of voting rules. Rules to pick projects or a policy are also important. These group decisions occur more often than elections. They even occur in many groups with no elections.

The members of clubs, co-ops, colleges, grant givers and more can enjoy the merits of Fair Share Voting.

Fair Representation distributes council seats fairly. Likewise, votes can distribute some funding fairly.

Democratic rights progress. Each step is more fair thus accurate, responsive, widely supported and strong.

✓ Voting by rich men, poor men, Black men, women

✔ Fair Representation of all big political groups

✔ Fair Share Voting by big groups of voters or reps

Patterns of Unfair Funding

Participatory Budgeting. PB, lets neighbors research, discuss and vote on how to spend part of a city's budget. In South America, it spread from one city in 1989 to hundreds today. Progress most often advances this way. The World Bank reports PB may reduce corruption and it tends to raise a community’s health and education.¹

In 2010, a Chicago alderman gave $1,300,000 to PB.² But a plurality rule made the votes and voters unequal. For example, in 2011 each vote to help a park won $501. That was its cost divided by its voters. But if cast for bike racks, each vote won a mere $31. That's too unfair. Even worse, most of the votes were wasted on losers.³

A costly winner makes many lose.

A bad election rule gets worse when it picks projects. It is not cost aware, so it often funds a very costly item and cuts a bunch that get many more votes per dollar. To win this bad tally, load various proposals into one. Keep raising its cost if that attracts more votes.

One year, a scholarship fund got many surplus votes. These were wasted votes because they had no effect. So the next year, many supporters chose not to waste a vote on this “sure winner.” It lost! They saw the need for a voting rule that would not waste surplus votes.⁴

All big groups have the right to spend some funds.

A voter's PB share is sometimes over $1,000!
The principle of Fair Share Voting is:

Spending power for groups, in proportion to their voters.

So 60% of the voters can spend 60% of the fund, not all of it. Your ballot’s share from the fund lets you vote to pay your shares of the costs for your favorite items.

Voting is easy: simply rank your choices, like in IRV.

Your ballot pays one share for each of its present top ranks—as many as it can afford. A tally of all ballots drops the item with the fewest shares. Those two steps repeat until each remaining item gets full funding.³

Paying one share proves you feel the item is worth its cost and you can afford it in your high priorities.

Some Merits of Fair Share Voting, FSV

- Each winner is a popular priority worth its cost:
  To qualify for funding from our group's source, an item needs our “base number” of voters or more.

- FSV is fair to an item of any cost and to its voters:
  A ballot pays a costly share to vote for a costly item. 
  \[
  \text{cost} / \text{base} = 1 \text{ share} \quad \text{e.g.} \quad \$100 / 25 \text{ ballots} = \$4
  \]
  If more ballots divide a cost, each of them pays less.

- So, a ballot's money can help more low-cost items.
  This motivates a voter to give his top ranks to the items he feels give the most joy per dollar.

- See Ranked Choice Voting points 1 and 3 on page 14.

Fair Shares and Majorities

If a majority controls all the money, the last item they choose adds little to their happiness; it is a low priority. But that money can buy a high priority of another big interest group, adding more to their happiness.

In economic terms: The social utility of the money and winners tends to rise if we each allocate a share. Fair, cost-aware voting gives more voters more of what they want for the same cost = more satisfied voters. Shares also spread good opportunities and incentives.

In political terms: The total spending has a wider base of support: It appeals to more voters because more see their high priorities get funding.

Items Projects
Goods Programs
Services Budgets

✓ Fair shares spread the joy and opportunities.

Plurality rules let surplus votes waste a big group’s power and let rival items split it, as seen on page 14. The biggest groups often have the biggest risks.

FSV protects a majority’s right to spend a majority of the fund. It does this by eliminating split votes, as did IRV, and surplus votes, as we’ll soon see.
Budget Levels

A co-op that helped develop Fair Share Voting lets each voter rank budget levels for some items.

A budget level needs to get the base number of votes. It gets one if a ballot offers to share the cost up to that level or a higher level. \( \text{cost} / \text{base} = 1 \text{ share} = 1 \text{ vote} \)

You only pay up to a level you voted for and can afford.

The item with the weakest top level loses that level. Any money your ballot had offered to it moves down your ballot to your highest ranks that lack your support. This repeats until the top level of each item is fully funded by its supporters. Thus, fair shares and backup ranks select a set of winners with more supporters.

Many voters must concur, this cost is a high priority within my budget.

A group with 100 members set our base number at 25 votes. My first choice got just enough votes, so my ballot paid 4% of the cost. \( 100\% / 25 \text{ votes} = 4\% \).

My second choice lost; did it waste any of my power?

My third choice got 50 votes, so my ballot paid only 2% of the cost. Was there any surplus? Did I waste much of my power by voting for this sure winner?

Answers: None. None. Not much.

More Merits of Fair Share Voting

After discussion, a quick poll can pick many items. It reduces agenda effects such as leaving no money for the last items or going into debt for them.

It lets subgroups fund items; so it’s like federalism but without new layers of laws, taxes and bureaucracy. And it funds a big group even if they are scattered.

Each big group controls only its share of the money. This reduces their means and motives for fighting.

Fairness builds trust in spending by subgroups and raises support for more. This can reduce spending at the extremes of individual and central control.

New Tool

Merits of FSV for an Elected Council

FSV gives some power to reps in the opposition, so Electing them is more effective, less of a wasted vote.

They ease starvation budgets that damage projects. This makes project management more efficient.

A voter can see grants from his rep to each project, tax cut or debt reduction and hold her accountable.

In games, we may vote for treats and eat the winners!
4. Enacting a Policy

**Condorcet Test Number Two**

The Runoff on page 12 was a one-against-one contest between the positions of candidates M and K. Five voters preferred M's position over K's.

Here is a second test with the same voters: K's position loses this one-against-one test. Candidate L wins by five votes to four.

Each person votes once with a ranked choice ballot. Pages 33 and 46 will show two different kinds of ballots. A workshop page will show a Condorcet tally table. And a simulation map will show Condorcet voters with two issue dimensions.

*People often struggle to find a group’s center of opinion*

K is nearest four voters. L is nearest five voters.

---

**Condorcet Test Number Three**

Candidate L wins her next one-on-one test also. She has won majorities against each of her rivals. So she is the “Condorcet winner.”

“...such a mandate is no doubt a vital ingredient in the subsequent career of the winner.”

Could another person top candidate L, Yes or No? Hint: Is anyone closer to the center, Yes or No? Who is the Condorcet winner on page 13, K, L or M?

Thus a Condorcet tally picks a *central winner*. It can select the base number for FSV. See page 26. But is it likely to spread spending fairly, Yes or No? It can elect a *moderator* to a council. See page 8. But is it likely to elect diverse reps, Yes or No? Does a CEO need to moderate or advocate? And a PM?

L has six votes. M has three.

Answers: Yes. Yes. L. No. No. Discuss this.
The goal in a Condorcet Tally is this:

Majority victories, over every single rival.

The winner must top every rival, one-against-one.

The sports analogy is a “round-robin tournament.” A player has one contest with each rival. If she wins all her tests, she wins the tournament.

Each voting test sorts all the ballots into two piles. If you rank option J higher than D, your ballot goes to J. The one that gets the most ballots wins this test. If one wins all its tests, it wins the Condorcet Tally. If none does, IRV elects one of the near winners.

Why Use a Condorcet Tally, CT

- **No split-vote** worries as duplicates don't help or hurt each other. The ad hoc majority ranks all of their favorites over the other proposals. Their top one wins.

- **Choice ballots** rank the related options on one ballot so Simplify the old rules of order and speed up voting so Reduce agenda effects, from simple errors and gridlock, to free-rider and wrecking amendments.

- **A balanced policy** tends to be stable, thus decisive. Yet, a balanced process can calm some fears about reviewing and changing a good policy to improve it. All this saves time and builds respect for democracy.

---

Policies with Wider Appeal

A plurality or runoff winner gets no votes from the losing side and doesn't need to please those voters. But a CT candidate needs support from all sides, because every voter can rank it against its close rivals. Thus every voter is “obtainable” and valuable.

So the winner is well balanced and widely popular.

Voters on the center and right give it a majority over any left-wing policy. At the same time, voters on the center and left like it more than any right-wing policy. All sides like it more than a narrowly-centrist policy.

“Our center is near me.”

“I am the center!”

“Where is our center?


---

Chairs with Balanced Support

CT can elect a chairperson and vice chairs to be the swing voters in an Ensemble Council, as pictured on pages 8 and 54. The broad base of support they need to win their CT election gives them strong incentives to help the council balance its process and policies.

IRV has slightly different effects, incentives and uses.

Games will put us inside each tally to feel how it works.

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* The glossary is on page 68.
Resist Rigged Votes

By plurality rule, candidate M lost on page 11. Now let's say her party gerrymanders the borders of her election district. It adds in voters, pictured in purple, who tend to like the party and cuts out some who don’t. In this safe-seat district, bluish voters can elect M or a less central candidate who might polarize the council. But did this gerrymander change the CT winner, L? Many wasted votes often can expose gerrymandering; Fair Rep reduces both, as shown on pages 16 and 17.

To capture a CT or IRV seat via ads, bots and news stories, I must misleading a majority, not just a plurality. And my gifts to the other side’s spoilers fail to split it.

Foul manipulations of plurality rules are not rare. And point voting invites extreme high and low votes, as voters worry, “Do my lower choices hurt my top choice?” But a chance to manipulate IRV, or Condorcet/IRV, in a real election is rare, risky and hard. So you have no need to worry over your own or other voters’ tactics.

Answer: No, because L still wins the Condorcet Tally.

A Less Rigged Agenda

Some meetings concoct a policy by a series of yes-no choices, with or without rules of order, agendas or votes. An early proposal might have to beat each later one. An early decision might preclude some later proposals. So “stacking the agenda” can help or hurt proposals.

Other meetings discuss the rival options all at once. But often, many members express no backup choices. So similar options split supporters and hurt each other. Then a minority pushing one option might seem to be the strongest group. Even sadder, a member with a well-balanced option but few eager supporters might drop it.

Too often, a committee chooses all the parts in a bill. Other members can say only yes or no to that bundle, which could include free-rider or wrecking amendments.

Rigged votes often build bad policy and animosity. To reduce these risks, let the voters rank more options.

**Issue A, RCV Ballot A**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Continue Discussion</td>
</tr>
<tr>
<td>2</td>
<td>Original Bill, the main motion</td>
</tr>
<tr>
<td>1</td>
<td>Bill with Amendment 1 (a free rider?)</td>
</tr>
<tr>
<td>8</td>
<td>Bill with Amend. 2 (a wrecking amend.?)</td>
</tr>
<tr>
<td>7</td>
<td>Bill with Amendments 1 and 2</td>
</tr>
<tr>
<td>4</td>
<td>Postpone to a Definite Time</td>
</tr>
<tr>
<td>5</td>
<td>Refer the Bill to a Committee</td>
</tr>
<tr>
<td>6</td>
<td>No Change (a vote for gridlock exposed?)</td>
</tr>
</tbody>
</table>

The “Incidental Motions” do not wait for the ballot, e.g. a personal complaint or request.
Summary and Index of Benefits

Ranked Choice Voting Has Proven To  

- Make voting easy and more often effective.  Pages 14, 57
  - Give you power to rank a backup choice; so 33, 46
  - Reduce your risk of wasting your vote; so 12, 16
  - Vote worry free for your true first choice. 14
- Boost mandates as more voters count. 11-17, 57

- Reduce attack ads that scare, anger and polarize. 14, 46
  - Weaken gerrymanders and spoilers. 14, 16, 32

- Give fair shares of reps to the rival groups; so 18
  - Diverse candidates have real chances to win; so 20
  - Voters have real choices and effective votes; so 17
  - Voter turnout is stronger. 61

- Elect women about twice as often as plurality; so 20
  - Accurate majorities win—also due to more: choices, 17
turnout, effective votes and equal votes per rep; so 21
  - Policies match public opinion better. 21, 60

New Related Legislative Rules can

- Elect a central chair whose swing vote pulls reps from many factions to moderate policies. 30-31, 56
- Give Fair Share Voting to members for projects. 24
  - Let voters see each rep's spending; so 27
  - Reduce graft given to big campaign sponsors. 32, 58

- Reduce agenda effects and scams. 27, 30, 33, 36, 54
  - Streamline group decision making. 27, 33, 36

Social Effects and Uses

These Are Tools Between People

A group’s decision rules pull its culture toward fair shares or toward winner takes all. They spread power wide and balanced, or narrow and lopsided. Other relations among members may follow their models.

Fair rules make cooperation safer, faster and easier. This favors people and groups who tend to cooperate. It may lead others to cooperate more often.

Politics are more principled and peaceful when all the rules help us find fair shares and central majorities. This might reduce political fears within our community; which helps us to be more receptive, creative and free.

So better rules can help us build better decisions, plus better relationships. Both can please most people. Fair rules won’t please some who get money or self-esteem from war-like politics. But countries with fair rules tend to rank higher in social trust and happiness. Voting is an exemplary tool between people.
**Consensus and Voting**

Group decision-making has two linked processes. A discussion process may have an agenda, a facilitator, some reports and proposals. Plus the members may suggest some questions and changes for each proposal. A decision process asks all members which proposals have enough support to be winners.\(^2\)

Voting only yes or no leads us to discuss and decide one formal “motion” at a time in a very strict sequence. It stifles the sharing of ideas and development of plans.

But both consensus and ranked choice ballots let us decide some closely related options at the same time. And both reward blending compatible ideas. pages 9, 31

They are less divisive than yes-or-no voting. " 14, 46, 56 So more members feel they own and want to help carry out each decision.

**Why Take a Vote**

Discussing an issue well often resolves most parts, with mandates up to 100%. Yet we might want to decide some parts with the best voting tools because they strengthen some reasons for voting:

- Choice ballots can speed up meetings. pages 27, 33
- Secret ballots reduce social pressure and coercion.
- Well-designed ballots and tallies promote equality: Even busy or unassertive people can cast full votes.

**Complementing Consensus**

Groups that seek consensus on basic agreements may vote on other issues: They may vote on a minor detail like a paint color or on a bunch of optional projects.

**Fair Share Voting gives fair shares of power.** Inclusive yet fast, it won't let one person block action. It is cooperative, not consensual nor adversarial. It is less about blocking rivals, more about attracting allies. Its ballot guides a voter to limit and prioritize projects. Its tally weighs dozens of desires, of varied cost and priority, from dozens of intersecting groups. We may modify our FSV results through our usual process.

All majorities prefer the Condorcet winner. A proposal needs to top each rival by 50% plus one; and we may require it to win 60% or even 100% over the status quo on issues involving our basic agreements. If so, 41%, or even one voter, may block a Condorcet winner by showing it breaks a basic agreement.

**Carpentry Analogy**

The nice consensus methods are like nice hand tools, and these nice voting methods are like nice power tools. The power tools speed cutting through piles of boards or issues, and cutting through a steel-hard one. The high-touch tools help us discover and develop insights into new options.\(^3\) So most of us want both kinds of tools.

This primer told the stories of the best voting tools. The games will let us touch the simple tallies.
How You Can Try a Voting Tool

It's easy to test-drive a decision tool in a survey. Or a council can form a “committee of the whole” to vote, tally and report results to enact by their old rules.

Many groups adopt a book of parliamentary rules; then they amend it with “special rules of order” to make their decisions more popular, stable and quick.

Steering Analogy

When choosing a voting rule, a new Mercedes costs little more than an old jalopy. That price is a bargain when the votes steer important budgets or policies.

Does your car have an 1890 steering tiller or a new, power steering wheel? Does your organization have an 1890 voting rule or a new, centrally balanced rule?

Get your hands on 4 great voting rules. See how fair-share tallies organize voters. Vote fast on projects, reps, or policies.

Many groups offer apps to tally your votes. https://AccurateDemocracy.com/z_tools.htm

A tally board has
- A card for each voter,
- A column for each option,
- A finish line for the favorites.
1. Instant Runoff Voting Elects One

Tabletop tallies make **Ranked Choice Voting** lively.

- The **finish line** is the height of half the cards, plus one. That is how many votes a candidate needs to win.
- If no one wins, we **eliminate** the weakest candidate. We draw names from a hat to break ties.
- If your favorite loses, you can **move** your card. You can give it to your next backup choice.
- We **repeat** this to eliminate all but one, the winner!

This **chart** shows four columns on a tally board. The rule **eliminated** Anna, so **voter JJ** moved his card. Then Bianca lost, so **BB and GG** moved their cards. They were free to choose different backups.¹

<table>
<thead>
<tr>
<th>Anna</th>
<th>Bianca</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eliminated 1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>Dropped 2&lt;sup&gt;nd&lt;/sup&gt;</td>
</tr>
<tr>
<td>J J</td>
<td>B B</td>
</tr>
</tbody>
</table>

**Finish Line**

- **Celia** IRV Winner
- **Diana** Runner up


How many votes were wasted on a surplus or a loser?

- This winner had no surplus. The last loser held 4 votes.
Instant Runoff Quiz

1. How can your group use this voting rule?
2. A card you move counts just like others, True or False?
3. Ranking a backup can’t hurt your first choice, T or F?
4. Only one candidate can reach 50% plus a vote, T or F?
5. Name four cities or schools that use IRV. Inside cover

Answer questions one through three for each voting rule.
2) True, we count each card once in each round.
3) True, a backup doesn’t count unless your 1st has lost.
4) True, two reps would need over 100% of the votes.

Ranked Choice Voting, RCV, includes IRV and STV.
The inside cover lists some of the users.
Most of the groups tally their votes easily with apps.

2. Fair Rep by Single Transferable Vote

A tabletop tally to elect three reps works like STV.
我们就 set the finish line at 1/4 of the cards plus one.
Don’t put your card on a column that is full.
One at a time, we drop the weakest candidate.
If your candidate loses, you can move your card.
Repeat until three candidates reach the finish line!

1. What benefits can Fair Rep by STV give us?
2. Can only three candidates each win 25% plus a vote?
3. Added together, what total must that trio of reps win?

STV answers: See page 18. Yes. Over 75%.

3. Fair Shares Buy Shared Goods

For our tabletop tally of Fair Share Voting, FSV:
We each get three 50¢ voting cards to buy treats.
We decided an item needs modest support from six of us to prove it is a shared good worth shared funding.
So the finish line marks the height of six cards, and
You may put only one of your cards into a column.
A costly item must fill several columns. A column here holds $3, so a $6 item must fill two columns.
Rule B lets you vote an average 50¢ card, a short 25¢
and a tall 75¢ to let you help your top choice more.
Four eager voters can fill a column.

When an item wins, the treasurer hides its cards.
We drop items that cost more than all the cards left.
Then, one at a time, we drop the least popular item, the one with the lowest level of cards in its columns.
Move your cards from a loser to your lower choices.
Stop when we’ve paid up all items still in the game.
Only a few items can win, but all voters can win!

Rule C software has 60¢ ‘columns.’ (A $3 item now fills 5.)
It gives 17¢ to the first column of each voter’s favorite. Every voter’s next column gets 16¢, etc. to a round of 3¢ ‘cards.’
A ballot’s cards average 10¢ but still total $1.50.
Setting Budget Levels

Each **budget level** needs enough **cards** to pay its cost. So a $3 bag of apples needs its voters to fill one **column**; a $6 size just needs some voters to fill one more.

I can’t afford to help items I rank below a **costly item**. Some of us might rank it high only at low-budget levels. This leaves money in our ballots to help more favorites get the base number of votes and so qualify for funding.

Similar options, like ✆ various fruits for treats (or trees for a park →) may split their voters; Then, by plurality rule, each may lose to a plain nut.

**Adjusting Ongoing Budgets**

Levels for all the ongoing budgets can make a ballot too long and hard for many voters. So instead of FSV, any ... members may offer an ongoing-budgets plan. Most voters feel it is easier to rank these few plans. A **Condorcet Tally** picks a plan; it is coherent and has majority support, but it might not be fair to some groups.

A management team’s plan won every year. Many voters complained, “My ballot had no effect!” Turnout fell lower. So now that team may present several plans.

4. Condorcet Tally Centers a Policy

In a Condorcet tally, the winner must top each rival, **one-against-one**. Two games show how it works.

1) ✶ Flag C stands at our **center**, by the median voter. Flags A, B and D surround C, 2 m. or yards from it.

   We asked 9 voters: “Are you closer to A than to B? If so, please raise a hand.” Only one raised a hand.

   We entered A vs. B, etc. in the **pairwise table** below.

   **The nine voters gave C a majority over each rival.**

   ![Pairwise Table]

<table>
<thead>
<tr>
<th>against</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>for A</td>
<td>-</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>for B</td>
<td>8</td>
<td>8+1=9</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>for C</td>
<td>6</td>
<td>5</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>for D</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4+5=9</td>
</tr>
</tbody>
</table>

2) ✶ Flag C has a short **Red** ribbon and a long **Blue** one.

   ✶ If the Red ribbon gets to you, the Red policy gets your vote with its narrow appeal.

   ✶ But if the Red cannot touch you, the **wide appeal** of the Blue policy gets your vote. Which one wins?

   If the flags mark places for a heater in an icy cold room:
   1. Do we put it at our center or in the biggest group?
   2. Do we turn on its fan to spread the heat wide?
   3. Do voters on the fringes have any influence?
   4. Can the median voter enact any policy alone?
   5. Do we get a balanced or a one-sided policy?

Ranked Choice Ballots

A tally board might serve 30 voters. It’s easier to mark paper ballots or webpages and tally by computer. Some groups need the secure paper ballots or printouts used by “risk-limiting audits” to find frauds and errors.3

Yes-or-no ballots badly oversimplify most issues. They often highlight just two factions: “us versus them.” So they tend to polarize and harden conflicts.

Ranked choice ballots reduce those problems. They let you rank your 1st choice, 2nd choice, 3rd etc. Ranks can reveal a great variety of opinions. Surveys find most voters like the power to rank candidates.4

Our Menu #1

Fill only one “O” on each line.

Best Ranks Worst

<table>
<thead>
<tr>
<th>lbs.</th>
<th>Treats</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Almonds, Toasted</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>7</td>
<td>Apples, Honey Crisp</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>5</td>
<td>Apricots, Dried</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>6</td>
<td>Bananas</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>6</td>
<td>Peaches, White</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>6</td>
<td>Oranges, Navel</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

Which 1 wins by plurality? Hints: 5 sweets vs. 1 nut, and the first name on a ballot gets a 2% to 9% boost.5 Which treat wins by IRV or by Condorcet? With treats, we could adjust their quantities so their costs are equal. FSV helps if their costs vary, as on pages 24 and 43.

Workshop Finale Notes

It’s easy to give this workshop in a class or a club.6 In an hour, 20 voters can review plurality, try IRV, then try STV for colors, as shown below, or FSV for treats.7 Eat the winners! while you plan to take a poll for the central majority or fair shares in a group you know. What qualities do you want in this poll? (See page 34.)

Voter education can be fun to do and it is essential. FairVote.org has model ballots, voter-education flyers, videos, stories and much more to help your voters.

Many groups offer apps to tally your votes.
https://AccurateDemocracy.com/z_tools.htm

Hands-on games and shared treats make memories of how each tool works. Next, simple simulations and national statistics will reveal each tool’s effects. The political effects on pages 54-57 and institutional or societal effects on pages 58-61 are very important.
III. SimElection Games

2. Watch Full Rep Balancing a Council

These maps show Choice ballots electing five reps. A little shape is a voter’s ballot; a big one is a candidate. Each little ballot has the color and shape of its current top-ranked choice, the closest remaining candidate.

Sim players position their candidates to get votes (page 56). The numbers on a map show each candidate's current share of top-rank votes; getting 16.7% will win a seat and (halo!) After this round of counting, the weakest candidate must lose and get an X. Which one will be the first to lose?

Answer, 3.7%
In 6, a candidate has just enough votes to win a seat. In 8, a winner has **surplus votes**; a fair share goes to each supporter's next choice.

The maps show only two issue dimensions. But a five-seat council can form decisions in 3D, if its reps are diverse. More issues and positions get represented in campaigns and debates, then in policies and projects—all in 3D!

This pattern of voters makes their choices easy to see. SimElection™ also created uniform, random, custom and normal bell-curve patterns for games and research. To learn about life, play in lifelike normal patterns.

In 13, the box holds half the voters and all but one rep. Does STV tend to favor and elect fringe candidates? Five reps together need what percentage of the votes? Are the reps diverse? Balanced fairly? Centered well?

No. Over 83%. Yes. Yes. See page 55.
3. Simulation of Fair Share Voting

**Fair Share Voting** helps voters organize many ad hoc groups large enough to fund their favorite items. Each voter may try to help a few different groups to give money, labor, water or another resource, to one-time projects or optional items in ongoing budgets; e.g. FSV can choose repairs for roads but not new routes.

### One-Time Resource Allocations

**OTRAs**

This map shows the public plants proposed by voters on a campus. Often, the site closest to a voter is most useful to him and is his top choice. But this case has four distinct interest groups: Red, Yellow, Green, and Blue. Items can be close together on the map and yet be far apart in color. So the map shows a third issue dimension as deep layers of color within the page.

This is a proposed blue-flower garden. It is far from what the red voters want, even if it is next door. A voter prefers the closest item with his favorite color.

Here a garden club had $240 to buy public plants and each interest group got a quarter of the votes. So how much did each group allocate?

A red rosebush cost $30, two big sunflowers $15, an evergreen bush $20, a blue passionflower vine $60. A group with only a few, low-cost proposals might be able to fund them all. Did that happen here?

**Answers:** $60, $60, $60, $60. Yes for sunflowers.
Contrast 3 Councils, each with 5 seats

1. The Loring Ensemble Rule elects a few reps by a Condorcet Tally, the rest by an STV tally; see page 8. On this next map, Condorcet Tally elects Al; then Full Rep by four-seat STV elects Bev, Di, Fred and Joe. The map shows each winner’s name in bold.*

- 2. The Condorcet Series elects the candidates closest to the middle of the voters: Al, Bev, GG, Joe and Fred. The lower right or southeast gets no rep; so the council is not well balanced. Each winner’s name is in italic.

- 3. Full Rep by five-seat STV elects Bev, Di, Fred, GG and Joe. Each name is underlined. It eliminated Al!

Notice Two Surprises

- 1. It may be surprising that broad Fair Rep helps the central Condorcet winner be the council's swing voter. With these tools, political diversity can be a source of balance and moderation as well as a wide perspective.*

- 2. Central reps can lead a broad Fair Rep council to broader majorities, holding moderates from all sides. This can add to or replace some of the “checks and balances” often used to moderate a council's action.

Well Centered and Balanced

An Ensemble council combines the breadth and balance of Fair Representation with the centering of Condorcet.

A council’s swing voter on an issue such as budgets, or regulations, can strongly influence those decisions.

STV works to elect a balanced council with moderates and often a centrist. But it does not push any rep to please a central majority of voters. Condorcet does. ➤
4. Watch Condorcet Find the Center

This map puts a line halfway between Al and a rival. Voters on Al’s side of a line are closer to Al and so rank Al higher than the rival. The long line has more voters on Al’s side than on Joe’s. So Al wins that test. Al wins a very different majority over each rival here. To do that, Al's political positions must be central and have widespread support. page 31

In contrast, STV requires the most intense support, first-rank votes, to avoid early elimination. page 48

IRV does too, with a high finish line of 50% + one vote.
Voting Reforms Aid Other Reforms

1. **Ballot access** rules block a new party or independent if the established parties fear it will split their voters. To calm this fear, let voters rank their backup choices. **Ranked Choice Voting, RCV**, opens up elections.

3. **A news firm** may inform us better if the subscribers steer more parts of it than the owners or advertisers do. Here’s a low-cost method for any membership group: **Fair $hare Voting** can pay the best news bloggers.

3. **Public campaign funding** lets reps and rivals give less time to their sponsors, more time to their voters. One plan gives each voter $50 of vouchers to donate. Such nameless gifts or **FSV** can cut corrupt paybacks. Sponsors aim gifts to buy the few swing-seat districts. **RCV** and **Fair Representation** make that harder.

4. **Citizens’ assemblies** and their referendums can get more choices and control by using **Condorcet Tallies**. The laws on voting rules, reps’ pay, sponsors, etc. need referendums because the reps have conflicts of interest.

“**It’s very hard to see us fixing the climate until we fix our democracy.”**

*Dr. James Hansen, climate scientist*

Civil Society Builds Democracy

Merchants and workers in medieval guilds won some rights by building **group skills**, unity, and allies. Now, town councils, co-ops and schools can build skills.

Empirical thinking grew in the Age of Enlightenment leading to revolutions for **human rights**. Now, rights must include Fair Representation and Fair Share Voting.

A big need for workers has often raised their pay and political strength, thus the **political equality** of society. Now, more progressive taxes can help political equality.

**Move to a more democratic place (or .org)**

To get good policies quickly, go where they are used. For example, do you want the democratic control and long-term savings of county or **co-op owned** utilities?

CEOs may need to be assertive, but never authoritarian. The later corrupts human rights and relationships.

Q: How can voting tools **avoid abuses of power**?

A: **RCV rivals act nicer** p.14, **swing reps moderate** p.54. **Fair Rep** p.51, FSV p.24, & reforms on p.58 spread power. But a winner-takes-all tally sets a bad example.
Better Voting, Better Living

This data suggests, to elect a good government that enacts superb health, education, tax and other policies, a country needs effective, not wasted votes.

Does Fair Representation elect more women? Do they tend to raise health and education results? Can these lift low incomes and reduce violent crime?

Do voter turnouts or seats won by women tend to be lower in countries with more: people? diversity? religion? polygamy? corruption? militarism? hot weather? Are those harder to change than the voting rules?

Data Definitions and Sources
Measures of respectable power and policies, circa 2016

Seats average per election district; Inter-Parliamentary Union
Women % of main legislature; Inter-Parliamentary Union
Turnout % Int’l. Inst. for Democracy and Electoral Assistance
Health Rank first is best; World Health Organization
Math Score Program for Int’l. Student Assessment; OECD
Poverty % of children below half of median income; OECD
Murder Rate per million; 7th UN Survey of Crime Trends
Scores weighted by population give a voting rule’s average.

<table>
<thead>
<tr>
<th>Country</th>
<th>Seats</th>
<th>Women</th>
<th>Health Rank</th>
<th>Math</th>
<th>Murder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair Rep page 16</td>
<td>37%</td>
<td>75%</td>
<td>15</td>
<td>503</td>
<td>13%</td>
</tr>
<tr>
<td>Sweden</td>
<td>14</td>
<td>44</td>
<td>86</td>
<td>23</td>
<td>502</td>
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<td>13</td>
<td>42</td>
<td>67</td>
<td>31</td>
<td>548</td>
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<td>6.7</td>
<td>41</td>
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<tr>
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<td>40</td>
<td>76</td>
<td>11</td>
<td>490</td>
</tr>
<tr>
<td>Belgium</td>
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<td>39</td>
<td>89</td>
<td>21</td>
<td>520</td>
</tr>
<tr>
<td>Denmark</td>
<td>15</td>
<td>38</td>
<td>88</td>
<td>34</td>
<td>513</td>
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<tr>
<td>Netherlands</td>
<td>150</td>
<td>37</td>
<td>80</td>
<td>17</td>
<td>528</td>
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<tr>
<td>Austria</td>
<td>19</td>
<td>28</td>
<td>82</td>
<td>9</td>
<td>505</td>
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<td>Switzerland</td>
<td>7.8</td>
<td>28</td>
<td>49</td>
<td>20</td>
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<td>Costa Rica</td>
<td>21, 4</td>
<td>19</td>
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<td>Uruguay</td>
<td>30, 2</td>
<td>13</td>
<td>90</td>
<td>65</td>
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<tr>
<td>Mixed page 19</td>
<td>36%</td>
<td>71%</td>
<td>26</td>
<td>505</td>
<td>9%</td>
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<tr>
<td>Germany</td>
<td>19, 1</td>
<td>39, 13</td>
<td>72</td>
<td>25</td>
<td>514</td>
</tr>
<tr>
<td>New Zealand</td>
<td>50, 1</td>
<td>45, 15</td>
<td>77</td>
<td>41</td>
<td>500</td>
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<tr>
<td>STV, IRV p. 38,14</td>
<td>34%</td>
<td>89%</td>
<td>29</td>
<td>517</td>
<td>14%</td>
</tr>
<tr>
<td>Australia b</td>
<td>6, 1</td>
<td>38, 25</td>
<td>93</td>
<td>32</td>
<td>520</td>
</tr>
<tr>
<td>Ireland</td>
<td>4</td>
<td>15</td>
<td>70</td>
<td>19</td>
<td>501</td>
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<tr>
<td>Runoff page 12</td>
<td>27%</td>
<td>60%</td>
<td>1</td>
<td>496</td>
<td>11%</td>
</tr>
<tr>
<td>France</td>
<td>1</td>
<td>27</td>
<td>60</td>
<td>1</td>
<td>496</td>
</tr>
<tr>
<td>Plurality page 6</td>
<td>25%</td>
<td>66%</td>
<td>34</td>
<td>486</td>
<td>19%</td>
</tr>
<tr>
<td>Canada</td>
<td>1</td>
<td>26</td>
<td>68</td>
<td>30</td>
<td>527</td>
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<tr>
<td>United Kingdom</td>
<td>1</td>
<td>29</td>
<td>66</td>
<td>18</td>
<td>495</td>
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<tr>
<td>United States, 2020</td>
<td>24, 25</td>
<td>66, 49</td>
<td>37</td>
<td>474</td>
<td>21</td>
</tr>
</tbody>
</table>

b Each Australian state elects 6 senators at a time, by STV.
An Australian House district elects 1 member, by IRV.
*U.S. turnout often falls >15% in non-presidential years.

AccurateDemocracy.com/d_stats.htm has more. 2.25.21
For each chapter the endnote numbers restart at one. I abbreviate and format as needed to fit the page width. I favor online sources that use data from real elections or realistic sims. This is essential for realistic research.

This is the first book about Ensemble Councils, Fair Share Voting, and rules of order for Condorcet policies. Accuratedemocracy.com (@) has pages on each voting rule. They add links, videos and free software: @ z_tools.htm.

FairVote.org has model ballots, bylaws, editorials, research reports, voter-education stories, videos and more. RCV Resources https://www.rankedchoicevoting.org/ https://www.fairvote.org/rcv_activist_toolkit

I. Introduction, Tragedies, Eras and Progress
7 See pages 30-31 and 54-56.
8 Statistics on page 60-61 compare the stable democracies.

1. Electing a Leader, Instant Runoff @ c_irv.htm
http://www.fairvote.org/ranked_choice_voting_outperforms_runoffs_in_upholding_majority_rule
3 Ranked Choice Voting Civility Project fairvote.org/rcv_civility_project
6 representwomen.org/representation_and_rcv_a_long_term_solution
8 https://www.fairvote.org/rcv_in_campus_elections
https://www.fairvote.org/where_is_ranked_choice_voting_used

2. Electing a Council, Fair Rep @ d_intro.htm
1 Statistics on pages 60-61 compare the stable democracies.
More at https://accuratedemocracy.com/d_stats.htm

62
2. Electing Representatives, Fair Rep


5 Mathews, Dylan. “3 Reasons New Zealand has the Best Designed Government in the World”
ww.vox.com/2014/9/23/6831777/newzealand-electoral-system-constitution-mixed-member-unicameral

6 Richie, Rob and Andrew Spenser. “The Right Choice for Elections”
University of Richmond Law Review; vol. 47 #3, (March 2013)
https://lawreview.richmond.edu/files/2013/03/Richie-473.pdf


Healy, Andrew and Jennifer Pate. 2011. “Can Teams Help to Close the Gender Competition Gap?”
Economics Journal, 121: 1192-1204

8 https://www.nytimes.com/2020/05/15/world/coronavirus-women-leaders.html
Statistics of nations pages 60-61 above, and d_stats.htm

3. Allocating Budgets, Fair Share Voting

FSV=STV if $# = voters$, 1 share = $1$, and 1 seat costs $# / (seats+1)
Shah, Anwar ed. Participatory Budgeting; The World Bank; Wash. DC; siteresources.worldbank.org/PSGLP/Resources/ParticipatoryBudgeting.pdf

2 Moore, Joe. Participatory Budgeting in the 49th Ward;
http://participatorybudgeting49.wordpress.com/
In 2014, voters in Cambridge, Massachusetts saw a similar pattern.

https://accuratedemocracy.com/p_intro.htm


www.ic.org/participatory-budgeting-in-an-income-sharing-community/
Leaves of Twin Oaks, 2013. To cut a budget level needed support from 55% of the voters. So no one tried to protest a cut.

4. Enacting a Policy, Condorcet Tally

1 From Chamberlin, Cohen, and Coombs, cited on page 63 above.
2 If A tops B, B tops C, and C tops A, then we have a “voting cycle.”
   Tally IRV with the options in the top voting cycle. @ l_cycles.htm


Chamberlin et al above, also Merrill. c_data.htm l_motion.htm
Loring One-winner Rule, 1996; c_data.htm, l_lor1.htm

2b These follow from Later-no-harm and Later-no-help criteria.

3 See the captions on pages 15 and 56. c_irv.htm#compare

4 https://en.wikipedia.org/wiki/Primary_challenge


6 Rules of Order AccurateDemocracy.com/l_motion.htm

7 fairvote.org/basalt_mayoral_race_features_ranked_choice_voting
+ https://www.theatlantic.com/politics/archive/2018/02/a-better-way-to-look-at-most-every-political-issue/552752/

Social Effects and Uses

1 Bennett-Smith, Meredith. World’s Happiest Countries 2013,
http://www.huffingtonpost.com/2013/05/28/worlds-happiest-countries-2013-australia_n_3347347.html; Cites UN, OECD.

OECD Better Life Index http://www.oecdbetterlifeindex.org/
Rothstein, B. and E. Uslaner. “All for All: Equality, Corruption, and Social Trust” World Politics, Vol. 58, # 1, October 2005, pp. 41-72


+ wikipedia.org Committee_of_the_whole Special_rules_of_order
II. Workshop Games, hold a vote ③ a_workshop.htm
1 A voter’s ranks may skip around, e.g. 1st left, 2nd far right, 3rd center.
2 Loring, Robert. Other Budget Rules ③ q_other.htm
   fairvote.org/ranked-voting-and-questions-about-election-integrity/
4 Portland Voters Overwhelmingly Support Ranked Choice Voting, 2015
   fairvote.org/portland_voters_overwhelmingly_support_ranked_choice_voting
5 Krosnick, Jon A. "In the Voting Booth, Bias Starts at the Top", NY
   + https://www.fairvote.org/rcv_ballot_design
   + A ballot by a developer of FSV  http://tupelo-schneck.org:8080/tag/
6 https://AccurateDemocracy.com/a_teach.htm
7 www.youtube.com/watch?v=oHRPMJmzBBw or v=5SLQXNpzsk
   https://accuratedemocracy.com/d_stv2d.htm ③ p_tools.htm
Music video  https://flip2020.wordpress.com

III. Simulation Examples, compare rules ③ d_stv2d.htm
1 Loring, Robert. simelection.com 1996 http://politicalsim.com
   https://accuratedemocracy.com/d_stv2d.htm ③ p_tools.htm
See Chamberlin et al, or Merrill III, or Green-Armytage above.
Brady, Henry E. "Dimensional Analysis of Ranking Data”,
   American Journal of Political Science. 34 (11/90)

* Back Matter ③ a_goals.htm ③ z_review.htm
2 Ackerman, Bruce; and Ian Ayres. Voting with Dollars: A New
   Paradigm for Campaign Finance; (New Haven: Yale U. Press, 2002)
2 Gifts to "spoilers" are less effective under Ranked Choice Voting.
   Multi winner districts make it hard to aim money at just one seat.
3 nytimes.com/2018/06/23/opinion/sunday/james-e-hansen-climate-
   global-warming.html also, “conservation ... depends on effective
governance;” https://www.nature.com/articles/nature25139.
4 Compare the Math scores of stable democracies on page 61.
5 Chalmers, Patrick. “The People Trying to Save Democracy From
   Itself”, https://www.theguardian.com/world/2016/jul/02/democracy-
tarnished-brand-desperate-need-reinvention
Bouricius, Terrill G. “Democracy Through Multi-Body Sortition:
   Athenian Lessons for the Modern Day”, New Democracy Inst.,
   Journal of Public Deliberation, Volume 9 | Issue 1; 4-30-2013
Navajas, Joaquin et al; “Aggregated knowledge from a small number
   of debates outperforms the wisdom of large crowds”, (Cornell U.,
6 Tishman, Shari and Albert Andrade. Thinking Dispositions,
   https://pdfs.semanticscholar.org/57cb/278acf38e9da6490d266260f9a
   9c50d20da3.pdf Many people use these ways of thinking at times.
   But fewer have a disposition to use them routinely.
7 See progressive taxes in Wikipedia pages on: Carbon_tax,
   Consumption_tax#Expenditure_tax, Location_value_tax,
   Financial_transaction_tax (speculation), and Weath_tax.
Piketty, Thomas and Arthur Goldhammer. Capital in the 21st Century;
8 https://cyber.harvard.edu/publications/2018/01/communityfiber
   Institute for Local Self-Reliance  www.ilsr.org  www.windsong.bc.ca
9 Loring, Robert. “Egalitarian versus Authoritarian Values”
   https://AccurateDemocracy.com/a_quotes.htm#egal
10 https://scholar.princeton.edu/sites/default/files/mgilens/files/gilens_and
10 https://psypost.org/2018/06/study-finds-less-corruption-countries-
   women-government-51530
Damien Cave. “Jacinda Ardern Sold a Drastic Lockdown With Straight
   Talk and Mom Jokes”. nytimes.com/2020/05/23/world/asia/jacinda-
   ardern-coronavirus-new-zealand.html Defines MMP
11 https://web.archive.org/web/19990218104532/http://members.aol.com
   /loringrbt/elect.htm ③ archive/Democracy_Evolves_1997/elect.htm
12 https://web.archive.org/web/19991023011241/http://members.aol.com:
   80/loringrbt/a_intro.htm

Share the eBook: AccurateDemocracy.com/AcDem.pdf
Some basic questions to ask about any voting rule:
How many groups use it, with how many voters, how many times, over how many years?  How consequential are their decisions?
What percentage of voters turnout?  What percentage are effective?
Is its pattern of winners erratic or consistent?
If it’s consistent, is it fair share or winner takes all?
If it is winner takes all, is the winner from one side or central?
If it’s central, is the winner’s appeal wide or narrow?
How often were past elections manipulated by a gerrymander, spoiler, stacked agenda, strategic voting, or other rigged votes?

Some basic questions to ask about voting-rule research:
Are the data from: 1) Real competitions, 2) Computer simulations with: A) normal distributions of voters and candidates B) weird distributions, 3) Mathematical proofs, 4) Concocted examples.

Most articles, books and web pages cited here use real data or realistic simulations. Other kinds of data risk “garbage in, garbage out,” or might be fascinating mathematically but are usually useless or even misleading to most organizations.

Why do this work?  To help the most people, give them better tools to make better group decisions, to allocate resources and to reduce conflicts.  Tools between people do both, page 51.  The multiplier effect is huge as a small budget for voting can steer much bigger budgets for many years, give other groups a great example, and are often self reproducing with little or no added cost for each user.  This issue has earned increasing attention as more cities and colleges adopt Ranked Choice Voting.

https://AccurateDemocracy.com/z_thanks.htm explains how extremely fortunate I have been to find this project and the wonderful people who have done most of the R&D for it.