The primer, games and pictures let you

Read, Touch and See How

The best voting rules are fast, easy and fair.
They help groups from classrooms to countries.
The results are well centered and widely popular.

They strengthen the votes supporting
one chairperson or policy and
fair-shares of seats or $pending.

to Use and Enjoy

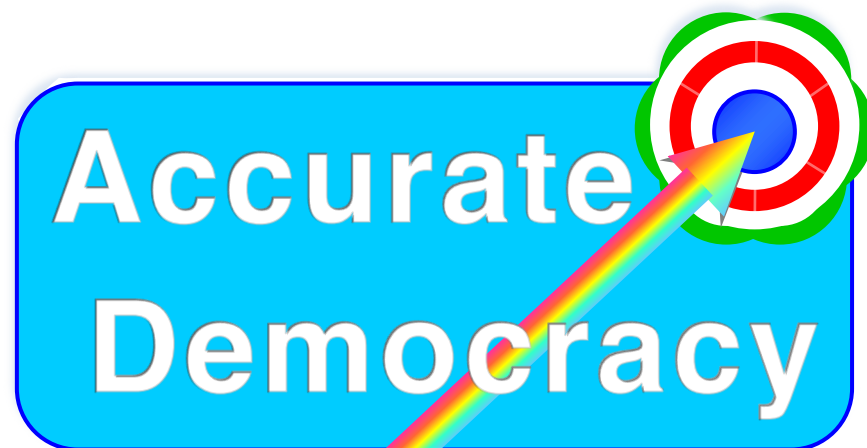**Share** this illustrated booklet with friends.
Grow support in your school, club or town.
Enjoy better politics, relations and policies,
pages 32, 33 and 59.

Loring

ACCURATE DEMOCRACY

FairVote

Accurate Democracy

4 **Decision Tools**

with Pictures & Games

More Endorsements

"I like your thoughtful application of the best voting techniques to the PB process." [Budgets, pages 22, 35, 41] —Tree Bressen, a leading author on group process, *Group-Process Pattern Language*, groupworksdeck.org

"A very interesting site about voting procedures is: Accurate Democracy. Highly recommended." —Arkadii Slinko, mathematical politics, Univ. of Aukland.

Many groups have given endorsements, editorials, or testimonials for ranked choice voting. Here are a few:

Organizations: cities and colleges on pages 13 and 40. Academy Awards (Oscars), Common Cause, Sierra Club, Church of England, Unitarian Universalist Association

Leagues of Women Voters: Arizona, California, Florida, Maine, Massachusetts, Minnesota, North Carolina, Oklahoma, Oregon, South Carolina, Vermont and Washington.

National Newspapers: New York Times Sunday 6/10/18, USA Today, Washington Post 6/14/18; regional editorials: Portland Press Herald, Las Cruces Sun News

Journalists: David Brooks 6/1/2018, Hendrik Hertzberg

Celebrities: Jennifer Lawrence 6/5/2018, John Cleese, Dr. James Hansen, Krist Novoselic,

US Senators: John McCain, B. Obama, Bernie Sanders

US Reps: Keith Ellison, John Porter, Jamie Raskin

Parties: Democrats of California, Colorado, Maine and Massachusetts; Green Party US; Libertarian Party; Minneapolis, DFL Party; Republicans in Alaska and Utah

More at fairvote.org/endorsers
fairvote.org/editorial_board_support_for_rcv_in_2018

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, Drs. John R. Chamberlin, and Samuel Merrill III each gave me permission to use their simulation results to advance a Condorcet-IRV rule. In the 1990s, I created the *PoliticalSim™* and *SimElection™* software. They compared 30 single- and multi-winner rules from around the world and were used in a few universities. Pages 46-54 show maps from the simulation games. By 1996 I had built the *Democracy Evolves* website. Then I helped FairVote as a webmaster and librarian. For over 10 years I've cheered Dr. Robert Tupelo-Schneck, Ian Little, Adder Oaks, Kathryn Simmons and Twin Oaks Community for developing Fair Share Voting. (page 22) This booklet summarizes *Accurate Democracy.com*

The goals are better group-decision results (page 59), through systemic changes (e.g. pages 32, 56), through better tools between people (e.g. pages 23, 25, 31, 33).

Glossary and Index

See also the **Index of Benefits** on page 32.

Acronyms and Synonyms   Pages

Accurate Democracy

Four Decision Tools
with Pictures and Games

Robert Loring

FairVote

New Tools

N€w   N¥w

N£w   N$w

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page 57 Flickr pool, Local Living Venture;
Others not attributed. All photos altered.

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

5 Chalmers, Patrick. "The People Trying to Save Democracy From Itself", 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 University, 2017)   https://arxiv.org/abs/1703.00045

6 Tishman, Shari and Albert Andrade, Thinking Dispositions, https://pdfs.semanticscholar.org/57cb/278acf38e9da6490d266260f9a9c50d20da3.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, Georgism (land), Financial_transaction_tax (speculation), and Weath_tax.

Piketty, Thomas and Arthur Goldhammer; Capital in the 21st Century; (Cambridge MA: The Belknap Press of Harvard U. Press, 2014.)

8 https://cyber.harvard.edu/publications/2018/01/communityfiber Institute for Local Self-Reliance www.ilsr.org

On Solar Streets and Wilderness Alleys   http://windsong.bc.ca

9 Loring, Robert. "Egalitarian versus Authoritarian Values" https://AccurateDemocracy.com/a_quotes.htm#egal

https://scholar.princeton.edu/sites/default/files/mgilens/files/gilens_and_page_2014_-testing_theories_of_american_politics.doc.pdf

Resources for education and action
 Accuratedemocracy.com has pages about each voting tool, links to **free software** @/z_tools.htm and more @/z_bib.htm
Share the **free eBook**: AccurateDemocracy.com/eBook.pdf

 FairVote.org has voter education videos, ballots, editorials testimonials, model bylaws, research reports, and more.
https://www.fairvote.org/rcv_**activist_toolkit**
https://www.RankedChoiceVoting.org/

Workshop Games, hold a vote @ a_workshop.htm

1 A voter's ranks may skip around, e.g. 1st left, 2nd far right, 3rd center.

2 Other Budget Rules @ q_other.htm

3 FairVote, "Ranked Voting and Questions About Election Integrity",
"Published October 12, 2013. http://www.fairvote.org/ranked-voting-and-questions-about-election-integrity/

www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=25120

Election Audits, http://electionaudits.org/   http://www.verifiedvoting.org

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 Times*, http://nytimes.com/2006/11/04/opinion/04krosnick.html

6 www.youtube.com/watch?v=oHRPMJmzBBw   or   v=_5SLQXNpzsk
https://accuratedemocracy.com/d_stv2d.htm   @ p_tools.htm

7 https://AccurateDemocracy.com/a_teach.htm

A ballot by an inventor of FSV http://tupelo-schneck.org:8080/tag/

Simulation Examples, compare rules @ d_stv2d.htm

1 Loring, Robert. simelection.com 1996   http:politicalsim.com
https://accuratedemocracy.com/d_stv2d.htm   @ p_tools.htm

See Chamberlin et al, or Merrill III, or Green-Armytage above.

2 Other Budget Rules @ q_other.htm

Brady, Henry E. "Dimensional Analysis of Ranking Data",
American Journal of Political Science. 34 (11/90).

Back Matter @ a_goals.htm @ z_review.htm

1 https://en.wikipedia.org/wiki/Democracy_voucher

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 ineffective under Ranked Choice Voting.
Multi winner districts make it hard to target money on just one seat.

3 nytimes.com/2018/06/23/opinion/sunday/james-e-hansen-climate-global-warming.html   see also, "conservation ... depends on effective governance;" https://www.nature.com/articles/nature25139.

Contents

Here are **three ways** to learn **four** voting tools
that are inclusive, yet centered, quick and easy

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?

✳ Enacting a Policy, Condorcet @ l_intro.htm l_motion.htm

1 From Chamberlin, Cohen, and Coombs, cited on page 61 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

Green-Armytage, James. "Four Condorcet-Hare Hybrid Methods for single-winner elections"; 2011; votingmatters.org.uk/ISSUE29/I29P1.pdf

"Strategic Voting and Nomination"; *Social Choice and Welfare;* 2014.

Tideman, Nicolaus. *Collective Decisions and Voting;* (Ashgate Publishing Ltd. Hampshire, England; 2006) page 232.

Green-Armytage, James; Nicolaus Tideman and Rafael Cosman. "Statistical Evaluation of Voting Rules" *Social Choice and Welfare;* 2016, 46: 183.

Chamberlin et al above, also Merrill. @ c_data.htm @ l_data.htm

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

3 See the captions on pages 13 and 54.   @ c_irv.htm#compare

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

5 https://www.nytimes.com/interactive/2018/11/10/opinion/house-representatives-size-multi-member.html

6 Rules of Order   AccurateDemocracy.com/l_motion.htm

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 https://projects.iq.harvard.edu/gov2126/files/rothstein_2005.pdf

2 Susskind, Lawrence and Jeffrey L. Cruikshank, *Breaking Robert's Rules*; (Oxford, Oxford University Press, 2006). Spanish: *Mejor Que La Mayoria,* with Francisco Ingouville, (Buenos Aires, Obelisco, 2011)

Francis, Fred and Peg. *Democratic Rules of Order*, 2010, p.19, 24.

3 *Group-Process Pattern Language*, http://groupworksdeck.org

4 https://www.AccurateDemocracy.com/l_motion.htm

wikipedia.org   Committee_of_the_whole   Special_rules_of_order

Electing a Council, Fair Representation

4 Roberts, Nigel. *New Zealand: A Long-Established Westminster Democracy Switches to PR*, (Stockholm, IDEA, 1997) www.nigel-roberts.info/NSR-in-Reynolds-&-Reilly-1997.pdf

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

http://www.representation2020.com/

6 Krook, Mona Lena. *Quotas for Women in Politics: Gender and Candidate Selection Reform Worldwide*; (Oxford U. Press, 2009) 123.

Healy, Andrew and Jennifer Pate. 2011. "Can Teams Help to Close the Gender Competition Gap?" *Economics Journal*, 121: 1192-1204 https://web.archive.org/web/20170706034311/http://myweb.lmu.edu/a healy/papers/healy_pate_2011.pdf

7 http://www.nytimes.com/2016/11/10/upshot/women-actually-do-govern-differently.html   Statistics of nations p.58-59 above, @ d_stats.htm

http://www.nytimes.com/interactive/2018/11/10/opinion/house-representatives-size-multi-member.html

+ Green-Armytage, James. "Direct Voting and Proxy Voting", Dept. of Economics, Bard College. http://jamesgreenarmytage.com/proxy.pdf

Funding Projects, Fair Share Voting @ p_intro.htm

FSV=STV if $# = voters#, 1 share = $1, and 1 seat costs $# / seats+1.

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 the same pattern.

3 Tupelo-Schneck, Robert and Robert B. Loring, *Fair Share Voting*, for Participatory Budgeting Conference **slideshows**, NYC, 2012. https://accuratedemocracy.com/p_intro.htm

4 News of the Oaks, *Leaves of Twin Oaks*, Louisa, VA, USA; 1995.

5 Oaks, Adder. "Participatory Budgeting in an Income Sharing Community", *Communities: Life in Cooperative Culture;* #175, June 2017. 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. Some managers grumbled but did not try to protest.

https://pbstanford.org/   participatorybudgeting.org

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. For such a contest, the yes or no votes say enough.

But as soon as three candidates run for one office, the situation 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**, funding shared **project**s, 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?

Eras, Rules and Councils

In the 19th Century
Winner-Take-All Districts = Off-Center Councils
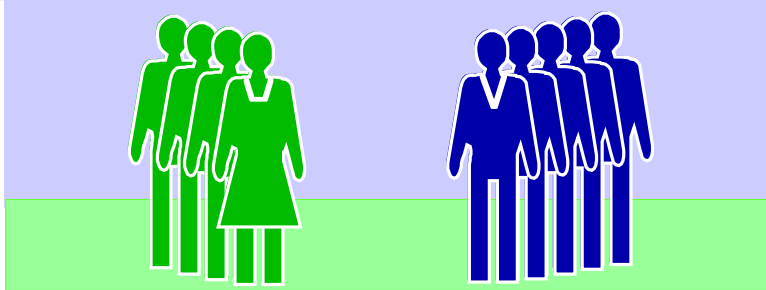
$ $ $ Policies $ $ $

Typical Council Elected By Plurality Rule

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.[4] It gets worse: a district's bias often makes it a "safe seat" for *one* party. So the voters are given either a very limited choice or **no real choice**.[5]

A few who do get choices can make a council swerve from side to side. Its majority (above) sets all budget$ and policies—in another battle of **winner takes all**.

✐ Electing a Leader, Instant Runoff @ c_irv.htm

1 Chamberlin, John R., Jerry L. Cohen, and Clyde H. Coombs; "Social Choice Observed: Five Presidential Elections of the American Psychological Association" *Journal of Politics*. 46 (1984): 479-502.

"An Investigation into the Relative Manipulability of Four Voting Systems", *Behavioral Science*; 30:4 (Jan. 1985) 195-203.

Merrill, Samuel III. *Making Multi-candidate Elections More Democratic*. (Princeton, NJ: Princeton University Press, 1988).

2 Wright, Stephen G. "Voter Turnout in Runoff Elections", *The Journal of Politics*, Vol. 51, No. 2 (May, 1989), 385-396

http://www.fairvote.org/ranked_choice_voting_outperforms_runoffs_in_upholding_majority_rule

3 Ranked Choice Voting Civility Project fairvote.org/rcv_civility_project

Reilly, Ben. *Democracy in Divided Societies* (Cambridge U. Press, 2001)

Papua New Guinea: Electoral Incentives for Inter-Ethnic Accommodation http://aceproject.org/ace-en/topics/es/annex/esy/esy_pg

4 Korean election http://en.wikipedia.org/wiki/Roh_Tae-woo https://web.archive.org/web/20010113205900/http://nimbus.ocis.temple.edu/~jhurewit/history.html

5 https://www.fairvote.org/rcv_in_campus_elections https://www.fairvote.org/where_is_ranked_choice_voting_used

✤ Electing a Council, Fair Representation @ d_intro.htm

1 Statistics on pages 58-59 compare the stable democracies. More at https://accuratedemocracy.com/d_stats.htm

2 Huber, John D. and G. Bingham Powell, Jr., "Congruence Between Citizens and Policymakers in Two Visions of Liberal Democracy," *World Politics* v46 #3 (April 1994), 291-326.

3 "*Illinois Assembly on Political Representation and Alternative Electoral Systems*", (IGPA University of Illinois, Spring 2001) http://www.fairvote.org/media/pep/execsum.pdf

History of cumulative voting, 1870-1970: Three is better than one http://www.lib.niu.edu/1982/iisr04.html

http://archive.fairvote.org/index.php?page=39&articlemode=showspecific&showarticle=1325

The endnote numbers restart at one for each chapter. I abbreviate and format as needed to fit the page width. Most of the sources use real data or realistic simulations, which are essential for realistic research.

This is the first book about **Ensemble Councils**, **Fair Share Voting**, and rules of order for **Condorcet policies**. It covers some **Accuratedemocracy**.com **(@)** pages such as @ a_primer.htm @ a_workshop.htm and @ d_stats.htm. They add links, videos and free software! @ z_tools.htm.

FairVote.org has model ballots, bylaws, editorials, research reports, voter-education videos, stories and more.

In the 20th Century
Fair-Share Elections = One-Sided Majorities
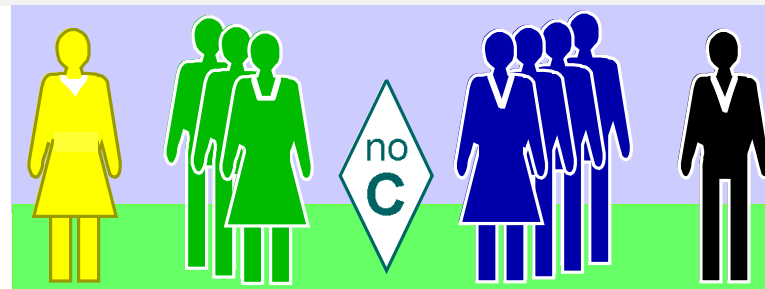
$ $ $ Policies $ $ $

Typical Council Elected By Fair Representation

Introduction, Tragedies, Eras and Progress

1 Amy, Douglas J. *Proportional Representation: The Case for a Better Election System*. NC on page 30, http://archive.fairvote.org/?page=1606

2 Durbin, Kathy. *Tree Huggers: Victory, Defeat and Renewal in the Northwest Ancient Forest Campaign*, (Seattle, The Mountaineers, 1996)

3 Hoag, Clarence and George Hallett. *Proportional Representation*, (NYC, The Macmillan Company, 1926)

4 Duverger, Maurice. "Factors in a Two-Party and Multiparty System" *Party Politics and Pressure Groups* (NYC: Thomas Y. Crowell, 1972), 23-32.

5 FairVote. *Monopoly Politics 2020*, https://www.fairvote.org/monopoly_politics

6 Lijphart, Arend. *Electoral Systems and Party Systems: A Study of Twenty-Seven Democracies* (Oxford: Oxford University Press, 1994)

7 See pages 28-29 and 52-54.

8 Statistics on page 58-59 compare the stable democracies.

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**.

In the 21st Century
Ensemble Councils = Balanced Majorities
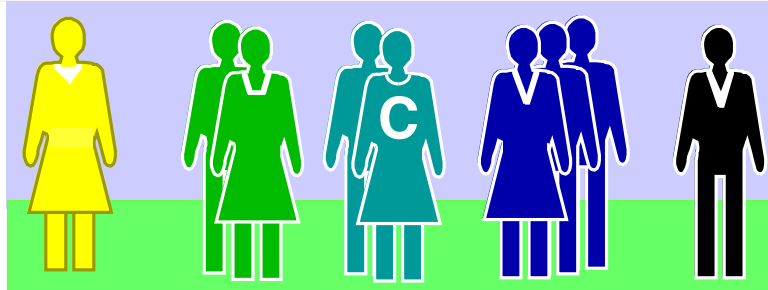
$ $ $ Policies $ $ $

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**, plus a pivotal **midpoint**, matching the voters.

   Later pages will show how a rule can elect reps with wide support and views near the center of the voters.[7] So winners will be near the center of a Fair Rep council. So they'll be the council's **powerful swing votes**.

   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.**

6

Country	Seats	Women %	Turnout	Health	Math	Poverty%	Murder
Fair Rep	page 14	37%	75%	15	503	13%	12
Sweden	14	44	86	23	502	8	7
Finland	13	42	67	31	548	4	28
Spain	6.7	41	69	7	480	20	12
Norway	8.7	40	76	11	490	5	11
Belgium	8.4	39	89	21	520	13	16
Denmark	15	38	88	34	513	4	11
Netherlands	150	37	80	17	528	10	11
Austria	19	28	82	9	505	8	9
Switzerland	7.8	28	49	20	530	10	9
Costa Rica	21, 4	19	81	36	407	-	85
Uruguay	30, 2	13	90	65	409	-	79
Mixed	page 17	36%	71%	26	505	9%	12
Germany	19, 1	39, 13	72	25	514	16	12
New Zealand	50, 1	45, 15	77	41	500	15	11
STV, **IRV**	p. 36,12	34%	89%	29	517	14%	11
Australia◊	6, 1	38, 25	93	32	520	15	11
Ireland	4	15	70	19	501	10	12
Runoff	page 10	27%	60%	1	496	11%	11
France	1	27	60	1	496	11	11
Plurality	page 4	21%	58%	34	486	19%	35
Canada	1	26	68	30	527	15	15
United Kingdom	1	29	66	18	495	10	14
United States, 2018	1	19, 23	55, 49	37	474	21	42

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

59

Better Voting, Better Living

This data suggests, to elect a good government that enacts superb health, education, tax[9] and other policies, <mark>a country needs effective, not wasted votes.</mark>

Does **Fair Representation** elect more women? p.18 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 avg. 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
Averages for voting rules are weighted by population.

The table's **worst** numbers are in **bold**.

Progress of Democracy

A centrist policy enacts a narrow point of view; it excludes other opinions and needs. A one-sided policy also blocks rival ideas.

A compromise policy tries to negotiate rival plans; but contrary plans 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 **powerful moderators**.

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. We *measure* their success in a typical voter's education and income, freedom and safety, health and leisure.[8]

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 select projects or pick a policy will also show these qualities in the book's stories, graphics and games.

Electing a Leader

Nine Voters

Let's think about an election with nine voters whose opinions range from left to right. The figures in this picture mark the positions chosen by voters spreading out across the political spectrum from left to right. It is as though we asked them, "If you want high-quality public services and taxes like Sweden or Denmark, please stand here. Like Canada? Stand here please. Like the USA? Stand here. Stand over there for Mexico's low taxes and government services."

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

Nine voters spread out along an issue.

High taxes buying
great gov. services

Low taxes buying
poor gov. services

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.

The Age of Enlightenment built **thinking skills**[6] that led to revolutions for **human rights**. Now rights can 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[7] can help political equality.
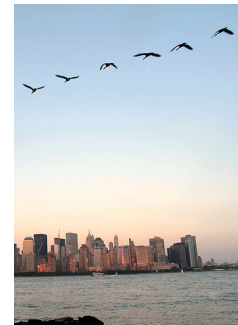
Move to a more democratic place (or .org)

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?[8]

CEOs may need to be assertive, but not authoritarian. That corrupts commerce, democracy and human rights.[9] How can voting tools **fight abuses of power**?

RCV rivals act nicer, p.12. Swing-voting reps moderate, p.52. Fair Representation, p.49, and Fair Share Voting, p.22, spread out power. So do all the related reforms on page 56. A winner-takes-all tally sets a bad example.

Voting Reforms Aid Related Reforms

1 **A Top-Four Primary** then an *RCV election* puts a focus on four big candidates, with more hopes, fears and plans than just two rivals in a macho duel. A winner has both intense and *widespread* support.[4.2]

3 **A news firm** may serve us better if the subscribers steer more parts of it than the owners or advertisers do. There's a low-cost method for any membership group: **Fair $hare Voting** can reward 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.[1] Such nameless gifts or **FSV** can cut corrupt paybacks. Big $ponsors aim gifts to buy the few swing districts.[2]
1 **2** **RCV** or **Fair Representation** make that harder. So big business and billionaires may buy fewer seats.

*"It's very hard to see us fixing the **climate** until we fix our democracy." Dr. James Hansen[3]*

1 **2** **Good schools**, taxes and voting may go together.[4] Schools build our group skills and political know-how.

1 **Sabbatical terms** make the current rep run against a former rep returning from rest, reflection and research. Then the candidates include two with records in the job! Two alike do not break apart a group that uses **RCV**.

4 **Citizens' assemblies**[5] and their referendums can get more choices and control by using **Condorcet Tallies**. The laws on voting rules, reps' pay, $ponsors, etc., need referendums because the reps have conflicts of interest.

Plurality Election

Here we see three rivals step up for election. 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, No
Who gets the plurality (the largest number)?   K, L, M
Who gets the second-largest number of votes?   K, L, M

A mere plurality gives the winner a weak **mandate**. That is the legitimacy effective votes loan to a winner. A strong mandate to lead, legislate and govern is a goal of accurate democracy.

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

Voters for K   **Vote L**   **Vote for M**
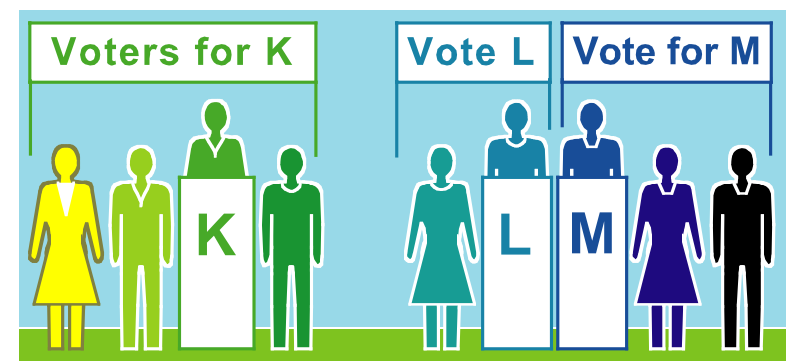
K is nearest four voters.   M is nearest three.
L is nearest two.

Runoff Election

Only the top two from plurality advance to a runoff. We eliminate ("drop") the other candidates all at once.

Who wins this runoff? K, M

Did they get a majority (over half)? Yes, No

The two (teal) who had voted for L now vote for M.

Did teal voters get more power than others? Yes, No

Only four "**wasted votes**" fail to elect anyone. More ballots became effective votes—a basic goal.

Did the plurality election waste more votes? Yes, No

Did this runoff give a stronger mandate? Yes, No

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

In a runoff, the top two compete one against one.
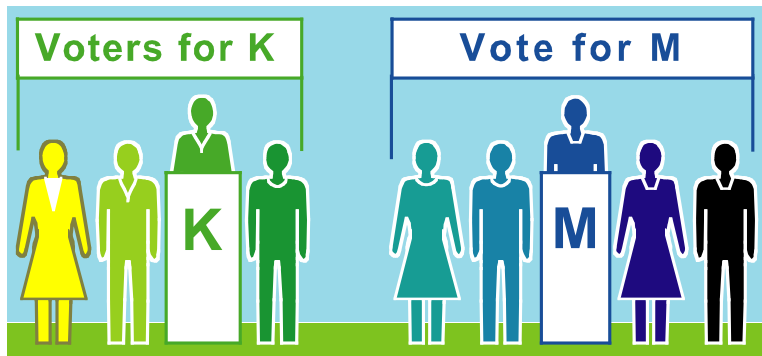
Candidate M wins the runoff.

M wins. Yes. No, each voter got 1 runoff vote. Yes. Yes.

Voting Reform Is Cost Effective

Issue campaigns lobby reps every week for years. This eases one problem, but rarely fixes the source.

Election campaigns cost a lot all at once. The biggest faction can skew all policies for a few years.

Reform campaigns cost no more than elections. Ranked choice voting strengthens the votes supporting the reps and policies for many years.

Issue			
Election			
Reform			
2020	2022	2024	2026
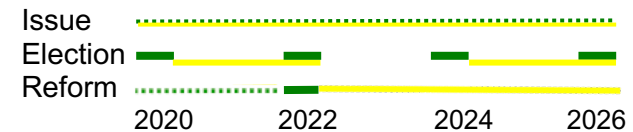
Campaign **costs in green**, results in yellow.

Stronger Votes, Mandates and Policies

Better voting rules expand the base of power, the numbers of effective votes and voters supporting: Pages

❋ a **CEO** or a **Chair** from a plurality to a majority 13, 29

✿ a **Council** from a plurality to over three quarters 15

❋ the **Budgets** from a few power blocs to all members 22

❋ a **Policy** from a one-sided to an over-all majority. 28

Votes for real choices tally up *democratic power*. It needs strong new tools to overrule new tools for money, military and media. The stronger mandates empower action to achieve widely-shared goals.

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 her; so they rank her higher than the rival. For example, the long line has more voters on Al's side than on Joe's. So Al wins that one-on-one test. <mark>She wins a very different majority over each rival here.</mark> To do that, Al's political positions must be *central* and have *widespread support.*   page 29

File	Edit	Format	Window	Organize	Fund		Campaign

Cambridge

Polls close in 2 minutes

○ Voters

Joe

GG

Bev

Al

Fred

Eve

Di

Cal

○ Voters ○

Hello Offic
Quick Setu

Survey Vo
Nominate (
Bid on Rul

Position C
Interview (
Audit Cam

Voters Shi
Cast Ballo
Watch Ret

Save Elect
Get Electi
Run Resea

Sequence of LER + wins and - eliminations: +Bev, -Eve, +Fred, -Cal, +Di, -GG, +Joe, +Al
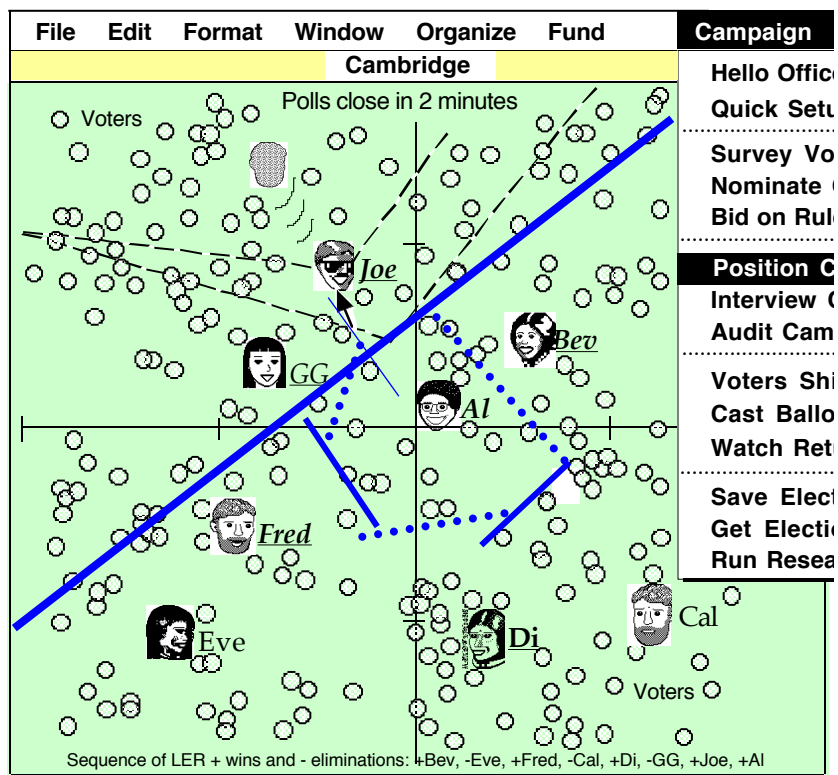
   In contrast, <u>STV</u> requires the most <u>intense support</u>, first-rank votes, to avoid early elimination.   ● page 46
IRV does too, with a high finish line of 50% + one vote.

Politics in Two Issue Dimensions

   When more issues concern the voters, a voting rule keeps its character.[1]

   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.
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 $\updownarrow$ and taxes for services $\leftrightarrow$

K   L M

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-rank candidate. <mark>If no candidate gets a majority, the one with the <u>fewest votes loses</u>. So we eliminate that one from the tally.</mark> 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**. (Turnout often goes down in old runoff elections.[2])

- ☛ **Less divisive campaigns** happen when candidates act nicer to earn backup votes from a rival's fans.[3]

*Pages 31 and 43 show ballots.

Well Centered and Balanced

Only the **Ensemble** council has the breadth and balance of <u>Fair Representation</u> with the centering of *Condorcet*.

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

<u>STV</u> works to elect a <u>balanced council</u> with moderates and often a centrist. But it does not push any rep to please a *central majority* of voters. *Condorcet* does. ↗

⊛ 1. An **Ensemble Rule** is the best way to represent the center and all sides, as page 6 simply defined it. 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*. No rep has a position in the lower right, so the council is not fairly balanced. Each winner's name is in *italic*.

○ 3. <u>Full Rep</u> by five-seat <u>STV</u> elects <u>Bev</u>, <u>Di</u>, <u>Fred</u>, <u>GG</u> and <u>Joe</u>. Each name is <u>underlined</u>. It eliminated Al*!*
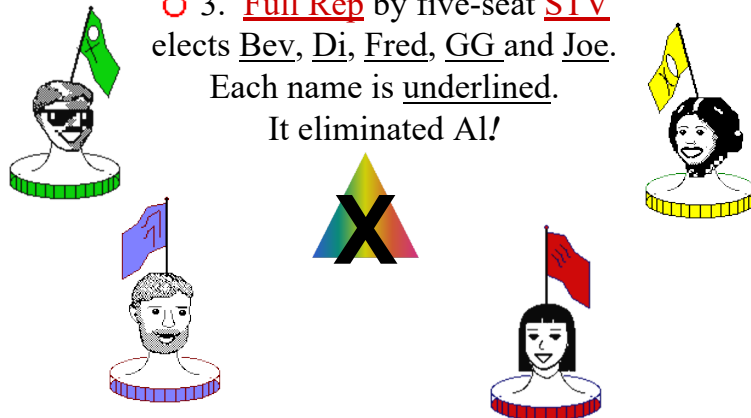
Notice Two Surprises

⊛ 1. It may be surprising that <u>broad</u> <u>Fair Rep</u> helps the *central Condorcet* winner be the council's **swing voter**. It shows that political diversity can be a source of balance and moderation as well as perspective.

⊛ 2. *Central reps* can lead a <u>broad</u> <u>Fair Rep council</u> 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.

Running for president in 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 killing of pro-democracy demonstrators.[4]

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) Blondie 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 elects leaders in more and more places: Maine, Minneapolis and San Francisco now use it; plus students at Duke, Harvard, Stanford, Rice, Tufts, MIT, Cal Tech, Carlton, Clark, Hendrix, Reed, Vassar, the Universities of CA, IA, IL, MA, MN, NC, OK, TX, VA and WA.[5]
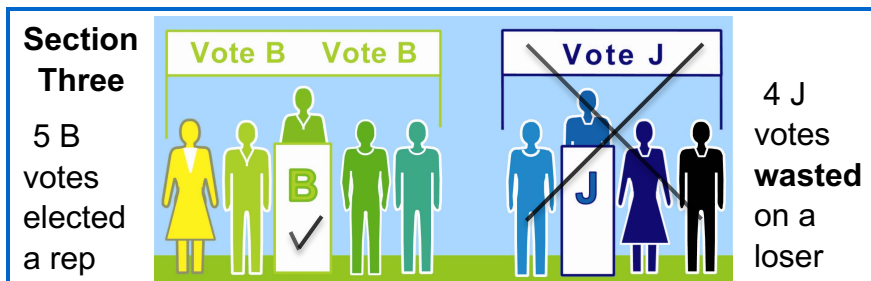
Irish and Australian voters have used it for decades. They call it the Alternative Vote or Preferential Vote. Many in the United States call it Ranked Choice Voting.

Electing a Council

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.

Section One

1 vote **wasted** on a loser

Vote M   Vote M   M ✓

8 M votes; 3 were **wasted** in a surplus

Section Two

5 C votes elected a rep

Vote C   Vote C   C ✓   Vote K   K

4 K votes **wasted** on a loser

Section Three

5 B votes elected a rep

Vote B   Vote B   B ✓   Vote J   J

4 J votes **wasted** on a loser
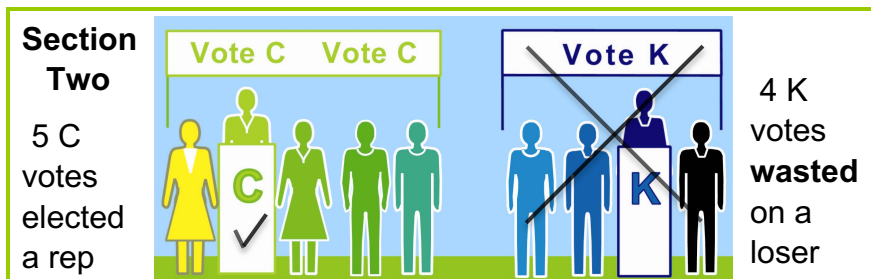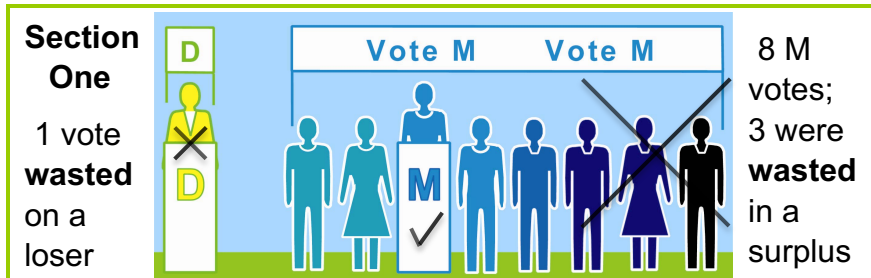
↗ An 11 voter minority got 2 reps; that's majority power.
But with 3 or 4 voters in each section, they'd get no reps.
So we see it's erratic, easy to rig, and often unfair.

FSV Shares Funding

O 0/60   P $60   D 0/30   E $15   K $20   C $30   B 0/30   I 0/20   N 0/60   L $20   F $15   M 0/60   A $30   J $20   H $15   G $15
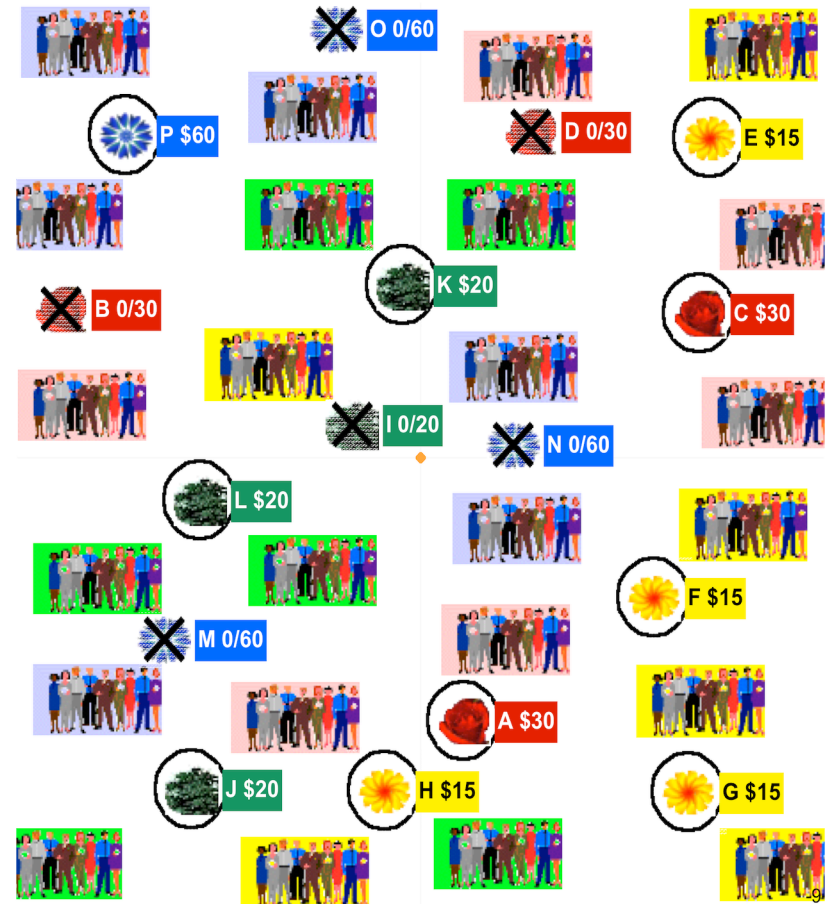
Any big group can **focus** or **spread out** their spending.

With the same ballots, we can run a Condorcet Tally and fund some of its winners before the Fair Share tally. This lets you vote for a sure winner without wasting any of your own power. It weights budget power toward the center, or the ruling majority if there is one.   That's good or not, depending on your goals.

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, water, spaces, labor, or another resource, to some projects or optional items in ongoing budgets; e.g. FSV can target repairs for roads but not new routes.

Sharing Resources and Costs for Widely-Shared Goods

This map shows the public plants proposed by voters in a village. 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 in the page.

This is a proposed **blue-flower garden.** It is far from what **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 for 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?

$60, $60, $60, $60.   Yes

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."
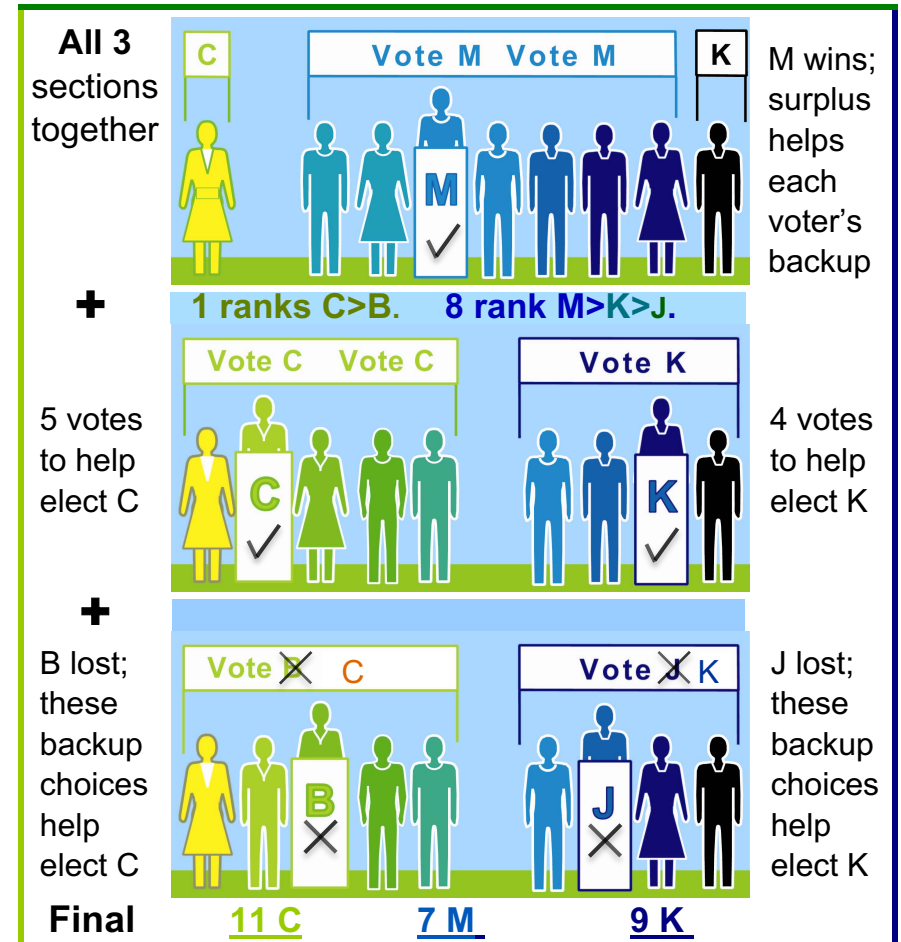
Now the minority gets 1 rep and the majority gets 2. This is more fair, thus accurate, popular and strong.

How many surplus votes did C get?   *4*   15

The principle of **Fair Representation** is:

Majority rule by representing the groups in proportion to their votes.

That is, <mark>60% of the vote gets you 60% of the seats,</mark> 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 often[1] so **Accurate majorities** win—also due to real choices, more turnout, effective votes, and equal votes per rep so **Policies match** public opinion better.[2]

Many people call this Proportional Representation, PR.

A Diverse and Balanced Council

10   11
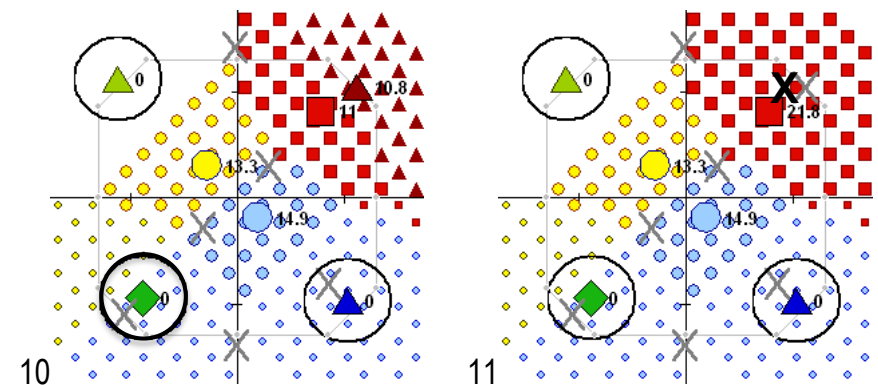
This pattern of voters makes their choices easy to see. SimElection™ also created uniform, random, custom and normal bell-curve patterns for games and research. <mark>To learn about life, play with lifelike normal patterns.[1]</mark>

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? Well centered?

12   13
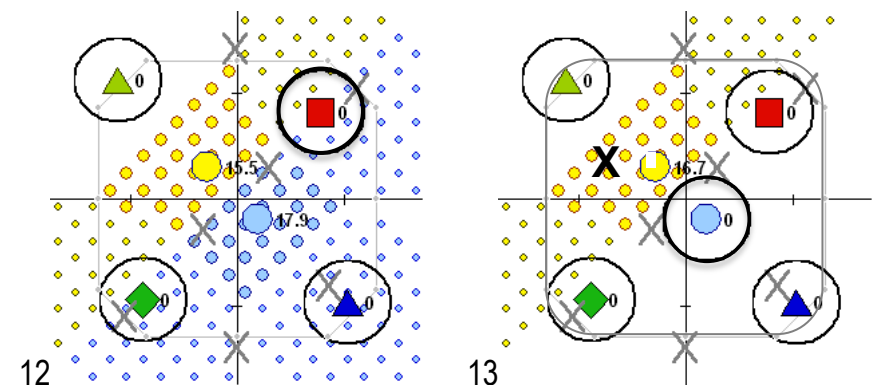
No. Over 83%. Yes. Yes. Yes.

Votes Transfer, Elect Reps

6)   7)
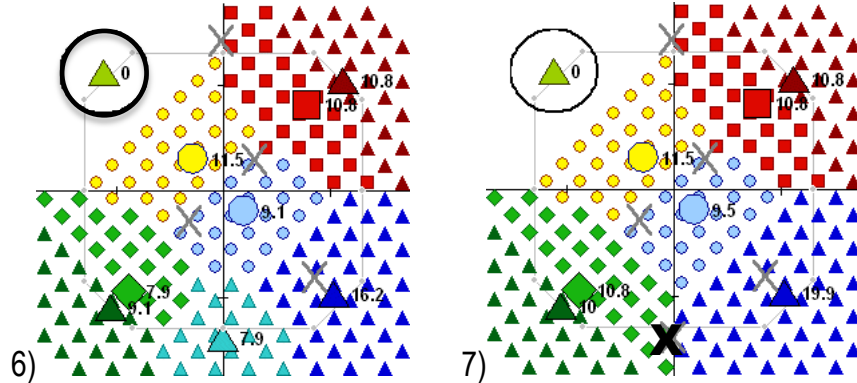
In 6, a candidate has just enough votes to win a seat.
In 8, a winner has **surplus votes**; a fair share
goes to each supporter's next choice. ◆ ● ■

The charts 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**!

8)   9)
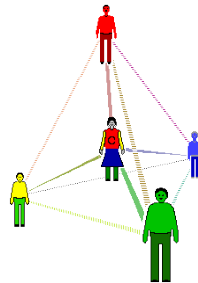
Fair Shares and Moderates

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 both parties courted voters in all districts.
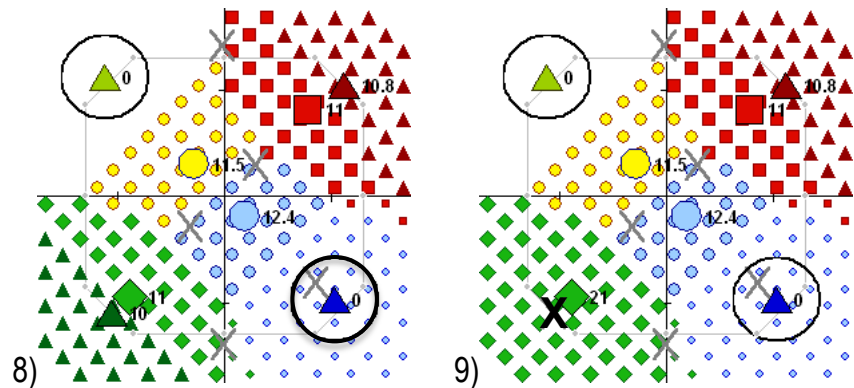
Those Chicago Republicans were usually moderates. So were Democratic reps from Republican strongholds. Even the biggest party in a district tended to elect more **independent**-minded reps. They could work together for moderate policies.[3]

✓ **Shares of votes equal fair shares of seats.**

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. The SMDs elect few women; but in the same election, the party lists elect two or three times more women.[1]

In every one-seat district, a party's **safest nominee** is likely to be a member of the dominant sex, race, etc. That adds up to very poor representation of all others.

Fair Rep leads a party to nominate a **balanced team** of candidates to attract voters. This promotes women.[5] A team can have class, ethnic, and religious 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 loses. But Fair Rep gives every big party its share of seats.

This credible threat made one party decide that 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. Now they are incumbents with experience, power and allies.[6]

2)   3)
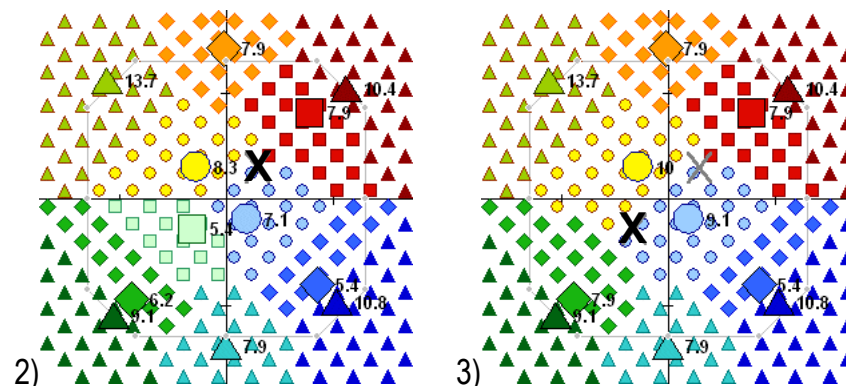
In chart 2, the first loser gets an X. Her ballots change color and shape when each counts for its new top rank, a close rival. So the nearby fields of color grow.

In 1, the gray box holds half the ballots. The candidates outside it lead their close rivals on the first ballot count. But in 2 and 3, as weak candidates lose, most of their ballots count for centrists or **moderates** inside that box.

4)   5)
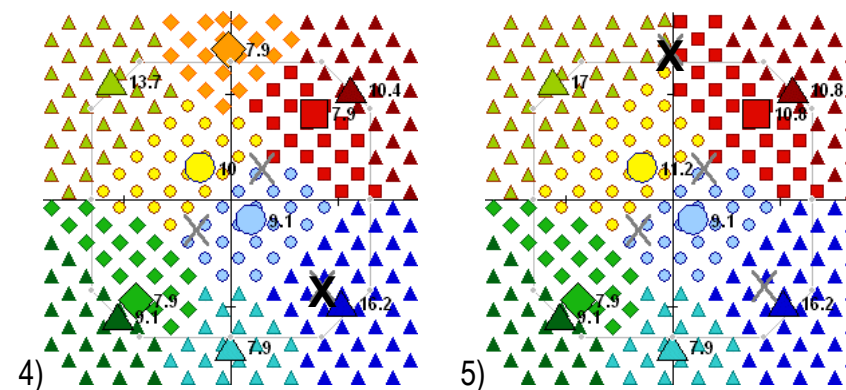
III. SimElection Charts

Watch Full Rep Balancing a Council

These charts show **Choice** ballots electing **five** reps. A little shape is a voter's ballot; a big one is a candidate. Each little ballot has a color and shape like its current top-ranked choice, the closest remaining candidate.[1]

1)
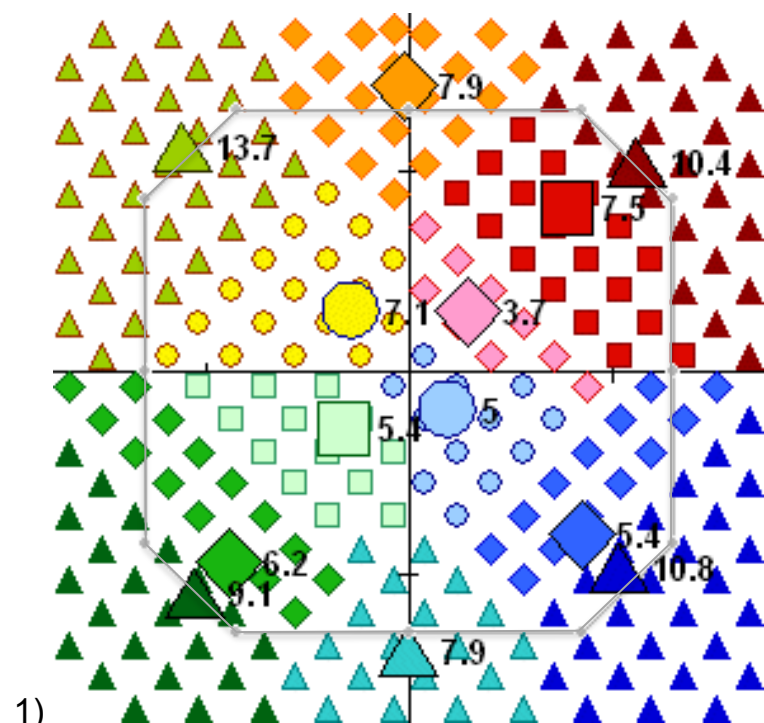
Sim players position their candidates to get votes (page 54). In chart **1**, the first count shows each candidate's current share of the votes; getting 16.7% will win a seat and (halo!) After this round of counting, the weakest candidate will lose and get an **X**. Which one will be the first to lose?

◆ 3.7%

Voting Rules and Policy Results

SMDs elect reps with a wide range of 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, producing **policies closer to public opinion**.[2]

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

~~less: wasted votes,~~
~~gerrymandered districts,~~
~~monopoly politics,~~
~~dubious democracy~~

Councils with fewer women tend to do less for health care, childcare, education, and other social needs.[7] Then the poorest schools and clinics are a **blight**, as are the citizens and workers hurt by poor education or health.

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 in the scores on page 58. 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.

Funding Projects

### Fair Shares to Buy Shared Goods

Electing reps is the most obvious use of voting rules. Rules to pick projects or a policy are also important. These decisions occur more often than elections and occur even in groups that don't hold elections.

Fair Representation distributes council seats **fairly**. Voting can also distribute some spending power **fairly**.

Democratic rights progress: Each step makes a democracy more fair, thus accurate, popular and strong.

✓ Voting by rich men, poor men, "colored" men, women
🌀 Fair Representation of big political minorities
📊 Fair Share Voting by big groups of voters or reps

Counties, co-ops and colleges, service clubs, investors and grant makers can gain by Fair Share Voting, FSV.
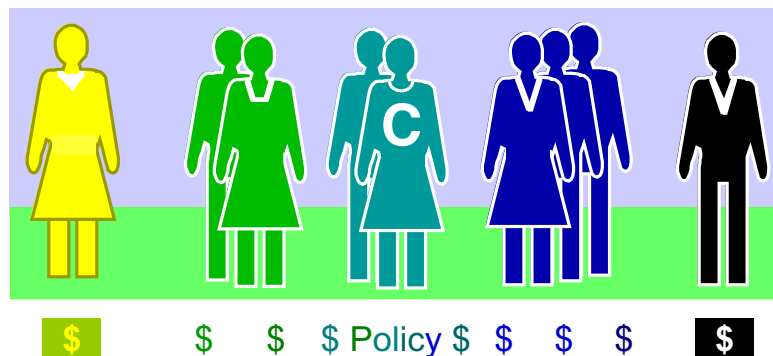
All major groups have the right to spend some funds.

Workshop Finale 𝄞 Notes

Our ballots from page 43 let us compare some rules. Which 1 wins by plurality? Hints: 5 chocolates 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**? Which are the top 3 by those rules, **STV** or **FSV**? Which rule is best if the items vary in cost?

Eat the winners! as you plan how 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 32.)
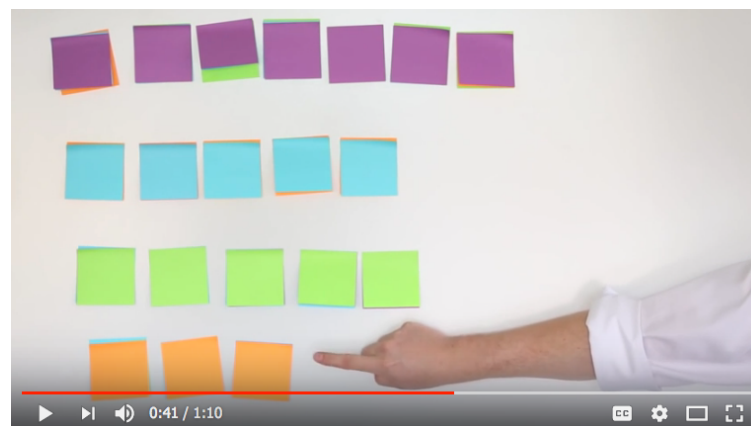
It's easy to host a workshop in a class or a club. In an hour, 20 voters can review plurality, try **IRV**, then try **FSV** with treats or **STV** with colors as shown above.[6]

The primer and workshop webpages say a bit more. A teacher's page has handouts, ballots and voting cards.[7]

Hands-on games and shared treats made memories of how each tool *works*. Next, realistic simulations and national statistics will reveal each tool's *effects*.

Condorcet Tally Centers a Policy

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

against	A	B	C	D
for A	—	1	3	4
for B	8	8+1=9	3	3
for C	6	6	—	5
for D	5	6	4	4+5=9

The nine voters gave C a majority over each rival.

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?

Usually: Blue. Center. Yes. Yes. No. Balanced.

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**. Each vote for the park won $501. (its price / its votes) But if given to fund the bike racks, each won only $31. That's too unfair. Even worse, more than half the votes were wasted on losers.[3]

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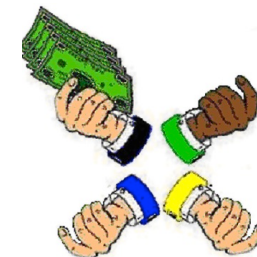
  A bad election rule gets worse when picking projects. It is **not cost aware**, so it often funds a very costly item and cuts a bunch that get many more votes per dollar. To win this bad tally, load various proposals into one. Keep raising its cost if that attracts more votes.

  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]

The principle of **Fair Share Voting** is:

**Spending power for groups,
in proportion to their votes.**

That is, 60% of the voters can spend 60% of the fund, all of it. Your share of the fund lets you vote to pay your shares of the costs for your favorite projects.

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

Your ballot offers a grant to each of your present top ranks—as many as it can afford. A tally of all ballots drops the project with the fewest offers. Those two steps repeat until all the remaining projects are fully funded.[3]

Some Merits of Fair Share Voting, FSV

- **FSV is fair** to a project of any price, and to its voters
  It takes a costly offer to vote for a costly project so
  A ballot's money can help more low-cost projects.

- This motivates a voter to give his top ranks to the projects he feels give **the most joy per dollar**.

- **Votes can move** from losers to backup choices so:
  Voters split by similar proposals can **unite** on one so
  The ballots leave **fewer wasted votes** and
  The set of winners gets **stronger support**.

- A project is a **shared priority** **worth its price**, if enough voters each offer it a small, set percentage of that price. (See more on page 24.)

Ranked Choice Ballots

A small tally board can 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 catch frauds or errors.[3]

☒ **Yes-or-no ballots** badly oversimplify most issues. They often highlight only two factions: "us versus them." 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]

Party Menu   Fill only one "O" on each line.

Treats Ballot #2	Best 1st	2nd	3rd	4th	5th	Worst 6th
1 Fruit & Nut Platter	🍎	O	O	O	O	O
6 Chocolate Brownies	O	O	O	O	O	O
6 Choc. Chip Muffins	O	O	O	O	O	O
6 Choc. Fudge FroYos	O	O	O	O	O	O
1 Choc. Cheesecake	O	O	O	O	O	O
3 Choc. Mousse Hearts	O	O	O	O	O	O

Each serves 6 for $9 with a group discount.

Fair Shares Set Budget Levels

Each **budget level** needs enough **cards** to pay its cost. So a $3 bottle of OJ needs its voters to fill one **column**; the $6 size needs to fill one more. Voters who want *only* the $6 size may fill that one first. But if the $3 column loses so does the $6.

Listing logical levels of a costly item lets us limit it; it leaves more money for more favorites. Voting takes a tad longer but the results likely please most voters more.

1. Should a member who pays more taxes or dues get more power to spend the group's money?

2. Could ranking lower choices hurt your first choice?

(For a shorter ballot, let any __5__ members endorse a **budget plan**. It is often easier to rank a few plans than many budget items and levels. A Condorcet Tally then enacts one plan. *If* all big groups influence the result, it works well. But it is not an inherently fair share rule.)[2]

Similar proposals, like these chocolates ↑ →
can split a group of voters so it loses by plurality rules.

Not if each has an equal membership.
Tall and short voting cards reduce this risk. page 41

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.

✓ **Fair shares**
spread the joy and opportunities.

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

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

Adjusting Budgets, optional

Your group may let each voter write-in and rank **budget levels** for some items.

A budget level needs to get a **base** number of votes. It gets a vote when a ballot offers to share the cost up to that level or higher.   cost **/** base = 1 offer = 1 vote.
If more ballots divide the cost, each of them offers less. You only pay up to a level you voted for and can afford.[3]

The item with the weakest top level loses that level. Any money you 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 own supporters.

**Many voters must agree,
this item is a high priority for our money.**

A group with 100 members set our **base** number at 25 votes.[5] My first choice got just enough votes, so my ballot paid 4% of the cost.*   100% **/** 25 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 <u>surplus</u>? Did I waste much of my power by voting for this sure winner?

* These are "reciprocals."   *None. <u>None</u>. Not too much.*

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 in a **column**.

⚡ A costly item must fill several **columns**. A column here holds $3, so a $6 item must fill two columns.

(Version B gives you one 50¢ card, a short 25¢ and a tall 75¢ card to let you help your top choice more. Four eager voters can fund a $3 item.)

⚡ 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 next choice.

⚡ **Stop** when we've paid up all items still in the game. Only a few items can win, but all voters can win *!*

If your favorite is about to lose, consider briefly taking your cards off some of your lower choices, so one of them might lose first—if your group allows this extra step.

Instant Runoff Quiz

1. How can your group use this voting rule?

2. A card you move counts just like others: True, False

3. Ranking a backup can't hurt your first choice: T, F

4. Only one candidate can reach 50% plus a vote: T, F

5. Name four cities or schools that use IRV. page 13

6. What benefits does it give them? page 12

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.*

↖ ↗

RCV Ranked Choice Voting includes **IRV** and **STV**

↙

Fair Rep by Single Transferable Vote

A tabletop tally to elect three reps works like **STV**.

⊕ The **finish line** is set at 1/4 of the cards plus one. Don't put your card in a column that is full.

⊕ **Drop** the weakest candidates one at a time, and

⊕ **Move** (transfer) those cards; repeat until three win*!*

Users include Australian and Irish voters, the Church of England, Cambridge, Harvard, MIT, Oberlin, Oxford, Princeton, Vassar, UT Austin, U Cal, Davis, LA, and SB. Some of their ballots look like those on pages 31 or 43.

1. What benefits does Fair Rep by STV give them?

2. Can only three candidates each win 25% plus a vote?

3. What total percentage do three STV reps together win?

More Merits of Fair Share Voting

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

⚡ It lets subgroups pick projects; 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 can raise support for more. This can cut spending at the extremes of individual and central control.

```
N€w                          N¥w



          New Tool


N£w                          N$w
```

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 workshop games we may eat our winning treats*!*

Enacting a Policy

Condorcet Test Number Two

The Runoff on page 10 was a one-against-one contest between the positions of candidates M and K. Five voters preferred M's policy position over K's.

Here is a second test with the same voters: K's position loses this one-against-one test. L wins by five votes to four.
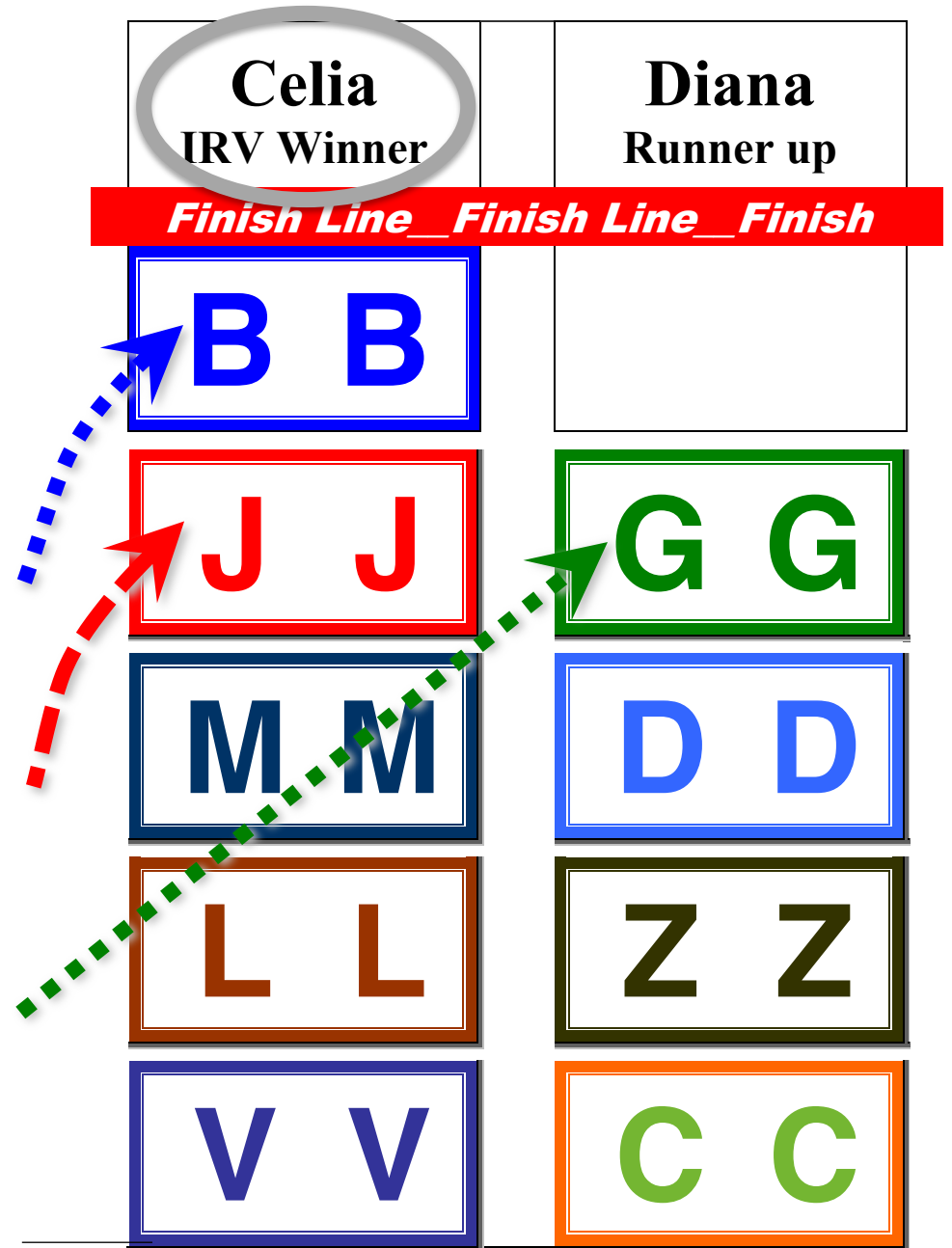
Each person votes once with a ranked choice ballot. Pages 31 and 43 will show two kinds of ballots. A workshop page will show a Condorcet tally table. And a simulation map will show Condorcet voters with two issue dimensions.

People often struggle to find a group's center of opinion

Voters for K   **Vote L   Vote L**
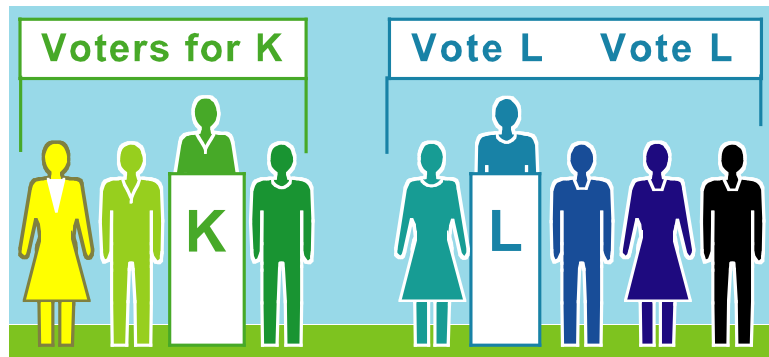
K is nearest four voters.   L is nearest five voters.

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

Celia IRV Winner		Diana Runner up
Finish Line__Finish Line__Finish		
B B		
J J		G G
M M		D D
L L		Z Z
V V		C C

M, L and V ranked Celia #1.   D, Z and C ranked Diana #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, **eliminate** the weakest candidate.
  Draw names from a hat to break ties.

- If your favorite loses, **move** your Post-it or token.
  Give it to your next backup choice.

- **Repeat** until one candida te reaches the finish line!

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 to backups.
They were free to choose different backups.[1]

| Anna Eliminated 1st		Bianca Dropped 2nd
		B B
J J		G G

JJ ranked Anna > Celia   GG put Bianca > Diana

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." [1]

Could another person top candidate L?   Yes, No
Hint: Is anyone closer to the political center?   Yes, No
Who is the Condorcet winner on page 11?   K, L, M

Thus a Condorcet tally picks a **central winner**.
It can set the base number for **FSV**.   page 24
But is it likely to spread spending fairly?   Yes, No
It can elect a **moderator** to a council.   page 6
But is it likely to elect diverse reps?   Yes, No
Is a CEO more of a moderator or a leader?

Vote L Vote L Vote L	Vote for M
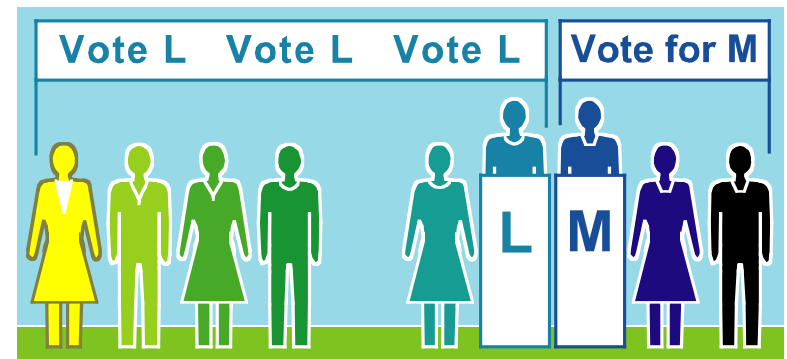
L has six votes.   M has three.

Yes.   Yes.   L.   No.   No.   Discuss this.

The goal in a **Condorcet Tally** is this:

**Majority victories,
over every single rival.**

<mark>The winner must top every rival, **one-against-one**.</mark>

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 of 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 can elect one of the near winners.[2])

Why Use a Condorcet Tally, CT

� **No split-vote** worries as duplicates don't help or hurt
each other.[2b] The ad hoc majority ranks *all* of their
favorites over the other options. Their top one wins.

✖ **Ranked choice ballots** poll related options all at once,
simplify the old rules of order and **speed up** voting.
They 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 money and builds respect for leaders.

28   *The Glossary is on page 66.

II. Workshop Games

–

Get your hands on **4** great voting rules.

See how fair-share tallies organize voters.

Vote fast on **projects**, **reps,** or **policies**.

A tally board has

❂ A **card** for each voter,

❂ A **column** for each option,

❂ A **finish line** for the favorites.

How to Try New Tools

It's easy to **test**-drive a new rule in a survey. Or a council can form a "committee of the whole" to vote, tally and report results to enact by old yes-or-no 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.[4]

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?

Today's drivers need the **skill** to use power steering, but they don't need the math or logic to engineer it. Same with voters and voting rules.

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.[2, 3] 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 think it's right here."

"I *am* the center*!*"

C
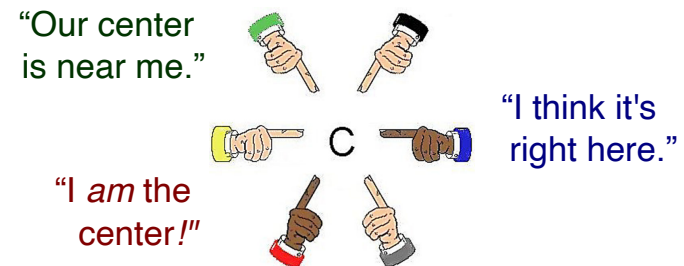
✓ Where is our center?

Chairs with Balanced Support

CT elects a central chairperson and vice chair to hold the powerful **swing votes** in an **Ensemble Council**. Candidates must compete for good ranks from all voters, as page 54 will picture. So the chairs have strong incentives to balance a council's process and policies.

IRV has slightly different effects, incentives and uses.[3] Games will put us inside each tally to feel how it works.

By plurality rule, candidate M lost on page 9. 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**, bluish voters can elect M or an even *less* central candidate who might **polarize** the council.[4] But did this gerrymander change the **CT** winner, L? Many wasted votes often can expose gerrymanders; **Fair Rep** reduces both,[5] as shown on pages 14 and 15.
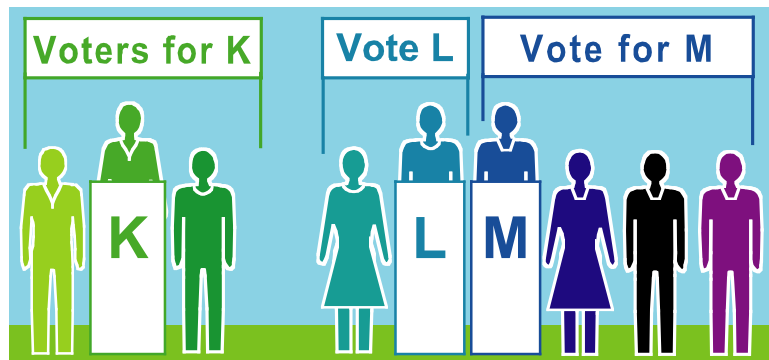
3 rank K>L>M.   2 rank L>M>K.   4 rank M>L>K.

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

Manipulations of plurality rules are, sadly, not rare. And point voting invites extreme high and low votes. So those voters should worry about their voting tactics. But a chance to manipulate **IRV** (or **Condorcet/IRV**) in a real election is rare, risky and hard.[2] So you don't need to worry about your own or other voters' tactics.

No because L still wins the Condorcet Tally.

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 overlapping 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, can block a Condorcet winner by writing-in a basic concern about it.

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. ➲

Consensus and Voting

Group decision-making has two linked processes. A **discussion process** may have an agenda, a facilitator and some 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 7, 29 They are less divisive than yes-or-no voting. " 12, 43, 54 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 25, 31
- ⊞ Secret ballots **reduce social pressure** and coercion.
- ⊞ Well-designed ballots and tallies **promote equality**: Even busy or unassertive people can cast full votes.

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 voters get to say only yes or no to a big **bundle**, that 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.[6]

Ballot On Issue A

Rank	Option
5	Continue Discussion
2	Original Bill, the main motion
1	Bill with Amendment 1 (a free rider?)
8	Bill with Amend. 2 (a wrecking amend.?)
7	Bill with Amendments 1 and 2
3	Postpone to a Definite Time ___7__ days
4	Refer the Bill to a Committee
6	No Change in the status quo

An "Incidental Motion" does not wait for a ballot.

Summary and Index of Benefits

Accurate Elections

Accurate Legislation

★ Social Effects and Uses

Tools Between People

A group's decision rules pull its **culture** toward fair shares or winner takes all. They spread power wide and balanced or narrow and lopsided. Less formal decisions by members may follow their models.

Fair rules make **cooperation** safer, faster and easier. This favors people and groups who tend to cooperate, and can 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.[1] Voting is an exemplary tool between people.