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| “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 Assistant Secretary of State for Educational and Cultural Affairs, and 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*.  **Touch, See and Hear 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  **1**  fair-shares of seats or $pending.  **Then Act**  **Share** this illustrated booklet with friends.  **Build** support in your school, club or town. **Enjoy** better relations, politics, and policies: See pages 33, 36 and 58. | **ACCURATE DEMOCRACY** | **Accurate**  **Democracy**  ***4 Decision Tools with Pictures & Games***  Cvr50wide |

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| More Endorsements  “I like your thoughtful application of the best voting techniques to the PB process.” [Participatory Budgeting]  —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.”  – Prof. Arkadii Slinko, mathematical politics, NZ.  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; recent regional editorials: Portland Press Herald, Las Cruces Sun News...  Journalists: David Brooks 6/1/2018, Hendrik Hertzberg...  Celebrities: Jennifer Lawrence 6/5/2018, Krist Novoselic, John Cleese, Dr. James Hansen...  US Senators: John McCain, Barak Obama, Bernie Sanders...  US Reps: Abner Mikva, John Porter, Jamie Raskin, Keith Ellison, John Anderson...  Parties: Democrats of California, Colorado, Massachusetts and Maine; Green Party US; Libertarian Party; Republicans of Alaska and Utah.  See many more at fairvote.org/endorsers |  | About Us  About *FairVote*  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 we are 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 results to advance a Condorcet-IRV rule. Throughout the 1990s, I wrote 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 46-55 show maps from the simulation games. By 1998 I’d started the *Democracy Evolves* website. Then I helped FairVote as a webmaster and librarian. I’ve helped Robert Tupelo-Schneck and Twin Oaks Community test Fair Share Voting for 10 years. This booklet summarizes *Accurate Democracy.com*.  The goals are better group-decision results (page 59), through systemic changes (e.g. pages 34-36), through better tools between people (e.g. pages 23, 25 and 33). |

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| Glossary and Index  **Accurate democracy** gives groups fair shares of seats and spending. It cuts scams and enacts a policy that tops all rivals.  *4 goals*  a **Mandate** is the legitimacy effective votes loan  Pages  to a winner.  Contrast a wasted vote. *basic goal* **9**-15, 35  a **Majority** is more than half of the votes. **9**-, 12-, 27-, 54  a **Plurality** has the most votes—often not a majority.  **"** **rules** use yes-or-no voting; contrast RCV. **4**, 9, 21, 29-, 59  a **Ranked Choice Vote** lets you rank your first choice and backups.  *It’s a tool for effective votes and fair shares.*  **12**, 38-, 46  a **Threshold** to win, quota or finish line is the percentage of  the votes a rule requires for a win. 4, 12, 15, **38**-, 46  a **Wasted vote** went to a loser, a winner's surplus or a powerless rep. *It measures weakness in a voting result.* **10**-16, 21, 25  a **Wrecking amendment** ruins a bill’s chances or effects.  a **Free-rider "** doesn't relate to the original bill. 28, **31**, 36  Acronyms and Synonyms  Pages  Consensus process 31, 33, **55**  CTCondorcet Tally, Pairwise Tally 26-**28**-, 43, 52-56  **EC** Ensemble Council ***New*** **6**-, 29, 52-54  **FSV** Fair Share Voting ***New*** 20-**22**-, 41-, 50-, 55-  **FR Fair Rep**, Fair Representation (US), PR  Proportional Representation; see also STV 14-**16**-, 40, 46-, 59  RCVRanked Choice Voting, Choice Voting (US), includes: STVSingle Transferable Vote for Fair Rep. **40**, 46-49, 52-54 **IRV** Instant Runoff Vote (US), Majority Preferential Vote (Aus),  AV Alternative Vote (UK), or Hare for SMD. **12**, 38-40, 54  **SMD** Single-Member District elects one rep. **4**, 14, 17 |  | Accurate Democracy  Four Decision Tools  with Pictures and Games  Robert Loring  FairVote |
| We feel this **information** should be free.  So we give it a Creative Commons License,  make it free on the Web and print a few copies.  The rare booklet costs over $7 to print in **color**.  So please share it with your friends to improve democracies in your clubs, schools, city and state.  Please consider donating to **FairVote**  6930 Carroll Ave. # 240; Takoma Park, MD 20912.  301 270 4616 www.fairvote.org  What will you do or give to live in an educated and accurate democracy?  Photo **credits**: cover Rawpixel;  title page Reflecting Voters, Adrian de Kock; page 3 Kiichiro Sato; page 32 Mercedes-Benz;  page 55 Minnesota Public Radio;  page 55 Flickr pool, Local Living Venture;  Others not attributed. All photos altered.  © CC BY-SA 3.0 2018, Robert Loring  AccurateDemocracy and its logo are trademarks.  We encourage reviews, reprints, and translations.  www.[accuratedemocracy.com/z\_prints.htm](http://www.accuratedemocracy.com/z_prints.htm)  Updated 8.21.18 |  | From Classes and Co-ops to Countries, [p\_tools.htm](http://accuratedemocracy.com/p_tools.htm)  1 Lawrence Susskind and Jeffrey L. Cruikshank, *Breaking Robert’s Rules*; (Oxford U. Press, 2006). Spanish: *Mejor Que La Mayoria,* with Francisco Ingouville, (Obelisco, 2011)  LiquidFeedback.org Free software to help groups make decisions.  [*Democratic Rules of Order*](http://democraticrules.com/tips.html), Fred & Peg Francis, 9th ed. 2010, p.19, 24.  Diana Leafe Christian; *Radical Governance Changes in Two North American Ecovillages*; 2014. http://gen.ecovillage.org/en/node/8737  2 *Group-Process Pattern Language*, groupworksdeck.org  3 Corrine McConnaughy, http://washingtonpost.com/blogs/monkey-cage/wp/2014/03/31/forget-susan-b-anthony/ *The Woman Suffrage Movement in America: A Reassessment*; Cambridge Univ. Press, 2013  4 Many people use these critical ways of thinking at times. But fewer have a disposition to use them routinely. http://learnweb.harvard.edu/alps/thinking/docs/dispositions.htm  5 Institute for Local Self-Reliance http://www.ilsr.org/  6 “Egalitarian versus Authoritarian Values” https://accuratedemocracy.com/a\_quotes.htm#egal  7 See progressive taxes in Wikipedia pages on: [Carbon\_tax](https://en.wikipedia.org/wiki/Carbon_tax), [Consumption\_tax#Expenditure\_tax](https://en.wikipedia.org/wiki/Consumption_tax#Expenditure_tax), [Georgism (land)](https://en.wikipedia.org/wiki/Georgism), [Financial\_transaction\_tax (speculation)](https://en.wikipedia.org/wiki/Financial_transaction_tax), and Weath\_tax.  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 Send friends the **eBook**: accuratedemocracy.com/123.pdf  FairVote.org has voter education videos, ballots, editorials, testimonials, model bylaws, research reports, and more. http://www.fairvote.org/rcv\_**activist\_toolkit** https://www.rankedchoicevoting.org/  Kindly send your questions and comments to    65 |
| Cost and Benefits, (continued)  5a This assertion needs research; but see, “conservation ... depends on effective governance;” https://www.nature.com/articles/nature25139.  5b nytimes.com/2018/06/23/opinion/sunday/james-e-hansen-climate-global-warming.html  6 “The People Trying to Save Democracy From Itself”, Patrick Chalmers, theguardian.com/world/2016/jul/02/democracy-tarnished-brand-desperate-need-reinvention  6b “Democracy Through Multi-Body Sortition: Athenian Lessons for the Modern Day”, Terrill G. Bouricius New Democracy Institute, *Journal of Public Deliberation*, Volume 9 | Issue 1; 4-30-2013  7 The statistics on page 59 compare stable democracies; notice Math scores.  8 See Chamberlin et al, or Merrill, or Green-Armytage above.  Workshop Games, hold a vote ⓐ/a\_workshop.htm  A ballot by the inventor of FSV http://tupelo-schneck.org:8080/tag/  2 FairVote, “Ranked Voting and Questions About Election Integrity”, "Published October 12, 2013. http://www.fairvote.org/ranked-voting-and-questions-about-election-integrity/  Election Audits, http://electionaudits.org/ http://www.verifiedvoting.org  3 Portland (ME) Mayoral Election with Ranked Choice Voting: A Voter Survey; By Dorothy Scheeline and Rob Richie; FairVote, 2012. fairvote.org/assets/NewFolder-3/Portland-ME-Exit-Survey-11-3-11.pdf  4 Jon A. Krosnick, "In the Voting Booth, Bias Starts at the Top", *NY Times*, http://nytimes.com/2006/11/04/opinion/04krosnick.html  5 www.youtube.com/watch?v=oHRPMJmzBBw v=\_5SLQXNpzsk  Simulation Examples, compare rules SimElection.com  1 Robert Loring, simelection.com 1996 http:politicalsim.com  https://accuratedemocracy.com/d\_stv2d.htm ⓐ/p\_tools.htm  Henry E. Brady, "Dimensional Analysis of Ranking Data", American Journal of Political Science. 34 (11/90).  64 |  | Contents  $ $  $ $  **1**  Here are **three ways** to learn **four** voting tools  They are inclusive, yet centered, quick, and easy  **I. Voting Primer** tells the stories of the best tools  Bunting1RB Tragedies, Eras and Progress of Democracy 2  Instant Runoff Voting Elects a Strong Leader  8  Fair Representation Elects a BalancedCouncil 14  Fair Share Voting Sets Many Budgets ***New*** 20  Condorcet Tally Enacts a Balanced **Policy**  ***"*** 26  Bunting1RB Cost-Benefit Analogy, Related Reforms 32  **II. Workshop Games** put the tally steps in your hands  Bunting1RB Leader, Reps, Budgets, Policy ***New!*** 37  **III. SimElection**™ maps make tally patterns visible  Bunting1RB Reps, Budgets, Policy, **Council** ***New*** 46  **—————**  **IV. Co-ops and Countries** gain with these tools  Bunting1RB Consensus on a Policy, and on Budgets 55  Bunting1RB Countries with Plurality, Runoffs, or Fair Rep 57  **V. References, Glossary & Index,** **About**  60 |
| 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 for many years as forestry policies were reversed again and again. Hasty logging in times of weak regulation wasted resources. Sudden limits on logging bankrupted some workers and small businesses. If this **policy pendulum** swings far, it cuts down forests and species, families and towns.2  bl2  What can big swings in other policies do?  2 |  | **Enacting a Policy**, Condorcet ⓐ/l\_intro.htm l\_motion.htm  1 James Green-Armytage, "Four Condorcet-Hare Hybrid Methods for single-winner elections"; *Voting Matters*; 2011.  "Strategic Voting and Nomination"; *Social Choice and Welfare;* 2014.  Nicolaus Tideman; *Collective Decisions and Voting;* (Ashgate Publishing Ltd. Hampshire, England; 2006) page 232.  James Green-Armytage, Nicolaus Tideman and Rafael Cosman, "Statistical Evaluation of Voting Rules". 2014  1a If A tops B, B tops C, and C tops A, then we have a “voting cycle.” Tally IRV with the motions in the top voting cycle. @ l\_cycles.htm  1b These follow from Later-no-harm and Later-no-help criteria.  2 See Chamberlin et al, or Merrill above. ⓐ/c\_data.htm ⓐ/l\_data.htm  3 http://www.accuratedemocracy.com/c\_irv.htm#compare  4 https://en.wikipedia.org/wiki/Primary\_challenge  5 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/  Cost and Benefits, ⓐ/a\_goals.htm ⓐ/z\_review.htm  https://www.accuratedemocracy.com/l\_motion.htm  https://en.wikipedia.org/wiki/Committee\_of\_the\_whole  2 Meredith Bennett-Smith, *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/  https://www.cambridge.org/core/journals/world-politics/article/all-for-all-equality-corruption-and-social-trust/09B64F404EB0F753E78680B70A9ABEDB  3 <https://en.wikipedia.org/wiki/Democracy_voucher>  Bruce Ackerman and Ian Ayres, *Voting with Dollars: A New Paradigm for Campaign Finance*; (New Haven: Yale Univ. Press, 2002).  4 Gifts to "spoilers" are ineffective under Ranked Choice Voting. Multi winner districts make it hard to target money on just one seat.  63 |
| Electing a Council, Fair Representation  5 Nigel Roberts, *New Zealand: A Long-Established Westminster Democracy Switches to PR*, (Stockholm, IDEA) www.nigel-roberts.info/NSR-in-Reynolds-&-Reilly-1997.pdf  http://www.greens.org.nz/speeches/proportional-representation-nz-how-people-let-themselves-part-ii  6 Rob Richie, Andrew Spenser; “The Right Choice for Elections” *University of Richmond Law Review*; v. 47 #3, March 2013. http://lawreview.richmond.edu/wp/wp-content/uploads/2013/03/Richie-473.pdf http://www.representation2020.com/  7 Mona Lena Krook; *Quotas for Women in Politics: Gender & Candidate Selection Reform Worldwide*; (Oxford University Press, 2009), 123.  Andrew Healy, Jennifer Pate. 2011. “Can Teams Help to Close the Gender Competition Gap?” *Economics Journal*, 121: 1192-1204 myweb.lmu.edu/ahealy/papers/healy\_pate\_2011.pdf  8 http://www.nytimes.com/2016/11/10/upshot/women-actually-do-govern-differently.html  Idem 1; Pages 58-59, Statistics of nations. ⓐ/d\_stats.htm  + “Direct Voting and Proxy Voting”, James Green-Armytage, Department of Economics, Bard College.  **Setting Budgets**, Fair Share Votingⓐ/p\_intro.htm  1 Anwar Shah, ed., *Participatory Budgeting*; The World Bank Washington, DC; http://siteresources.worldbank.org/PSGLP/ Resources/ParticipatoryBudgeting.pdf  2 Joe Moore, *Participatory Budgeting in the 49th Ward*, http://participatorybudgeting49.wordpress.com/  In 2014, voters in Cambridge, Massachusetts saw the same pattern.  3 *Leaves of Twin Oaks*, Louisa, VA, USA; 1998.  4 The voting games on pages 41-43 make the details easy to grasp.  5 Robert Tupelo-Schneck and Robert B. Loring, *Fair Share Voting*, for Participatory Budgeting Conference **slideshows**, NYC, 2012.  [https://accuratedemocracy.com/p\_intro.htm](http://accuratedemocracy.com/p_intro.htm)  6 Adder Oaks; “Participatory Budgeting in an Income Sharing Com­munity”, *Communities: Life in Cooperative Culture;* #175, 6/2017.  *Leaves of Twin Oaks*, 2013. Base of support to cut a budget was 55%.  62 |  | 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**, 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.*  Kiichiro Sato AP Mirror  Will their votes be effective?  3 |
| 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**.  4 |  | **Electing a Leader**, Instant Runoff ⓐ/c\_irv.htm  1 John R. Chamberlin, 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 (1985) 195-203.  Samuel Merrill III, *Making Multi-candidate Elections More Democratic*. (Princeton, NJ: Princeton University Press, 1988).  2 “Voter Turnout in Runoff Elections”, Stephen G. Wright, *The Journal of Politics*, Vol. 51, No. 2 (May, 1989), pp. 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  Ben Reilly, *Democracy in Divided Societies*, Cambridge U., Press, 2001.  Papua New Guinea: Electoral Incentives for Inter-Ethnic Accommodation, https://web.archive.org/web/20080611065753/aceproject.org/ace-en/topics/es/esy/esy\_pg  4 Korean election <http://en.wikipedia.org/wiki/Roh_Tae-woo>  http://nimbus.ocis.temple.edu/~jhurewit/history.html  http://tradecompass.com/library/books/armyhb/CHAPT04.04SK.html  **Electing a Council**, Fair Representationⓐ/d\_intro.htm  Refs 1, 2, 4, 10 Statistics on page 56 compare the stable democracies.  2 Idem 1; Page 56, Statistics of nations. @/d\_stats.htm  3 John D. Huber and G. Bingham Powell, Jr., “Congruence Between Citizens and Policymakers in Two Visions of Liberal Democracy,” *World Politics* v46 #3 (April 1994), 291-326.  4 “*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  61 |
| V. End Matter  References by Chapter  The reference numbers restart at 1 for each chapter.  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](http://accuratedemocracy.com/a_primer.htm) ⓐ/[a\_workshop.htm](http://accuratedemocracy.com/a_workshop.htm) and ⓐ/[d\_stats.htm](http://accuratedemocracy.com/d_stats.htm). They add links, videos and voting software*!* ⓐ/[z\_tools.htm](http://accuratedemocracy.com/z_tools.htm).  ***FairVote***.org has model ballots, bylaws, editorials, research reports, voter-education videos, stories and more.  Introduction, Tragedies, Eras and Progress  Douglas J. Amy, *Proportional Representation: The Case for a Better Election System*. North Carolina on page 30, http://archive.fairvote.org/?page=1606  2 Kathy Durbin, *Tree Huggers: Victory, Defeat & Renewal in the Northwest Ancient Forest Campaign*, (Seattle, The Mountaineers, 1996)  3 Clarence Hoag and George Hallett, *Proportional*  *Representation*, (NYC, The Macmillan Company, 1926).  4 Maurice Duverger, "Factors in a Two-Party and Multiparty System," *Party Politics and Pressure Groups* (NYC: Thomas Y. Crowell, 1972), 23‑32.  5 FairVote, *Monopoly Politics 2014 and the Fair Voting Solution*, https://www.fairvote.org/assets/PowerofPartisanship2014.pdf  6 Arend Lijphart, Electoral Systems and Party Systems: *A Study of Twenty-Seven Democracies* (Oxford: Oxford U. Press, 1994)  7 See pages 28, 29 and 52-54.  8 Statistics on page 58-59 compare the stable democracies.  60 |  | In the 20th Century Fair-Share Elections = One-Sided Majorities    $ $ $ Policies $ $ $  Typical Council Elected By Fair Representation  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**.  5 |
| **In the 21st Century** Ensemble Councils = Balanced Majorities      $ $ $ Policies $ $ $  Council Elected By Central And Fair-Share Rules  Ensemble rules will elect most reps by Fair Repre­sen­tation, and elect a few by a central rule ( **C** above). So the political views on the council will have a spread and a midpoint like the whole voting public.  Later pages will show how a rule can elect reps with wide support and views near the middle of the voters.7 Winners are thus near the middle of a Fair Rep council.   So they are the council's **powerful swing votes**.  Most voters in that wide base of supportdon’t want averaged or centrist policies. They want policies to combine the best suggestions from all groups.  6 |  | **Country**  **Women** **Health** **Poverty**%  **Seats** % **Turnout** **Math** **Murder**   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Fair Rep** page 14 | 37% | 75% | 15 | 503 | 13% | 12 | | Sweden9 14 | *44* | 86 | 23 | 502 | 8 | 7 | | Finland5 13 | 42 | 67 | 31 | 548 | 4 | 28 | | Spain46 6.7 | 41 | 69 | 7 | 480 | **20** | 12 | | Norway5 8.7 | 40 | 76 | 11 | 490 | 5 | 11 | | Belgium 8.4 | 39 | 89 | 21 | 520 | 13 | 16 | | Denmark5 15 | 38 | 88 | 34 | 513 | 4 | 11 | | Netherlands17 150 | 37 | 80 | 17 | 528 | 10 | 11 | | Austria8.6 19 | 28 | 82 | 9 | 505 | 8 | 9 | | Switzerland8 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, MMP** p17 | 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 | | **IRV, STV** p 12, 40 | 34% | 89% | 29 | 517 | 14% | 11 | | Australia**◊** 6, 1 | 38, 25 | *93* | 32 | 520 | 15 | 11 | | Ireland4.6 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 \* 1 | **19** | **55**\* | 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 drops 15 to 20% in non-presidential years.  accuratedemocracy.com/d\_stats.htm 59 |
| Better Voting, Better Living  This data suggests, to elect a good government that enacts superb health, education, tax7 and other policies, a country needs effective, not wasted votes.  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?  Dovoter **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?  FairVote IPU_logo http://www.haitilibre.com/images-a/g-9656.jpg  WHO_Logo oecdlogo UN_Logo  Data Definitions and Sources  Measures of respectable power and policies  **Seats** avg. per election district; Inter-Parliamentary Union  **Women %** of main legislature; Inter-Parliamentary Union  **Turnout %** Int'l. Inst. for Democracy & 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.  58 The table's **worst** numbers are in **bold**. |  | |  |  |  | | --- | --- | --- | | Soapbox | **Progress of Democracy** | TV |   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 democracy. An ensemble is **inclusive**, yet **centered** and **decisive**—  to make the council **popular**, yet **stable** and **quick**. We'll see these qualities again in the best ways to set budgets and policies.  7 |
| 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 of voters on the political left, right or center. 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 Low taxes buying great gov. services poor gov. services  8 |  | Conditions for Democracy  Money powerand martial skills raised the oligarchs of old Athens, Rome and Venice. In time, more groups won voting rights, as they built **skills**, unity and allies.3  Democracy grew most in the Age of Enlightenment, a time noted for improving our knowledge of the world through rational, skeptical, **empirical thinking**.4  High demand for workers often raised their incomes and **political influence**. Now some countries tax wealth7 in part as one way to help political equality.  Emigrate Ely Flower Bed n Panels sm  **Move to a more democratic place.**  Find places that use the process and policies you want. That may be easier where the technology, culture and laws facilitate freedom through **local self-reliance**.5  It often takes an **assertive will** to guide a community. But an authoritarian greed for power hurts other people.6 How can voting tools restrain that greed?r  *RCV rivals often act nicer, page 12. Swing-voting members can moderate, page 52. Sabbatical terms, citizen assemblies and referendums can spread power, page 34. So can Fair Rep, page 49 and Fair Share Voting, page 22.*  57 |
| Complementing Consensus  Groups that seek consensus on basic agreements may vote on other issues, such as choosing a minor **detail** like a paint color or funding a few optional **projects**.  **Fair Share Voting gives fair shares of power.** Inclusive yet fast, it won't let one person block action. Cooperative, not consensual or adversarial, it is less about blocking rivals, more about attracting allies. Its ballot guides a voter to limit and prioritize budgets. 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 that involve our basic agreements. So 41%, or even one voter, may 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. (Unlike power tools, nice voting tools are free and easy.) The power tools speed cutting through piles of boards or issues and cutting through a hardened board or issue. But high-touch tools help us appreciate our options and develop insights.2 So most of us use both kinds of tools.  56 |  | Plurality Election  Here we see three rivals up for election. Each voter prefers the one with the closest political position. So the voters on the left vote 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. Strong mandates are a goal of accurate democracy.  By plurality rule, the one with the most votes wins.    K is nearest four voters. M is nearest three.  L is nearest two.  *No. K. M.* 9 |
| Runoff Election  Only the top two from plurality advance to a runoff,  because we eliminate the other candidates all at once. Who wins this runoff? K, M  The two (teal) who had voted for L now vote for M. Do ballots that change count more 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.  10 *M wins by 5 to 4. No, each is 1 vote. Yes. Yes.* |  | IV. Classes to Countries  Consensus and Voting  Group decision-making has two linked processes. Its **discussion** **process** may have an agenda, facilitator, and proposals, plus questions and changes on each proposal. Its **decision** **process** asks the members which proposals have enough support to be winners.1  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 discuss and decide *all* closely related options together.  Discussing an issue well often resolves most parts, with mandates up to 100%. Yet we may want to decide some parts with the best voting rules. Why?  Why Take a Vote  The best rules *strengthen* some reasons for voting:  Choice ballots let us **speed up meetings**. page 31  Secret ballots **reduce social pressure** and coercion.  A well-designed ballot and tally **promote equality**: Even busy or unassertive people can cast full votes.  The best rules *weaken* some reasons to avoid voting:  A **Condorcet Tally** is less divisive. pages 12, 43  It rewards blending compatible ideas. pages 29, 54  So more members help implement a decision.  55 |
| **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. She wins a very different majority over each rival here. To do that, Al's political positions must be *central* and have *widespread support.* page 29    In contrast, STV requires the most intense support, first-rank votes, to avoid early elimination. ● page 46 IRV does too, with a high finish line of 50% + one vote.  54 |  | Politics in Two Issue Dimensions  A voting rule keeps its character when the concerns of voters cover more issues.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.  “Please step forward for more regulation of \_\_\_. Please step back if you want less regulation.  Take more steps for more change.”  The chapter on sim games and research will show more tallies with two and even three issue dimensions.  Seventeen voters take positions on two issues:  more or less regulation 🡙 and taxes for services 🡘    Kay wins a plurality. Em wins a runoff.  11 |
| The goal of **Instant Runoff Voting** is this:  A majority winner, from a single election.  Voting is easy. Rank your favorite as first choice. Rank backup choices: second, third, etc. if you want to. Your civic duty to vote is done.  Now your vote counts for your top-rank 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)  A majority winner from one election, so no winners with weak mandates and **no costly runoff** elections.  Higher voter turnout can create a stronger mandate. It often falls for runoffs2 and it’s low for primaries.  Less divisive campaigns because many candidates act nicer to get backup votes from a rival’s supporters.3  No hurting your first choice by ranking a backup, as it does not count unless your first choice has lost.  No lesser-of-two-evils choice because you can mark your true first choice without fear of wasting your vote.  No **split-vote** worries for a faction as votes for its least popular candidate move to each voter's backup.  12 It's often called Ranked Choice Voting, RCV; see p 65. |  | **Well Centered and Balanced**  Only the Ensemble council has  the breadth and balance of Fair Representation  with the centering of *Condorcet*.  **File Edit Window Organize Fund  Campaign**  Chart Cropped  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 🡪  53 |
| **Compare Three Councils**  Bunting1RB1. An Ensemble Rule is the best way to represent the center and all sides, as shown on page 6. In the map on the next page, Condorcet elects **Al** and then STV elects **Bev**, **Di**, **Fred** and **Joe**. Each winner’s name is in **bold**.  Dot2cList 2. The *Condorcet Series* elects the five closest to the central voter: *Al, Bev, GG*, *Joe* and *Fred*. There is no rep from the lower right, so the council cannot balance around the central voter. Each name is in *italic.*  CMN96164Dot3c 3. The STV reps? Bev, Di, Fred, GG and Joe. Each name is underlined. STV eliminated Al***!***  CFY96167  CFN96168b  CMY96176b  **Notice Two Surprises**  Bunting1RB1. Perhaps it's surprising that broad Fair Rep helps a *central* *Condorcet* winner own a council's **swing vote**. It shows that political diversity can be a source of balance and moderation as well as perspective.  Bunting1RB2. *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.  52 |  | **Instant Runoff Voting** **Patterns**  Running for president in South Korean, 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  IRV would drop the candidate with the fewest votes. Each of those would then count for its voter’s backup, likely to be a candidate who is similar but more popular.    1 2 3 4  **From five factions to one majority.** 1) **Violet** loses, so 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: London, Minneapolis, San Francisco and Maine have adopted it. Students use it at Duke, Harvard, Stanford, Rice, Tufts, MIT, Cal Tech, Carlton, Clark, Hendrix, Reed, Vassar, The Universities of: CA, IL, MD, MN, OK, VA, WA, …  IRV lets you vote for the candidate you really like. And even if that option loses, your vote isn't wasted;  it goes to your next choice.  13 |
| Electing a Council  *Three* Single-Member Districts  A class of 27 wants to elect a planning committee. Someone says, “Elect a rep from each seminar group.”  **5 B** voters elect her in this top group as **J** has only **4**.  **5 B** PV_bbBbb_jJjj **~~4 J~~**  votes elect a rep  votes **wasted** on a loser  **5 C**PV_cCccc_kkKk **~~4 K~~**  **wasted**  **~~1 D~~** PV_d_mmMmmmmm **8 M**  total **wasted** votes  1 + 11  3  surplus votes **, wasted**  A minority with 11 voters gets majority power, with 2 reps.   But if it were spread out evenly, it would get none.  14 |  | **Balancing Projects**  FS Map Shelf_q6_c4  Change the sim to vary the item costs and group sizes, and then see if each group wins its share. Spread voters evenly, like above, or crowd some together. Notice, any ad hoc group may **focus** or **spread out** their spending.  51 |
| **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.  They spend money, labor hours or any resource, for projects or the discretionary parts of ongoing budgets.  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 this 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 that features 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 may be able to fund them all. Did that happen here?  50 *$60, $60, $60, $60.* *Yes* |  | ***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 small seminar to a 1/4 of the whole class plus one.” So 3 reps need 3/4 of the votes. Wasting fewer votes gives the council a **stronger** mandate.  PV_cbBbb_jJkk  **🞦**  PV_cCccc_kkKk  **🞦**  PV_c_mmMmmmmk  total **wasted** votes  4 + 2  **=** **7 C** **~~4 B~~** **7 M** **~~2 J~~** **7 K**  Now a majority gets 2 reps and a minority gets 1.  Many wasted votes may expose a gerrymander.  15 |
| The principle of **Fair Representation** is:  **Majority rule by representing the groups in proportion to their votes.**  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** about three times more often2 so **Accurate** **majorities** win—also due to real choices, more turnout, effective votes, and equal votes per rep so  **Policies match** public opinion better.3  16 This is often called Proportional Representation or PR. |  | **A Diverse and Balanced Council**  10STVd10 11STVd11  **X**  This pattern of voters makes their choices easy to see. SimElection™ also created uniform, random, custom and normal bell-curve patterns for research and games. Realistic patterns are essential for realistic research.  In 13, the box holds half the voters and all but one rep. Does STV tend to favor and elect fringe candidates? What percentage of votes is needed to elect five reps? Are the reps diverse? Balanced fairly? Well centered?  12STVd12 13STVd13  **X**  *No. Over 83%. Yes. Yes. Yes.* 49 |
| **Votes Transfer, Elect Reps**  6)STVd6 7)STVd7  X  Pyramid AIn 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 the reps are diverse. More issues and positions get represented in campaigns  and debates, then in policies and budgets—all in **3D**!  8)STVd8 9)STVd9  **X**  48 |  | **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 and moderate policies.5  D_Equals  **✓** 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.6  17 |
| **Why Elect Women**  Does Fair Representation elect more women?  **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 three times more women.  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.6 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 some parties decide that job experience was not as important as **gender balance**. So they dropped some experienced men to make more room for women on the party’s list. And they won. Now they are incumbents with experience, power and allies.7  18 |  | **The Weakest Lose, One at a Time**  2)STVd2 3)STVd3  **X**  **X**  In chart 2, the first loser gets an X. Her voters change color as each **transfers** to his next choice, a close rival. So the nearest fields of color grow. ● ◼ ●  In 1, the gray box holds half the voters. The candidates outside it lead their close rivals on the first ballot count. But in 2 and 3, as weak candidates lose, most ballots transfer to **moderates** and centrists inside that box.  4)STVd4 5)STVd5  **X**  **X**  47 |
| III. SimElection Charts  **Watch Full Rep Balancing a Council**  SimElection™ made these charts of an **STV** tally. The small shapes are voters; the big ones are candidates. Each voter has the same color and shape as his current top choice, the closest remaining candidate.1  1) STVd1  Sim players position their candidates to get votes. 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?  46 ⬥ 3.7% |  | **Voting Rules and Policy Results**  A woman in a multi-winner race is not so much running against a man or an incumbent. She is more often seen as **running for her issues**.  SMDs elect reps with a wide range of vote totals. So a majority of reps might *not* represent most voters. Fair Rep requires more equal votes per rep (page 15). So each majority of reps *does* stand for most voters. It leads to policies **matching public opinion** better.3  *~~less: wasted votes,   gerrymandered districts,   monopoly politics,  dubious democracy~~*  **Consequences**: Legislatures with fewer women tend to give less attention to health care, childcare, education, and other social needs.8 The resulting groups of people with poor education and health hurt the whole society.  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 coming from a poor voting rule.  The countries with the best voting rules have 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.  19 |
| Setting Budgets  **Fair Shares to Buy Shared Goods**  Electing reps is the most obvious use of voting rules. Rules to set policies and budgets are also important. These votes 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 can gain by Fair Share Voting*    **$** $ $ $ Policy $ $ $ $ **$**  All big groups have a right to allocate some funds.  20 |  | 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.4  Which dessert 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 36.)    **It’s easy to host a workshop** in a class or a club.5 In an hour, 20 voters can review plurality, try IRV, then try **STV** with colors as pictured or **FSV** with treats.  The primer and workshop webpages say a bit more. A teacher's page has handouts, ballots and voting cards. https://AccurateDemocracy.com/a\_teach.htm  Hands-on games and shared treats create long-lasting memories of how each tool *works*. National statistics and realistic simulations reveal each tool’s *effects*. 45 |
| Condorcet Tally Centers a Policy  For a Condorcet tally, the winner must top all rivals, one-against-one. Two games show how it works.  A_In4c1)Flag C stands at our center, by the median voter. Three flags surround C, about 2m or yards from it.  A_In4c We ask: “Are you closer to flag A than flag B? If so, please raise a hand.” Then A against C, etc. We put each total in the Condorcet table below.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **against** | **A** | **B** | **C** | **D** | | **for A** | — | 2 | 4 | 4 | | **for B** | **7** | — | 3 | 4 | | **for C** | **5** | **6** | — | **5** | | **for D** | **5** | **5** | 4 | — |   **Nine voters finding C tops all rivals.**  A_In4c2)Flag C has a short Red ribbon and a long Blue one.  A_In4c If the Red ribbon gets to you, the Red policy gets your vote with its narrow appeal.  A_In4c 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?  44 *Usually: Blue. Center. Yes. Yes. No. Balanced.* |  | Patterns of Unfair Spending  **Participatory Budgeting**: PB lets neighbors research,  discuss and vote how to spend part of a city's budget. This is a big step up for democracy. In South America, it spread from one city in 1989 to several hundred today. The World Bank reports that PB may reduce corruption and it tends to raise a city’s health and education.1  A top Chicago alderman first gave his discretionary fund to PB in 2010. But a plurality rule made the votes and **voters unequal**. A vote for a park was worth $501. But if given to fund bike racks, it was worth only $31. That's too unfair. Even worse, more than half the votes were wasted on losers.2    **A costly winner makes many**  **lose.**  A bad election rule gets worse when setting budgets. 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.3  21 |
| The principle of **Fair Share Voting** is:  **Spending power for all,  in proportion to their votes.**  That is, 60% of the voters spend 60% of the money,    not all of it. A project needs grants offered by *many*   voters to prove it's a **common good** worth group funds.   So a voter’s grant is a small share of a project’s price.  Voting is easy. Simply rank your choices, as in IRV. Your civic duty to vote is done.  Then your ballot offers a grant to each of your top choices—as many as it can afford. A tally of all the ballots drops the project with the fewest offers. This repeats 'til all projects still in the tally are fully funded.4  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 And the set of winners gets **stronger support** because the ballots leave **few wasted votes**.  22 |  | Ranked Choice Ballots  A simple tally board can serve about thirty voters. Big groups use paper ballots, or screens and printouts, then tally on computer. Risk-limiting audits need well- protected paper ballots to catch frauds and errors.2   **Yes-or-no ballots** badly oversimplify most issues. They often highlight just two factions: “us versus them.” They tend to **polarize** and harden conflicts.  Bunting1RBO **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.3  chocolate-cheesecake-cut princess-love-boat-dream-rich-chocolate-mousse-on-brownie-freephotooftheday-cut  **Party Menu** Fill only one “O” on each line.  Best **Ranks** Worst  **Desserts 1**st **2**nd **3**rd **4**th **5**th **6**th  **1 Fruit & Nut Platter** OOOOO  **12 Chocolate Brownies** OOOOOO  **12 Choc. Chip Muffins** OOOOOO  **4 Choc. Fudge FroYos**  OOOOOO  **1 Choc. Cheesecake** OOOOOO  **6 Choc. Mousse Hearts**  OOOOOO  All are extra large orders for group discounts.43 |
| **Fair Shares Set Budget Levels**  Each budget level needs enough cards to pay its cost. So a $4 bottle of OJ needs its voters to fill one column, and the $8 size needs them to fill one more column.  Voters who want *only* the $8 size may fill that column first. But if the $4 column loses, so does the $8.  One at a time, the weakest levels lose and voters **move** their cards to help treats still on the table.  1. Should we let each member fund private items?  2. Should a member who pays more taxes or dues   get more power to spend the group's money?  choc-fudge-brownie-froyo-detail 3. Could ranking lower choices hurt your first choice?  2683300-114927-dried-fruits-and-nuts-on-a-white-background_zps88bb3e07-sandiegocitd  **A trick with treats** is to split-up the biggest group so they lose by plurality rule. If votes can’t transfer, these chocolates all lose, or at least show many wasted votes. The healthy treat wins*!* cashews*!* apricots*!* pineapple*!*  We can vote for a party menu, a dance playlist, a ... Caution: long ballots lead some voters to give up. Smart ballot design cuts voter errors and exhaustion.1  42 *No. No; maybe for gifts or investments. Optional.* |  | **Fair Share Voting Works This Way**  In a citywide vote, each neighborhood or interest group funds a few school, park or road improvements. The city's taxes then pay for the projects as the School, Park and Road Departments manage the contracts.  If a majority spends all the money, the last thing they buy adds little to their **happiness**; it is a low priority. But that money could buy a high priority for another big interest group; it could make them happier.  Share Blur USM 2 12 15 600 **✓** **✓**  **✓** **✓**  **✓** Fair shares spread the joy and opportunities.  In economic terms: The *social utility* of the money and winners tends to rise if we each allocate a share. Fair share, 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.  Each big group controls its share of the resources.  This reduces their means and motives for fighting and  dominating the other groups.  23 |
| Adjusting Budgets, optional  You may write-in and rank budget levels for an item. Your ballot may pay only one share of a budget level. Often, it can afford to help most of your favorite 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.6  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 large base of support.  A_Budgets  **A large base of support must agree,  this item is a high priority for our money.**  A group with 100 members set our **base** number at 25 votes.7 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 I paid only 2% of the cost. Was there any surplus? Did I waste much power by voting for this sure winner?  24 *None. None. Not much.* |  | **Fair Shares Buy Shared Goods**  For our tabletop tally of **Fair Share Voting** (FSV)  We each get four 50¢ voting cards to buy treats.  We decided an item needs modest support from eight of us to prove it is a *shared*good worth shared funding. So the **finish line** marks the height of eight cards, and  You may put only one card in a column.  A costly item must fill several columns. A column  here holds $4, so an $8 item must fill two columns.  (Version B gives two 50¢, plus a tall $1 card. The tall cards let four eager voters fund one low-cost item.)  p_clouds  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 card from a loser to your next choice.  We stop when all items still on the table are paid up.  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. 41 |
| **Instant Runoff Quiz**  1. How can your group use this voting rule?  2. A card we move counts just like others: True, False  3. Ranking a backup choice can’t hurt your first: 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.*  **🡤** **🡥**  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.  Move the cards until three candidates win*!*  Users include Australian and Irish voters, Cambridge, Harvard, MIT, Oberlin, Oxford, Princeton, UC Berkeley, UC Davis, UCSB, Vassar, and the Church of England. 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 must three STV reps win?  40 *Page 16. Yes. 75% + 3 votes.* |  | More Merits of Fair Share Voting  After discussion, one **quick** poll can set many budgets. It reduces **agenda** effects such as leaving no money for the last items or going into debt for them.  It lets sub-groups 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're scattered.  **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.  It does not give political minorities too much power: A **majority** spends most of any fair share fund—and sets the policies that direct, or close, each department.  ***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 programs. This makes program management more efficient.  A voter can see grants by his rep to each program, tax cut or debt reduction and hold her **accountable**.  25 |
| 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 to 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 show two kinds of ballots. A workshop page shows a Condorcet tally table. And the sim maps show Condorcet voters with more issue dimensions.  *People often struggle to find  a group’s center of opinion*    K is nearest four voters. L is nearest five voters.  26 |  | |  |  |  | | --- | --- | --- | | **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 |   39 |
| |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **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 candidate reaches the finish line!  Rule_Board_500  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.   |  |  |  | | --- | --- | --- | | **Anna** **Eliminated 1st** |  | **Bianca** **Dropped 2nd** | |  |  | B B | |  |  |  | | J J |  | G G |   38 | |  | **Condorcet** Test Number Three  Candidate L wins her next one-on-one test also. She even got one surplus vote more than she needed.  She has won majorities against each of her rivals. So she is the “**Condorcet winner**”.  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 elect a **moderator** to a council. page 6  But is it likely to elect diverse reps? Yes, No  It can set the base of support for **FSV**. page 24  But is it likely to spread spending fairly? Yes, No  **1**    L has six votes. M has three.  *Yes. Yes. L. No. No.* 27 |
| 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 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.1)  **Why Use Condorcet Tallies** (CT)  **No split-vote** worries as duplicates don't help or hurt each other.1 The ad hoc majority ranks *all* of their favorites over other motions. Their top one wins.  **Ranked choice ballots** poll related motions all at once, **simplify** the old rules of order and **speed up** voting. They reduce **agenda** effects, from simple errors to free-rider and wrecking amendments. page 65  **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 |  | II. Workshop Games  Rule_Board_500  **Get your hands on 4 great voting rules.**  **See how fair-share tallies organize voters.**  **Vote fast on budgets, reps, or policies.**  Imag0019 h sized A tally board has **Bunting1RB A card for each voter,**  **Bunting1RB A column for each option,**  **Bunting1RB** **A finish line for the favorites.** |
| Benefits to Voters and Reps  **Accurate Elections** pages  Make voting **easy**, free of worry over strategies,8 12 and more often **effective**. 15, 35  Give us real choices of candidates who might win, by electing fair shares of reps from all big groups. 14  This supports a wide range of candidates, 16 **debate** of issues and turnout of voters. 61  Reduce **wasted votes** to end weak mandates. 10, 9, 14 Cut the power of spoilers and **gerrymanders**. 12, 30  Reduce **attack ads** and anger among voters. 12 Cut the **payoffs** to big campaign sponsors. 30    **Accurate Legislation** pages  Give fair representation to all big groups, so 14 the council enacts laws for real majorities.  Elect a **central chair** whose **swing vote** pulls 29 reps from many factions to moderate policies. 6, 52  Give members Fair Share Voting for optional 20 budgets. Let voters see each rep's spending. 25  Cut agenda effects; detach free rider and wrecking 28 amendments. Speed-rank all options at once. 31  This primer told the benefits of the best voting rules. Now voting games will show the simple steps in a tally.  36 |  | **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  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.  pw Blur USM 600  “Our center  is near me.”  “I think it's  right here.”  “I *am* the  center*!"*  **✓** 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**. As shown on page 54, they compete for support from voters left, right and center. So they have strong incentives to balance a council's process and policies.  **IRV** has slightly different incentives, effects, and uses.  See the captions on pages 13 and 54.3  29 |
| Resist Rigged Votes  By plurality rule, candidate M lost on page 9. Now let's say her party **gerrymanders** the borders of her election district. They add in voters (pictured in purple) who tend to like her party and exclude some who don’t. In this **safe seat**, bluish voters can nominate and elect a less central candidate who could **polarize** the council.4  But did this gerrymander change the **CT** winner, L?    3 rank K>L>M. 2 rank L>M>K. 4 rank M>L>K.  **Bribes** can make some reps switch sides on a policy. **CT** rules can resist this some: Bribing one rep moves a council's middle, and its winning policy, only a little. This can reduce some payoffs to big campaign sponsors.  The old **plurality** rules are often easy to manipulate. Borda and Score Voting are also very susceptible and make many voters worry about voting tactics and risks. The **IRV** and **Condorcet+IRV** rules have the lowest manipulation risks. So you can simply and safely vote your sincere choices with no worry about tactics.1, 2  30  *No change; L still wins the Condorcet Tally.* | |  | | 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.  A win strengthens reps and policies for many years.  Issue  Election  Reform  2018 2020 2022 2024  Campaign  **costs in green**, results in yellow.  Strengthen Votes and Mandates  Good voting rules help the voters organize. They 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  a Budget 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 new strength to balance the powers based on military, money, or media. Better rules give stronger mandates and lead toward widely-shared goals.  35 |
| **Voting Helps Related Reforms**  **A news firm** might inform us better if it is controlled by voting subscribers more than investors or advertisers. VoterMedia.org has low-cost methods for any group: Use **FSV** to reward to the best local-news bloggers.  **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.3 Such nameless gifts or **FSV** may cut corrupt paybacks. $ponsors aim their $ to buy the few swing-seat SMDs. That's harder for them under **IRV** or **Fair Rep**.4  *Voters, $ponsors, and Writers are in* ***Ecosystem******Feedback*** *Loops to Reps.*  *“It’s very hard to see us fixing the climate until we fix our democracy.” —Dr. James Hansen5*  **Ballot access** laws make it hard for small parties to get on the ballot, because big parties fear “spoilers”. Good voting rules such as **IRV** can calm that fear.  **Sabbatical terms** make the current rep run against a former rep returning from rest, reflection, and research. It’s a choice between two winners with actual records! Good rules do not hurt a party with extra nominees.  **Citizens’ assemblies**6 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.  **Good** **schools**, taxes and voting may go together.7  34 |  | Unstack the 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 may have to beat each later one. An early decision may preclude some later proposals. So “stacking the agenda” can help or hurt some options.  Other meetings discuss the rival options all at once; yet many members don't express their **backup choices**. So similar options split supporters and hurt each other. Then a minority pushing one option may 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.  **Rigged votes** often build bad policy and animosity. To reduce these risks, let the voters rank more options.5  Bob's Ballot *New Tool*  **Rank Option**    2  Original Bill, the main motion    1  Bill with Amendment 1 (a free-rider?)    7  Bill with Amend. 2 (a wrecking amend.?)    6  Bill with Amendments 1 and 2    3  Postpone to a Definite Time   1  days    4  Refer the Bill to a Committee    5  No Change in the status quo  31 | |
| Costs and Benefits  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?  A_oldsteam A_mercedes  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.  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 amend it with their own “special rules of order” to make their decisions more popular, stable and quick.1  32 |  | Tools Between People  Voting rules affect our laws—and our views on life. By making us give either fair shares or winner take all, rules shape how we treat each other and see our world. The official rules model the goals for shared decisions. They teach some patterns often followed by coworkers, friends and neighbors.  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.  Earthball Rect_2  Politics are more **principled** and peaceful when all the rules help us find fair shares and central majorities. This may reduce political fears within our community, helping us to be more accepting, 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.2 Voting is an exemplary tool between people.  33 |

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