Accurate Democracy 4
Great Tools


## Summary

The best voting rules are fast, easy and fair. They help voters organize. They expand the base of power, the number of voters supporting:
类 a Chairperson from a plurality to a majority;

* a Council from a plurality to over three quarters;

Kix a Budget from a few power blocs to the whole;
粮 a Policy from a one-sided to an over-all majority.
These rules give voters more effective votes. So they give stronger mandates to the winners.

## Accurate Democracy

- Tragedies, Eras and Progress of Democracy .................... 2
- Instant Runoff Voting elects a strong Executive ............... 6
\& Full Representation fills a balanced Council .................. 12
Kzair-share Spending funds diverse Projects .. New ....... 16
糍 Pairwise tally enacts a popular central Policy ................ 22
© Bribes, Agendas and Expectations ................................. 26
© Goals, Conclusions and Action ...................................... 29
. Workshop Tallies and Full-Choice Ballots ................ Insert


## Four Tools for Elections and Meetings

These tools offer real hope; we can stop the tragedies caused by old methods often used in nations and towns, co-ops and corporate boards.

This primer shows the need for better voting rules. The workshop shows the simple steps in each tally. The Web site has the footnotes - and free software!
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## Tragedies of Democracy

The Northwest has been ripped apart for 30 years as forestry laws are reversed again and again. Hasty logging in times of weak regulation lays waste to resources.
Sudden limits on logging bankrupt workers and small businesses. A political pendulum swings; it cuts down forests and species, families and towns.
Old ways of adding up votes fail to represent large groups in many places. North Carolina had enough black voters to fill up two election districts. But they were a minority spread over 8 districts. So they won no federal representation; for 100 years they were invisible as voters. 1a

## What's Wrong?

Our defective voting rules come from the failure to see there are different jobs for voting; and these need different types of voting.

We all know how to decide the simplest sort of issue: A question with only two answers is voted 'yes' or 'no'. For such an issue, the yes and no votes are enough.

But as soon as three candidates run for a single office, the situation becomes more complicated. Then a yes-no vote is no longer suitable.

## In the 1800s

Winner-Take-All Districts = Off-Center Councils


Typical Council Elected By Plurality Rule

## Eras, Voting Rules and Typical Councils

Some English-speaking nations still count votes by England's old plurality rule. It elects only one rep from each district; and winning it does not require a majority. It merely elects whoever gets the most "yes" votes.
Where only the largest party in a district wins a rep, only two big parties thrive. So the voters get only two real candidates; they're given very little choice.

A council majority sets policies (blue reps above). A small change in one district's popular vote can shift all power, making policies swerve from side to side. Plurality politics is a war of winner take all.

## In the 1900s

## Fair-Share Elections = One-Sided Majorities



Typical Council Elected By Full Representation

Full Representation was invented in the late 1800s to end some problems caused by plurality rule. Most democracies have adopted "Full Rep." It elects several people to represent each large district. It gives a group that earns, say $10 \%$ of the votes, $10 \%$ of the seats. Thus Full Rep delivers fair shares of representation.

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 (blue and black) forms the ruling majority to enact policies skewed to one side.

## In the 2000s

## Ensemble Councils $=$ Balanced Majorities



Ensemble Elected By Central And Proportional Rules

New ensemble rules will elect most reps by Full Representation, plus a few by a central rule ( C above). Later pages show how a central rule picks winners with wide appeal and views near the middle of the voters. Winners are thus near the middle of a Full Rep council. So they are a council's powerful swing votes.

Most voters in that wide base of support don't want averaged or centrist policies. They want policies to combine the best suggestions from all groups.

## Democratic Progress

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

A compromise policy tries to negotiate rival plans. But contrary plans forced together often work poorly. And so does the average between rival plans.

A balanced policy unites 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 happiness to the greatest number of people. The success of policies is measured in a typical voter's education and income, freedom and safety, health and leisure.

Old tally rules cause one-sided results and tragedies. An ensemble is inclusive; yet it is strongly centered and decisive. So it can make the organization popular, yet stable and quick. The best rules for spending and policies can follow this pattern - as you will see.

## 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 - as though we asked them, "If you want high-quality government services and taxes like Norway or Sweden, please stand here. Like Canada? Stand here please. Like the USA? Stand here. Stand over there for Mexico's low taxes and government."

## Nine voters spread out along an issue.



High taxes, great services

Low taxes, poor services

## Plurality Election

Three candidates stand for office. A voter likes the one whose political position is nearest. So voters on the left favor 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 win a majority?
Yes, No
Who wins the plurality or largest share?
K, L, M
Who wins the second-largest share of votes?
K, L, M
K gets only a weak mandate of authority from voters.

## Plurality, the one with the most votes wins.



K is nearest four voters.
$M$ is nearest three.
$L$ is nearest two.

## Runoff Election

Who wins a runoff between the top two? K, M The two (teal) who had voted for $L$ now vote for M . Do votes that move count more than others?

This winner has the power of a majority mandate.
Runoffs practically ask, "Which side is stronger?" (Later, these voters will use a rule that asks, "Where is our center?" And a bigger group will use a rule that asks, "Which trio best represents all of us?")

## Runoff, the top two compete one against one.



Candidate M wins the runoff. 8 b

## Politics in Two Issue Dimensions

Voting rules work the same even when the opinions of voters do not simply line up from left to right.

Here a group spreads out on two issue dimensions: left to right plus up and down. On the steps of their school, we asked them a second question. It was about an issue apart from taxes and services.
"Please take one step up if you want more regulation. Take two steps down if you want much less regulation. Take more steps for more change."

## Seventeen voters spread out along two issues.



Kay wins a plurality.
Em wins a runoff

## The goal of IRV is this: A majority winner, from a single election.

How does it work? You rank your favorite candidates as your first choice, second choice, third and so on. Then your ballot goes to your first-rank candidate.

If no candidate gets a majority, the one with the fewest ballots loses. Then there is another round of counting. Your ballot stays with your favorite if she advances. It moves to your next choice if your favorite has lost. This repeats until one candidate gets a majority.

## The Benefits of Instant Runoff Voting Are

- A majority winner from 1 election, so no winners-without-mandates and no costly runoff elections.
- Less negative campaigning, as a candidate must ask a rival's supporters for their $2^{\text {nd }}$ choice votes.
- No hurting your first choice by ranking a $2^{\text {nd }}$, as a $2^{\text {nd }}$ does not count unless the $1^{\text {st }}$ choice has lost.
- No lesser-of-two-evils choice, as you can mark your true $1^{\text {st }}$ choice without fear of wasting your vote.
- No spoilers, as votes for minor candidates move to each voter's more popular choices.


## Instant Runoff Voting Patterns

In a South Korean presidential election, two liberals faced the aid to a military dictator. The liberals got a majority of the votes but split their supporters. So the conservative won under a plurality rule. These rules elect whoever gets the most votes; $50 \%$ is not required.

The winner claimed a mandate to continue repressive policies. Years later he was convicted of treason in the tragic killing of pro-democracy demonstrators.

With Instant Runoff Voting, ballots for the weaker liberal could move to elect the stronger one.

## From Five Factions to One Majority.



1) Ms. Violet loses. Her ballots go to each voter's next choice. 2) Ms. Blonde loses. Her ballots move. 3) Ms. Green loses. 4) Ms. Carmine loses.
(Workshop page 1 shows votes moving.)
IRV elects leaders in London, Sidney, San Francisco... Many colleges from Harvard to Stanford use it.

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.

## Single-Winner District Elections

A class of 27 wants to elect a planning committee. Someone says, "Elect a rep from each seminar group." The top group gives Kay 3 votes and Ray 6 votes.



Bluish majorities win in all three sections.
Other voters get no voice on the committee.

## Full Representation Election

A better suggestion says, "Keep the class whole. Change the definition of victory from half of a small seminar to a quarter of the whole class, plus one."

$+$



Now bluish voters win two seats, a majority.
And yellowish voters win the third seat.

## The principle of Full Representation is:

## Majority rule, with representation for political minorities, in proportion to their votes.

That is, $60 \%$ of the vote gets you $60 \%$ of the seats, not all of them. And $10 \%$ of the vote gets you $10 \%$ of the seats, not none of them. These are fair-shares.

## How Does Full Representation Work?

There are three basic ingredients:
If We elect more than one rep from each district.
If You vote for more than one; you vote for a list. Parties offer lists to us, or we each list favorites.

If The more votes a list gets, the more reps it elects.

## Some Benefits of Full Representation

If It gives each major group a fair share of reps. So it often elects more political minorities and women.

If They tend to help policies match public opinion. And often raise the quality of health and education.

F It gives voters real choices, boosting voter turnout.
If A council must earn many more votes ( $3 / 4$ vs. $1 / 2$ ). So Full Rep can strengthen a council's mandate.

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\text { Page } 29 \text { lists more points. }
$$

## Fair-Shares and Moderates

Chicago now elects no Republicans to the State Congress, even though they win up to a third of its votes. But for over a century the city elected reps from both parties. That was because state used a fair rule to elect three reps in each House district. Most districts gave the majority party two reps and the minority party one.

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

New Zealand switched in 1996 from Single-Winner Districts to a blend of SWD and Full Representation. A small, one-winner district exaggerates local issues. Full Rep frees voters from district enclosures. So they can elect some reps with a thin but widespread appeal.

The number of women elected rose from 21 to 35 . The number of native Maoris elected rose from 6 to 15, which is almost proportional to the Maori population. Voters also elected 3 Polynesian reps and 1 Asian rep.

Many people call this Proportional Representation or Proportional Voting. (The workshop shows 1 way.)

## Fair Shares to Buy Public Goods

Electing reps is the most obvious use of voting rules. Rules to set policies and budgets are just as important. They get used much more than election rules.

Full Representation gives out the council seats fairly. In the same way, Fair-share Spending allocates money for optional projects fairly. It is the next logical step.

Democratic rights fulfilled through history:
$\checkmark$ Voting for rich men, poor men, "colored" men, women.
\$ Full representation for large political minorities.
喽 Fair-share spending by big groups of reps.

## Fair Shares to Buy Public Goods



Fair shares give minority voters some power. 16b

## Bad Budget Rules

The old way to set budgets blurs responsibility. Take overspending. Liberals say too much is spent on big weapons; conservatives blame the social services. Every rep can claim, "I didn't spend too much."

Protecting the environment is popular with conservative and liberal voters. Reps don't dare attack it openly. So, to pay off some corporate donors, reps slyly starve agencies that enforce environmental laws. Similar cuts have hit OSHA and auditors of corporate tax returns.

The SuperConducting Super Collider was an effort to build the world's largest cyclotron. It was funded by a majority in Congress for a few years... then dropped. All it left was a "billion-dollar hole in the ground."

We might be more cautious about starting projects if we could not spend other members' shares. And we need the power to finish projects with our own share.

## Patterns of Unfair Spending

Membership groups often shirk competitive elections to avoid conflicts and hurt feelings. But members still compete over money to fund projects.

Often, some members use tricks to capture a lot of the budget. When that injustice is felt,others may grow rebellious, or leave.

They need a rule to make funding fair and accurate.

The US Congress lets a single rep "earmark" funds for pet projects in her district. In 1994, the four thousand earmarks cost us $\$ 23$ billion. Ten years later, the fourteen thousand earmarks cost us $\$ 45$ billion.

Earmarks help some reps give much more money to their districts than most reps do. Each rep votes yes or no to a huge "omnibus" bill. It holds hundreds of earmarks, some good, some bad. The system makes it hard to prove which reps are wasting money.

$x$ Many empty hands

$\checkmark$ Fair shares

Everyone can see a rep's Budget Refill grants.

## Fair-share Spending Patterns

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.

Every neighborhood and interest group controls its share of spending power; no one is shut out. This makes (hidden) empires less profitable.


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 the high-priority favorite of a large minority; making them happier.

In economic terms. The social utility of the money and goods tends to increase if we each allocate a share. Shares spread opportunities and incentives too.
In political terms: Fair shares earn wide respect, as we are each in a minority wanting some project. The budget serves and appeals to more people.

## The principle of Fair-share Spending is this: 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 still needs grants from many voters to prove it is a public good worth public money. So we let a voter fund only a fraction of a project.

How does it work? Like IRV: you rank your choices. Then your money moves to help your top choices. And a tally of all ballots drops the least-funded item. This repeats 'til all still in the race are fully funded.

## Merits of Fair-share Spending on Projects

Kiy After discussion, one poll quickly picks many projects. It reduces agenda effects such as leaving naught for the last items or going into debt for them. It splits the free-rider or poison-pill items from others.
鿬 It lets sub-groups pick projects; it's like federalism but without new layers of taxes and bureaucracy. And it funds big groups both spread out and local.
Kix This does not hand minorities too much power: A majority spends most of the fair-share fund.

## Merits of Fair-share Spending for Agencies

$x_{1}^{x}$ Majorities enact the policies that direct the programs. They may end any program before the voting starts.
 Stop starvation budgets designed to cause failure.
$x_{1}^{x}$ A member can waste only her share of the fund. Voters can see a rep's grantsto each project,tax cut or debt reduction and hold her accountable.
$x_{x}^{x}$ Fair-share voting builds trust in group spending, and may raise support for more of it.

## Setting Budgets

Every "line item" starts with most of its old budget. You may write-in and rank higher budgets for the items. Your ballot can afford to pay your fair shares for your top choices. This is how it gives them votes.

Each budget level of an item needs a quota of votes. It gets a vote when a ballot pays a share of the cost up to that level or higher. cost $/$ quota $=1$ share $=1$ vote

The item with the weakest top level, loses that level. Any money you gave it flows to your highest rank that lacks your vote. This repeats until the top level of each item is fully funded, by winning the quota of votes.

## An older Budget Refill principle was this: Majority rule, within a balance of forces.

So if we all agree, we can alter budgets radically. But if many disagree, they can moderate the changes. Yet a minority cannot slow the budget process.

All departments start at $80 \%$ of their current budgets. A voter may refill only a limited share of each budget. So it takes many voters to refill 1 , and more to raise it. You repeatedly adjust your grants, causing and countering budget changes, until a timer stops the voting.

## Pairwise Test Number Two

The Runoff shown on page 8 was a one-against-one or "Pairwise" contest between candidates M and K . Five voters preferred M over K .

Here is a second Pairwise test with the same voters: Candidate K loses this one-against-one test. Candidate $L$ wins by five votes to four.
(Each person votes once with a full-choice ballot. The back of the workshop booklet shows one style. The inside shows a tally table for Pairwise.)

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

## Pairwise 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 one candidate who best represents all of the voters. She is the Pairwise winner.

Could another person top candidate L? Hint: Is anyone closer to the political center? Who is the Pairwise winner on page 9 ?

Yes, No
Yes, No
K, L, M
Thus Pairwise picks a central chairperson or policy. Is it likely to elect diverse reps?


L has six votes;
M has three.

## The principle of the Pairwise 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 option with the most ballots wins that test. If an option wins all its tests, it wins the election.

## Pairwise Quickly Picks a Balanced Policy．

装 Full－choice ballots rank related motions all at once． They simplify the rules of order，speed up voting，and cut agenda effects，poison and free－rider amendments．

桨Balanced policies avoid erratic or excessive changes． That saves money and builds respect for government． They cut the game－of－chance and hysteria in politics． They reduce the payoff from big campaign gifts．

装 Pairwise can elect a neutral judge or administrator． It can elect moderators to cast the swing votes for a balanced，＂ensemble council．＂（See page four．）

## Pairwise Popularity and Balance

A policy needs good marks from voters all along the political spectrum, because every voter can rank it relative to other policies. So all voters are "obtainable" and valuable. This leads to policies with wide appeal. (A plurality or runoff winner gets no votes from the losing side and doesn't need to please those voters.)

The Pairwise winner is central and popular:
Most centrist and conservative voters prefer it to each liberal policy. At the same time, centrist and liberal voters prefer it over each conservative policy.
All sides can join to beat a narrow centrist policy.

A Chairperson's Balanced Support: Liberal voters rank Kennedy higher than Clinton. So to win a majority over Kennedy, Clinton must outrank him on ballots from centrists and conservatives. (She will not be a conservative's first choice though.)

Conservative voters rank Bush higher than Clinton. So to win a majority over Bush, Clinton must outrank him on ballots from centrists and liberals.
(In this Pairwise election of a moderator, a less controversial candidate might top each of these polarizing politicians.)

## Gerrymander

Candidate M lost the last election by plurality rule. Now let's say her party gerrymanders the borders of her election district. They add neighbors (purple below) who tend to vote for her party, and exclude less favorable voters (the yellow voter missing on the left). The party's nominee is certain to win the new district. Reps will tend to come from the party's activist wing.

The old plurality rule is the easiest to manipulate. But the Pairwise winner, L, doesn't change in this case. And Full Representation also resists gerrymanders.


Now K has three.
$L$ has two. And $M$ has four.

Bribes, big campaign gifts, and jobs for friends can lead some reps to switch sides on a policy. Pairwise resists corruption well. Bribing a few reps moves the council's middle, and its winning policy, only a little. Fair shares of seats and spending reduce the payoffs to those who bribe the biggest party. It can no longer seize more than its share of reps or money. Fair-shares of visible grants also restrain corruption.
(Workshop page 7 shows a Pairwise tally.)

## Issues Related to Voting Rules

$\checkmark$ Ballot access laws make it hard for minor parties to get their candidates on the ballot. The two big parties make those laws largely because they fear spoiler candidates. Better voting rules put that fear to rest..
$\checkmark$ News firms might inform us better if they were ruled by the subscribers' votes.
$\checkmark$ Public campaign funding, as in Maine and Arizona, lets reps give less time to rich donors and more to common voters. (The Ackerman-Ayres plan lets each voter give anonymous vouchers.)
$\checkmark$ Optical-scan ballots and open-source software check fraud by election workers and corporations. "Optscan" voting systems can work well with IRV.
$\checkmark$ Sabbatical terms make elections more competitive than any other reform. The incumbent's record is compared with the former winner coming back from sabbatical. (IRV \& Pairwise avoid a party spilt.)

Initiative voters get more choices and power with fullchoice ballots and Pairwise tallies. They should set the rules for politicians. But minority rights to voting, representation and funding need constitutional protection from the majority of the day.

## Unstack the Agenda

Meetings often make interlocking decisions one at a time through yes-no voting, with or without explicit rules of order, agendas, and votes. Proposals decided early can shut out later options.

Or participants may talk about all options at once but never clearly tell (vote) their second and third choices. So a few people pushing a single idea can appear to be the strongest group. And one person with a balanced idea but no avid supporters might drop it.

The best rules avoid all those problems by ranking the rival motions (or budgets) on the same ballot.

## In Groups of Any Size

The anonymity of secret ballots protects dissidents.
$\checkmark$ A good tally assures equality; even busy or shy people can cast a full vote.
$\checkmark$ Pondering a ballot or survey educates members about setting budgets and priorities.
$\checkmark$ Most important: some issues allow decisions that are not adversarial or consensual: Multi-winner funding gives everyone their fair share of power without letting anyone block action.

## Exit or Power

In the end, a group decision cannot fully satisfy two people with strongly opposing values about the issue. Leaving, or voting with your feet, is the surest way to get to the policies you want. When you can't do that, avoid willful authoritarians; build democratic institutions with open-minded egalitarians.

Democracy improves in eras like The Enlightenment. Many people restrained blind faith, obedience and ideology. They worked to increase knowledge by using rational, skeptical and empirical thinking.

## Tools Between People

Voting rules affect our laws - and our views on life. By making us practice winner-take-all or sharing, rules change the way we treat each other and see the world.

Expectations of voting can rise with better rules. They work less as tools to fight culture wars, more as tools to support the freedom of diverse communities.

Happiness is strongly linked to good relationships. To raise happiness, improve tools between people.

## Voting Reforms Open Doors

These reforms open doors for popular changes.e.g. Data shows Full Rep elects more women than plurality. And this change leads to better health and education.

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. If you win control, you can help all issues for two years.

Reform campaigns cost no more than elections. A win affects the whole council for many years. Your work keeps giving to a school, club or town.

## 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 group can test drive a new rule in a survey. Or as a "committee of the whole" they may vote, tally and report its result to enact by the usual rules.

## Benefits to Voters, Reps and Groups

## Elections

F Give voters real choices of candidates who can win, by electing fair shares of reps from all big groups.
\& That supports a wide range of candidates, debate of issues and turnout of voters.
\& Reduce wasted votes and so end weak mandates. Cut the influence of spoilers and gerrymanders.
\& Reduce attack ads and social schisms. Cut the payoffs to the big campaign donors.

## Legislation

F Give fair representation to all major groups, so the council will enact laws with real majorities.
辳 Elect a central chair with wide appeal; she'll be a swing vote between the reps from interest groups.
粮 Cut the chances for agenda scams. Speed-rank all options at once to detach poison pills and free riders.
Kix Give all reps equal funds for projects and agencies. And make each rep's spending visible to the voters.

Online pages list more benefits of each rule. The workshop shows how they meet those goals.

## Exit or Power

Voting with your feet, by moving to a better place or group, is the surest way to get the policies you want.

That is practical if you have the freedom to relocate and diverse places to choose among. Such diversity is more likely when culture and technology give places economic independence through "local self-reliance".

Even when you can't move to a better company, city or state, you may still avoid willful authoritarians. Build your democratic groups with fair egalitarians.


Move to a place under democratic control.

Democracy grows in eras such as The Enlightenment. Then many people restrained blind faith and dogma. They improved our knowledge of the world through rational, skeptical, empirical thinking.

Better living is a goal of accurate democracy. It is measured in a typical voter's education and income, freedom and safety, health and leisure - on page 60.

## Conclusions

The best voting rules are fast, easy and fair. They help voters organize. They expand the base of power, the number of voters supporting:
将 a Chairperson from a plurality to a majority;

* a Council from a plurality to over three quarters;

Kix a Budget from a few power blocs to the whole;
䊉 a Policy from a one-sided to an over-all majority.
These rules give voters more effective votes. So they give stronger mandates to the winners.

## Actions

## Learn more at AccurateDemocracy.com.

Then build support in your school, club or town with FairVote, The Center for Voting and Democracy.

Steps toward accurate democracy include:
an Organize voters,
\& Represent everyone,
Empower everyone,
粦 Center policies,
with Movable Votes.
with Full Representation.
with Fair-share Spending. with Pairwise winners.
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