

## Conclusions

The best voting rules are fast, easy and fair. They help any group from classroom to nation. The results are well centered and widely popular.

Strengthen the votes supporting a **chairperson, council, policy, or budget.**



## Actions

Learn more at [AccurateDemocracy.com](http://AccurateDemocracy.com).

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

Help make your democracy:

- ✚ Organize voters.    ⚙ Represent everyone.
- ✚ Center policies.    ✚ Empower everyone.

## Tragedies of Democracy

The Northwest has been ripped apart for 30 years by flip-flops in forestry laws. Hasty logging in times of weak regulation lays waste to resources. Sudden limits on logging can 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. In North Carolina, there were 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.

More stories inside . . .

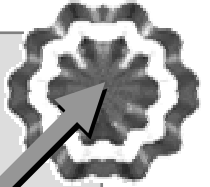
### What's Wrong?

Our faulty voting rules come from a 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 one office, the situation becomes more complicated. Then a yes-no vote is no longer suitable.

# Accurate Democracy



4 tools for elections and meetings

## Accurate Democracy

4 Great Tools for Elections and Meetings

Robert Loring

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Abridged Edition

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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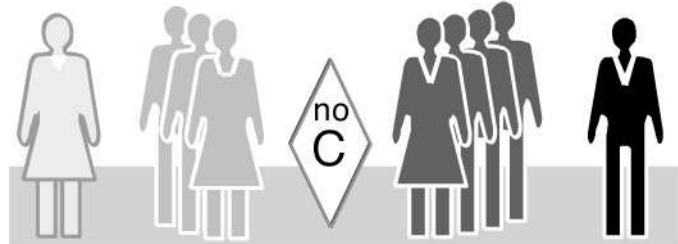
**In the 1800s**  
 Winner-Take-All Districts = Off-Center Councils



\$\$\$ LAWS \$\$\$

Typical Council Elected By Plurality Rule

**In the 1900s**  
 Fair-Share Elections = One-Sided Majorities



\$ \$ \$ LAWS \$ \$ \$

Typical Council Elected By Full Representation

**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 the one who gets the most "yes" votes.

Where only the largest party in a district wins a rep, only two big parties thrive. So voters get only two real candidates; they're given a very limited choice.

A council majority sets policies (dark gray † 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**.

**Full Representation** was invented in the late 1800s, to cut some problems caused by the old 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 (dark gray and black) forms the ruling majority. And they then enact =>

**policies skewed to their side.**

**In the 2000s**  
 Ensemble Councils = Balanced Majorities



\$ \$ \$ LAWS \$ \$ \$

Ensemble Elected By Central And Fair-Share 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 the 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 of rival plans.

A **balanced policy** unites compatible ideas from all sides. This process needs advocates for diverse ideas. But more than that, it needs **powerful moderators**.

A **broad, balanced majority** works to enact broad, balanced policies. These tend to give the most 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.

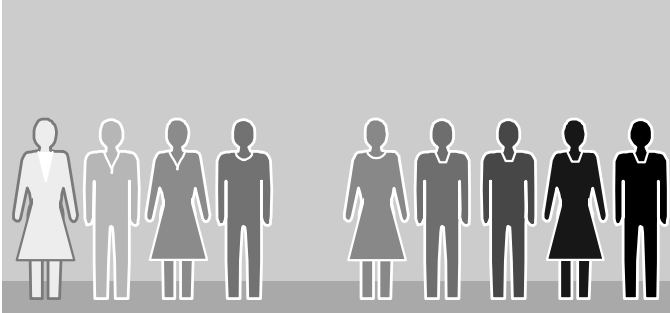
Old tally rules cause one-sided results and tragedies. An ensemble is inclusive; yet it is strongly centered and decisive. So it can make an organization popular, yet stable and quick. The best rules for spending and policies follow this pattern — as you will see.

# 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's like 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 there. Stand over there for Mexico's low taxes and government."

Nine voters spread out along an issue.



High taxes,  
great gov. services  
6

Low taxes,  
bad gov. services

## Plurality Election

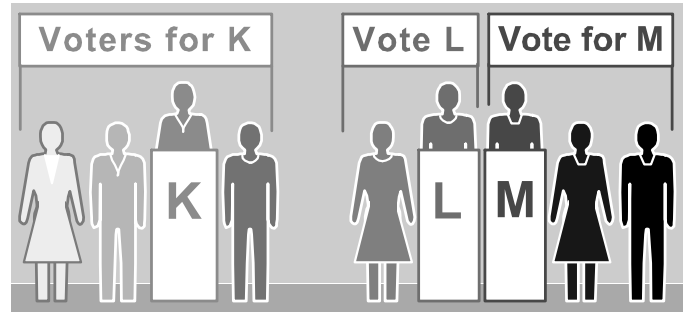
Three candidates stand for office. A voter likes the one whose political position is nearest. So voters on the left like the candidate on the left.

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

A mere plurality gives the winner a weak **mandate**. That is the authority given by voters.

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



K is nearest four voters.

M is nearest three.  
L is nearest two.

## Runoff Election

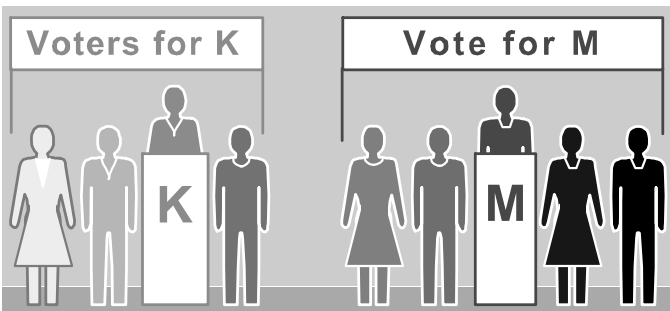
Who wins a runoff between the top two? K, M

The two (gray) who had voted for L now vote for M.  
Do votes that move count more than others? Yes, No

This winner has the power of a majority mandate.  
Only four "**wasted votes**" fail to elect anyone.

Runoffs almost 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**.

## Politics in Two Issue Dimensions

Voting rules work the same even when opinions do not fit neatly along a line 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 a step up if you want more regulation. Please step down if you want less regulation. Take more steps for more change."

Which leaves more wasted votes, plurality or runoff?  
Which gives the winner a stronger mandate?

Seventeen voters spread out along two issues.



Kay wins a plurality. Em wins a runoff.

The goal of **Instant Runoff Voting** 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 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**.

**Benefits of Instant Runoff Voting Include:**

- **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<sup>nd</sup> choice votes.
- **No hurting your first choice** by ranking a 2<sup>nd</sup>, as a 2<sup>nd</sup> does not count unless the 1<sup>st</sup> choice has lost.
- **No lesser-of-two-evils** choice, as you can mark your true 1<sup>st</sup> 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 aide to an army dictator. The liberals got a majority of the votes but split their supporters. So the conservative won by 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 help 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. White loses. Her ballots move.
- 3) Ms. Gray loses.
- 4) Ms. Coal wins.

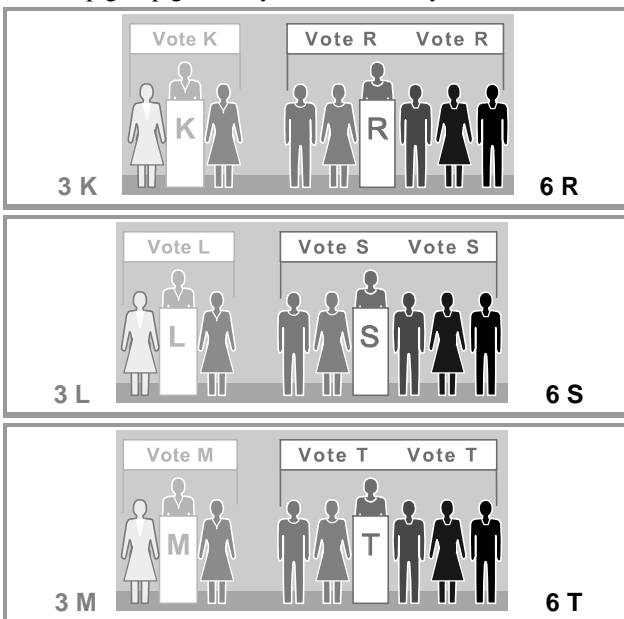
**IRV elects leaders** in more and more cities: London, Melbourne, Minneapolis, San Francisco and others. Students use it at Duke, Harvard, Stanford, Rice, Tufts, MIT, Cal Tech, Carlton, Clark, Hendrix, Reed, Vassar, The University of: CA, IL, MD, MN, OK, VA, WA, ...

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.

**ELECTING A COUNCIL**

**Single-Winner District Elections**

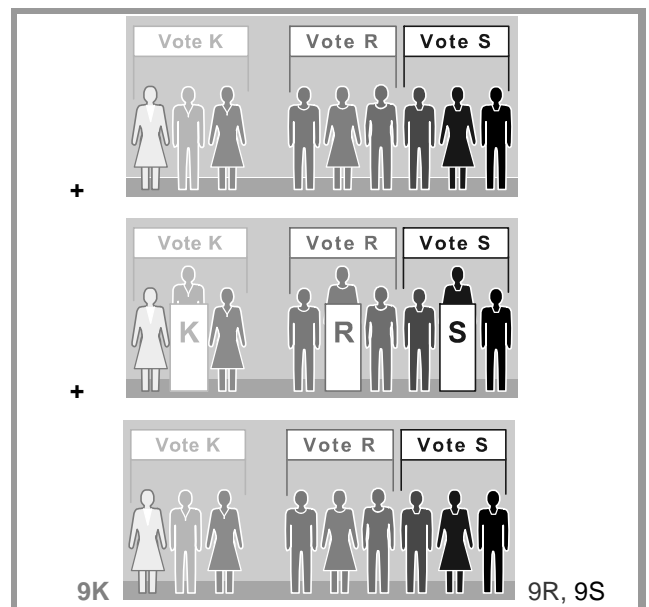
A class of 27 wants to elect a planning committee. Someone says, "Elect a rep from each seminar group." The top group gives Kay 3 votes and Ray 6 votes.



Dark gray majorities win in all three sections.  
Other voters get no voice.

**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 dark gray voters win two seats, a majority.  
And light gray voters win the third seat.

The principle of **Full Representation** is this:

**Majority rule,  
with representation for minorities,  
equal to their share of the 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 it work? There are three basic features:

- ☛ We elect more than one rep from each district.
- ☛ You vote for more than one; you vote for a list. Parties offer lists to us, or we each list favorites.
- ☛ The more votes a list gets, the more reps it elects.

### Some Benefits of **Full Representation**:

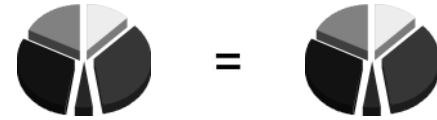
- ☛ It gives each major group a fair share of reps. So it often elects more political minorities. And it elects up to three times more **women**.
- ☛ They tend to help **policies match** public opinion, and often raise the quality of health and education.
- ☛ It gives voters real **choices**, boosting voter **turnout**.
- ☛ A council of 3 must earn many more votes, 3/4 vs. 1/2. So Full Rep strengthens a council's **mandate**.

14 Page 29 lists more benefits.

## Fair-Shares and Moderates

**Chicago** now elects no Republicans to the State House, even though they win up to a third of its votes. The city elected reps from both parties for 110 years. It used a fair rule to pick 3 reps in each House district. This gave the majority party 2 reps and the minority 1.

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



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

**New Zealand** switched in 1996 from Single-Winner Districts to a blend of SWD and Full Representation. Small, one-winner districts overplay local issues. Full Rep frees us to elect reps with widespread appeal.

The number of women elected rose from 21 to 35. The number of native Maoris elected rose from 6 to 15. Voters also elected 3 Polynesian reps and 1 Asian rep.

Many people call this Proportional Representation or Proportional Voting. 15

## SETTING THE BUDGETS

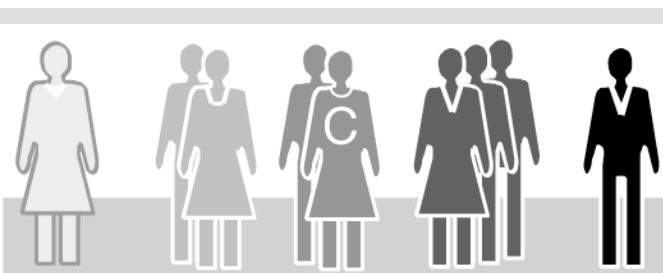
### Fair Shares to Buy Public Goods

Electing reps is the most obvious use of voting rules. Rules to set policies and budgets are just as important. In fact, they get used more often than election rules. They might be the only votes in a direct democracy.

Full Representation gives out the council seats **fairly**. In the same way, Fair-share Spending gives out the spending power fairly. It is the next logical step.

**Democratic rights** fulfilled through history:

- ✓ Voting for rich men, poor men, colored men, women.
- ☛ Full representation for big minority parties.
- ☛ Fair-share spending by big groups of voters or reps.



Fair shares give minority voters some power.

## Bad Budget Patterns

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."

Laws for clean air and water are popular with voters on the left and right. Reps don't dare attack openly. So, to pay off some corporate sponsors, reps slyly starve the agencies that enforce those laws. Budget cuts also hit OSHA and the auditors of corporate tax returns.

"Lower but constant funding is more productive than a roller-coaster budget that might average far more."

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."

Members might be more cautious about starting vast projects if they could not spend other people's share of the budget. And they should have the power to finish their projects with their 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 that makes spending fair.



**x Many empty hands**

**Participatory Budgeting** lets neighborhood assemblies spend part of a city's budget. It has spread from one city in 1989 to hundreds of cities in Latin America. In a first for the US, Chicago Alderman Joe Moore gave his 2010 "Menu Money" to PB by his constituents.

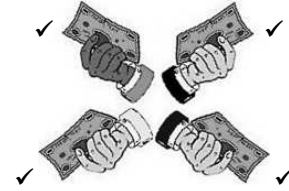
The World Bank reports that PB tends to improve a city's health and education, but that "young people" and "...the 'very poor' are left out of the process." They too need a voting rule that makes spending fair.

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## Fair-share Spending 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.

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



✓ Fair shares spread the joy and opportunities.

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 can fund the #1 need of a big minority. It can make them happier.

**In economic terms:** The *social utility* of the money and goods tends to rise if we each give out a share. Shares spread out opportunities and incentives too.

**In political terms:** Fair shares earn wide respect, as we are each in some minority wanting a project; and our budgets serve and appeal to more people.

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The principle of **Fair-share Spending** is:

**Spending power for all,  
equal to their share of the 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 project. This repeats 'til all still in the race are fully funded.

### Merits of Fair-share Spending on New Projects

- ✚ After discussion, a 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.
- ✚ 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.
- ✚ This does not hand minorities too much **power**: A majority spends most of the fair-share fund.

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### Adjust Budgets of Ongoing Agencies

Every "**line item**" starts with most of its old budget. You can 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 number of votes. It gets a vote from each ballot now paying a share of the item's cost at that level or higher.  $\text{cost} / \text{quota} = 1 \text{ share}$

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.

$N_{\text{ew}}$	$N_{\text{ew}}$
<b>New Tool</b>	
$N_{\text{ew}}$	$N_{\text{ew}}$

### Merits of Fair-share Spending for Agencies

- ✚ Majorities enact the policies that direct the programs. They may end any program before the voting starts.
- ✚ It smooths budget roller-coasters that hurt **efficiency**. It stops starvation budgets designed to cause failure.
- ✚ A member can waste only her share of the fund. Voters can **see** a rep's grants to each project, tax cut or debt reduction and hold her accountable.
- ✚ Fair-share voting builds **trust** in group spending, and may raise support for more of it.

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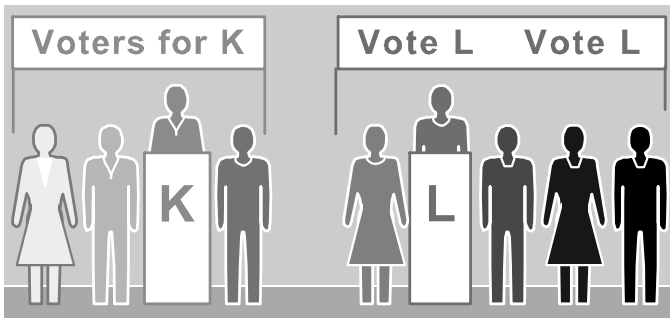
# ENACTING A POLICY

## 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 liked M better than 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 workshop pages show one style. And they show a tally table for Pairwise.)



K is nearest four voters.

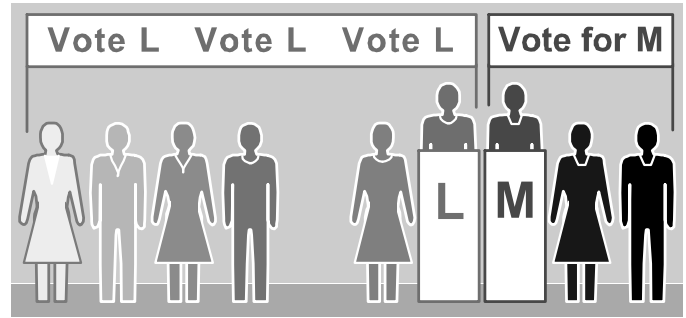
L is nearest five voters.

## Pairwise Test Number Three

Candidate L wins her next one-on-one test also. She can win majorities against each of her rivals. So she is the one candidate who best represents all the voters. She is the Pairwise winner.

Could another person top candidate L? Yes, No  
 Hint: Is anyone closer to the political center? Yes, No  
 Who is the Pairwise winner on page 9? K, L, M

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



L has six votes. M has three.

The goal in a **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**.

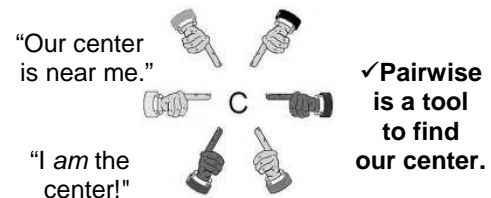
- ✳️ **Full-choice ballots** rank related motions all at once. They simplify the rules of order, speed up voting, and cut agenda effects, poison and free-rider amendments.
- ✳️ **Balanced policies** avoid erratic or excessive changes. That saves money and builds respect for government. It reduces the game-of-chance and fear in politics. And it reduces the payoff from big campaign gifts.
- ✳️ Pairwise can **elect** a neutral judge or administrator. It can elect moderators to cast the swing votes for a balanced, “ensemble council.” (See page 4.)

24 \*If 3 or more lose to each other, IRV can elect 1 of them.

## Pairwise Popularity and Balance

A policy needs good marks from voters on both sides. That's because every voter can rank it compared 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 Tally winner is central and popular. Most voters of the **center and right** like it more than each leftist policy. At the same time, most voters of the **center and left** like it more than a rightist policy. All sides can join to beat a narrowly centrist policy.



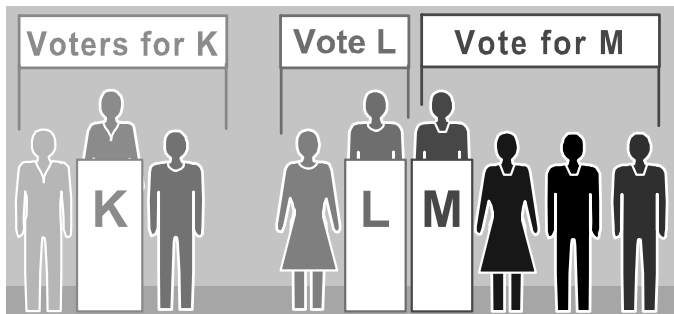
A Chairperson's **Balanced Support**. Voters on the left rank Kennedy higher than Clinton. So to win a majority over Kennedy, Clinton must *outrank* him on ballots from the **center and right**.

Voters on the right rank Bush higher than Clinton. So to win a majority over Bush, Clinton must *outrank* him on ballots from the **center and left**.

## Resist Rigged Voters

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 (charcoal below) who tend to vote for her party; and exclude less favorable voters (a light gray voter missing on the left). So now her party 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 scam this way. But the Pairwise winner, L, doesn't change in this case. And Full Rep fair shares also resist gerrymander.



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

**Bribes** can make some reps switch sides on a policy. Pairwise resists this well. Bribing one rep moves the council's middle, and its winning policy, only a little. Fair-shares and visible grants also restrain corruption.

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## CONCLUSION

### Unstack the Agenda

Meetings often make related decisions one at a time. They use a yes-no process, with or without rules of order, agendas, and votes. Items decided early can shut out later options.

Or people 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 eager supporters might drop it.

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

### 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 group have an 1890 voting rule or a new, centered and balanced rule?

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

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## 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.

Voting reform opens a door to many popular changes. And the results can last for many election cycles.



### Strengthen Votes and Mandates

These rules strengthen votes and thus mandates. They organize voters and lift the number supporting:

- ✦ a **Chairperson** from a plurality to a majority; page 6
- ✦ a **Council** from a plurality to over three quarters; 14
- ✦ a **Budget** from a few power blocs to all members; 18
- ✦ a **Policy** from a one-sided to an over-all majority. 24

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## What's in it for Voters & Reps

### Accurate Elections

page

- ✦ **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.** 12
- ✦ **Reduce** **wasted votes** to end weak mandates. 8, 7, 12  
Cut the effects of spoilers and **gerrymanders.** 10, 26
- ✦ Reduce **attack ads** and anger among voters. 10  
Cut the payoffs to the big **campaign donors.** 24

### Accurate Legislation

page

- ✦ **Give** fair representation to all major groups, so the council enacts laws with **real majorities.** 12
- ✦ Elect a **central chair** with wide appeal; she'll be a swing vote between the reps from interest groups. 4
- ✦ Cut chances for agenda **scams**; detach poison pills and free riders. Speed-rank all options at once. 27
- ✦ Give all reps **equal funds** for projects and agencies. And let the voters see each rep's spending. 16-21

Our Web pages detail these benefits and more. The workshop shows *how* they meet those goals. And free software on the web makes tallies easy.

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