

# Accurate Democracy Primer



# See How

**Better voting rules are fast, easy & fair.**

**They help in classrooms & countries.**

**Results are well centered & widely popular.**

**Politics are more principled & peaceful with  
fair shares for representation & money,  
full majorities for presidents & policies.**

# Preview of the Primer

## 4 Great Decision Tools

 Tragedies, Eras and Progress of Democracy

 Instant Runoff Voting elects a strong CEO.

 Fair Representation fills a balanced Council.

 Fair-shares quickly set Budgets. New

 Condorcet tally enacts a popular central Policy.

 Goals for Voting, Conclusions and Action

# A Tragedy of Democracy

Old ways of adding up votes fail to represent large groups in many places.

North Carolina had enough black voters to fill two election districts. But, they were a 25% minority spread over eight districts. So for over 100 years, they won no voice in Congress.

As voters they were silenced.<sup>1</sup>

# Another Tragedy

The Northwest was ripped apart for many years as forestry policies were reversed: Hasty logging in times of weak regulation wasted resources.

Sudden limits on logging bankrupted some workers and small businesses.

The political pendulum swings. It cuts down forests and species, families and towns.<sup>2</sup>

# What's Wrong

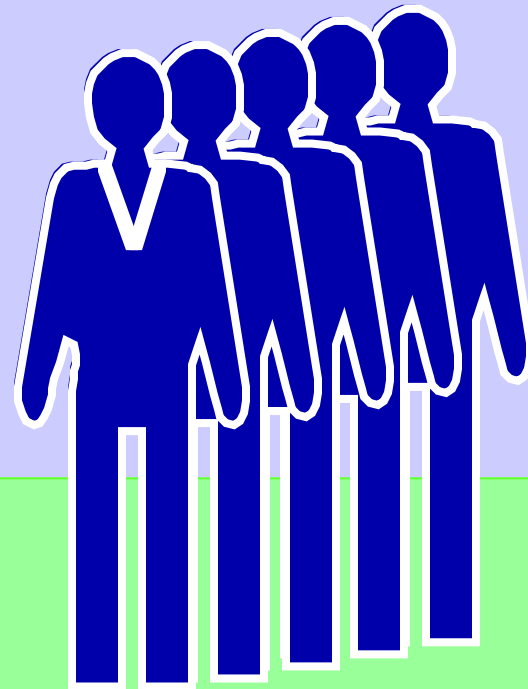
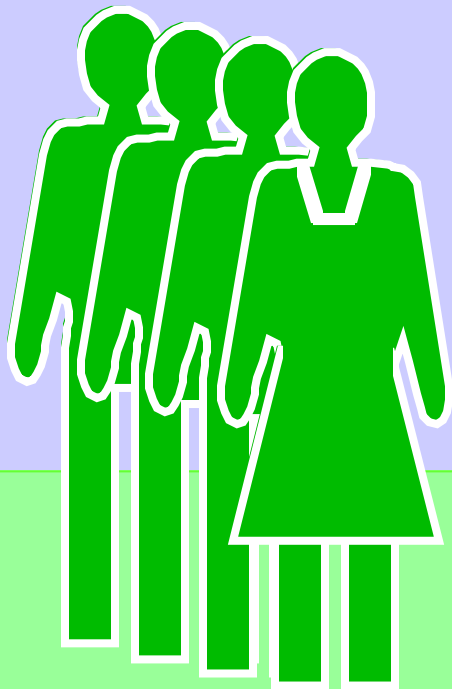
Different jobs for voting need different types of voting.

A yes-no vote suits only a simple issue with just two possible answers.

When three candidates run for an office, the situation is more complicated. And a simple yes-no vote is no longer suitable.<sup>3</sup>

# In the 19<sup>th</sup> Century

Winner-Take-All Districts = Off-Center Councils



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

Typical Council Elected By Plurality Rule

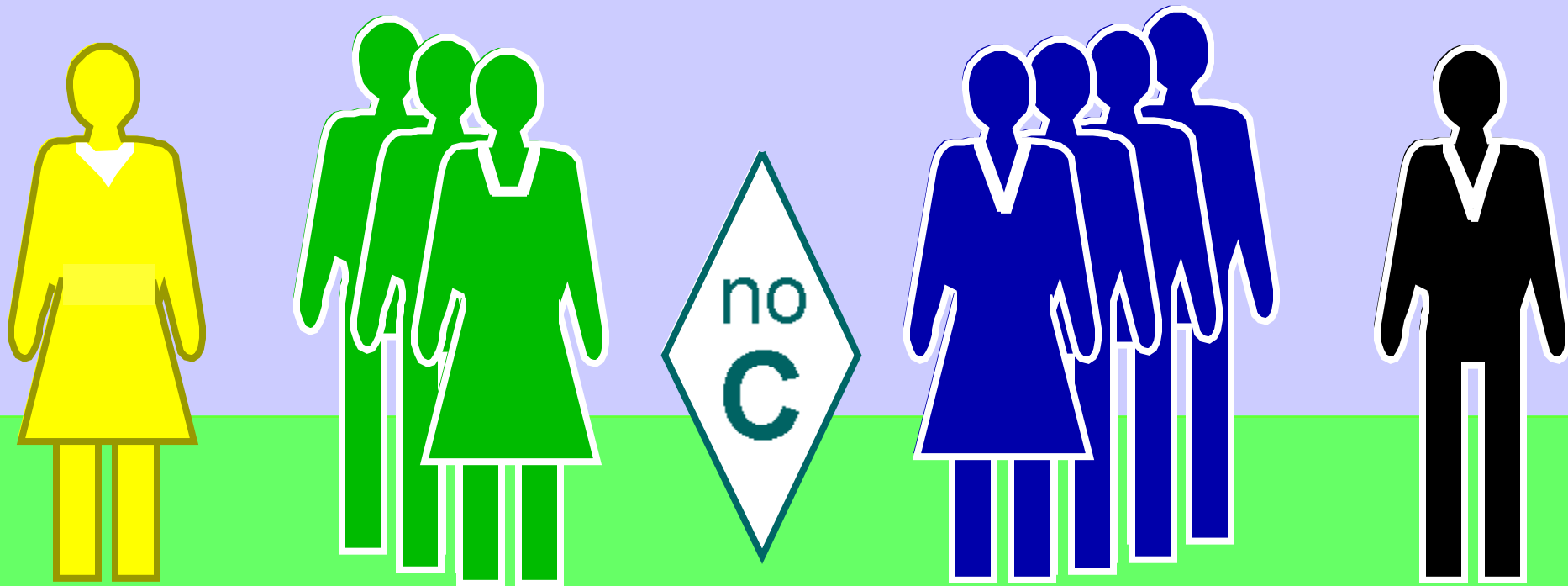
# Eras, Voting Rules and Typical Councils

- X Plurality rule, Less than a majority
- X Only one rep => Only two parties
- X Voters get very limited choices<sup>5</sup>
  
- X Power and policies swerve
- X Winners take all



# In the 20<sup>th</sup> Century






Fair-Share Elections = One-Sided Majorities



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

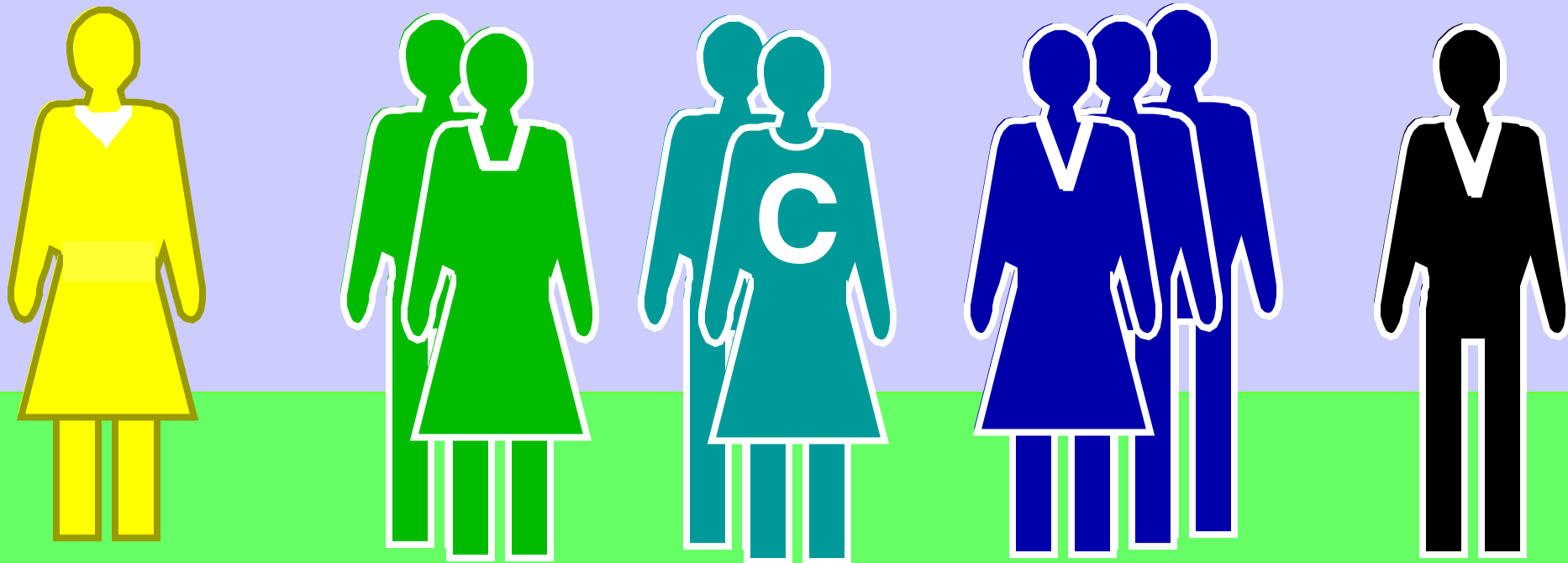
Typical Council with Fair Representation

# Fair Representation

-  Most democracies use “Fair Rep”
-  Elects several reps.
-  Larger districts.
-  Fair shares.<sup>6</sup>
-  Policies still skew to one side.

# In the 21<sup>st</sup> Century

Ensemble Councils = Balanced Majorities



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

Ensemble from Central & Fair-Share Rules

# Ensemble councils



Elect most reps by Fair Rep.



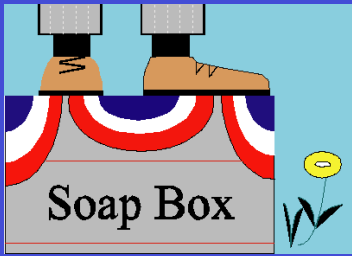
Add a few by a central rule.



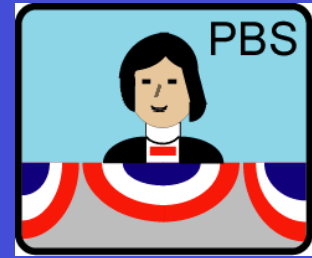
They have wide appeal, and



Powerful swing votes.



# Democratic Progress



- X Centrist policy – excludes others.
- X One-sided policy – ignores rivals.
- X Compromise policy – forced, averaged.
- ✿ Balanced policy – unites the best of all.

# Balanced Majority



**Broad, balanced policies,**



**Maximize happiness.**



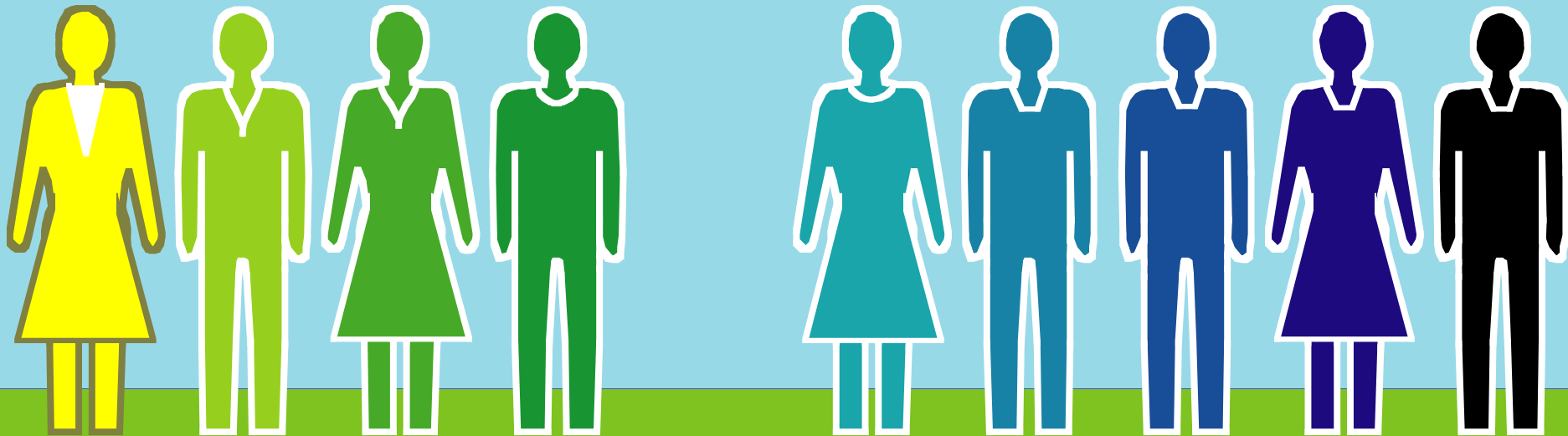
**Inclusive, well centered  
and decisive council,**



**Avoids tragedies.**

# Nine Voters

Nine voters whose opinions range from left to right.



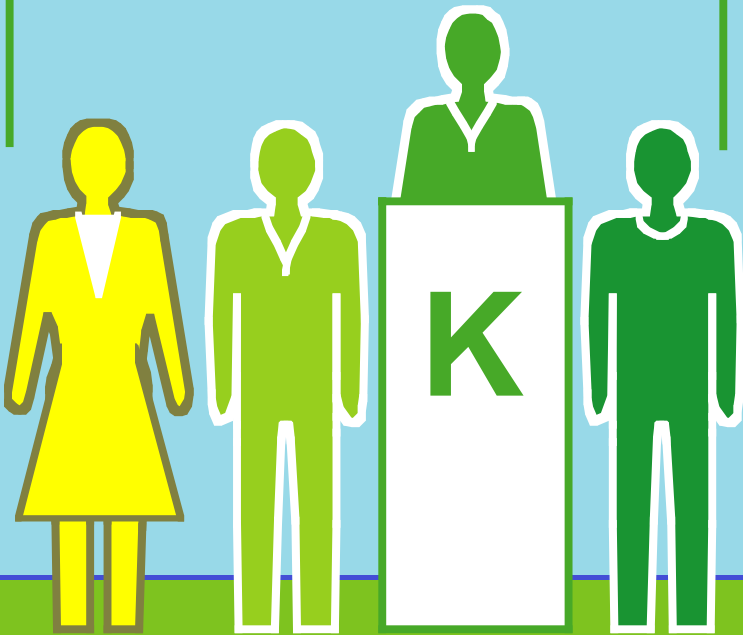
High taxes buy  
great gov. services

Low taxes,  
poor services 15

# Plurality Election

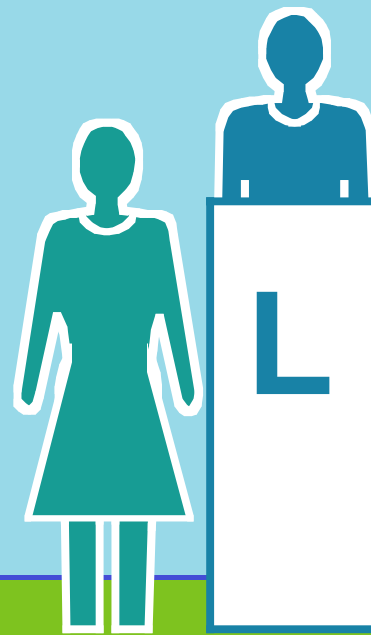
Plurality, the one with the most votes wins.

Voters for K



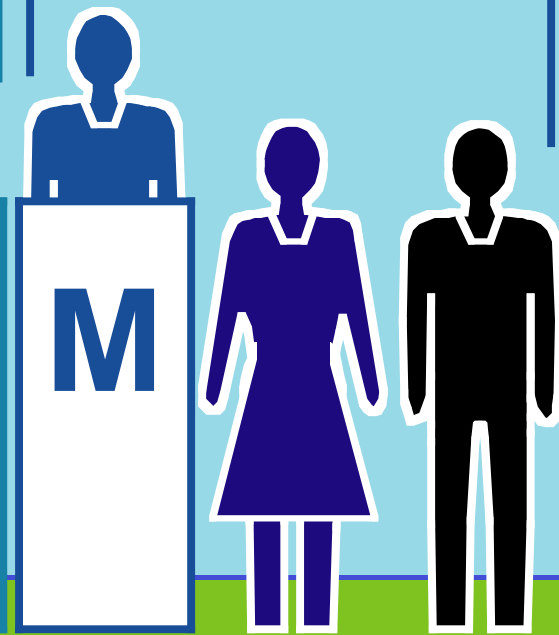
K is nearest 4 voters.

Vote L



L is nearest 2.

Vote for M



M is nearest 3.



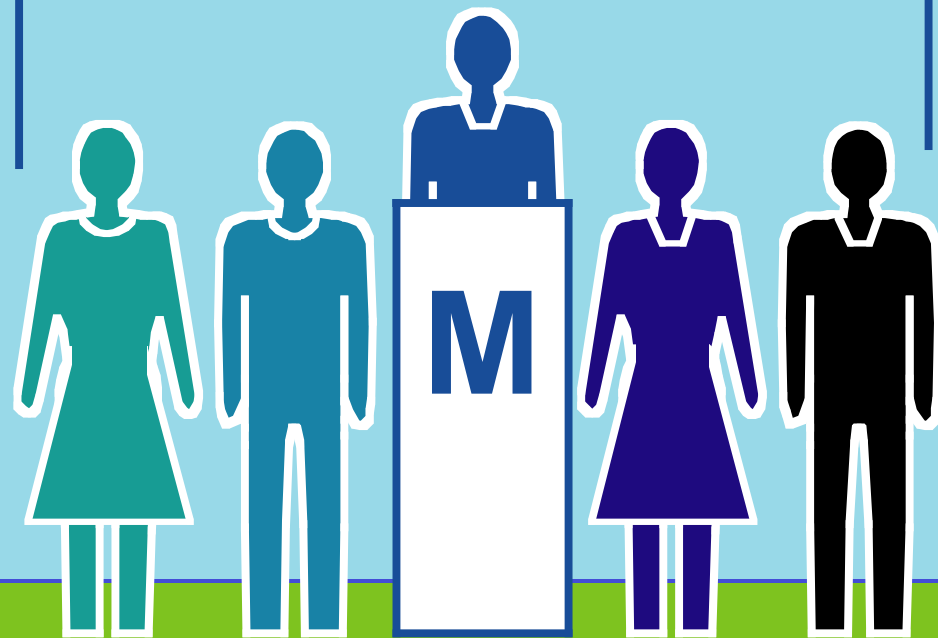
# Runoff Election

Runoff, the top two compete, one against one.

Voters for K



Vote for M



Candidate M wins the runoff.

# Politics on Two Dimensions

Voting systems behave the same when voters do not fit neatly along a single left-right dimension.<sup>1</sup>



Kay wins a plurality.

Em wins a runoff.

**A Goal of Instant Runoff Voting is this:**

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

Rank your favorite candidates.







Your ballot goes to your first choice.

Fewest ballots loses.

If your favorite lost, your ballot moves  
to your next choice. We count again.

Repeat till one candidate gets a majority.

# Merits of Instant Runoff Voting

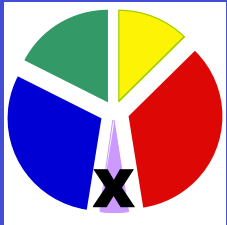
-  A majority winner from 1 election.
-  No drop in voter turnout.
-  Less negative campaigning.
-  No hurting your first choice.
-  No lesser-of-two-evils choice.
-  No split-vote worries for factions.

# Instant Runoff Voting Patterns

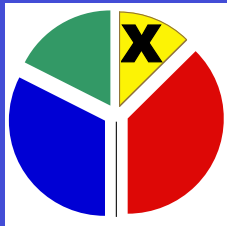
Two liberals faced a dictator's heir.  
So the liberal majority was split.  
The heir won under plurality rule.  
It elects whoever gets the most votes;  
50% is not required.

With IRV, ballots for the weaker liberal  
would transfer to elect the stronger.

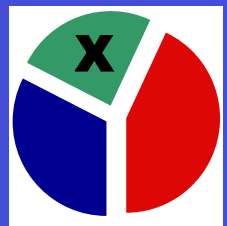
# From Five Factions to One Majority



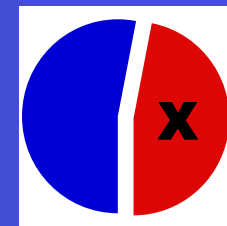
1) Ms. Violet loses. Her ballots go to each voter's next choice.



2) Ms. Blonde loses.  
Her ballots move.



3) Ms. Green loses.



4) Ms. Carmine loses.

# Instant Runoff Review

You vote once with a full-choice ballot.

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

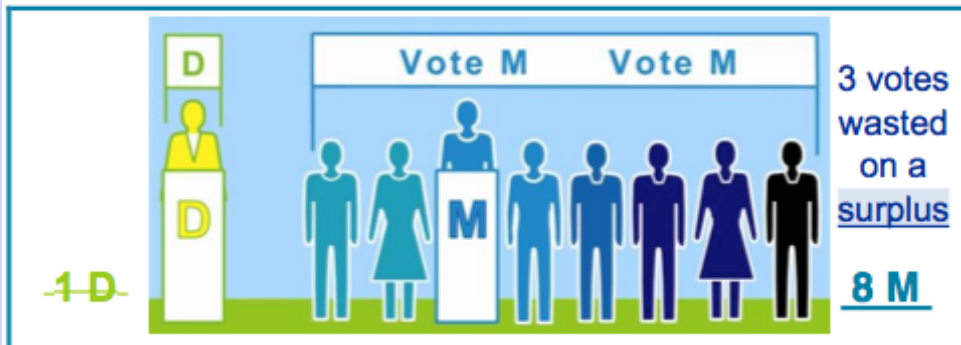
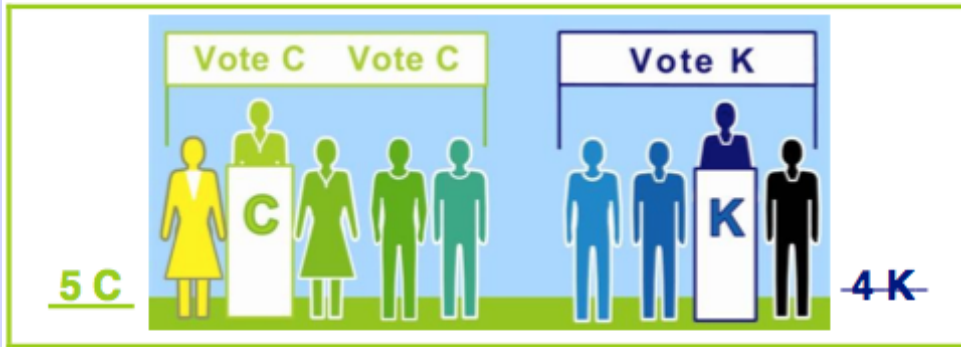
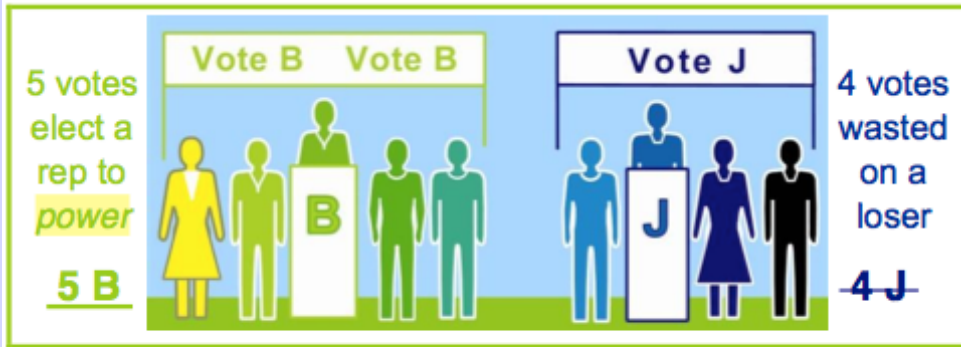
One rep from each of 3 seminar groups.  
But bluish majorities win in all 3 sections.  
And other voters get no representation.

# Fair Representation Election

A quarter of the whole class, plus one.  
So 3 reps get over 3/4; fewer wasted votes.  
Now bluish voters win two seats, a majority.  
And yellowish voters win the third seat.



# Three Single Winner Districts

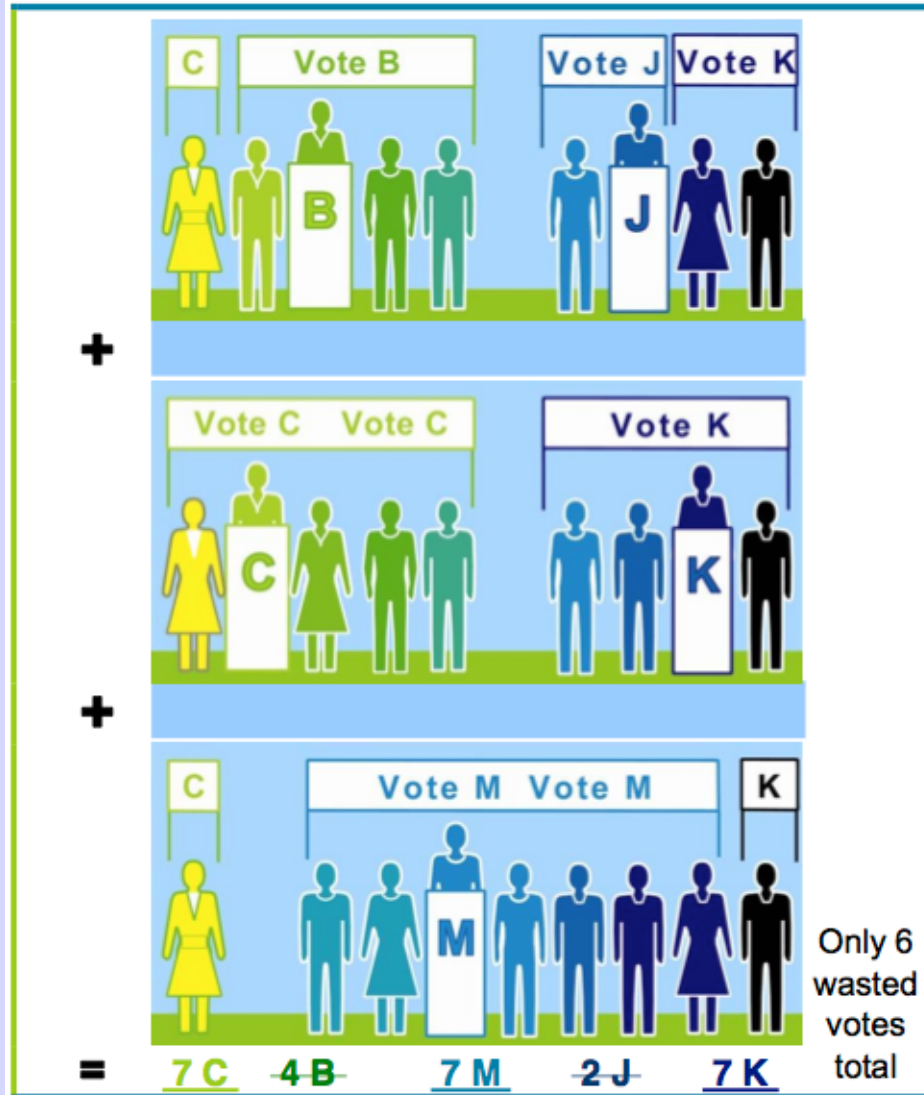


A class of 27 elects a rep from each seminar group.

In the top group, 5 votes elect B as J gets only 4 votes.

A minority with 11 voters gets majority power, with 2 reps. (But if it were spread out evenly, it would get none.)

# One Election with Fair Representation



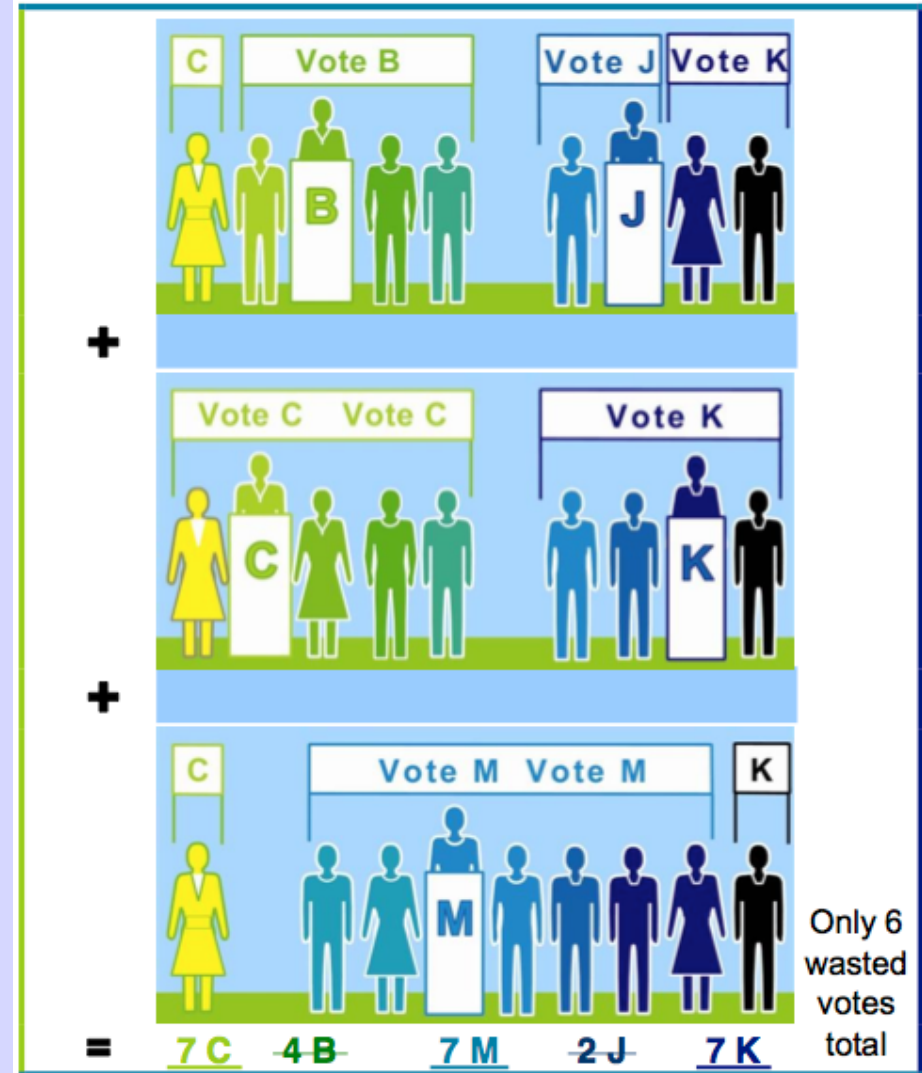
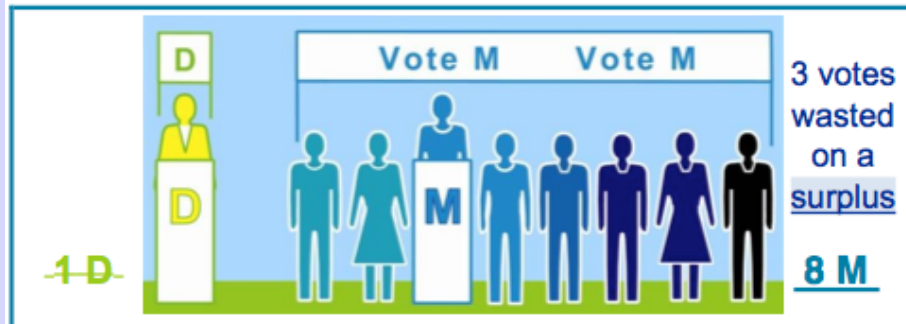
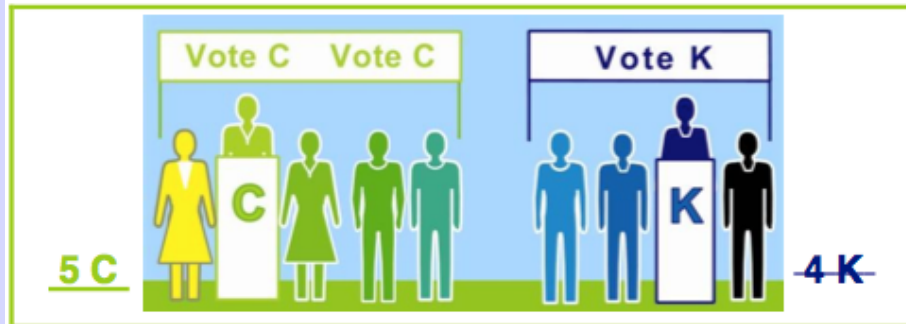
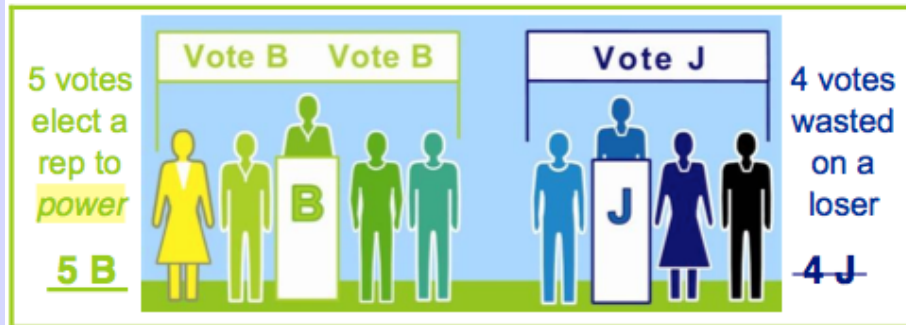
Change the definition of victory from 1/2 of each small seminar to 1/4 of the whole class plus one.

So 3 reps need 3/4 of the total votes.

Now the majority gets 2 reps, and the minority gets 1.

Effective votes make a stronger mandate for council decisions.

# Single Winner Districts vs. Fair Representation



# The principle of Fair Representation

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

That means, 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?


**Elect more than 1 rep from each district.**


**Vote for more than one; vote for a list.**

**Pick a party's list or list your favorites.**

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

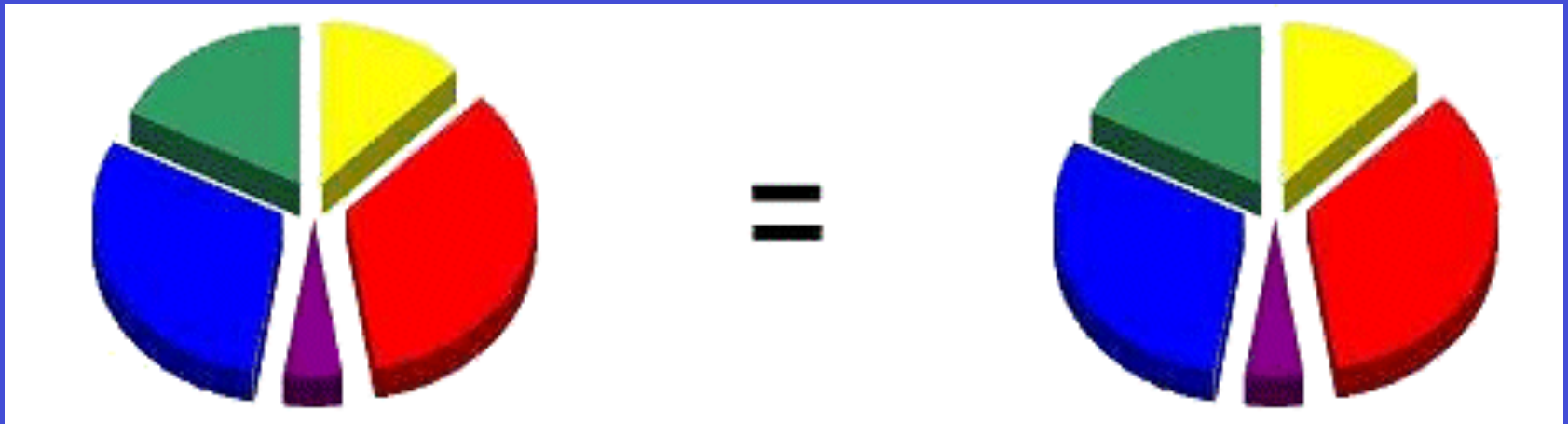
# Fair Representation Increases:

 Fair shares of reps for each group, so  
Diverse candidates can win, so  
Close races are on most ballots, so  
Real choices for the voters & high turnout

 Women get elected 3 times more often.  
Majority rule improves – also by few wasted  
votes, real choices, turnout & equal support.  
Policies match public opinion better.  
Health and education often increase.

# Fair-Share Elections and Moderate Reps

- ✿ Chicago's FR was less polarizing.
- ✿ New Zealand's FR reps are like voters.




Shares of votes equal fair shares of seats.

# Fair-Share Elections

## Elect More Women

 **New Zealand & Germany:**  
**Use both FR & Single-Member Districts.**  
**FR elects 3 times as many women.**

 **Swedish women's party (almost)**

 **Other Consequences:**  
**Fix the root cause of bad policies.**  
**Policies match public opinions better.**



# **Does It Work?**

**If urgent needs overwhelm a group, they neglect their essential needs, the structural roots of their problems.**

**We often get bad results from poor policies due to poor representation growing out of inapt voting rules.**



**The countries with the best voting rules have the best quality of life.**

# **Legislative Voting Rules**

**Elections are the public face of voting.**

**Rules to set policies and budgets are just as important. In fact, they get used much more than election rules.**

# Fair Shares Buy Public Goods

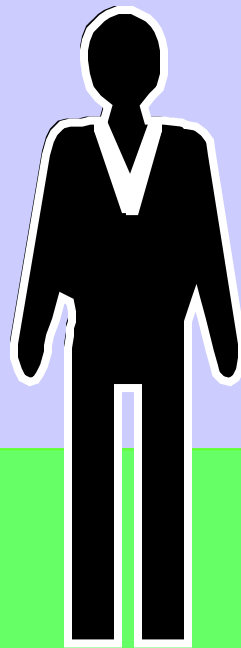
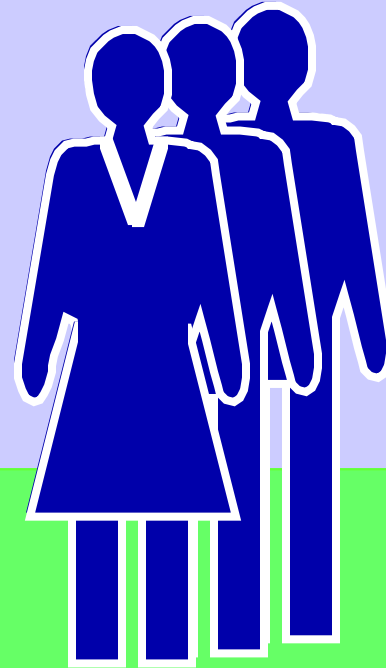
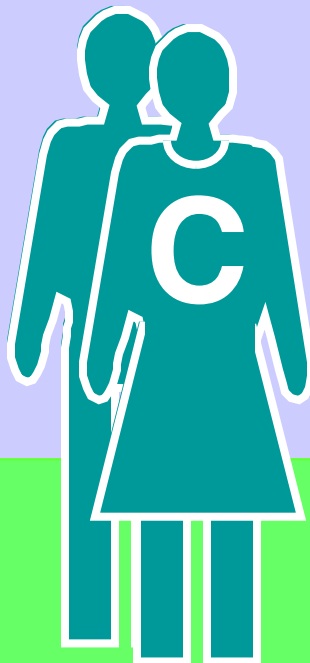
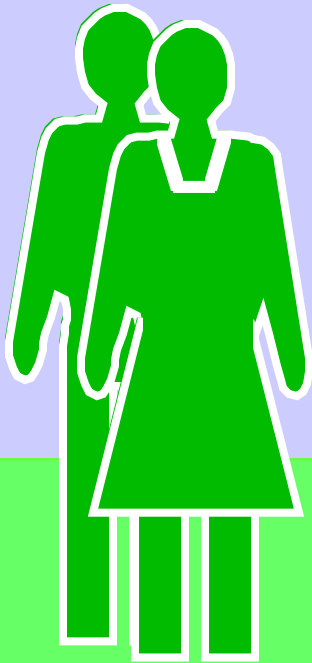
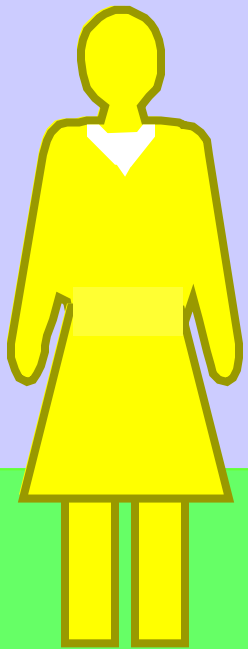
-  Fair Rep allocates council seats fairly.
-  Fair Share Voting spreads winning projects fairly. It is the next step.

## Democratic rights in history:

- ✓ Right to vote.
-  Right to representation.
-  Right to discretionary funds.

# Fair Shares Buying Public Goods

Fair shares for council seats and projects



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Fair shares give minority voters some power.

# Unfair Spending Patterns

Membership groups shirk real elections.  
Members still compete to fund projects.

Sometimes a faction subverts the  
process, to capture a lot of the budget.  
Others then grow rebellious, or leave.

They need a rule to make funding fair.

# Participatory Budgeting

**PB lets neighbors research, talk & vote on how to spend part of a city's budget.**

**PB is a big step up for democracy.**

**But it has 2 flaws. It is not cost aware:**

**A vote for a park was worth \$501.**

**But given to fund bike racks,  
that vote was worth only \$31.**

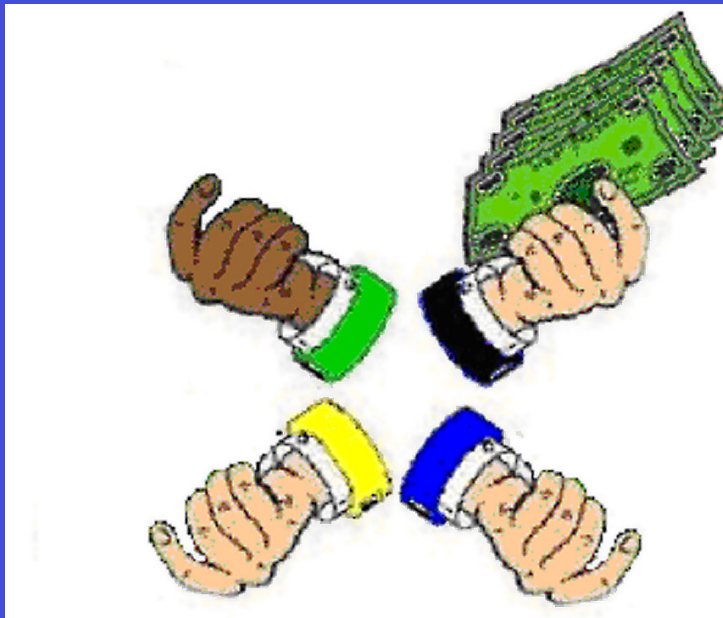
# **FSV Works This Way**

**Interest groups choose improvements.  
City's taxes pay for projects and city  
departments manage them.**

**No one is shut out.  
Each group controls its share of power.  
It makes (hidden) empires less profitable.**

# Fair-Share Voting on Projects

Money clearly shows the difference between fair shares and winner-take-all.



**x Many empty hands**



**✓ Fair shares**



# Fair Shares or Winner Take All

If a plurality controls all funding, 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.

# Spread Shares & More

Shares raise 'utility value' of spending.  
They spread opportunities & incentives.

Results earn wide respect & support.  
Budgets serve & appeal to more people.  
Most vote for at least 1 minority project.

See the FSV slide show at  
[accuratedemocracy.com/p\\_intro.htm](http://accuratedemocracy.com/p_intro.htm)

# The principle of Fair-share Spending

## Spending power for all, in proportion to their votes.

Public good worth public money.



Limits the fraction a voter may fund.

Just rank your favorite projects.

Your money moves to your top choices.

We drop the weakest items 1 at a time.

# Merits of Fair-share Spending

-  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.

# Merits of Fair-share Spending



A member can waste only her share of the fund.



Voters can see the rep's grants to each project, tax cut or debt reduction.



And hold her accountable.

# Merits of Fair-share Spending

It does not hand minorities too much power:



The fund is small; it just covers optional projects.



The majority spends most of the fair-share fund.

# Merits of Fair Share Votes

 Smooth the roller-coaster budgets that hurt efficiency.

 Stop starvation budgets designed to cause failure.

 Reduce agenda effects:  
leaving naught for the last departments  
or going into debt for them.

# Merits of Fair Share Votes



After discussion, one poll quickly sets many budgets.



Majorities enact the policies that direct the agencies. They may end any program before voting starts.



Fair, transparent rules build trust in group spending and may raise support for more of it.



# More Merits of Fair Shares



The majority lose a fraction of power for every minority annexed.



FS avoids both centralized and self-centered economics. It aids cooperation in ad hoc groups.



It keeps high incentives for inventors and investors to increase efficiency.

# Fair-share Spending Picture

“We’ ll fund  
this project.”



“We’ll fund  
another.”

“We’ ll fund  
this one!”

# Adjusting Budgets

Write-in and rank budget levels for items.

A voter may rank higher budgets for each.

He can afford a share for many high ranks.

Paying a full share gives 1 vote.

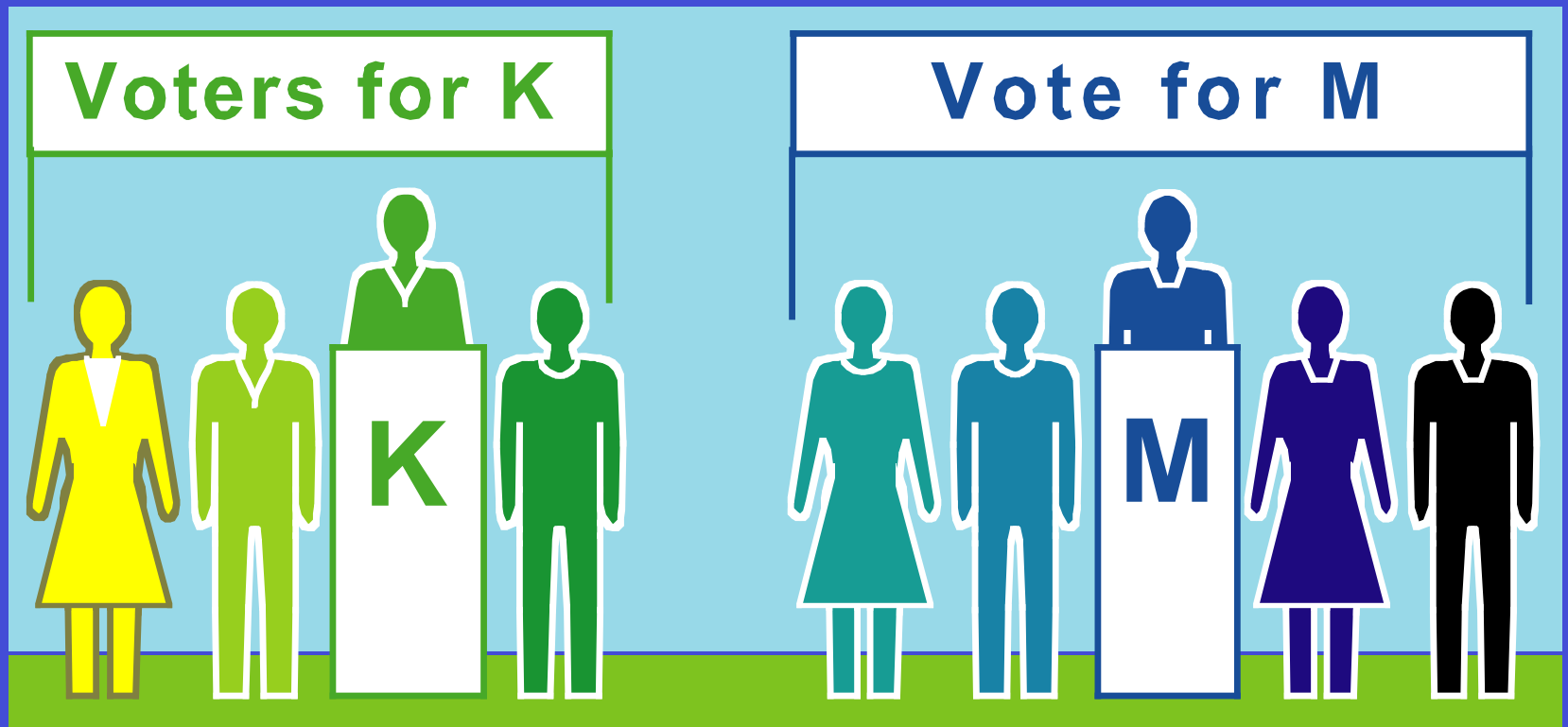
The item with weakest top level loses it.

A donor's money flows to his next choices.

This repeats 'til every top level wins quota.

# Pairwise Test Number One

The Runoff was a one-against-one or “Pairwise” contest between candidates M and K. Five voters preferred M over K.

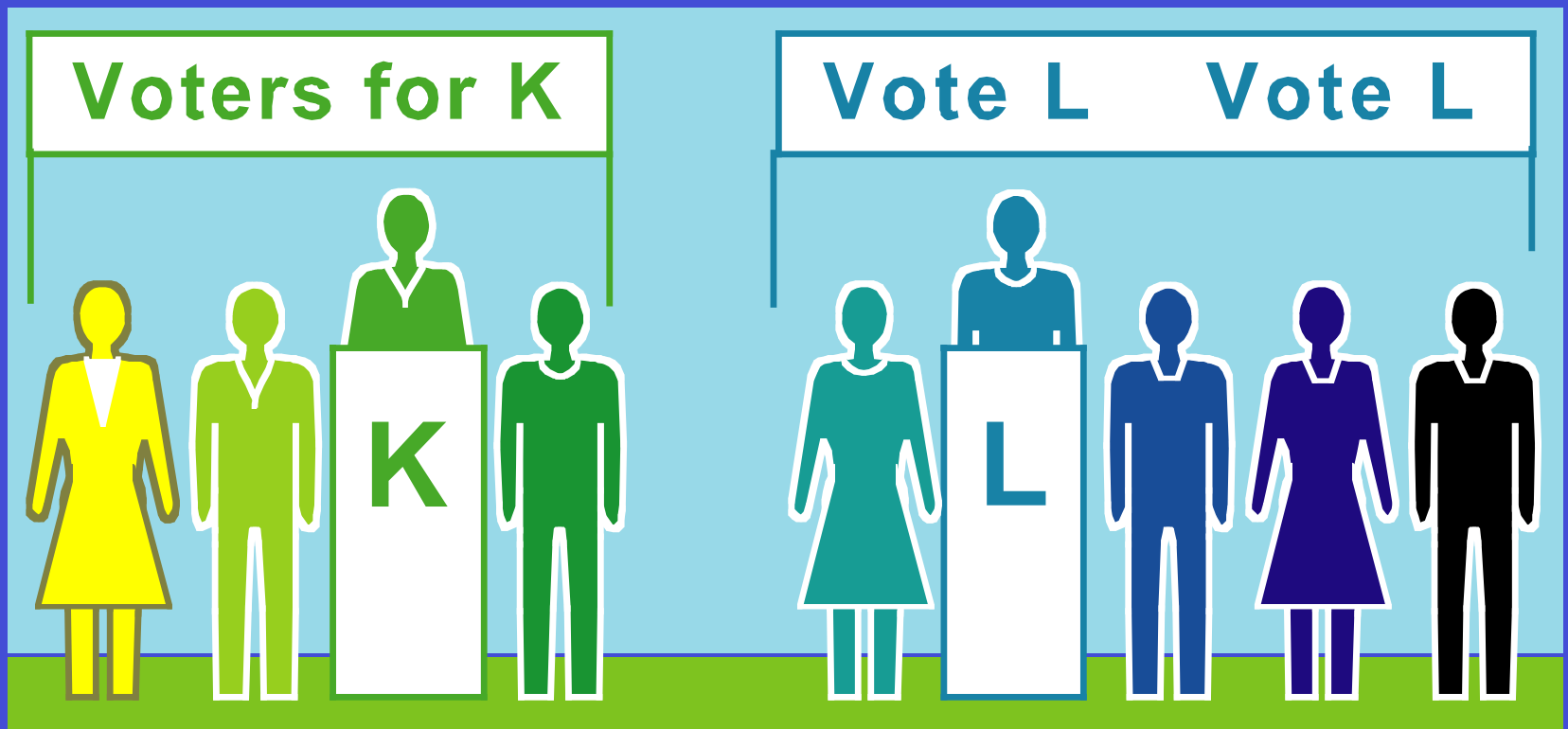


K is nearest four voters.

L is nearest five voters.

# Pairwise Test Number Two

Here is a second Pairwise test with the same voters. Candidate L wins by 5 to 4.

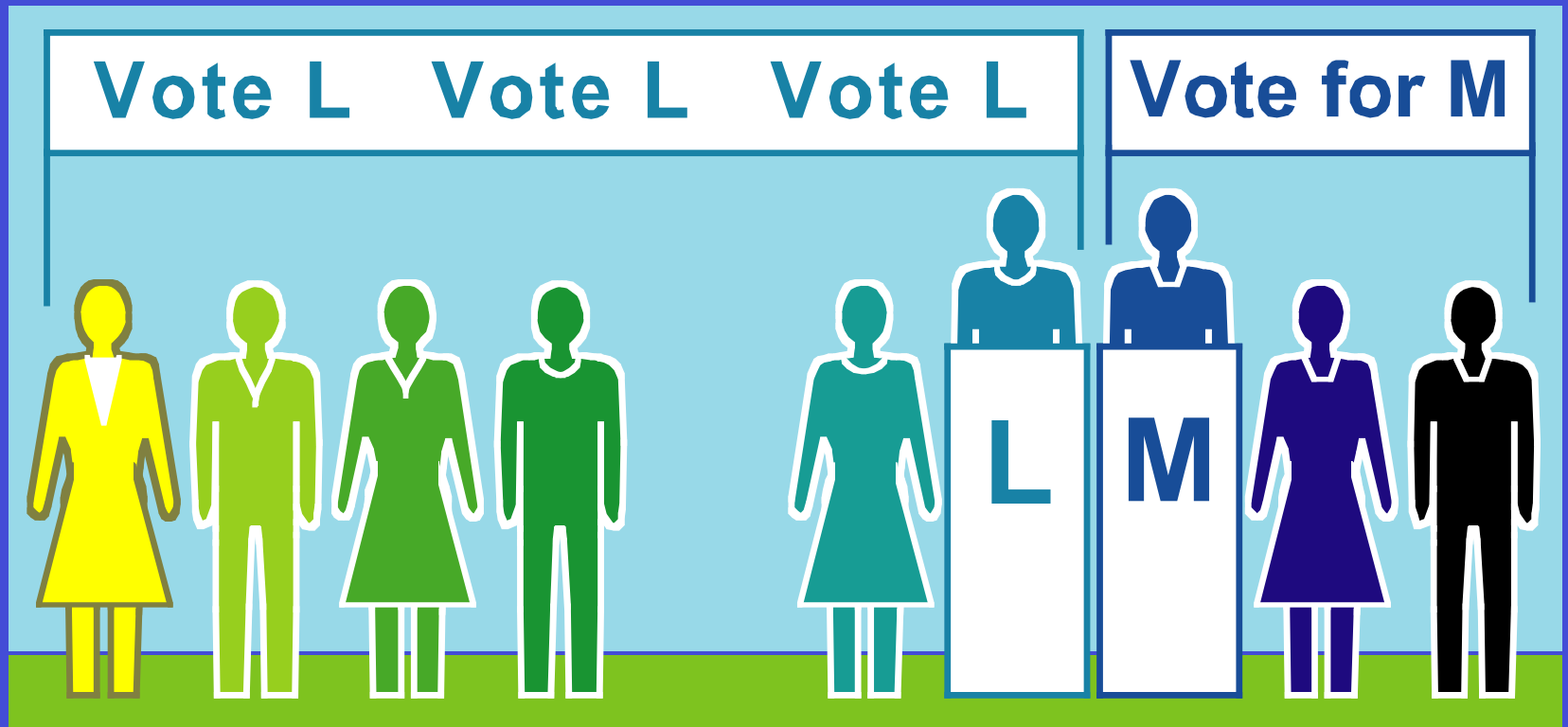


K is nearest four voters.

L is nearest five voters.

# Pairwise Test Number Three

Candidate L wins her last 1-on-1 test also. She has won majorities against each rival. She is the Pairwise winner.



L is nearest six voters;

M is nearest three.

# The Goal of the Pairwise Tally

## Majority victories, over every single rival.

A winner must top every rival, one-on-one.

The analogy is a “round robin tournament.”

A player has 1 contest with each rival.

If she wins all, she wins the tournament.

Each voting test sorts ballots into 2 piles.

If you rank J higher than D, yours goes to J.

The 1 with the most ballots wins that test.

If 1 option wins all its tests, it is enacted. 55

# Pairwise Tallies Quickly Pick Balanced Policies.



Full-choice ballots rank all related motions.



They simplify the rules of order.



That speeds up voting.



It cuts agenda effects, poison-pill and free-rider amendments.



# Pairwise Tallies Pick Balanced Policies.



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.



It reduces the payoff from big campaign gifts.

# Pairwise Tallies quickly pick central leaders.



Pairwise can elect a fairly neutral judge or chief administrator.



It also can elect a moderator to be the swing vote for a balanced, “ensemble council.” (See slide 10.)

# Pairwise Popularity and Balance

Every voter ranks it against other policies.

So all voters are valuable.

This leads to policies with wide appeal.

A Pairwise winner is central and popular:

Most centrist and liberal voters prefer it

over each conservative policy,

while centrist and conservative voters

prefer it to each liberal policy.

All sides can join to beat a narrow centrist.

# **Chairs with Balanced Support**

**CT elects a central chairperson and vice chair to hold the powerful swing votes on an Ensemble Council. They compete for support from voters left, right and center. So they have strong incentives to balance a council's process and policies.**

**Proposed policies compete for high ranks from all members, but the votes of the chairs are often key.**

# Chair's Balanced Support

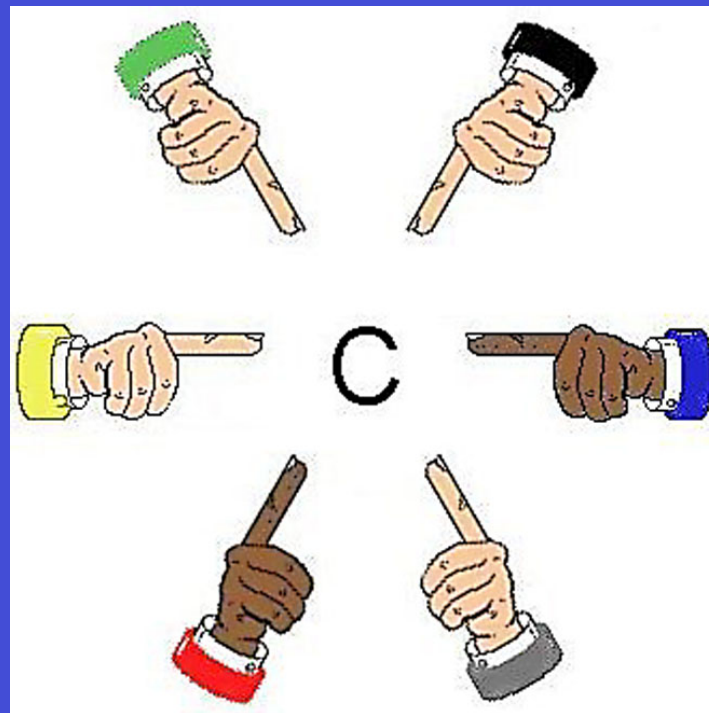
Liberal voters rank Kennedy higher than Clinton. So to win a majority over Kennedy, Clinton must outrank him on ballots from **centrists and conservatives**. (She will not be a conservative's first choice though.)

Conservative voters rank Bush higher than Clinton. So to win a majority over Bush, Clinton must outrank him on ballots from **centrists and liberals**.

# Balanced Pairwise Campaign

“Our center  
is near me.”

“*I am the  
center!*”

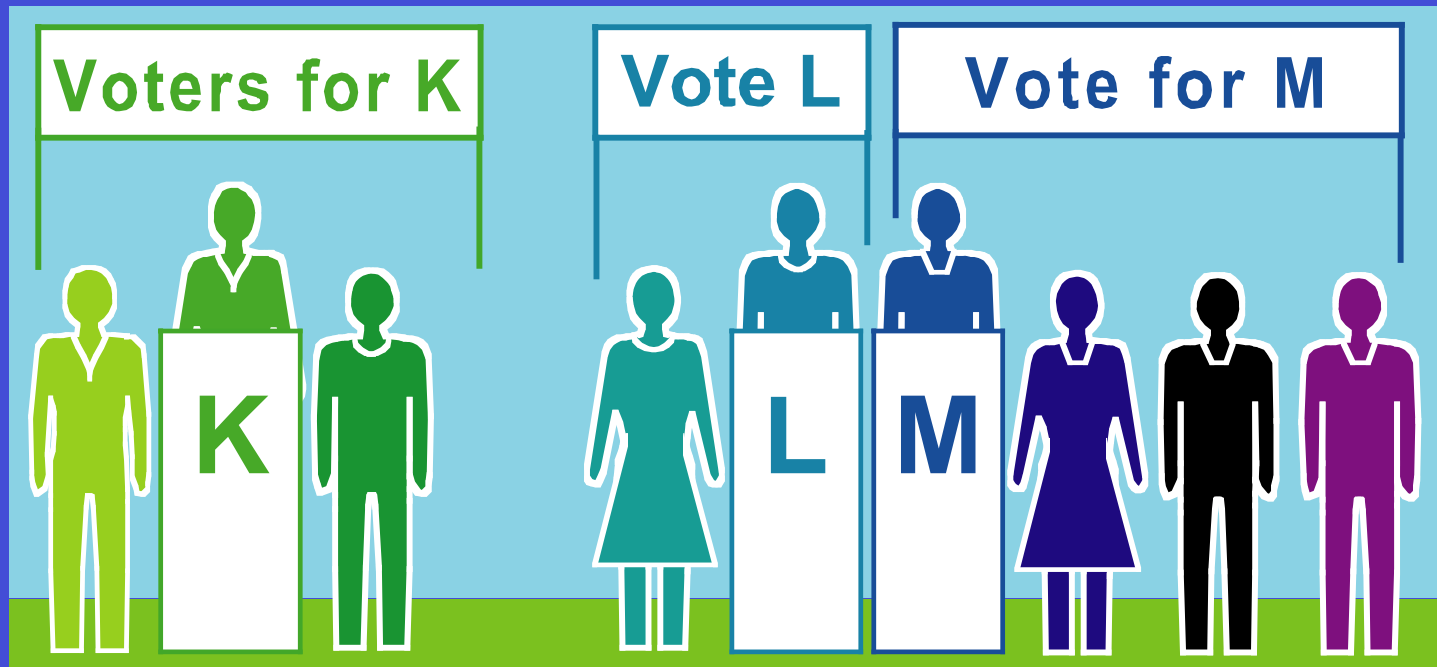


“I think it's  
over here.”

(Workshop page 7 shows a tally.)

# Gerrymander of Plurality Rule

Say M's party gerrymanders her district. They add neighbors (purple) who vote for her party, and exclude less favorable voters (the yellow voter missing on the left).



Now K is nearest 3 voters, L is nearest 2, and M is nearest 4.

# Resisting Rigged Voters

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

Bribes can make some reps switch sides on a policy. Pairwise resists well, as bribing a few reps moves the council's middle, and the winning policy, only a little. Visible grants to projects also inhibit corruption.



# Unstack Agendas

**Interlocking decisions make  
later options impossible.**

**A small group can appear strongest.**

**A balanced idea might get dropped.**

**The best rules avoid all those problems.**

**They rank related motions all at once.**

# Tools Between People

Rules deeply affect our quality of life. Practicing winner-take-all or sharing changes how we see the world.

Views of voting and government: tools for fighting culture wars or tools supporting diversity and its freedoms.

Voting reform opens a door to many popular changes.

# Steering Analogy

Low cost.

New, not 1890s technology.

Who loses?

Few skills needed.

Test drive

# Benefits to Voters and Reps

## Reduce:

- ✱ Wasted votes,
- ✱ Gerrymanders,
- ✱ Safe seats,
- ✱ Negative ads,
- ✱ Polarization,
- ✱ Spoilers,
- ✱ Funding bias.

## Ensure:

- ✱ Fair shares,
- ✱ Minority rights,
- ✱ Real choices,
- ✱ Wide debate,
- ✱ Voter turnout.

# Some Ethical Goals for Legislation



Real majorities.



Moderator, central swing vote.







Minimize manipulation:  
Poison-pills and free-riders,  
Deadlocks and upheavals.



Equal funds, visible votes,  
Accountability.

# Strengthen Votes & Mandates

Expand the vote supporting a:

-  Chairperson from a plurality to a majority;
-  Council from a plurality to three quarters;
-  Budget from a few power blocs to all;
-  Policy from a one-sided majority to an over-all majority.

More effective votes = stronger mandates.

# Conclusions

**Better voting rules are fast, easy & fair.**

**They help in classrooms & countries.**

**Results are well centered & widely popular.**

**Politics are more principled & peaceful with  
fair shares for representation & money,  
full majorities for presidents & policies.**

# Next Steps for Groups

Steps toward accurate democracy include:



Organize voters with Movable Votes.



Represent all with Fair Representation.



Empower all with Fair-share Spending.



Center policies with Pairwise winners.



# Next Steps

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

Play its complimentary software.

Give these benefits to your school,  
club or town with help from FairVote,  
The Center for Voting and Democracy.

Booklets are available at  
[accuratedemocracy.com](http://accuratedemocracy.com)

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# For Groups of Any Size

- ✓ Secret ballots protect dissidents.
- ✓ A good tally assures equality.
- ✓ A ballot or survey can educate members.
- ✓ Multi-winner rules can give fair shares.
- ✓ Yet no one can block action.

# Exit or Power

**Voting cannot satisfy opposing values.**

**“Voting with your feet” gets results.**

**Avoid willful authoritarians.**

**Build democracy with egalitarians.**

**Blind faith, obedience and ideology , vs.**

**Rationalism, skepticism and empiricism.**

# Other Election Issues

Public campaign funding.

Ballot printouts.

Term of office.

Initiatives.



# Unfair Spending System

“...[E]armarks [are] the devices by which individual members of Congress set aside budget resources for pet projects in their districts.”

Reps send “pork” projects to their districts.

Voters can't see who funded a project.

Omnibus bills have many projects, some good, some bad.

# **Black Box Budget Rules**

**Our budget process blurs responsibility.**

**Take deficits.**

**Liberals say... Conservatives say...**

**All claim, "I didn't spend too much."**

**Protecting the environment is popular.**

**Reps don't dare attack it openly.**

**But some reps starve enforcement.**



# Roller-Coaster Budgets

The Super-Conducting Super Collider was funded by a majority in Congress for a few years... then cut. 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.

# Fair Rep, How Does It Work?

**Elect more than one person  
from a district.**

**Vote for more than one;  
vote for a list.**

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

# Does It Work?

**More: competition, real choices,  
effective votes, voter turnout,  
diverse reps, women reps,  
stronger mandates, fitting policies**

**Less: monopoly politics,  
dubious democracy, safe seats,  
in gerrymandered districts**

# New Spending Patterns

“We’ ll take  
money from  
reduce  
agency G.”

“I’ll add to  
agency L.”



“We’ ll  
agency J.”

“We’ll add to  
agency K.”

Everyone will see a rep's Fair Share grants.