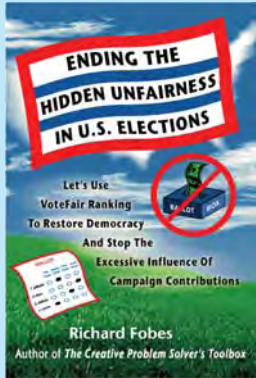
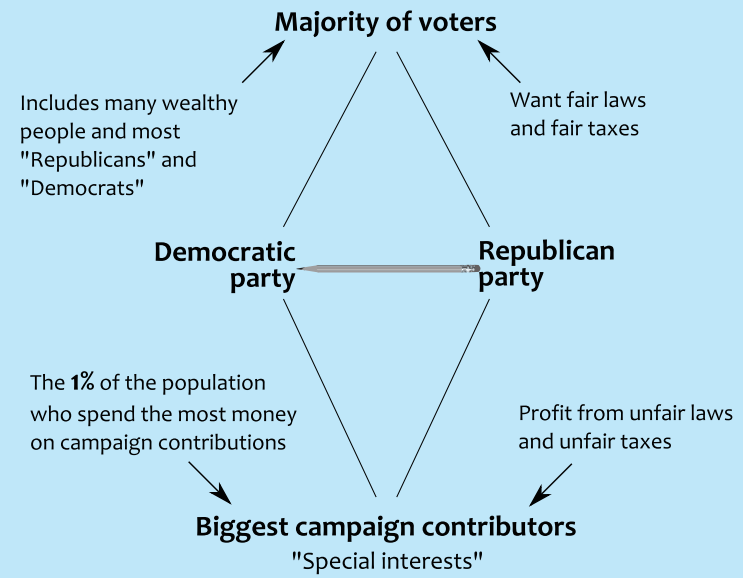


VoteFair ranking

Math-based voting power for the 99%



Richard Fobes



Biggest campaign contributors



Open-source VoteFair ranking software

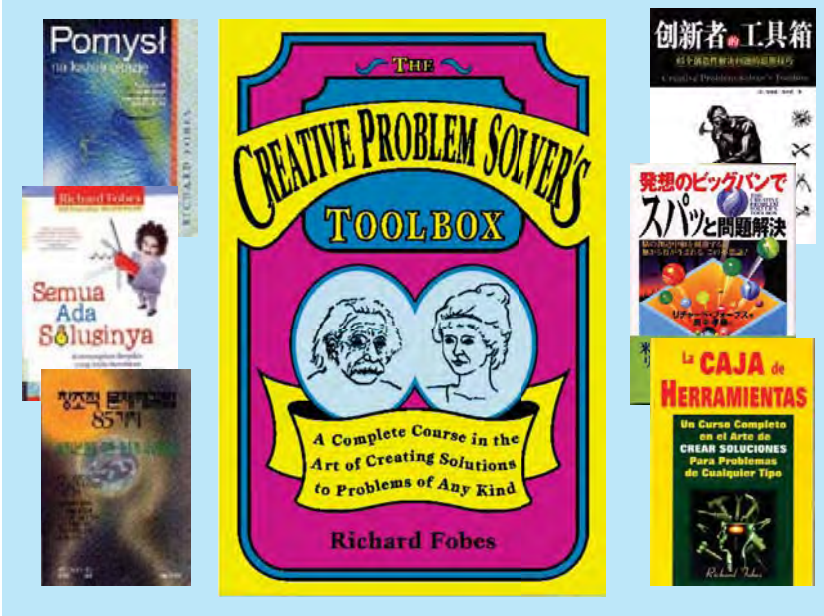
GitHub.com

CPSolver
account

Perl CPAN Archives*

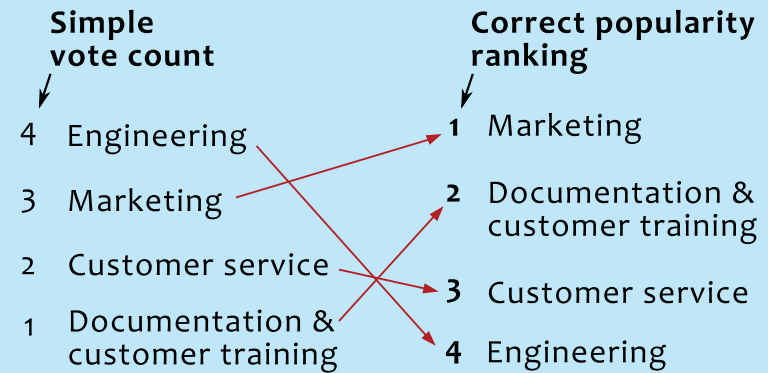
Voting::
VoteFairRanking

* Mirrored on more than
200 servers around the world



Business communication

Example: Prioritize budget categories



Key point:

**There are
different kinds of
popularity**

New town name

Lakehead ☐

The Lakehead ☐

Thunder Bay ☐

fewest votes,
not necessarily
least popular

← 39%

← 21%

← 40%

Single-mark ballot

Academic name: plurality ballot

District Representative

Clifford	<input type="radio"/>
Farah	<input checked="" type="radio"/>
Gordon	<input type="radio"/>
Mora	<input type="radio"/>

← Only a single mark is allowed

1-2-3 ballot

Academic names: preferential ballot (*redundant!*), ranked ballot

District Representative

	First choice	Second choice	Third choice	Fourth choice
Selden	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
Meredith	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
Elliot	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
Roland	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4

	X preferred over Y	Equally preferred	Y preferred over X
X is Selden Y is Meredith	1	0	0
X is Selden Y is Elliot	1	0	0
X is Selden Y is Roland	1	0	0
X is Meredith Y is Elliot	1	0	0
X is Meredith Y is Roland	0	1	0
X is Elliot Y is Roland	0	0	1

District Representative

	First choice	Second choice	Third choice	Fourth choice
Selden	<input checked="" type="radio"/>	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
Meredith	<input type="radio"/> 1	<input type="radio"/> 2	<input checked="" type="radio"/>	<input type="radio"/> 4
Elliot	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input checked="" type="radio"/>
Roland	<input type="radio"/> 1	<input type="radio"/> 2	<input checked="" type="radio"/>	<input type="radio"/> 4

	X preferred over Y	Equally preferred	Y preferred over X
X is Selden Y is Meredith	70	0	30
X is Selden Y is Elliot	40	0	60
X is Selden Y is Roland	70	0	30
X is Meredith Y is Elliot	20	10	
X is Meredith Y is Roland	60	20	
X is Elliot Y is Roland	70	0	

Convert to electoral votes for each state

	X preferred over Y	Equally preferred	Y preferred over X
X is Selden Y is Meredith	5.6	0	2.4
X is Selden Y is Elliot	3.2	0	4.8
X is Selden Y is Roland	5.6	0	2.4
X is Meredith Y is Elliot	1.6	0.8	5.6
X is Meredith Y is Roland	4.8	1.6	1.6
X is Elliot Y is Roland	5.6	0	2.4

Need electoral votes to compensate for state-based differences (laws, weather, etc.)

Sequence: Elliot → Seldon → Roland → Meridith

Score: 60 + 70 + 70 + 70 + 70 + 20

	X preferred over Y	Equally preferred	Y preferred over X
X is Seldon Y is Meredith	70	0	30
X is Seldon Y is Elliot	40	0	60
X is Seldon Y is Roland	70	0	30
X is Meredith Y is Elliot	20	10	70
X is Meredith Y is Roland	60	20	20
X is Elliot Y is Roland	70	0	30

First candidate	Second candidate	Third candidate	Fourth candidate	Sequence score
Selden	Meredith	Elliot	Roland	330
Selden	Meredith	Roland	Elliot	290
Selden	Elliot	Meredith	Roland	380
Selden	Elliot	Roland	Meredith	340
Selden	Roland	Meredith	Elliot	250
Selden	Roland	Elliot	Meredith	300
Meredith	Selden	Elliot	Roland	290
Meredith	Selden	Roland	Elliot	250
Meredith	Elliot	Selden	Roland	310
Meredith	Elliot	Roland	Selden	270
Meredith	Roland	Selden	Elliot	210
Meredith	Roland	Elliot	Selden	230
Elliot	Selden	Meredith	Roland	400
Elliot	Selden	Roland	Meredith	360
Elliot	Meredith	Selden	Roland	360
Elliot	Meredith	Roland	Selden	320
Elliot	Roland	Selden	Meredith	320
Elliot	Roland	Meredith	Selden	280
Roland	Selden	Meredith	Elliot	210
Roland	Selden	Elliot	Meredith	260
Roland	Meredith	Selden	Elliot	170
Roland	Meredith	Elliot	Selden	190
Roland	Elliot	Selden	Meredith	280
Roland	Elliot	Meredith	Selden	240

← largest

Ranking results

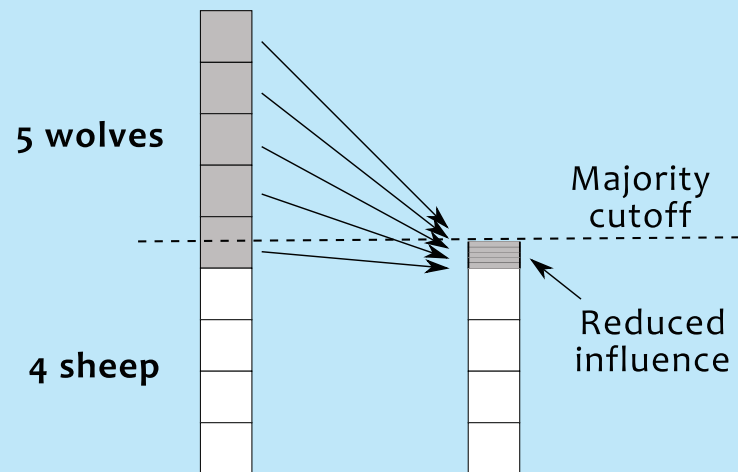
- 1: Elliot ← **Most popular**
- 2: Seldon ← Second-most popular
- 3: Meredith ← Third-most popular
- 4: Roland ← **Least popular**

Sequence with highest score

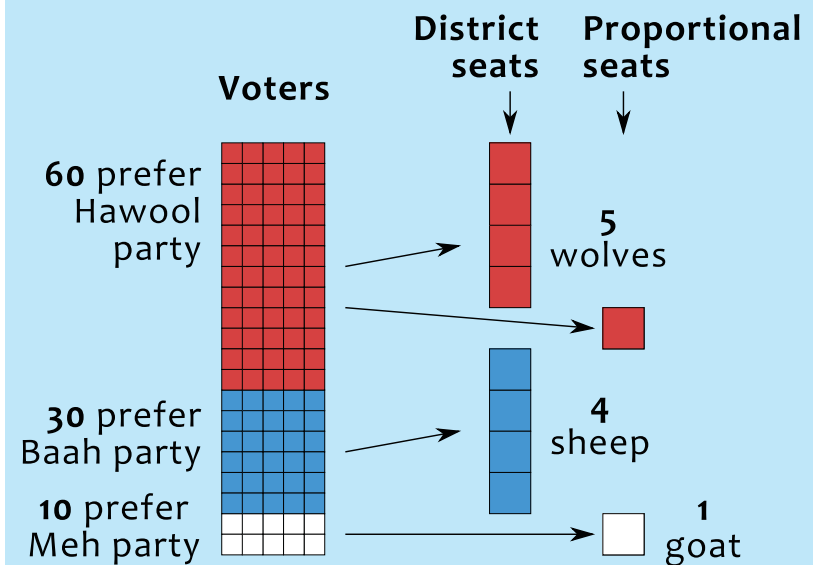
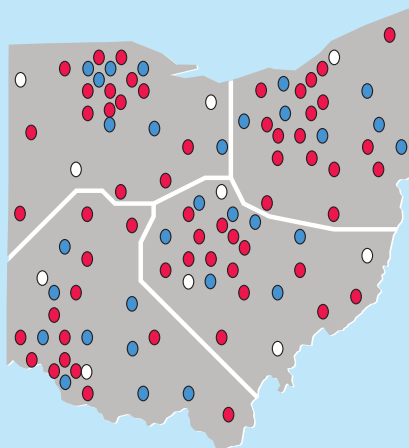
	Sequence →					
	... B	... C	... E	... F	... A	... D
B preferred over ...		56	65	74	79	84
C preferred over ...	37		60	70	75	76
E preferred over ...	29	35		64	66	72
F preferred over ...	19	23	30		55	62
A preferred over ...	14	18	28	37		50
D preferred over ...	9	17	21	30	41	

Sequence ↓

Normal influence



One wolf and one sheep from each of four districts



VoteFair party ranking

Most popular party ← Most popular according to VoteFair popularity ranking

Second-most popular party ← Second-most representative according to VoteFair representation ranking

Third-most popular party ← **Most popular among voters who do not rank most popular or second-most popular at the top of their party preferences**

With vote splitting gone, must limit number of candidates

Two candidates each from two most popular parties

One candidate from third party

District Representative

	First choice	Second choice	Third choice	Fourth choice	Fifth choice
K. Nighn (Hawool party)	1	2	3	4	5
Wendy W. (Hawool party)	1	2	3	4	5
Jumbo Jake (Baah party)	1	2	3	4	5
Rita Rumi (Baah party)	1	2	3	4	5
Billy G. (Meh party)	1	2	3	4	5

VoteFair ranking

VoteFair **popularity** ranking

Overcomes vote splitting, and much more

VoteFair **representation** ranking

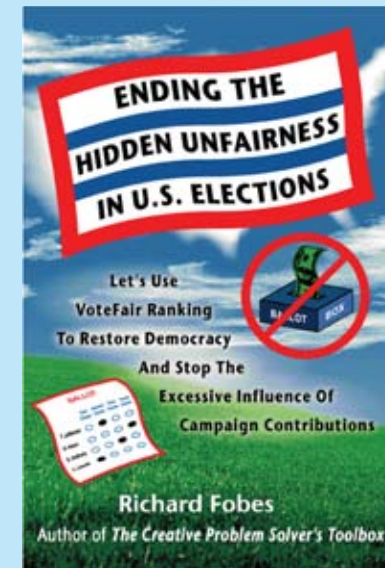
Identifies second-most representative choice

VoteFair **partial-proportional** ranking

Overcomes district-boundary manipulation

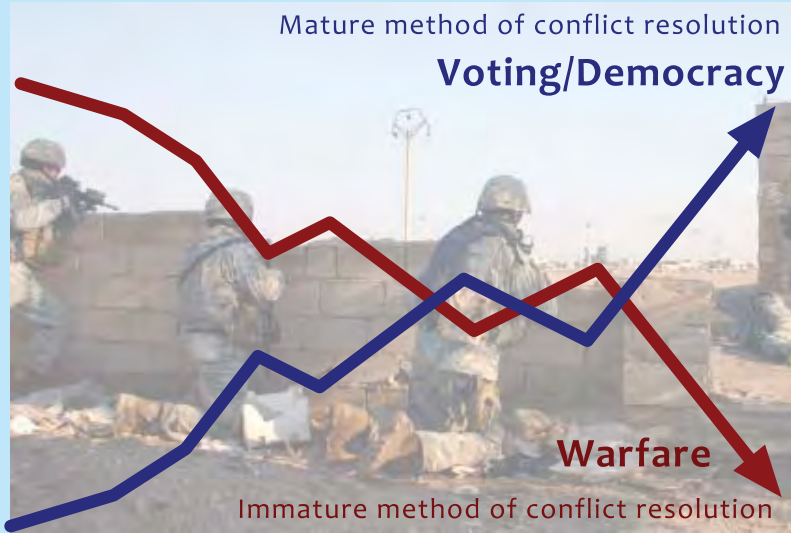
VoteFair **party** ranking

Avoids distraction of candidates who cannot win



Mature method of conflict resolution

Voting/Democracy

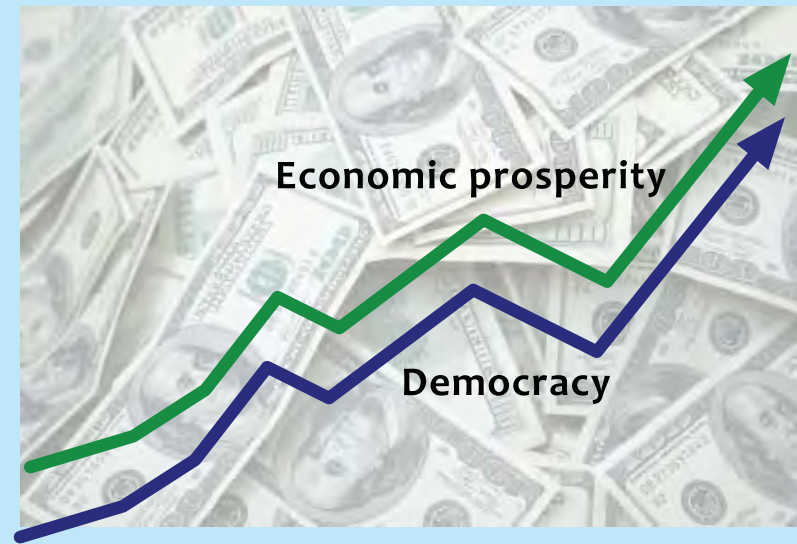


Warfare

Immature method of conflict resolution

Economic prosperity

Democracy



VoteFair Negotiation Ranking

VoteFair Negotiation Tool
The communication tool for negotiating fair outcomes, even in challenging situations

Case: Canadian Cabinet Ministers
Participant: Observer

Home Overall Ranking Tie-break ranking Participants Help Exit

Overall Ranking of Proposals

This is the calculated overall ranking. [\[full explanation below\]](#)

Acceptable

The average acceptance level for all these proposals exceeds the specified threshold, so the following proposals are acceptable as a resolution in this negotiation. [\[full explanation below\]](#)

[\[Show descriptions of acceptable proposals\]](#)

Ranking level	Percent voters who support	Proposal	Incompatible with proposals
1 (Most preferred)	58	Proposal 12: Minister of Finance: Ferguson (Liberal) [details]	Proposals 11, 13 [incompatibility details]
2	42	Proposal 1: Prime Minister: Hanson (Conservative) [details]	Proposals 2, 3, 4, 5, 6, 7 [incompatibility details]

www.NegotiationTool.org

The enemy is not ...



... Biggest campaign contributors
(wealthy, big business, etc.)

... Money

... Lobbyists
(who remind politicians of money)

... Politicians

... Barriers to third parties

The solution is not ...

... Public financing of campaigns

(because it would waste tax
money fighting the biggest
campaign contributors)

... Third parties

(until we have first reclaimed
the two we already have)

... Term limits

(because they also kick out competent
leaders whose hands are tied)

... More disclosure of campaign contributions

(because we already know
who controls politicians)

... Rules against lobbying

(because lobbyists become
powerless when the puppet
strings are cut)

VoteFair Ranking

PAIRWISE COUNTING

1-2-3 BALLOTS

MATH SOFTWARE COMPUTERS

From the
***Declaration of
Election-Method
Reform Advocates***

... we urge you to help educate
yourself, your friends, and your
representatives about the
advantages of better voting
methods ...

**VoteFair ranking
info at
www.VoteFair.org**

The
***Declaration of
Election-Method
Reform Advocates***
is at
www.BanSingleMarkBallots.org