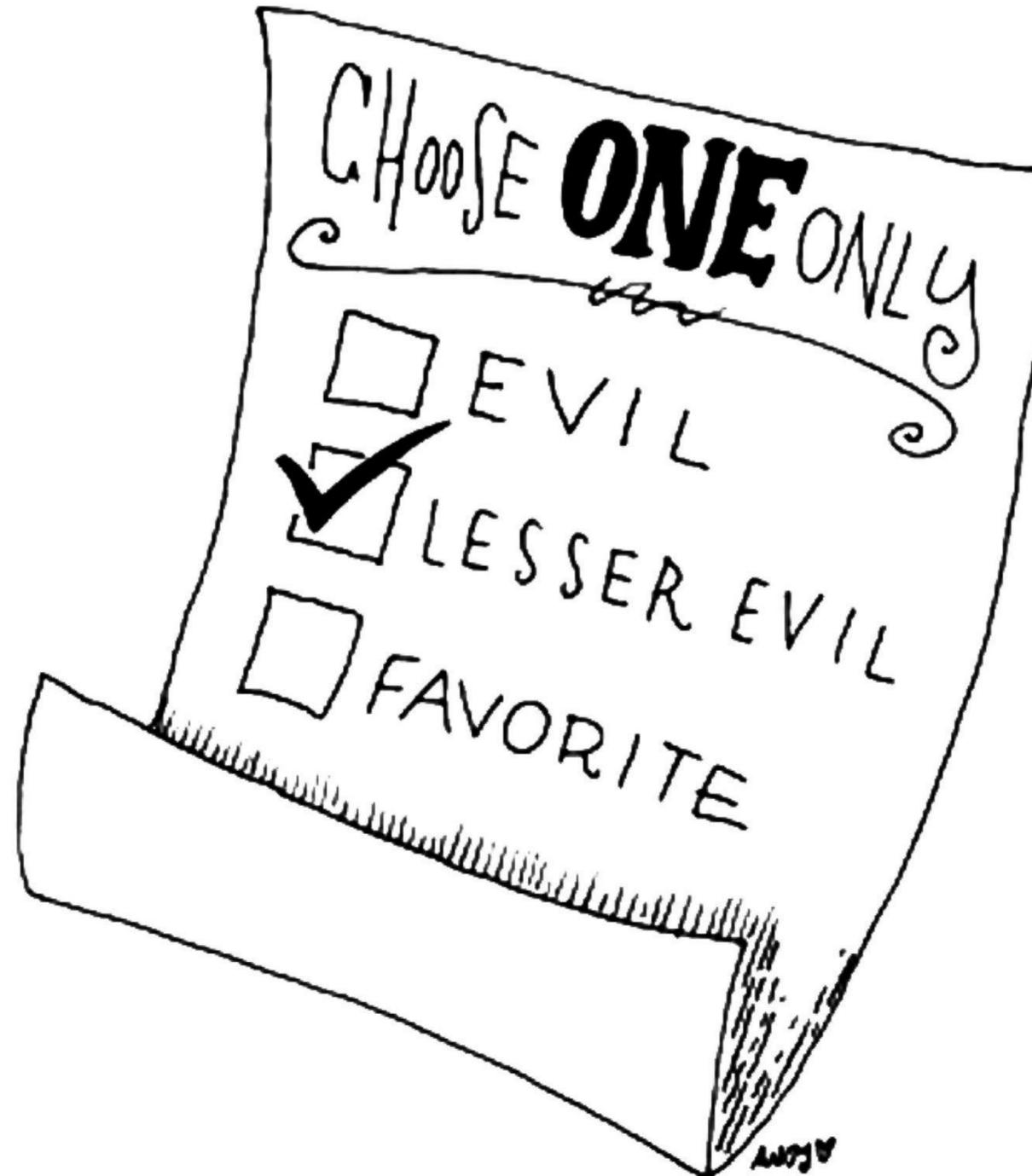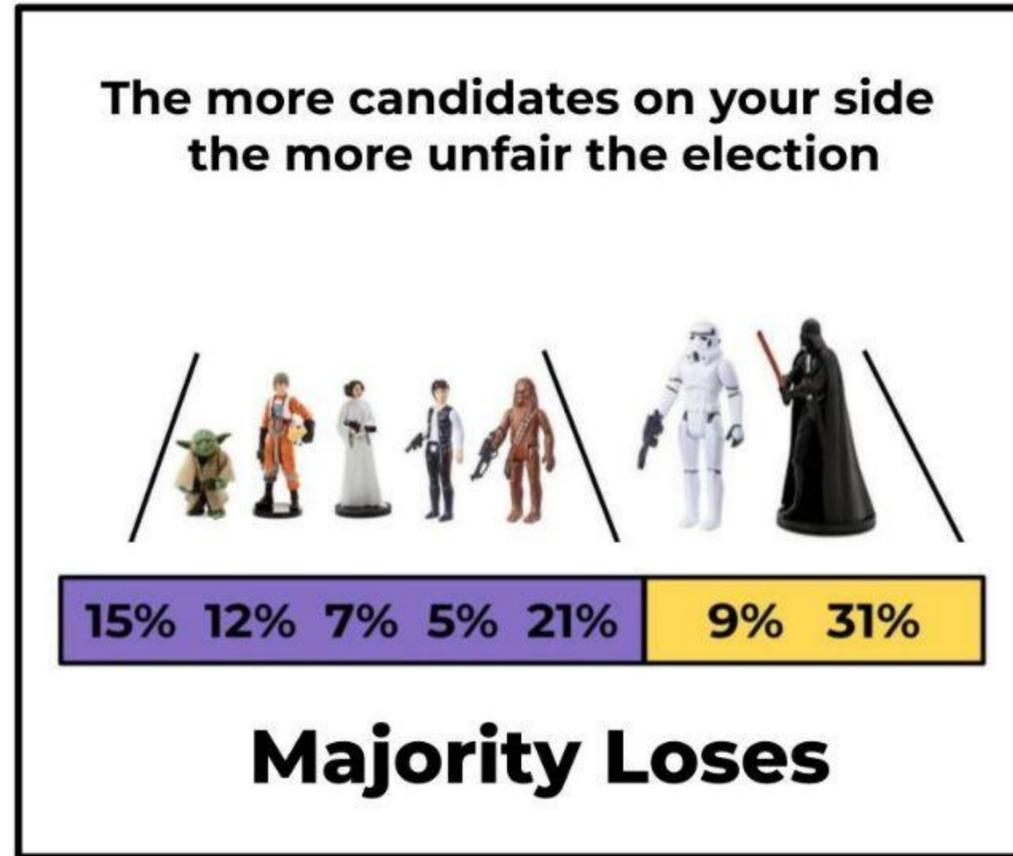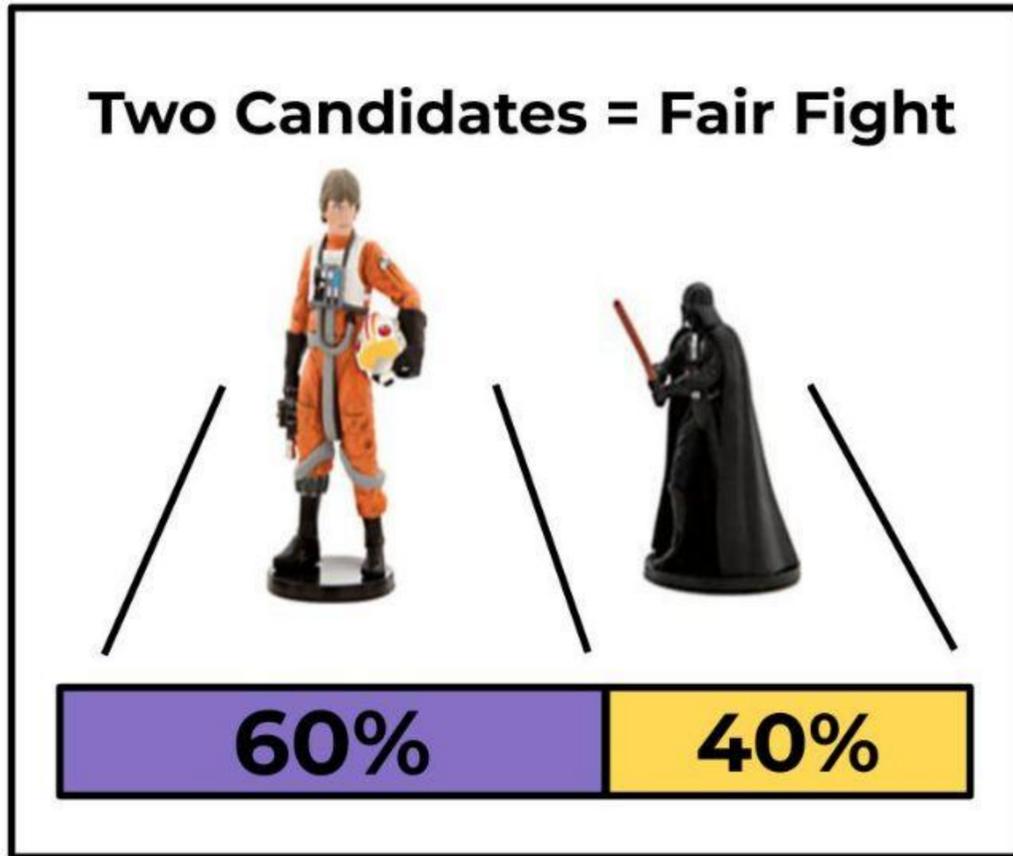# EQUAL.VOTE

"The idea is that your vote should be just as powerful as mine, no matter who you are, where you live, or how many candidates are on your side."

# THE PROBLEM

# VOTE-SPLITTING



**Two Candidates = Fair Fight**

60%    40%

**The more candidates on your side the more unfair the election**

15% 12% 7% 5% 21%    9% 31%

**Majority Loses**

**The more candidates on your side the less power your vote has**

Fully Powerful Voter

½ as Powerful Voter

⅓ as Powerful Voter

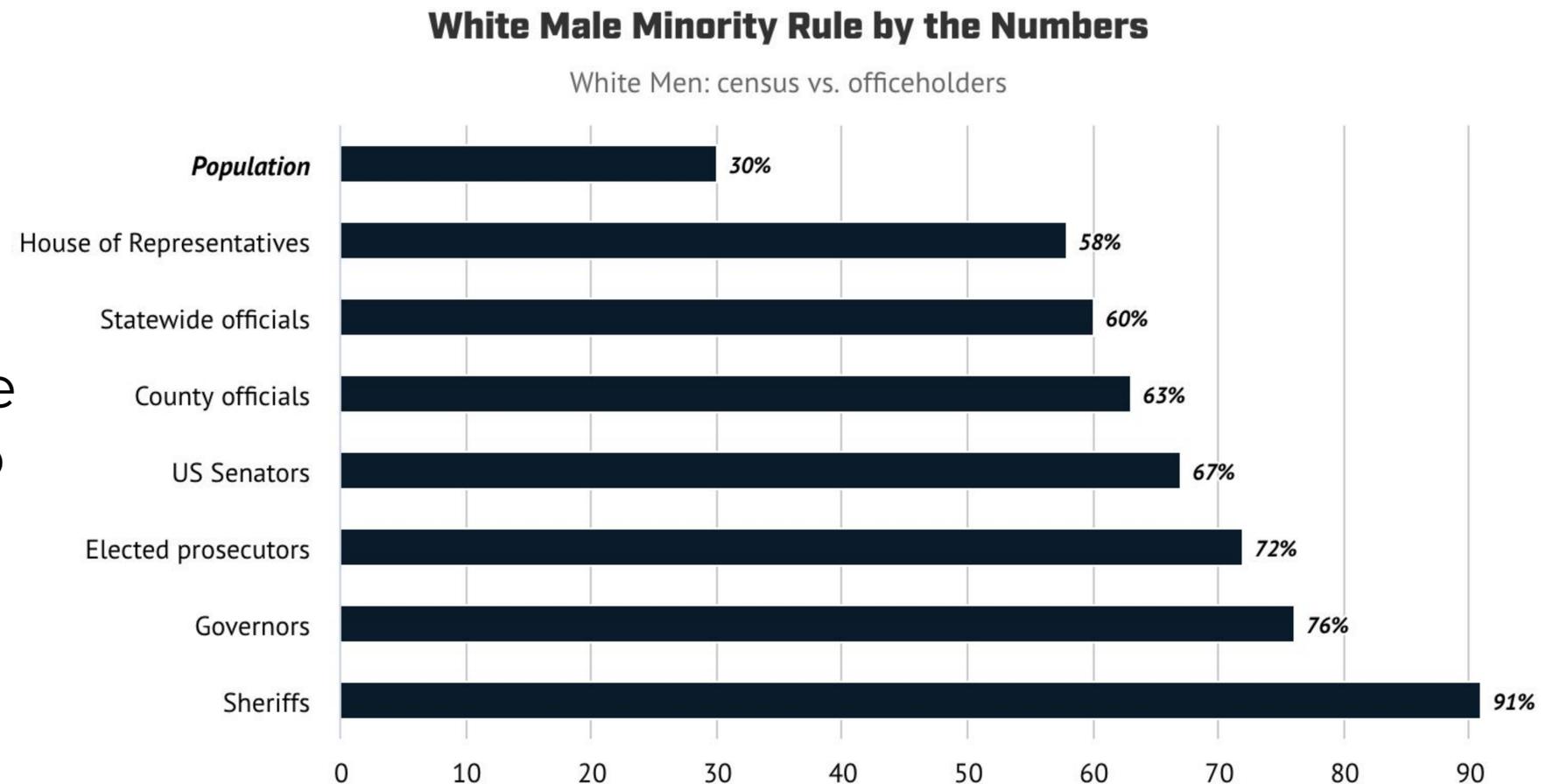**Vote-splitting leaves you without an equally weighted vote**

- In the current system, and in Ranked Choice, any time there are **more than two candidates in a race**, vote-splitting can leave majority coalitions divided and conquered, allowing a candidate opposed by the majority to win.

- To avoid a worst-case-scenario, **voters must strategically vote for the candidate on their side who they think is the most "electable."**

# LEVELING THE PLAYING FIELD

- Strategic incentives driven by vote-splitting **magnify implicit biases** and other barriers to representation.

- Those deemed "electable" are usually those who **raised the most money**, **incumbents**, those with **name recognition**.

- Voting methods which advantage those deemed most electable will continue to uphold serious **disparities in representation**, regardless of public opinion.

In 2019, 62% of elected offices in the US were white men, despite the fact that this group only comprises 30% percent of the population.

**White Male Minority Rule by the Numbers**

White Men: census vs. officeholders

| Office | Percent |
|---|---|
| Population | 30% |
| House of Representatives | 58% |
| Statewide officials | 60% |
| County officials | 63% |
| US Senators | 67% |
| Elected prosecutors | 72% |
| Governors | 76% |
| Sheriffs | 91% |

https://wholeads.us/research/system-failure-2020-primary-elections/

# WHAT DO WE WANT IN A VOTING METHOD?

⭐ **Simple:** easy to vote, easy to understand results, easy to tally, implement, and audit.

⭐ **Honest:** safe to vote your conscience. Incentivizes good voter behavior.

⭐ **Expressive:** voters are able to express their full opinion.

⭐ **Accurate:** winners reflect the will of the people as best as possible.

⭐ **Equal:** The system does not put some types of voters or candidates at an unfair advantage.
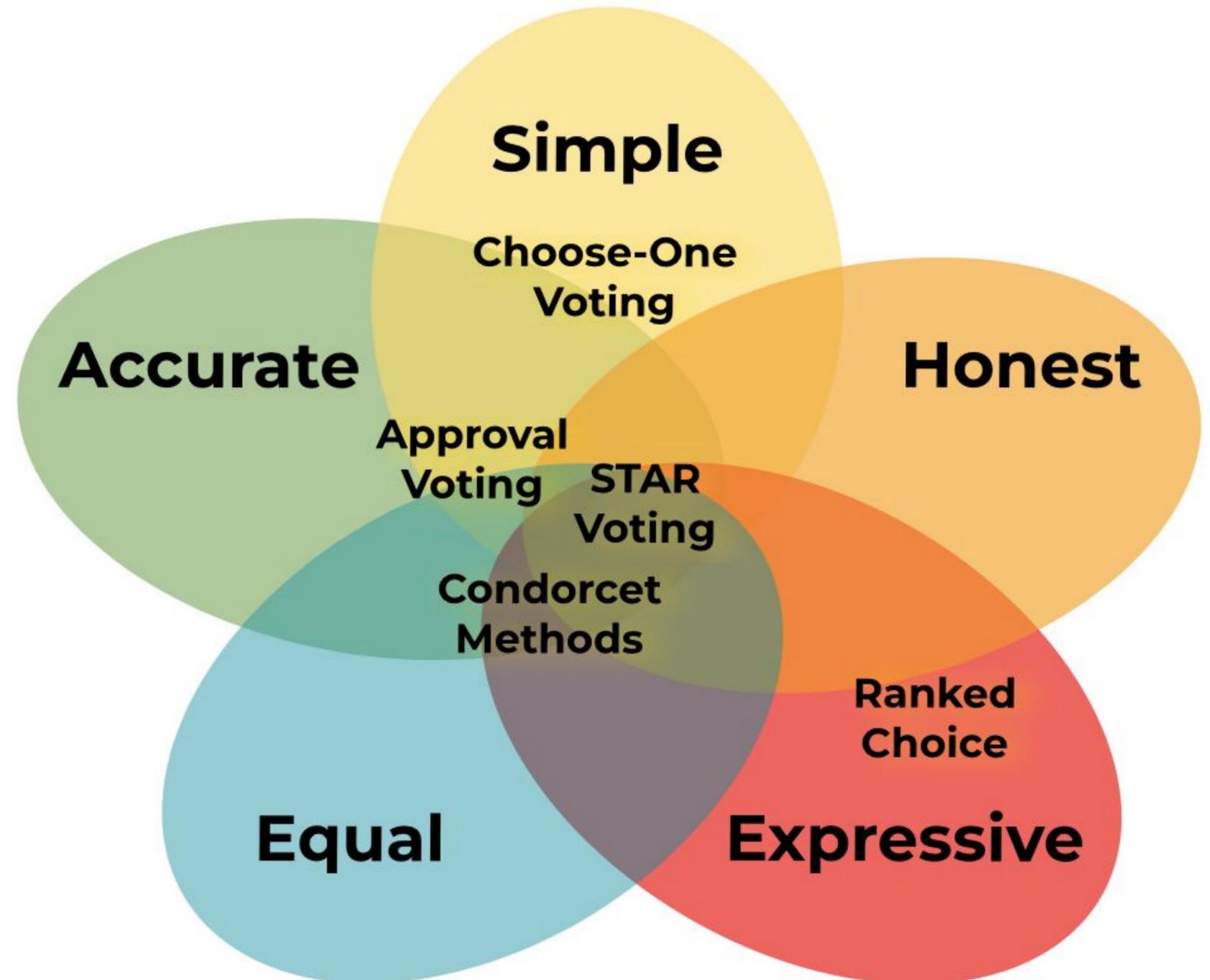
# WHAT IS STAR VOTING?

## STAR VOTING
### SCORE - THEN - AUTOMATIC - RUNOFF

- Give your favorite(s) five stars.
- Give your last choice(s) zero stars.
- Show preference order and level of support.
- Equal scores indicate no preference.
- Those left blank receive zero stars.

| Score Candidates: | Worst 0 | 1 | 2 | 3 | 4 | Best 5 |
|---|---|---|---|---|---|---|
| Andre | 0 | 1 | 2 | 3 | ● | 5 |
| Blake | ● | 1 | 2 | 3 | 4 | 5 |
| Carmen | 0 | 1 | 2 | 3 | 4 | ● |
| David | 0 | 1 | 2 | 3 | ● | 5 |
| Ella | 0 | ● | 2 | 3 | 4 | 5 |

## Score • Then • Automatic • Runoff

With STAR Voting you only have to vote once, and the ballots are counted in a two step process:

**Scoring Round:** the two highest scoring candidates are finalists.

**Automatic Runoff:** your vote automatically goes to the finalist you scored higher. The finalist preferred by the majority wins.

- Carmen: 54%
- David: 45.6%
- No Preference: .4%

# How does STAR Voting work?

## STAR VOTING
### SCORE - THEN - AUTOMATIC - RUNOFF

- Give your favorite(s) five stars.
- Give your last choice(s) zero stars.
- Show preference order and level of support.
- Equal scores indicate no preference.
- Those left blank receive zero stars.

|  | Worst | | | | | Best |
|---|---|---|---|---|---|---|
| Candidates: | 0 | 1 | 2 | 3 | 4 | 5 |
| Andy | ⓪ | ① | ② | ③ | ● | ⑤ |
| Ben | ⓪ | ● | ② | ③ | ④ | ⑤ |
| Cassie | ⓪ | ① | ② | ③ | ④ | ● |
| Daniel | ⓪ | ① | ② | ③ | ● | ⑤ |
| Erin | ● | ① | ② | ③ | ④ | ⑤ |

The two highest scoring candidates are finalists.
Your vote goes to the the finalist you prefer.

## Scoring Round

The two highest scoring candidates are finalists.

| Candidates: | Scores: |
|---|---|
| Cassie ★★★★☆ | 1,624,057 |
| Ben ★★★☆☆ | 892,103 |
| Erin ★★★☆☆ | 723,099 |
| Andy ★★☆☆☆ | 533,768 |
| Daniel ★☆☆☆☆ | 19,463 |

Cassie and Ben advance to the Automatic Runoff.

## Automatic Runoff

Your vote goes to the finalist you prefer.

|  | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| Andy | ⓪ | ① | ② | ③ | ● | ⑤ |
| Ben | ⓪ | ● | ② | ③ | ④ | ⑤ |
| Cassie | ⓪ | ① | ② | ③ | ④ | ● |
| Daniel | ⓪ | ① | ② | ③ | ● | ⑤ |
| Erin | ● | ① | ② | ③ | ④ | ⑤ |

This vote goes to Cassie because she was scored higher than Ben.

## Results

The finalist preferred by the majority wins!

Ben 41.1%
Cassie 58.9%
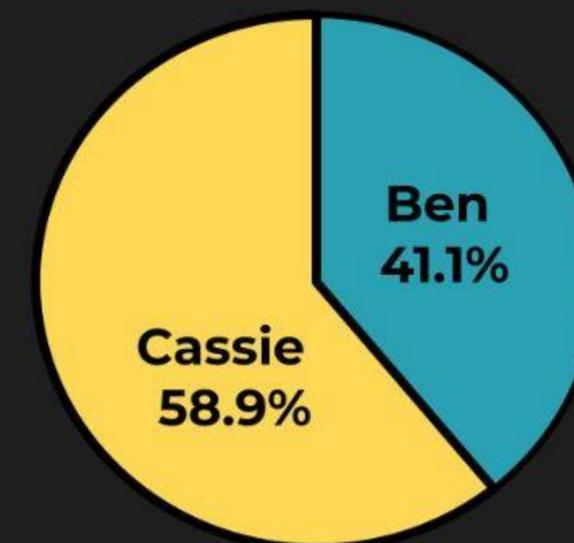
Each ballot counts as one vote.

**Whether or not your favorite can win, your vote goes to the finalist you prefer!**

# WHAT IS RANKED CHOICE VOTING?

- **There are a number of ways to tally a ranked ballot.**

- Originally ranked choice elections **counted all the rankings** and **elected the candidate preferred over all others.**

- 150 years ago **IRV was proposed as a work around** to make hand counting easier, **though it gets less representative outcomes.**

- In IRV, the top choice for each voter is counted and **votes transfer, if possible** when candidates are eliminated.

- **Most rankings given are not counted.** Some voters will have their next choice counted if their favorite is eliminated. Others will not.

- Selectively **ignoring ballot data can skew election results** and **disadvantage certain voters**, especially those whose favorites are strong underdogs.

- The candidate preferred over all others can lose in a RCV election. **Competitive elections are the most likely to fail.**

# STAR VOTING

## SCORE - THEN - AUTOMATIC - RUNOFF

- Give your favorite(s) five stars.
- Give your last choice(s) zero stars.
- Show preference order and level of support.
- Equal scores indicate no preference.
- Those left blank receive zero stars.

| Score Candidates: | Worst 0 | 1 | 2 | 3 | 4 | Best 5 |
|---|---|---|---|---|---|---|
| **Abby** | 0 | 1 | 2 | 3 | ● | 5 |
| **Ben** | ● | 1 | 2 | 3 | 4 | 5 |
| **Carmen** | 0 | 1 | 2 | 3 | 4 | ● |
| **DeAndre** | 0 | 1 | 2 | 3 | ● | 5 |
| **Eric** | 0 | ● | 2 | 3 | 4 | 5 |

The two highest scoring candidates are finalists.
Your vote goes to the the finalist you prefer.

# Ranked Choice Voting
## aka Instant Runoff Voting

Rank candidates in order of preference.
You can't give the same ranking twice.

| Rank Candidates: | 1st | 2nd | 3rd | 4th | 5th | 6th |
|---|---|---|---|---|---|---|
| **Abby** | 1 | 2 | ● | 4 | 5 | 6 |
| **Ben** | 1 | 2 | 3 | 4 | ● | 6 |
| **Carmen** | ● | 2 | 3 | 4 | 5 | 6 |
| **DeAndre** | 1 | ● | 3 | 4 | 5 | 6 |
| **Eric** | 1 | 2 | 3 | ● | 5 | 6 |

First choice votes are counted and the candidate who came in last place is eliminated. This process continues in tournament style rounds. In each round, ballots for the eliminated candidate are reallocated to the voter's next remaining choice, if possible. If the next choice has already been eliminated then the ballot is 'exhausted' and does not count in subsequent rounds.

**Voter Instructions** ⟷

**Tabulation** ⟷

# RANKED CHOICE RESULTS

## Tabulation requires as many round as there are candidates, -1.

- Top ranks are counted and votes transfer *if possible*.
- In this election 105,769 ballots were exhausted by the final round.
- Over 10% of ballots are exhausted on average.

**Ranked-Choice Voting Official Final Accumulated Results - Mayor of Oakland**

**Official Final Accumulated results last updated: Friday, November 19, 2010**

Accumulated Results Detail (PDF) **    Ballot Image File (TXT)    Master Lookup File (TXT)    Ballot Image Help (PDF) **    Comprehensive Report (PDF) **

| | Round 1 | | | Round 2 | | | Round 3 | | | Round 4 | | | Round 5 | | | Round 6 | | | Round 7 | | | Round 8 | | | Round 9 | | | Round 10 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Votes | % | Transfer | Votes | % | Transfer | Votes | % | Transfer | Votes | % | Transfer | Votes | % | Transfer | Votes | % | Transfer | Votes | % | Transfer | Votes | % | Transfer | Votes | % | Transfer | Votes | % | Transfer |
| DON PERATA | 40342 | 33.73% | +32 | 40374 | 33.80% | +81 | 40455 | 33.90% | +151 | 40606 | 34.08% | +122 | 40728 | 34.24% | +86 | 40814 | 34.39% | +550 | 41364 | 35.08% | +824 | 42188 | 36.13% | +3277 | 45465 | 40.16% | +6407 | 51872 | 49.04% | 0 |
| TERENCE CANDELL | 2315 | 1.94% | +1 | 2316 | 1.94% | +70 | 2386 | 2.00% | +111 | 2497 | 2.10% | +116 | 2613 | 2.20% | +67 | 2680 | 2.26% | -2680 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 |
| GREG HARLAND | 966 | 0.81% | +2 | 968 | 0.81% | +91 | 1059 | 0.89% | +28 | 1087 | 0.91% | -1087 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 |
| DON MACLEAY | 1630 | 1.36% | +6 | 1636 | 1.37% | +41 | 1677 | 1.41% | +42 | 1719 | 1.44% | +133 | 1852 | 1.56% | -1852 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 |
| JEAN QUAN | 29266 | 24.47% | +33 | 29299 | 24.53% | +92 | 29391 | 24.63% | +123 | 29514 | 24.77% | +131 | 29645 | 24.93% | +855 | 30500 | 25.70% | +384 | 30884 | 26.19% | +771 | 31655 | 27.11% | +3378 | 35033 | 30.94% | +18864 | 53897 | 50.96% | 0 |
| ARNOLD FIELDS | 733 | 0.61% | +5 | 738 | 0.62% | -738 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 |
| JOE TUMAN | 14347 | 12.00% | +10 | 14357 | 12.02% | +114 | 14471 | 12.13% | +81 | 14552 | 12.21% | +228 | 14780 | 12.43% | +169 | 14949 | 12.60% | +253 | 15202 | 12.89% | +260 | 15462 | 13.24% | -15462 | 0 | 0.00% | 0 | 0 | 0.00% | 0 |
| MARCIE HODGE | 2994 | 2.50% | +5 | 2999 | 2.51% | +34 | 3033 | 2.54% | +122 | 3155 | 2.65% | +45 | 3200 | 2.69% | +50 | 3250 | 2.74% | +375 | 3625 | 3.07% | -3625 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 |
| LARRY LIONEL "LL" YOUNG JR. | 933 | 0.78% | +6 | 939 | 0.79% | +37 | 976 | 0.82% | -976 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 |
| REBECCA KAPLAN | 25813 | 21.58% | +18 | 25831 | 21.62% | +59 | 25890 | 21.69% | +136 | 26026 | 21.84% | +91 | 26117 | 21.96% | +379 | 26496 | 22.32% | +335 | 26831 | 22.76% | +644 | 27475 | 23.53% | +5244 | 32719 | 28.90% | -32719 | 0 | 0.00% | 0 |
| Write-In | 268 | 0.22% | -268 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 |
| Exhausted by Over Votes | 355 | | +1 | 356 | | +6 | 362 | | +9 | 371 | | +5 | 376 | | +4 | 380 | | +21 | 401 | | +15 | 416 | | +45 | 461 | | +65 | 526 | | 0 |
| Under Votes | 2306 | | 0 | 2306 | | 0 | 2306 | | 0 | 2306 | | 0 | 2306 | | 0 | 2306 | | 0 | 2306 | | 0 | 2306 | | 0 | 2306 | | 0 | 2306 | | 0 |
| Exhausted Ballots | 0 | | +149 | 149 | | +113 | 262 | | +173 | 435 | | +216 | 651 | | +242 | 893 | | +762 | 1655 | | +1111 | 2766 | | +3518 | 6284 | | +7383 | 13667 | | 0 |
| Continuing Ballots | 119607 | 100.00% | | 119457 | 100.00% | | 119338 | 100.00% | | 119156 | 100.00% | | 118935 | 100.00% | | 118689 | 100.00% | | 117906 | 100.00% | | 116780 | 100.00% | | 113217 | 100.00% | | 105769 | 100.00% | |
| TOTAL | 122268 | | 0 | 122268 | | 0 | 122268 | | 0 | 122268 | | 0 | 122268 | | 0 | 122268 | | 0 | 122268 | | 0 | 122268 | | 0 | 122268 | | 0 | 122268 | | 0 |
| REMARKS | *Tie resolved in accordance with election law. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

# STAR RESULTS

## STAR Voting is tallied in 2 rounds:
## 1.) Add up the stars.    2.) Add up the votes.

| STAR Voting Election Results for Democratic Party of Oregon Platform Committee: Peter Nordby wins. | | | | | |
|---|---|---|---|---|---|
| | Total Stars | Runoff Votes | | | |
| Peter Nordbye | 200 | 15 | | | |
| Spencer Trumm | 190 | 10 | | | |
| Shani Harris-Bagwell | 185 | | | | |
| Sucheta Bal | 173 | | | | |
| Ami Fox | 153 | | | | |
| Gary Lietke | 153 | | | | |
| Mary Schutten | 142 | | | | |
| Daniel Goetz | 130 | | | | |
| Faith Ruffing | 138 | | | | |
| Tracy Farwell | 119 | | | | |

# THE EQUAL VOTE CRITERION

Voting methods that pass the Equal Vote Criterion eliminate vote-splitting

✓ **STAR Voting**

✓ **Ranked Robin**
(Condorcet voting)

✓ **Approval Voting**

✗ **Choose-One Plurality**
(Current System)

✗ **Ranked Choice Voting**
(Instant Runoff Voting version)

✗ **Single Transferable Vote**
(Proportional Ranked Choice)

Ensuring an Equal Vote can be done with any ballot if you:
- Allow voters to support as many candidates as they like.
- Allow voters to support candidates equally.
- Count all ballot data given.

# MEASURING PUBLIC OPINION

- A 2012 exit poll in NYC looked at **voter behavior** under alternative voting methods; Plurality was compared to Approval, 5 Star, and Ranked Choice.
- The winner had over 50%, so the RCV election was decided in one round only and the **Plurality and RCV results were nearly identical**. (left)
- The **Approval and 5 Star results showed the full breadth of voter support**. (right)
- For candidates and their supporters it's critical to know how competitive they actually are.
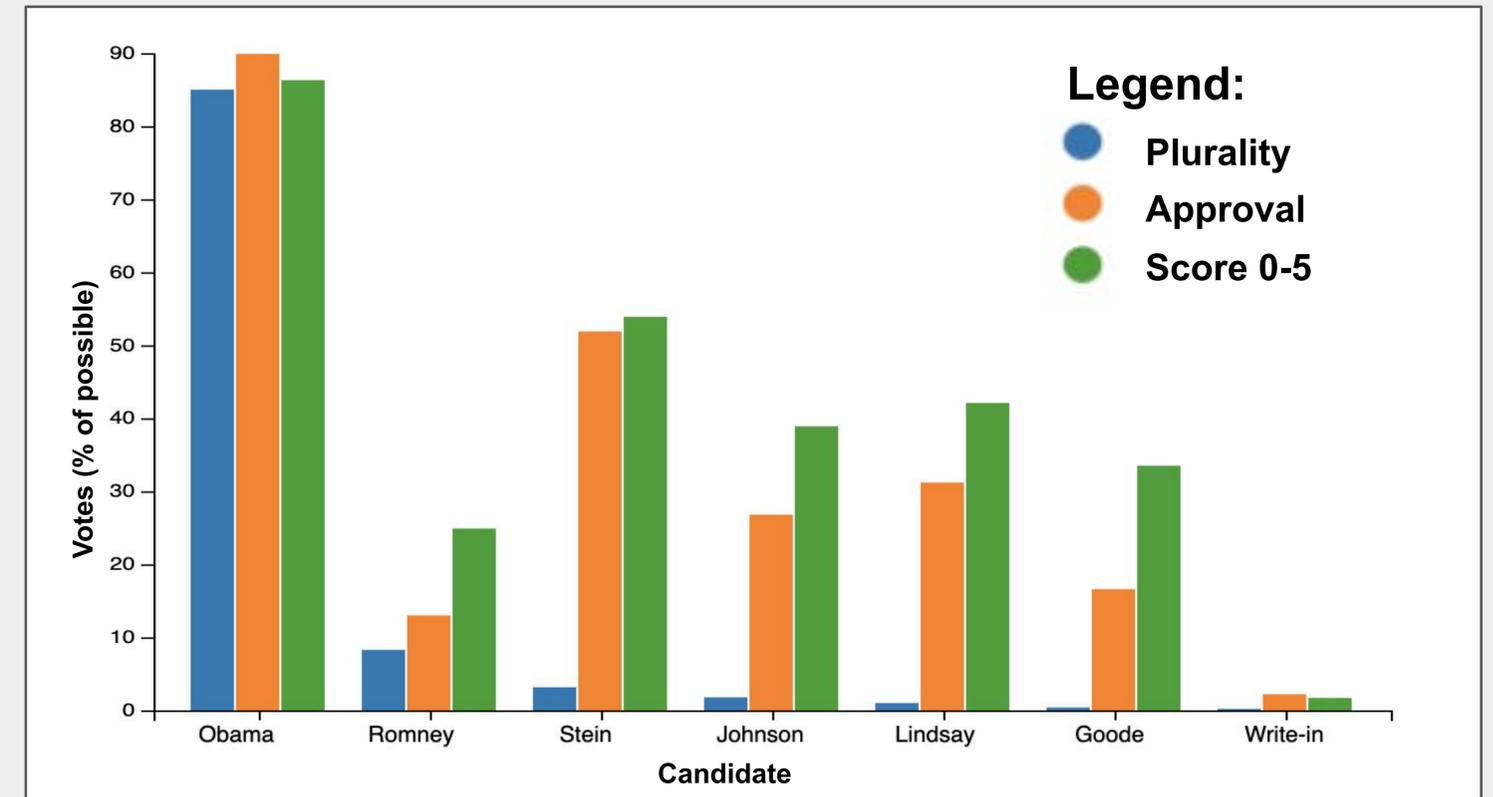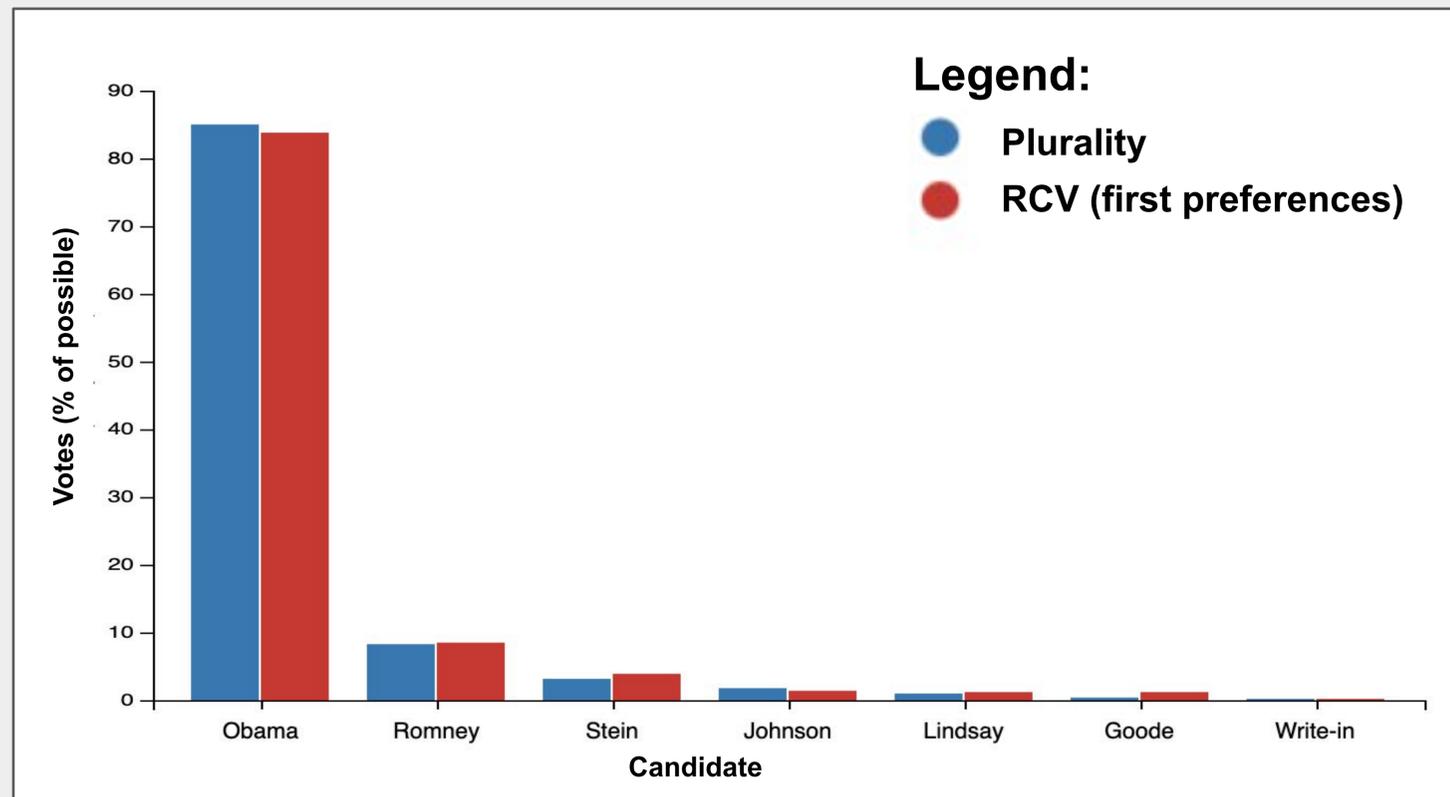
# ACCURATE REPRESENTATION

- Using statistical analysis, this study looked at 1000s of elections under a wide variety of realistic scenarios and measured how often each voting method picked the correct candidate.
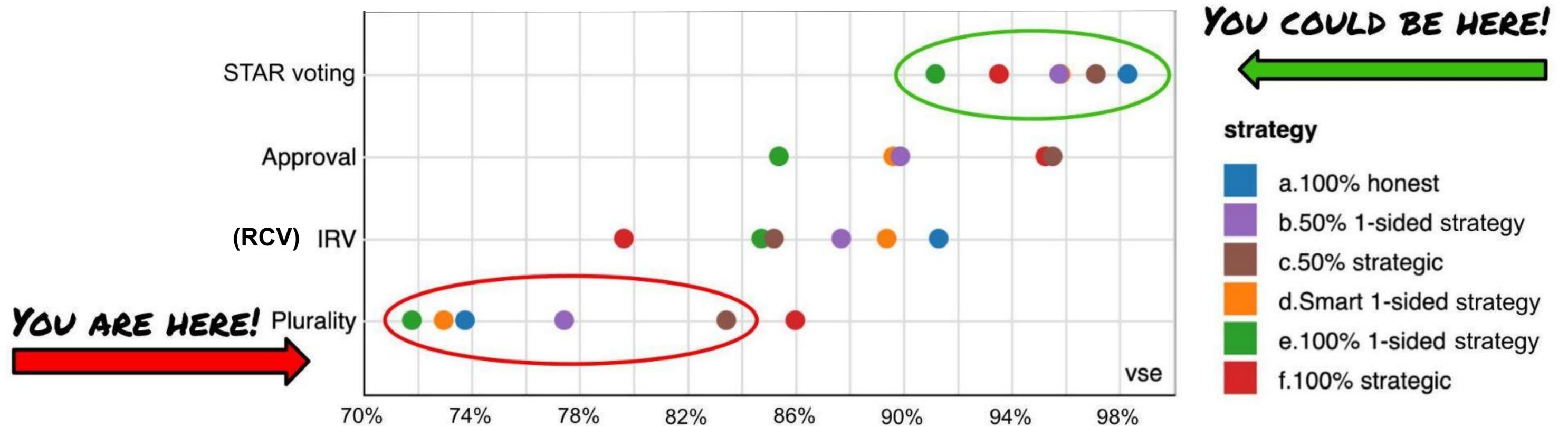


Voter Satisfaction Efficiency by Dr. Jameson Quinn, PhD in Statistics, Harvard

# STAR VOTING IS ADAPTABLE

## Nonpartisan?

- ✓ Nonpartisan Elections
- ✓ Partisan Elections

## Number of Winners?

- ✓ Single-winner
- ✓ Multi-winner
- ✓ Proportional Representation

## Primaries?

- ✓ Without primaries
- ✓ STAR Voting top 5 primary and general election

## Districting?

- ✓ Single-winner districts
- ✓ Multi-member districts

## Election Integrity?

- ✓ No centralized tabulation
- ✓ Risk-Limiting Auditable
- ✓ No new voting machines or new hardware
- ✓ Vote By Mail
- ✓ Quick and transparent results

# DISTRICTS OR PROPORTIONAL REPRESENTAITON?

## DISTRICTS:

### PROS
- Strong local representation.
- Easier to run grassroots community rooted campaigns.
- Simple and transparent.
- Good accountability for voters, a majority is all that's needed to vote someone out.
- Historically leads to better representation for people of color.

### CONS
- No guarantee of ideological diversity.
- Elected officials must represent people who they may not agree with.

## PROPORTIONAL REPRESENTATION:

### PROS
- Diversified ideological represntation matches makeup of the electorate.
- Most voters will have someone elected who they agree with.
- Increased representation for currently underrepresented ideologies. (Conservatives are county's largest underrepresented group currently.)
- Can be done with STAR-PR to pair with a great single-winner method.

### CONS
- Less local representation.
- Expensive and complex to implement.
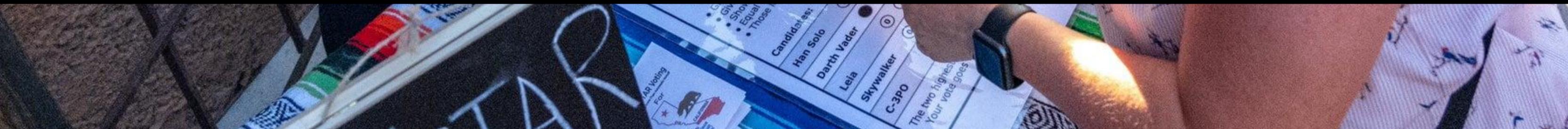- Less transparent results.

# WHERE IS STAR VOTING UNDER CONSIDERATION?



Canada

Oregon

Massachusetts

New York

Utah

Colorado

California

North Carolina

Texas

*Map slightly squished

LET'S LEAD ON THIS ISSUE!

Learn more at **starvoting.us**

Round 1:
Score

| First Round Total Sco... | |
|---|---|
| Darth Vader | 13,568 |
| Skywalker | 12,935 |
| Leia | 11,923 |
| Chewbaca | 8,101 |
| C3PO | 292 |

Determine 2 highest     Determine whi...
scoring candidates      preferred by more ...

Candidates:
Han Solo
Darth Vader
Leia
Skywalker
C-3PO

# FURTHER INFORMATION

**For more information on Equal Vote Coalition and Star Voting, find us on our websites!**
Equal Vote : equal.vote/        STAR Voting: starvoting.us/

**Want to get into the science that drove us to STAR voting, and is the basis of our movement?**
Voting Simulation Visualizations: starvoting.us/accuracy
STAR Voting and Ranked Choice Voting: equal.vote/star-vs-rcv

**Connect on social media:**
 **Facebook**
- **STAR Voting:** facebook.com/starvoting
- **Equal Vote:** facebook.com/EqualVote

 **Twitter:**
- **STAR Voting:** twitter.com/5starvoting
- **Equal Vote:** twitter.com/TheEqualVote

 **Instagram:**
- **STAR Voting:** instagram.com/starvoting/

# How To Choose a Voting Method

**START HERE**

Do you want to ensure that every voter has an equally powerful vote?

- **No →** Do you want to empower voters to vote their conscience without risking wasting their vote?
  - **No →** Do you want your elections to be secure and easy to audit?
    - **YES →** Do you want majority preferred winners when possible, or diverse idealogical representation?
      - **Majority Preferred →** You want Choose-One Plurality Voting with a Top-2 general election
      - **Diversified Ideologies →** You want Party List Proportional
    - **No →** Do you want majority preferred winners when possible, or diverse idealogical representation?
      - **Majority Preferred →** You want Ranked Choice Voting (aka Instant Runoff)
      - **Diversified Ideologies →** You want Proportional Ranked Choice (Single Transferable Vote)
  - **YES →** (to single-winner branch)

- **YES →** Is your election for a single-winner or executive office?
  - **YES →** What type of ballot do you want?
    - **Traditional →** Do you want to ensure majority preferred winners?
      - **No →** You want single-winner Approval Voting
      - **YES →** Are you okay with holding two separate elections, a primary and a general?
        - **YES →** You want an Approval Voting primary with a Top-2 general
        - (No) →
    - **Preference Voting →** Do you want your election's tabulation and results to be simple and transparent?
      - **No →** Do you want to ensure majority preferred winners when possible?
        - **No →** You want single-winner Condorcet Voting
        - **YES →** You want single-winner STAR Voting
      - **YES →** You want single-winner STAR Voting

  - **No →** Does local representation matter for this election?
    - **Absolutely →** Single-Winner Districts
    - **Somewhat →** Do you want to make elections more affordable and accessible for candidates or more competitive?
      - **Accessible →** Single-Winner Districts
      - **Competitive →** Multi-Winner districts
    - **Not at all →** At-Large Elections

- **At-Large Elections →** Do you want majority preferred winners when possible, or diverse idealogical representation?
  - **Majority Preferred →** What type of ballot do you want?
    - **Traditional →** You want an Approval Voting primary and multi-winner general election
    - **Preference Voting →** Do you want your election's tabulation to be simple and transparent?
      - **No →** You want multi-winner Condorcet Voting
      - **YES →** You want multi-winner STAR Voting
  - **Diversified Ideologies →** What type of ballot do you want?
    - **Traditional →** You want Proportional Approval Voting
    - **Ranked →** You want Proportional Condorcet
    - **5 Star →** You want Proportional STAR Voting

# A REAL WORLD RCV BALLOT

## City Council

| Rank up to 6 candidates. Mark no more than 1 oval in each column. | First choice 1st | Second choice 2nd | Third choice 3rd | Fourth choice 4th | Fifth choice 5th | Sixth choice 6th | Seventh choice 7th | Eighth choice 8th | Nineth choice 9th | Tenth choice 10th |
|---|---|---|---|---|---|---|---|---|---|---|
| **Valarie Altman** Orange Party | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ |
| **George Hovis** Yellow Party | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ |
| **Althea Sharp** Purple Party | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ |
| **Mary Tawa** Lime Party | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ |
| **Joe Li** Tan Party | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ |
| **Phil Wilkie** Independent | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ | ⬭ |

# BULLET VOTING

In both Ranked Choice and STAR Voting some voters may "bullet vote" and **only vote for their favorite**. In both systems, if the voter did have a more nuanced opinion this is **not effective** and their vote is **less likely to make a difference**.



## Who are Bullet Voters?

- Voters who have a polarized opinion and only like one candidate.
- Voters who only have one candidate on their side.
- Lazy or rushed voters who don't take the time to vote expressively.
- Voters who strategically decide not to show support for other candidates, even though this is not a good strategy in either STAR or RCV.

# VOTER ERROR - STAR Voting

Election protocols specify that ballots are counted according to voter intent if possible. **It's almost impossible to accidentally void or "spoil" a STAR ballot** when proper protocols are in place. **Equal rankings, the leading cause of spoiled ballots in RCV, are allowed in STAR Voting.**



The voter above crossed out the wrong rating and wrote in a new one.* This ballot will be counted as 5 stars for Ben. **This is not a spoiled ballot.**



The voter above filled in too many bubbles as if they were doing a 5 star rating.* This ballot will be counted as 5 stars for Ben and 3 for Carmen. **This is not a spoiled ballot.**



The voter above filled in both the 1 star and 5 star bubbles for Ben.* This ballot should be counted as 5 stars for Ben and 3 for Carmen. **This should not be a spoiled ballot.**

*Recommended election protocols specify to count the highest rating given for each candidate.

# SPOILED BALLOTS - Ranked Choice

In RCV, voters can not give candidates equal rankings and can not give multiple rankings to a single candidate. These rules lead to a high rate of "spoiled" or voided ballots.
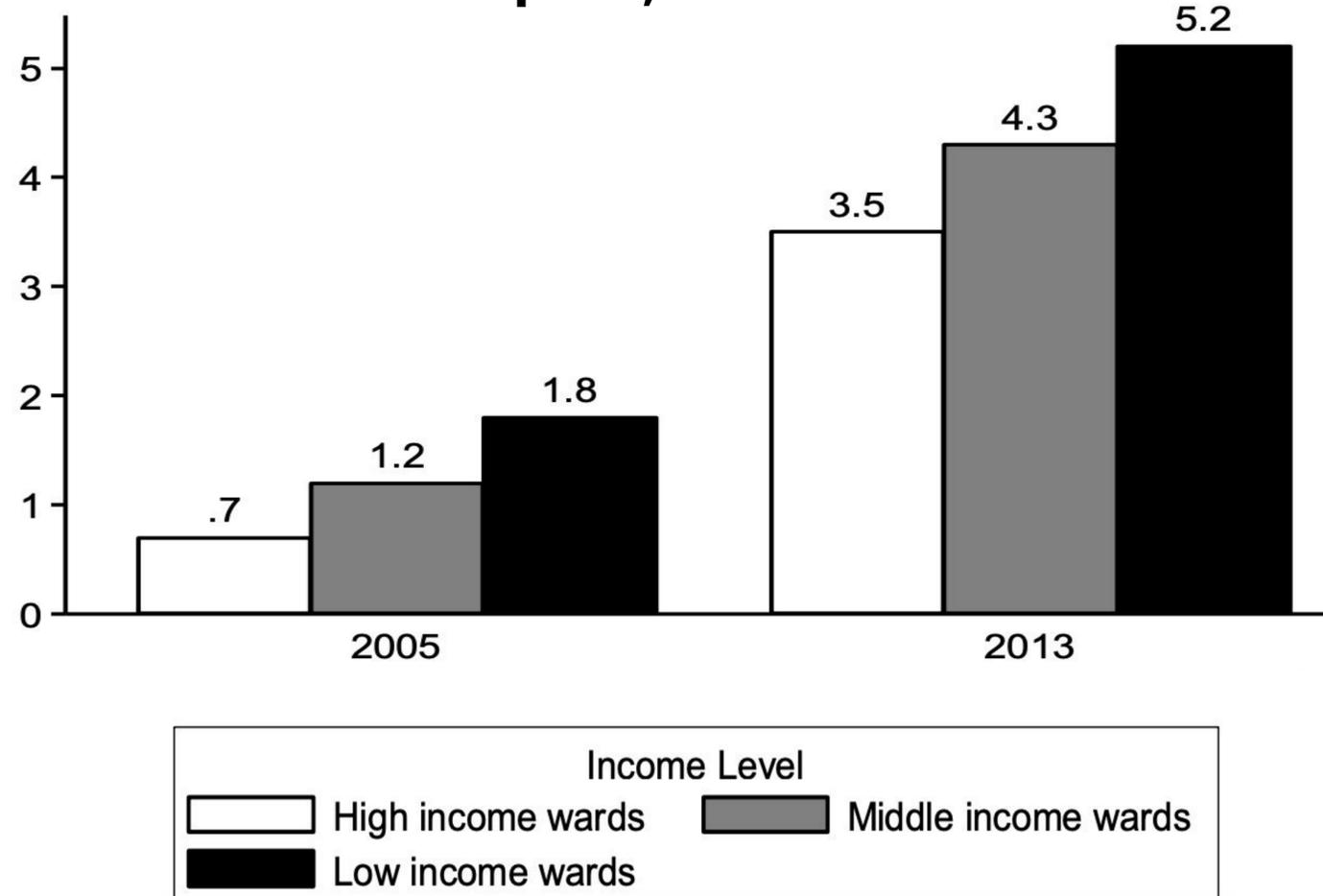


**ERROR 1**
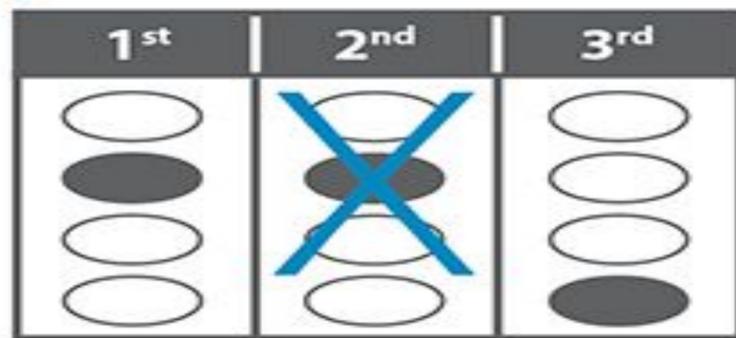
**This is a spoiled ballot.**



**ERROR 2**
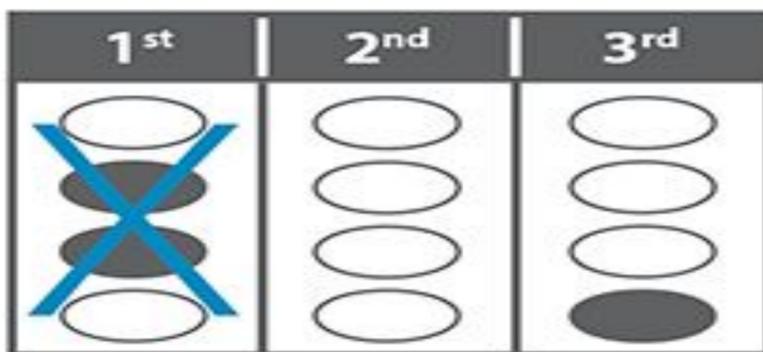
**This is a spoiled ballot.**



**Spoiled Ballot Rates by Ward Before and After RCV Adoption**
**Minneapolis, Minnesota**

Income Level
- High income wards
- Middle income wards
- Low income wards

# RCV EXHAUSTED BALLOTS



|  | 1st | 2nd | 3rd | 4th | 5th |
|---|---|---|---|---|---|
| Burgers | ○ | ○ | ○ | ○ | ○ |
| Curry | ○ | ✗ | ○ | ○ | ○ |
| Salad | ○ | ○ | ✗ | ○ | ○ |
| Tacos | ○ | ○ | ○ | ○ | ○ |
| Sushi | ● | ○ | ○ | ○ | ○ |

- By the time Sushi was eliminated this voter's other choices were gone already. This is an exhausted ballot.
- If all rankings had been counted, this election would have shown that curry was actually preferred over burgers.
- This voter should have strategically ranked curry first, but they were told that if their favorite was eliminated their next choice would be counted.

# WASTED VOTES - Ballot Limitations

## Ranked Choice Voting
### aka Instant Runoff Voting

Rank candidates in order of preference.
You can't give the same ranking twice.

| Rank Candidates: | 1st | 2nd | 3rd | 4th | 5th |
|---|---|---|---|---|---|
| **Abby** | ① | ② | ③ | ④ | ⑤ |
| **Ben** | ① | ② | ③ | ④ | ● |
| **Carmen** | ① | ② | ● | ④ | ⑤ |
| **DeAndre** | ① | ● | ③ | ④ | ⑤ |
| **Eric** | ① | ② | ③ | ● | ⑤ |
| **Francisco** | ① | ② | ③ | ④ | ⑤ |
| **Graham** | ● | ② | ③ | ④ | ⑤ |
| **Hector** | ① | ② | ③ | ④ | ⑤ |
| **Irma** | ① | ② | ③ | ④ | ⑤ |

- RCV ballots only allow voters to rank a limited number of candidates.

- Limiting the number of ranks in RCV helps prevent spoiled ballots, but increases the number of exhausted ballots in races with large fields of candidates.

- With STAR, voters can score as many or as few candidates as they want because equal scores are allowed.

## ☆ STAR VOTING
### SCORE - THEN - AUTOMATIC - RUNOFF

- Give your favorite(s) five stars.
- Give your last choice(s) zero stars.
- Show preference order and level of support.
- Equal scores indicate no preference.
- Those left blank receive zero stars.

| | Worst | | | | | Best |
|---|---|---|---|---|---|---|
| Score Candidates: | 0 | 1 | 2 | 3 | 4 | 5 |
| **Andre** | ⓪ | ① | ② | ③ | ● | ⑤ |
| **Blake** | ● | ① | ② | ③ | ④ | ⑤ |
| **Carmen** | ⓪ | ① | ② | ③ | ④ | ● |
| **David** | ⓪ | ① | ② | ③ | ④ | ● |
| **Ella** | ⓪ | ● | ② | ③ | ④ | ⑤ |
| **Fernando** | ⓪ | ① | ② | ● | ④ | ⑤ |
| **Gabe** | ⓪ | ① | ② | ③ | ④ | ● |
| **Helena** | ⓪ | ① | ② | ③ | ● | ⑤ |
| **Ira** | ● | ① | ② | ③ | ④ | ⑤ |

# NO-PREFERENCE VOTES IN THE STAR RUNOFF

- With STAR, voters can score as many or as few candidates as they want because *equal scores are allowed.*

- Allowing voters to give equal scores in STAR helps **prevent spoiled ballots,** and it's also key for *eliminating vote-splitting* between similar candidates and **maintaining election accuracy in larger fields of candidates**.

- Ballots counted as no-preference in the runoff *are counted* in both the scoring round and the runoff, and they **do make a difference** to help advance these voter's candidates who were more preferred.



## STAR VOTING
### SCORE - THEN - AUTOMATIC - RUNOFF

- Give your favorite(s) five stars.
- Give your last choice(s) zero stars.
- Show preference order and level of support.
- Equal scores indicate no preference.
- Those left blank receive zero stars.

| Score Candidates: | Worst 0 | 1 | 2 | 3 | 4 | Best 5 |
|---|---|---|---|---|---|---|
| **Andre** | 0 | 1 | 2 | 3 | ● | 5 |
| **Blake** | ● | 1 | 2 | 3 | 4 | 5 |
| **Carmen** | 0 | 1 | 2 | 3 | 4 | ● |
| **David** | 0 | 1 | 2 | 3 | 4 | ● |
| **Ella** | 0 | ● | 2 | 3 | 4 | 5 |
| **Fernando** | 0 | 1 | 2 | ● | 4 | 5 |
| **Gabe** | 0 | 1 | 2 | 3 | 4 | ● |
| **Helena** | 0 | 1 | 2 | 3 | ● | 5 |
| **Ira** | ● | 1 | 2 | 3 | 4 | 5 |

# Wasted Votes in the 2009 Burlington RCV Mayoral Election



Kiss

Montroll

Smith
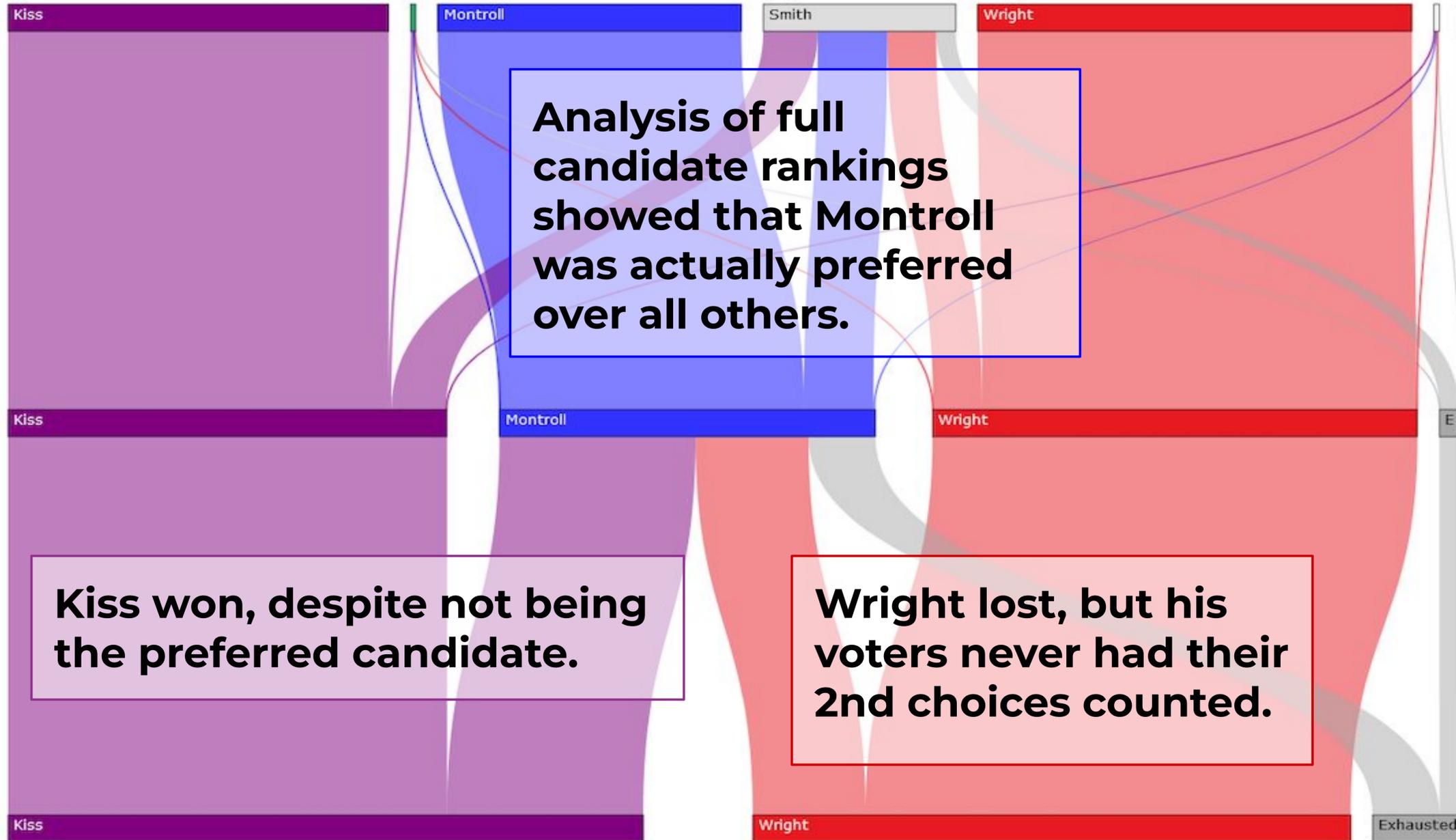
Wright

**Analysis of full candidate rankings showed that Montroll was actually preferred over all others.**
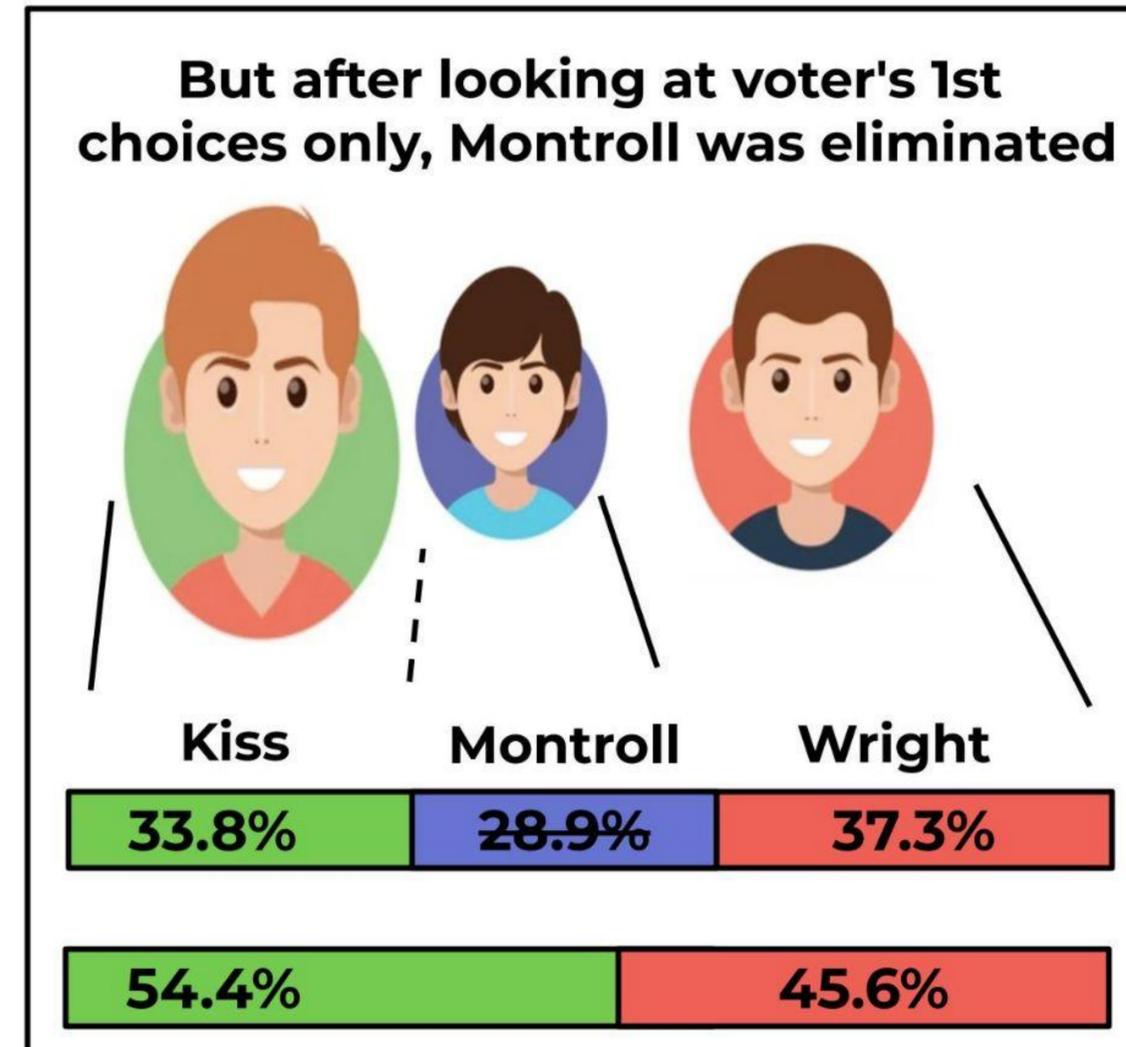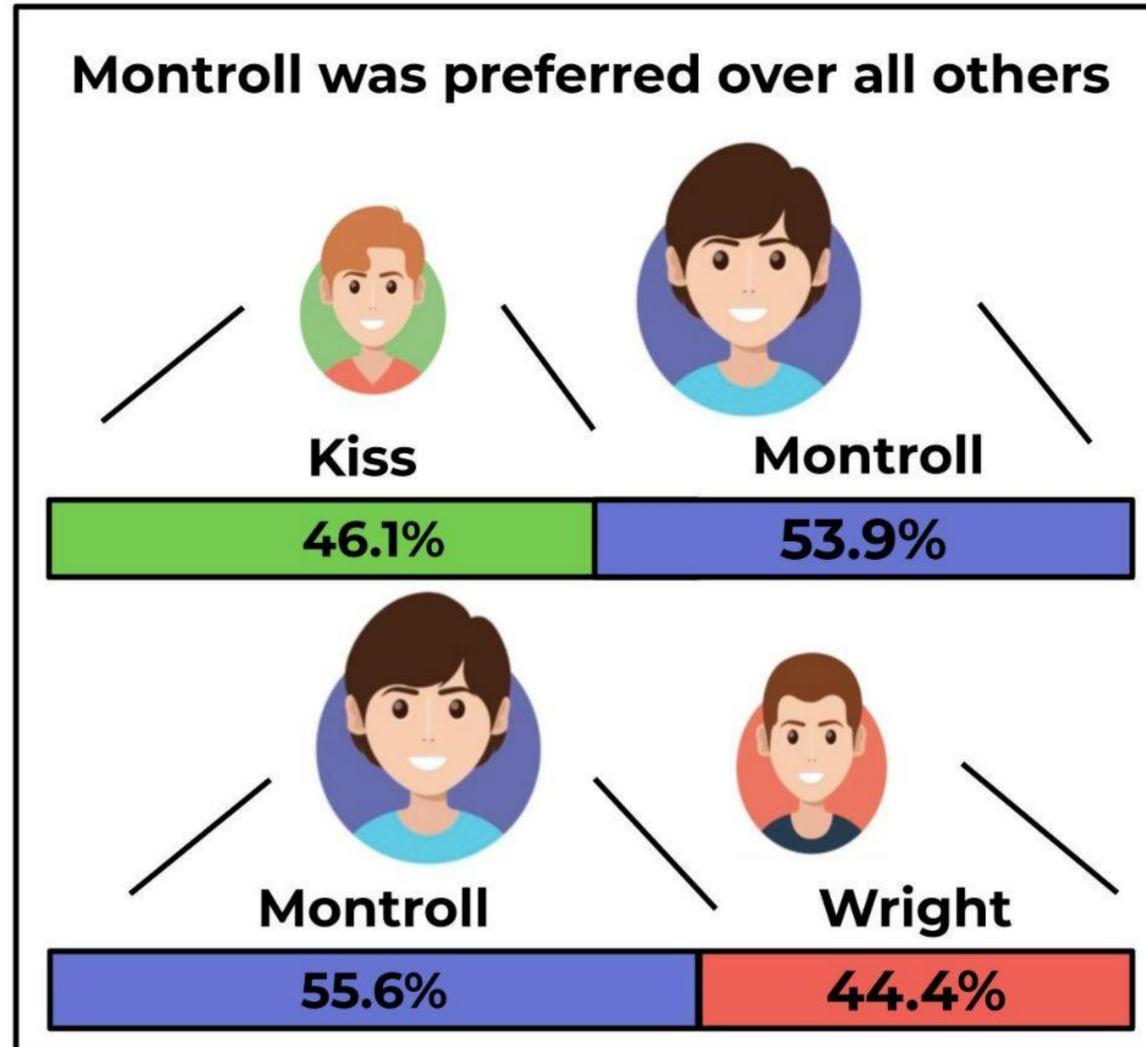
Kiss

Montroll

Wright

E

**DETAIL OF EXHAUSTED BALLOTS**

**These ballots were not counted in the deciding round, despite being numerous enough to have flipped the election.**

**Kiss won, despite not being the preferred candidate.**

**Wright lost, but his voters never had their 2nd choices counted.**

Exhausted

Kiss

Wright

Exhausted

## Kiss Wins

**Montroll was also the majority preferred candidate. If all ballot data had been counted he would have won.**

# Ranked Choice Voting and the Spoiler Effect in the 2009 Burlington Mayoral Election



**Montroll was preferred over all others**

Kiss — Montroll
46.1% — 53.9%

Montroll — Wright
55.6% — 44.4%

**But after looking at voter's 1st choices only, Montroll was eliminated**

Kiss — Montroll — Wright
33.8% — 28.9% — 37.3%

54.4% — 45.6%

**Montroll was preferred over both his opponents, but because he had less first choice votes than either, he was eliminated first. Voter's rankings which showed the full size of his base were never counted.**

Ranked Choice was invented 150 years ago and there is a wealth of data on where it delivers and where it falls short.

RCV does well in races where only two candidates are competitive, and successfully eliminates "The Nader Effect" if a 3rd party candidate is truly non-viable.

But, in elections with multiple viable candidates Ranked Choice Voting breaks down, producing non-representative and counterintuitive results. For this reason RCV has not broken two party domination in the countries where it's been used the longest. RCV is not suitable for primary elections or general elections with multiple viable parties or candidates.
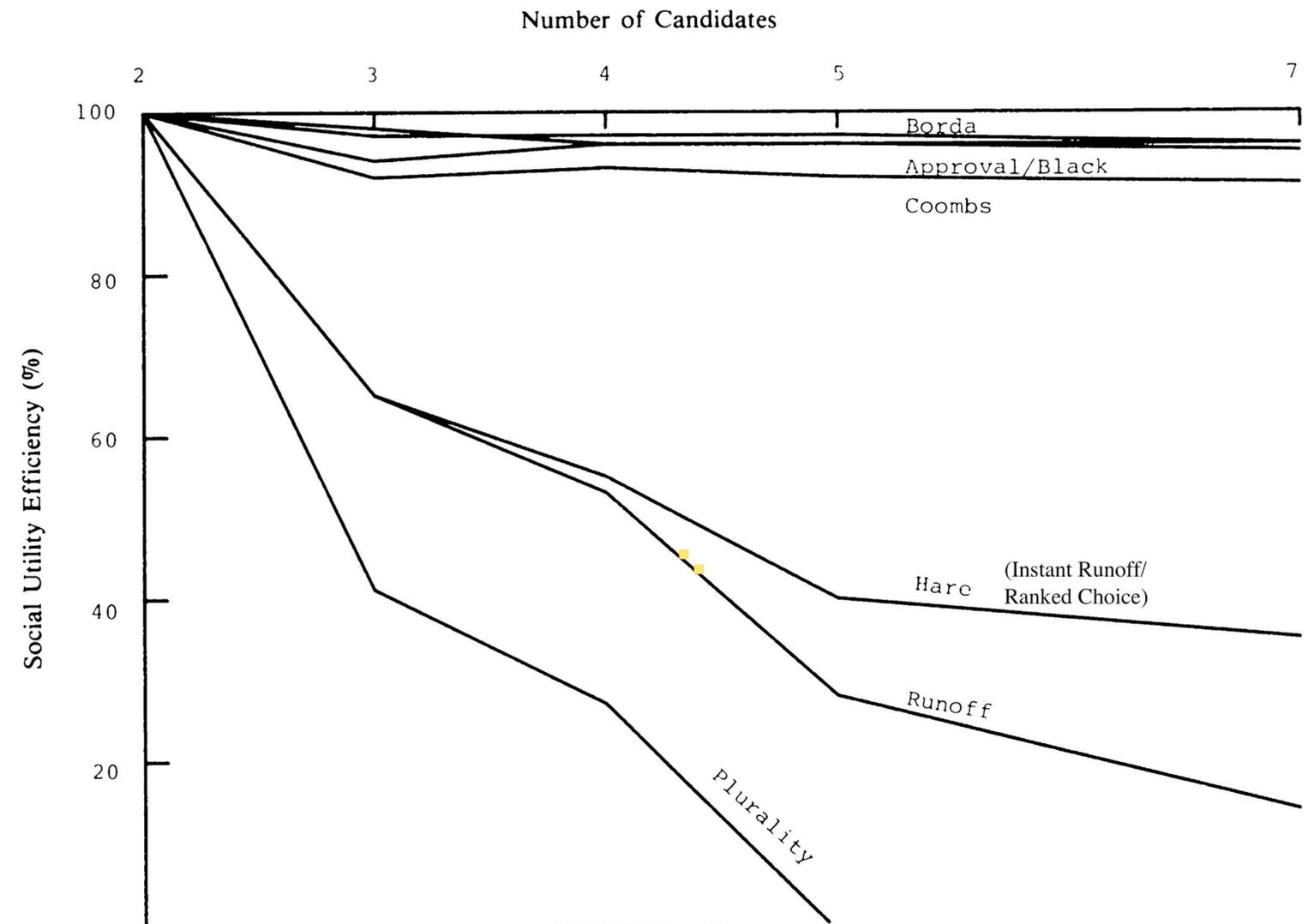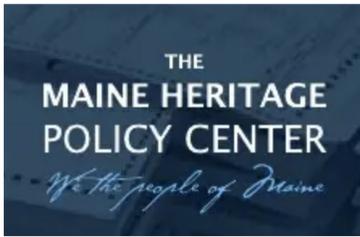
FIGURE 4.b

Social Utility Efficiency under Spatial Model Assumptions
(201 voters, two dimensions, correlation = .5, relative dispersion = .5)

Merrill, Samuel (1984). "A Comparison of Efficiency of Multicandidate Electoral Systems".

https://www.jstor.org/stable/2110786?seq=1

"Too often, proponents of ballot initiatives advance lofty claims to win support at the ballot box."

"In examining 96 ranked-choice voting races from across the country where additional rounds of tabulation were necessary to declare a winner, The Maine Heritage Policy Center concludes that the eventual winner failed to receive a true majority 61% of the time."

"the claim that ranked-choice voting always provides a majority winner … is false and deserves further scrutiny from voters."

"While candidates sometimes do receive a majority of the total votes cast, a winner is often declared only after a large number of exhausted ballots have been removed from the final denominator."

## Figure 5: Percentage of Competitive RCV Elections That Did Not Result In A Majority Winner
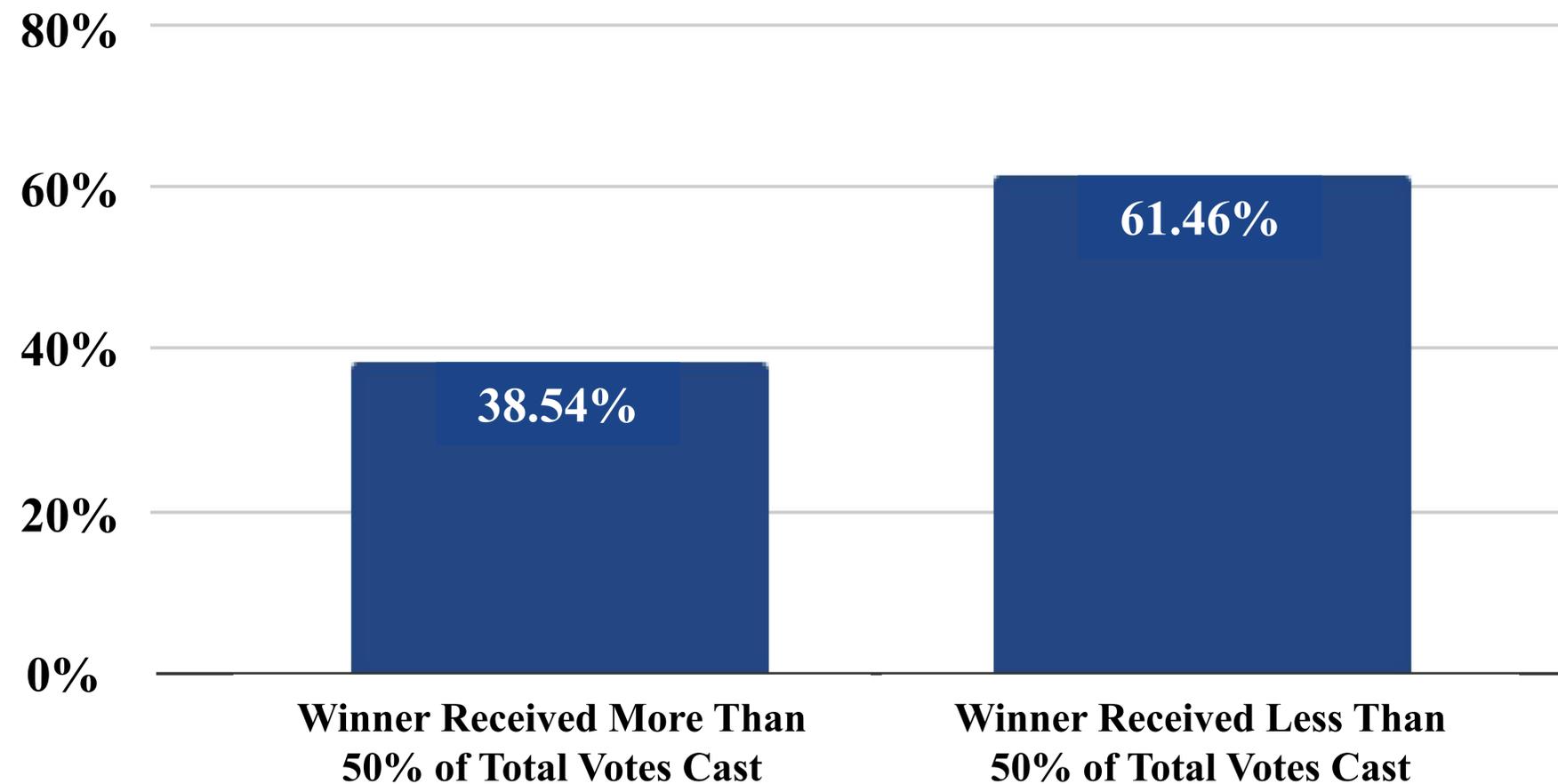


Source: The Maine Herritage Policy Center

www.scribd.com/document/421886759/RCV-Final-Booklet#fullscreen&from_embed

Frequency of monotonicity failure under Instant Runoff Voting: estimates based on a spatial model of elections

Joseph T. Ornstein and Robert Z. Norman

**"[IRV] can cause spoilers in up to 1 in 5 elections or worse when there are more candidates according to expert analysis."**

# Abstract

It has long been recognized that Instant Runoff Voting (IRV) suffers from a defect known as nonmonotonicity, wherein increasing support for a candidate among a subset of voters may adversely affect that candidate's election outcome. The expected frequency of this type of behavior, however, remains an open and important question, and limited access to detailed election data makes it difficult to resolve empirically. In this paper, we develop a spatial model of voting behavior to approach the question theoretically. We conclude that monotonicity failures in three-candidate IRV elections may be much more prevalent than widely presumed (results suggest a lower bound estimate of 15 % for competitive elections). In light of these results, those seeking to implement a fairer multi-candidate election system should be wary of adopting IRV.

# Ballot (and voter) "exhaustion" under Instant Runoff Voting: An examination of four ranked-choice elections ☆

Craig M. Burnett [a] ✉, Vladimir Kogan [b] ✉

## Highlights

- Instant runoff voting does not guarantee winners who receive an absolute majority.

- The rate of ballot exhaustion was high in each election, ranging 9.6%–27.1%.

- Voters' inability to rank multiple candidates contributes to ballot exhaustion.

# Abstract

Some proponents of municipal election reform advocate for the adoption of Instant Runoff Voting (IRV), a method that allows voters to rank multiple candidates according to their preferences. Although supporters claim that IRV is superior to the traditional primary-runoff election system, research on IRV is limited. We analyze data taken from images of more than 600,000 ballots cast by voters in four recent local elections. We document a problem known as ballot "exhaustion," which results in a substantial number of votes being discarded in each election. As a result of ballot exhaustion, the winner in all four of our cases receives less than a majority of the total votes cast, a finding that raises serious concerns about IRV and challenges a key argument made by the system's proponents.

\* Note: This study looked specifically at elections in which a majority was not found in the first RCV round of tabulation.

Francis Neely and Jason McDaniel
*San Francisco State University*

## Overvoting and the Equality of Voice under Instant-Runoff Voting in San Francisco

"The controversy surrounding the 2000 U.S. presidential race fueled a variety of efforts to improve the administration of elections. Activists, benefiting from that momentum ... found some purchase at the local level in San Francisco, California. Proposition A passed in a 2002 March primary and replaced a two-round runoff system with instant-runoff voting (IRV).[1] ... As the largest and longest-running application of IRV in the States, this serves as both a vanguard on the reform front and a test case for interested parties.[2]

"One concern in the discussion of any electoral reform is how well the public will understand a new system and what that implies for the equality of political voice. This is our focus. ... Concerns about the fairness of IRV led at least four jurisdictions to repeal similar reforms shortly after enacting them: Burlington, VT (2006–2009), Cary, NC (2007–2009), Pierce County, WA (2006–2009), Aspen, CO (2009).

"Higher counts of overvotes were also found, at times, among San Francisco communities with more Latino residents (Neely and Cook 2008), something shown in a similar analysis of voters in Los Angeles (Sinclair and Alvarez 2004), and in areas with more foreignborn residents."

"What has not changed is the nature of the discrepancies in who tends to overvote: consistently, precincts where more African-Americans reside are more likely to collect overvoted, voided ballots. And this often occurs where more Latino, elderly, foreign-born, and less wealthy folks live. The additional years of data show no meaningful increase or decline in these tendencies but rather bolster the earlier study's findings. In all of the elections we examined, some voters were more at risk than others of making disqualifying errors."

THE MAINE HERITAGE POLICY CENTER

# A FALSE MAJORITY:

## *The Failed Experiment of Ranked-Choice Voting*

### August 2019

"African Americans, Latinos, voters with less education, and those whose first language is not English are more likely to be disenfranchised with a ranked-choice voting system."

When individuals leave columns blank on their ballots and the candidate(s) they vote for are eliminated from contention, their ballot is not counted in the final tabulation... thereby giving those who fully complete their ballot more influence over the electoral process."

"only 50 percent of African Americans and 53 percent of Latinos ranked three candidates whereas 62 percent of whites ranked a candidate in all three columns."

"When we examined the 96 ranked-choice voting races in our sample from across the nation, our analysis found an average of 10.92 percent of ballots cast are exhausted by the final round of tabulation."



Figure 1: Percentage of Exhausted Votes in Ranked-Choice Elections (Maine and Nationally)
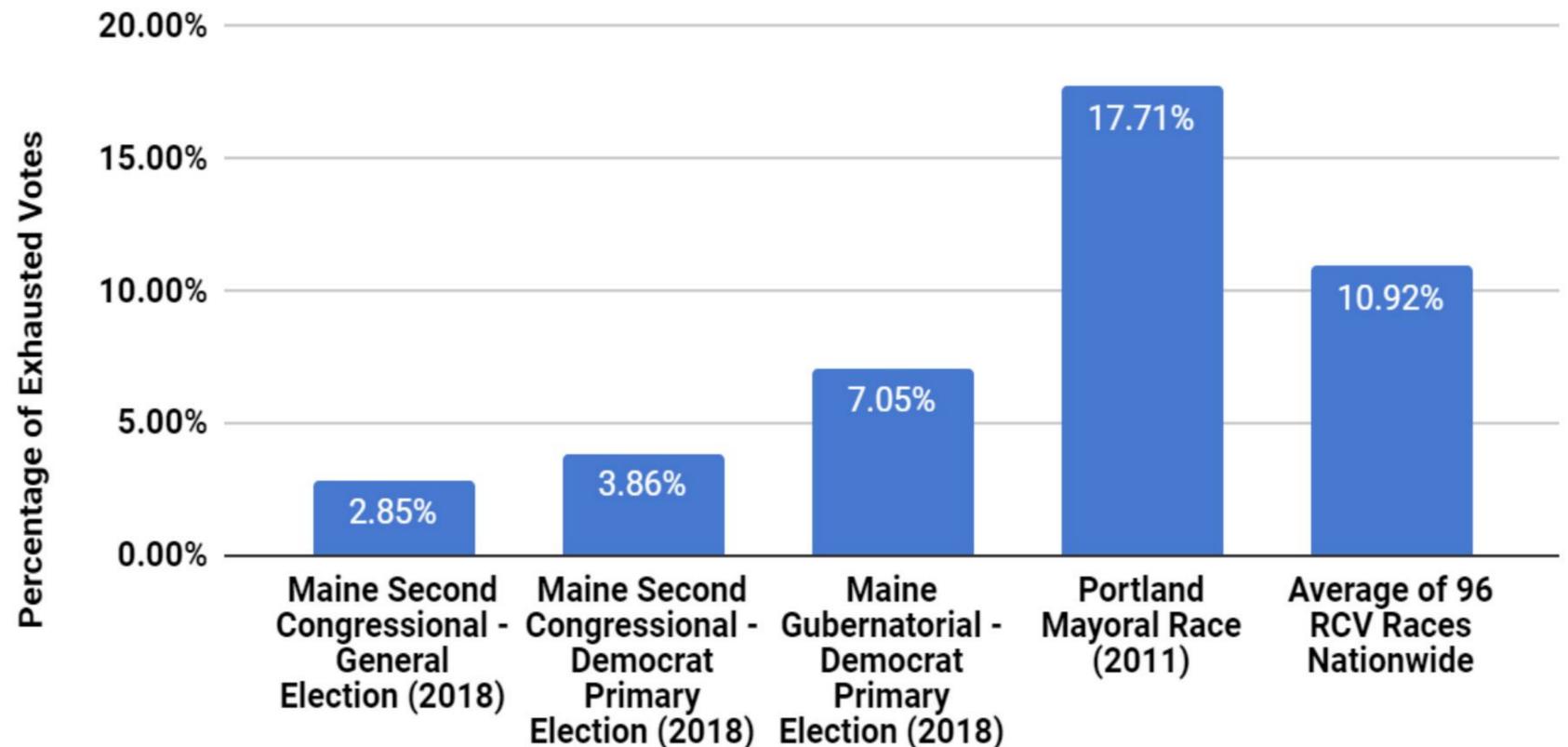
Source: Maine Secretary of State, The Maine Heritage Policy Center

https://mainepolicy.org/wp-content/uploads/RCV-Final-Booklet-.pdf

# How does Proportional STAR Voting work?

## STAR VOTING
### Proportional Representation

This election will elect 3 winners.
- Give your favorite(s) five stars.
- Give your last choice(s) zero stars.
- Show preference order and level of support.
- Equal scores indicate no preference.
- Those left blank receive zero stars.

|  | Worst | | | | | Best |
|---|---|---|---|---|---|---|
| Candidates: | 0 | 1 | 2 | 3 | 4 | 5 |
| Andre | 0 | 1 | ● | 3 | 4 | 5 |
| Blake | 0 | 1 | 2 | 3 | 4 | ● |
| Carmen | 0 | 1 | 2 | 3 | 4 | ● |
| David | 0 | 1 | 2 | 3 | 4 | 5 |
| Ella | 0 | 1 | 2 | 3 | ● | 5 |

## Winner Selection

The highest scoring candidate in each round wins a seat.

| Candidates: | Scores: |
|---|---|
| Carmen ★★★★☆ | 256,785 |
| Blake ★★★★☆ | 203,621 |
| Ella ★★★☆☆ | 175,902 |
| Andre ★★☆☆☆ | 143,309 |
| David ★☆☆☆☆ | 93,261 |

Carmen wins the first seat!

## Win Quotas

This election has three seats so the win quota is ⅓.

The ⅓ of ballots which scored Carmen highest count toward her win quota and are set aside.

The remaining ballots are recounted to find the next winner.

The process is repeated until all seats are filled.

## Results

Winners each represent at least ⅓ of the voters.
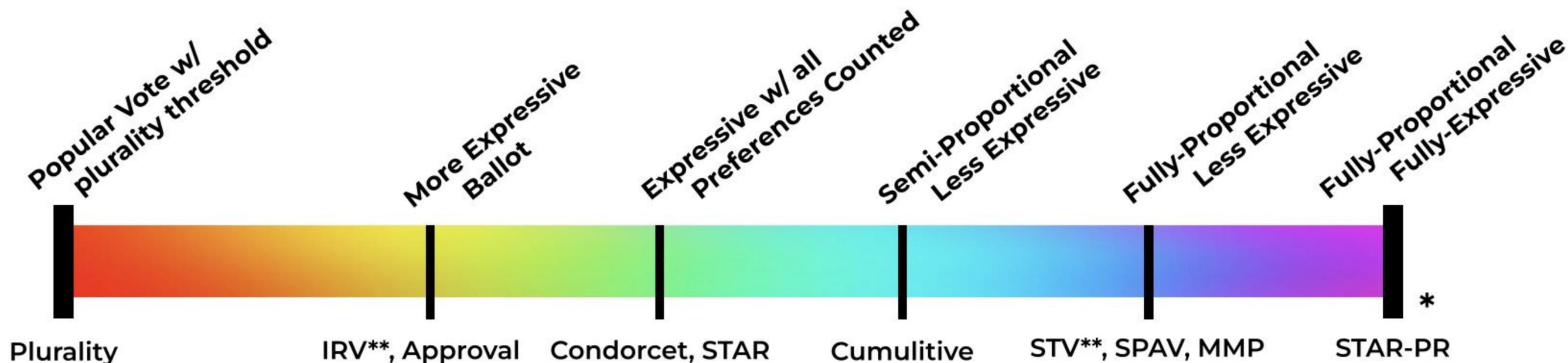
**Winners:**
- ★ Carmen
- ★ Ella
- ★ Andre

These three winners best represent the diversity in the electorate.

**Voters and factions within the electorate are represented proportionally!**

# How proportional is a voting method?

Proportionality for parties or distinct factions is measurable in a given election and is defined as the proportion of voters who were able to elect a winner who represents them.

Popular Vote w/ plurality threshold | More Expressive Ballot | Expressive w/ all Preferences Counted | Semi-Proportional Less Expressive | Fully-Proportional Less Expressive | Fully-Proportional Fully-Expressive

Plurality | IRV**, Approval | Condorcet, STAR | Cumulitive | STV**, SPAV, MMP | STAR-PR

\*

- **Fully-Proportional:** Passes a quota rule so that if a faction had the support of 1/5 of the voters, their top candidate would be able to win one out of the five available seats. Elected officials each represent their 'faction' or party specifically, rather than trying to represent the electorate as a whole.

- **Semi-Proportional:** Multi-winner voting methods which are designed to produce higher proportionality but do not guarantee any strict proportional criteria like a quota rule.

- **Popular Vote:** Methods designed to elect candidates to each seat who best represent the electorate as a whole. Each winner is supported by as many voters as possible.

\* Not to scale - proportionality varies depending on the election.          \*\* IRV and STV don't count many of the down ballot rankings given.