The Performance of Instant Runoff Voting in Burlington Vermont

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circa 2009

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Voters are not voting for specific delegates.

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The Failure of Instant Runoff Voting…

… to accomplish
the very purpose for
which it was adopted:
An object lesson in
Burlington Vermont

The submitted paper:
https://drive.google.com/
file/d/1jIhFQfEoxSdyRz5SqEjZ
otbVDx4xshwM/view

ORIGINAL PAPER

Check for updates

The failure of Instant Runoff to accomplish the purpose for which it was adopted: a case study from Burlington Vermont

Robert Bristow-Johnson[1]

Abstract

Instant-Runoff Voting (IRV) has been marketed to "guarantee that the majority candidate is elected," to "eliminate the spoiler effect," and to empower voters, particularly those supporting third-party or independent candidates, to "vote your hopes, not your fears," which is meant to level the playing field between such candidates and those from the major-party duopoly. This paper shows that in Burlington Ver-

- Hare RCV
  - formerly referred to as Instant-Runoff Voting or "IRV"
- Claims:
  - "guarantees the candidate with majority support is elected"
  - "eliminates the spoiler effect"
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- Hare RCV **objectively failed** to deliver on each of these promises in Burlington in 2009

Anomalous election in progressive city
IRV in Burlington in 2009

Most of the time, Hare RCV elects the "Condorcet winner"

HOWEVER, it didn't happen when Bob Kiss ([Progressive Party](#)) defeated Andy Montroll ([Democratic Party](#)) in 2009, as seen in 36 out of 37 elections listed by Sarwate (et al.) in 2013 paper about election audits.

Election	Candidates	Ranks	Ballots	Condorcet winner
2002 Dáil Éireann, Dublin North*	12	12	43,942	✓
2002 Dáil Éireann, Dublin West*	9	9	29,988	✓
2002 Dáil Éireann, Meath*	14	14	64,081	✓
2006 Burlington mayor	6‡	5	9,865	✓
2007 San Francisco mayor	18	3	149,465	✓
2007 Takoma Park city council special, ward 5	4‡	4	204	✓
2008 Pierce County assessor	7‡	3	312,771	✓
2008 Pierce County council, dist. 2	4‡	3	43,661	✓
2008 Pierce County executive	5‡	3	312,771	✓
2009 Aspen city council†	11§	9	2,544	✓
2009 Aspen mayor†	5‡	4	2,544	✓
2009 Burlington mayor	6‡	5	8,984	
2009 Pierce County auditor	4‡	3	159,987	✓
2010 Berkeley auditor	2‡	3	45,986	✓
2010 Berkeley city council, dist. 1	5‡	3	6,426	✓
2010 Berkeley city council, dist. 4	5‡	3	5,708	✓
2010 Berkeley city council, dist. 7	4‡	3	4,862	✓
2010 Berkeley city council, dist. 8	4‡	3	5,333	✓
2010 Oakland auditor	3‡	3	122,268	✓
2010 Oakland city council, dist. 2	3‡	3	15,243	✓

Table 1 - Various Hare RCV elections
Sarwate, Checkoway, and Shacham in 2013 -
"*Risk-limiting Audits for Nonplurality Elections*"
https://www.cs.utexas.edu/~hovav/dist/irv.pdf

MUST HAVES

- ## "One person, one vote"

  Every enfranchised voter is entitled to an equal influence on the outcome of elections

- ## Majority rule:

  If **MORE** voters mark their ballots preferring Candidate A over Candidate B
  – THEN –
  Candidate B **IS NOT** be elected.

Candidate A

Candidate B

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Nice to have:

- Avoiding the "spoiler effect":
  SPOILER EFFECT:
  An election that the relative preference of candidates A and B is
  reversed by the presence of a third candidate C.

- No "tactical voting" necessary for voters:
  NO WORRIES ABOUT "WASTING" VOTES:
  Voters should vote hopefully rather than strategically

So what happened in Burlington in 2009?

4064 voters preferred Andy Montroll over Bob Kiss

Candidate A

3476 voters preferred Bob Kiss over Andy Montroll

Candidate B

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Candidate A

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Candidate B

Yet Bob Kiss was elected in 2009.

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Had Kurt not run and voters expressed their same preferences with the remaining candidates, Andy Montroll would have met Bob Kiss in the IRV final round and defeat Bob Kiss by a margin of 588 votes (6.5%).

Disincentivize tactical voting

"Vote you hopes, not your fears."

1332	M>K>W
767	M>W>K
455	M
2554	Montroll
2043	K>M>W
370	K>W>M
568	K
2981	Kiss
1510	W>M>K
495	W>K>M
1289	W
3294	Wright

Vote tallies for 3 candidates remaining in the semifinal round

1332	M>K>W
767	M>W>K
455	M

2554 Montroll

2043	K>M>W
370	K>W>M
568	K

2981 Kiss

1510	W>M>K
495	W>K>M
1289	W

3294 Wright

371 tactical votes

1332	M>K>W
1138	M>W>K
455	M

2925

2043	K>M>W
370	K>W>M
568	K

2981

1139	W>M>K
495	W>K>M
1289	W
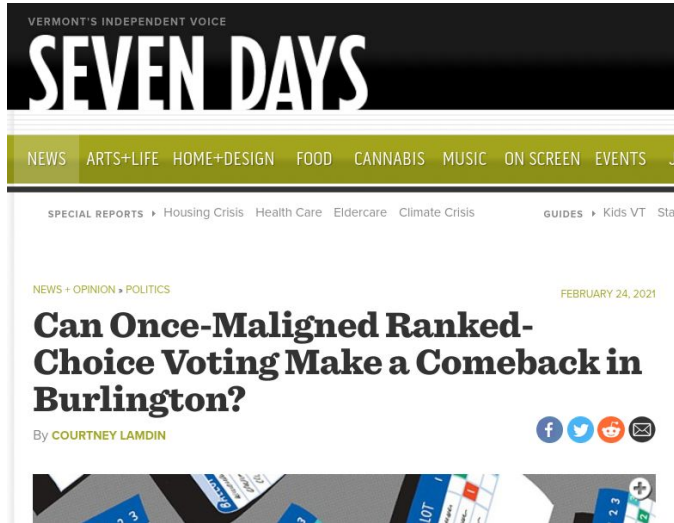
2923

Howard Dean says:

"*you can still get your second-choice vote.*"
[SevenDays, Courtney Lamdin, 2021]

Photo: Howard Dean in Pocatello, Idaho in 2007
https://commons.wikimedia.org/wiki/File:Howard_Dean_in_Idaho.jpg

…but not for these Wright voters.

https://www.sevendaysvt.com/vermont/can-once-maligned-ranked-choice-voting-make-a-comeback-in-burlington/Content?oid=

1332   M>K>W
767   M>W>K
455   M
_____

2554   Montroll

2043   K>M>W
370   K>W>M
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1510   W>M>K
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_____

3294   Wright

Did you vote for the loser of the final round?

1332	M>K>W
767	M>W>K
455	M
2554	Montroll

2043	K>M>W
370	K>W>M
568	K
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1510	W>M>K
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1289	W
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Did you vote for the loser of the final round?

THEN NO SECOND CHOICE VOTE FOR YOU.

Disincentivize tactical voting

"Vote you hopes, not your fears."

```
1332   M>K>W              1332   M>K>W
 767   M>W>K              1138   M>W>K
 455   M                   455   M
_____                     _____
2554   Montroll           2925

2043   K>M>W
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 568   K
_____
2981   Kiss

1510   W>M>K              1139   W>M>K
 495   W>K>M               495   W>K>M
1289   W                  1289   W
_____                     _____
3294   Wright             2923
```

371 tactical votes

These 1510 Wright voters would have been better off voting their fears than voting their hopes.

"In this liberal town I have to choose between *Liberal* and *More-Liberal*, because if I vote for the guy I really like, then *More-Liberal* gets elected!

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But Condorcet-consistent RCV would have delivered correctly on all of these promises in Burlington 2009 because the Consistent Majority Candidate (who was Andy Montroll) would have been elected.

Precinct Summability

Precinct Summability is the ability to independently determine the outcome of an election based solely on tallies published at each polling location on the evening of an election after polls close. The tallies from every polling place can be summed to determine the outcome of the election for the entire district of the elected office.

Precinct Summability means decentralization of the tabulation of the vote. If it is necessary that individual ballot data be opaquely transported from all of the polling places to a central tabulation location to count votes and identify the winner of an election, that is not Precinct Summable and lacks in process transparency.

For a particular election method, if the number of summable tallies is so large as to be considered unfeasible to publish at the polling location, that method is not Precinct Summable.

OFFICIAL RETURN OF VOTES
ELECTIONS DIVISION
OFFICE OF THE SECRETARY OF STATE

Election	GENERAL ELECTION (11/08/2022)	Town	BURLINGTON
		District	CHI 18

Name on Ballot	Party	Town of Residence	Vote Cast
US SENATOR			**Vote for not more than ONE**
MARK COESTER	INDEPENDENT	WESTMINSTER	3
NATASHA DIAMONDSTONE-KOHOUT	GREEN MOUNTAIN	DUMMERSTON	16
STEPHEN DUKE	INDEPENDENT	CALAIS	8
DAWN MARIE ELLIS	INDEPENDENT	BURLINGTON	65
MS. CRIS ERICSON	INDEPENDENT	CHESTER	7
GERALD MALLOY	REPUBLICAN	WEATHERSFIELD	662
KERRY PATRICK RAHEB	INDEPENDENT	BENNINGTON	15
PETER WELCH	DEMOCRATIC	NORWICH	3,137
TOTAL WRITE IN COUNTS			16

"I just want to find, uh, 11780, uh, votes."

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- Knowing the outcome of a statewide election on the evening of the election after polls close, instead of 4 to 15 days later.
- An easier, decentralized, and distributed effort in any recount.
- An easier, decentralized, and more secure way to deal with the outcome that "Combined Write-In" wins (as with Alaska Sen. Lisa Murkowski in 2010).

- First-Past-The-Post (FPTP) is decentralized vote tabulation and is Precinct Summable.

- Hare RCV (a.k.a. "IRV") requires centralization of all of the votes before tabulation can begin and is not Precinct Summable.

- Condorcet RCV is decentralized vote tabulation and is Precinct Summable.

It is not necessary to give up this basic function of process transparency to have Ranked-Choice Voting.

It is not necessary to give up this basic function of process transparency to have Ranked-Choice Voting.

But it is necessary to sacrifice this basic function of process transparency if the RCV is Hare RCV.

Ranked Choice Voting Resource Center

More Choice. Louder Voice.

2022

Another false claim:

Does ranked-choice voting impact how long it takes to know who won the election?

NO! Ranked-choice voting elections can be tabulated as quickly as a few minutes using round-by-round counting software.