

# Estimating Dynamic, Common-space Public Opinion: Why Maine Took Two Decades to Adopt Ranked-choice Voting

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## Abstract

Why did Maine finally adopt ranked-choice voting (RCV) in 2016, after four consecutive gubernatorial elections without a majority winner? I argue that RCV should gain traction when the second-largest party expects to benefit from smaller-party voters' lower rankings. This condition did not emerge until 2016. To show this, I construct the first set of over-time, common-space voter ideal points with Bayesian Aldrich-McKelvey scaling (BAM), then use the scores to simulate contests between the top two parties for voters' second-place support. I then give ecological inference estimates of party support for RCV in 2016. Those estimates are consistent with expectations: Democrats supported RCV, and Republicans did not. Turning to the state legislature, AV would not have produced substantively different results from plurality.

**Keywords:** ranked choice voting, Alternative Vote, instant runoff voting, Bayesian Aldrich-McKelvey, common-space public opinion.

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Ranked-choice voting (RCV) is a popular reform. Fifteen cities have enacted it since 2001. Until a May 2017 state court ruling that RCV is unconstitutional, Maine was poised to begin use in 2018 for all primaries, state offices, and Congress.<sup>1</sup> According to the main RCV advocacy group, 19 state legislatures had RCV bills before them as of May 2017.

Political scientists know RCV as the alternative vote or “AV” (Norris 1997; Bormann and Golder 2013).<sup>2</sup> Under this single-winner voting rule, voters rank candidates in order of preference. If no candidate is ranked first by a majority of voters, the candidate with the fewest first-place votes is dropped. If a voter’s first choice is dropped, their vote flows to their next-ranked pick. This process repeats until one candidate has a majority of votes.

Why does a jurisdiction end up adopting AV elections? This paper tests a simple explanation: AV is likely to win when the runner-up party thinks it will win due to other parties’ vote transfers. In order to test this explanation, I turn to the state of Maine, which adopted AV by referendum in November 2016, after four consecutive gubernatorial elections without majority winners (Figure 1). Why did adoption take almost two decades? Using data from the Cooperative Congressional Election Studies (CCES), I project voters and candidates into one ideological space and make a simple point: AV only gained traction when the runner-up party might have thought it would win with spoiler-party voters’ lower rankings.

A major-party interest account is far from groundbreaking, but popular comment needs some correction. Advocates claim AV will upend the two-party system. By eliminating the incentive to vote strategically, they say, AV lets voters support their true favorites. Minor parties should flourish. Anti-establishment candidates should prevail in primaries and local elections. From this perspective, there is little difference between AV and proportional representation (PR). Advocates now use the same term, in fact, to refer to both AV and the single transferable vote form of PR: “ranked-choice voting.” If AV wins because it consolidates runner-up parties’ vote shares, however, AV is far from PR.

This article begins with a brief review of the literature on AV adoptions and referendum-driven electoral reform. The second section sketches an in-

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1. The ruling does not affect RCV legality for primaries and Congressional elections, but Republican-sponsored legislation to repeal RCV is nonetheless before the Maine Senate.

2. Other popular names include “instant runoff” and “preferential voting,” although the latter also may refer to the single transferable vote.

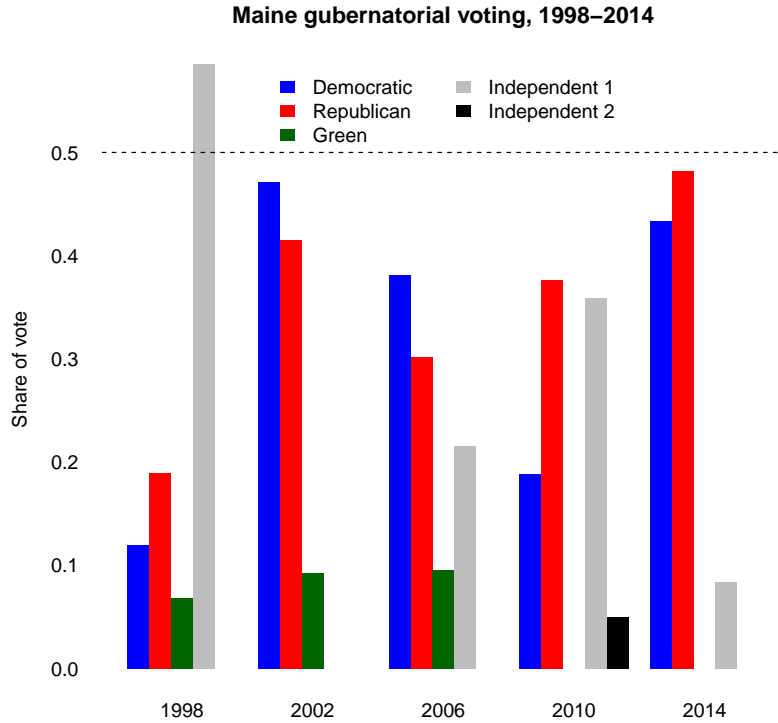


Figure 1: No Maine governor has won with a majority since 1998.

formal theory of party positions on AV. AV is likely to find traction when the second-largest party thinks smaller-party voters will propel it to office. The second-largest party is the actor to watch because – for now, at least – electorally “hopeless” parties tend to support AV anyway.

The third section explains how I capture expectations about small-party voters’ potential AV ballots. I use data from the CCES, 2012-16, when similarly measured variables permit representing the public’s party preferences in “common space.” This is the first paper to use Bayesian Aldrich-McKelvey (BAM) scaling to estimate over-time ideal points for the public.<sup>3</sup> Using these figures, I simulate a generic Democratic Party advantage among four CCES

3. Tausanovitch and Warshaw (2013: 341) also estimate over-time, common-space scores for the public from the CCES, but they do not use BAM, and they stop short of projecting candidates into that space.

groups: registered Democrats, Republicans, Independents, and Other. Section four discusses recent Maine gubernatorial elections and what parties might have expected if each election had been under AV.

Because my evidence considers only gubernatorial elections, I need to rule out potential benefits from AV elections to lower office. Section five shows that non-gubernatorial races were unlikely to have affected the parties' decision-making. Looking at the 2014 state legislative results, which were the most recent contests to occur in advance of the referendum, AV would have reproduced the same partisan majorities in both chambers.

The Maine Republican Party endorsed AV in the final days before the referendum. Was this sincere or strategic? The sixth section gives ecological inference estimates of party support. As expected, most Clinton voters (presumed to be Democrats) supported AV while most Trump voters (presumed to be Republicans) did not.

## **Partisan reasons for AV adoptions**

One could say AV adoptions exist along a continuum. At one end, an incumbent government both initiates and enacts the change. At the other end, initiation and enactment are strictly through mechanisms of direct democracy. Incumbent-driven processes have been common abroad, but only direct-democratic approaches have appeared in the United States.

### **Government-led processes abroad**

Two factors tend to appear when an incumbent government leads AV adoption. First, the party has been or expects to be out of power. Second, additional parties have appeared on the scene, such that parties may speculate about the destinations of new-party voters' ballots. These were the circumstances in 1918, when Australia adopted AV two decades after the start of serious preferential-voting advocacy. Labour had benefitted up to that point from "spoiler" candidacies by other parties. When the National Party came to power in 1917, it led a coalition of "anti-Labor parties" in imposing the new Commonwealth Electoral Bill (Farrell and McAllister 2005: 83). Three Western Canadian adoptions follow the same basic logic. In British Columbia in 1952, a Liberal-led government imposed AV elections "to stem the increasing influence of the [Cooperative Commonwealth Federation, an economically

left-wing third party].” Sitting provincial governments in Alberta and Manitoba imposed AV in 1924 for rural-district legislative elections after a series of third parties emerged (Jansen 2004: 649-54).<sup>4</sup> We get a similar picture from Papua New Guinea, where AV is known as “limited preferential voting”:

The move to preferential voting was reinitiated [...] largely because of the declining mandates held by the majority of Members of Parliament elected using first-past-the-post voting. As the numbers of candidates increased with every election, reaching an average of 21 candidates per seat in 1997 and 26 in 2002, so did the proportion of votes recorded by winning candidates decrease (Standish 2006: 196).

In other cases, incumbent governments facing external pressure for electoral reform have offered AV as a “safe” alternative to proportional representation (PR). This was the case in Fiji, which adopted AV in 1997 under pressure from out-of-government ethnic groups and the international donor community. Fiji’s parliament further mandated that most seats be in ethnically homogeneous constituencies. Reform’s immediate effect therefore was to reproduce the pre-AV ethnic balance in parliament (Stockwell 2005). Turning to the United Kingdom, a Conservative minority government there sent AV to referendum in 2011 following public demands for proportional voting. AV did not pass in part because Nick Clegg, leader of the Liberal Democratic Party, called AV “a miserable little compromise.”<sup>5</sup> More recently in Canada, Liberal Prime Minister Justin Trudeau has countered demands for PR voting with gestures toward a possible move to AV.<sup>6</sup>

## Ballot initiatives the US

While the comparative literature emphasizes partisan and factional self-interest, Americans still tend to see AV as an assault on the parties. Scholars

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4. Also see Pilon (2006) on Canadian governing parties’ self-preservation reasons for engaging in electoral reform.

5. Tom Clark, “10 reasons the AV referendum was lost,” *The Guardian*, May 6, 2011. <https://www.theguardian.com/commentisfree/2011/may/06/reasons-av-referendum-lost>.

6. Aaron Wherry, “Liberal fears of proportional representation and a referendum killed Trudeau’s reform promise,” *CBC News*, Feb. 3, 2017. <http://www.cbc.ca/news/politics/trudeau-reform-promise-referendum-1.3963533>.

therefore have responded by looking for effects on the party system (Kimball and Anthony 2018). One line of inquiry concerns voter error, voter turnout, and ballot roll-off in AV elections (Neely et al. 2005; Neely and Cook 2008; Schultz and Rendahl 2010; Burnett and Kogan 2015; Neely and McDaniel 2015; McDaniel 2016; Kimball and Anthony 2016). A second emerging area focuses on how voters (Tolbert 2014) and candidates (Donovan 2014) perceive the tone of campaigns under AV.

What we lack are accounts of how “instant runoff” or “single-winner ranked-choice voting” gets adopted in the first place. The exclusive use of ballot initiatives to impose AV in the United States complicates the effort to understand its spread. On the one hand, reformers read AV wins as direct democracy in action (Richie and Hill 1998; Hill 2004; Novoselic 2004; Drutman 2016). On the other hand, skeptics like McDaniel (2016) argue that middle-class reformers are “writing the rules to rank the candidates” with predictable effects on would-be voters of low socioeconomic status.

Regardless of whether an AV win reflects unbridled people power or naked class interest, a reform attempt has two problems to solve. The first is getting reform on the ballot. This typically takes several thousands of signatures. That figure in Maine in 2016 was 61,123, or just under six percent of the state’s voting-eligible population.<sup>7</sup> Second, whoever supports AV has to communicate to voters why they should do the same.

We think parties solve both problems – organizing the referendum, then communicating its import to voters – and this is especially true when an initiative implicates rules for converting votes to seats. Previous work has found that political parties orchestrate ballot measures and that partisanship is a strong predictor of voting in the respective referenda (Smith and Tolbert 2001). Further work argues that partisan cues about the effects of a policy explain the connection between partisanship and referendum voting (Riggle et al. 1992; Rahn 1993; Cohen 2003). Boudreau and MacKenzie (2014) show experimentally that policy information can trump partisan cues in budget referenda, but election-reform initiatives are different in two ways. First, most voters will not have good information *ex ante* about an arcane, new electoral system. Second, because voting reform can change the partisan control of government, parties have good reasons to intervene in (if not initiate) these referendum processes. Scholars have found party effects in pre-1932

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7. Maine’s voting-eligible population is 1,060,905 according to Michael McDonald: <http://www.electproject.org/2016g>.

referenda on council-manager local government (Choi et al. 2013), municipal adoptions of the single transferable vote (Santucci 2017), referenda on European integration (Hobolt 2007), and Britain’s 2011 failure to enact AV for the Commons (Vowles 2013). Bowler and Donovan (2016) further show how elite partisan cues polarize public opinion on questions of voting-rule change in the states. Why should AV in Maine have been any different?

## Predicting party positions on AV

I begin by differentiating the largest party, second-largest party, and all other parties (called the “smaller parties”). Assuming it takes a referendum majority to enact AV, that should occur only when the second-largest party teams up with smaller parties. The second-largest party will team up with smaller parties when it expects to receive their second-choice support. The largest party never wants AV, and the second-largest party only wants AV when it thinks AV will benefit it.

When no party’s candidate has a majority of first-choice votes, vote transfers decide an AV election. The destinations of transfers depend on how small parties strategically use lower rankings. The easiest form of strategic voting is to cast a sincere first-choice vote, then use one’s second-place ranking for one of two frontrunners (Cox 1997: 93-5).<sup>8</sup>

No winning party should want AV. If it expected to receive small-party second-choice support anyway, AV would have neutral effect. In the long run, AV may encourage largest-party voters to form new parties at the winning party’s expense. As Cox (1997: 95) notes, AV does not deter small-party formation to the same degree as plurality. Most important, AV may help elect the opposing, runner-up party.

The second-largest party supports AV when it expects smaller-party voters to rank it second. In short, the second-largest party thinks it needs AV to win and that AV will help it win. Figure 2 gives the stylized example of an eleven-voter election with three parties. Party A has won with five votes, not a majority. Parties B and C have four and two votes, respectively (left). Party B’s beliefs about Party C behavior under AV will determine Party B’s position on AV. In the middle, Party C has transferred votes to A, so B does

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8. Other forms of strategic voting are possible, but real-world elections are unlikely to meet the information requirements.

not want AV. On the right, Party C has broken for B, leading B to prefer AV elections.

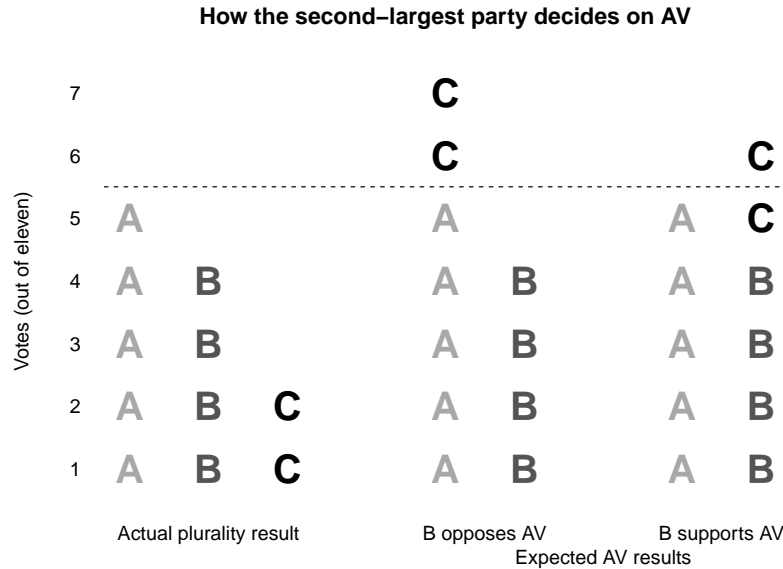


Figure 2: Hypothetical results of an eleven-voter election with and without AV.

All other non-largest parties should support AV in order to increase their first-choice vote totals. This may be for “expressive” reasons, small parties’ belief that they might bargain with their voters’ lower rankings, or to meet legal thresholds with other purposes (e.g., public funding, participation in debates).

## Empirical strategy

We need two pieces of information: parties’ relative sizes and the likely destinations of voters’ second choices. Figure 1 gives the relative sizes of Maine’s gubernatorial parties.

To understand who voters’ second choices might be, we need to reconstruct their preferences with respect to Maine’s parties. Since 2012, the



Cooperative Congressional Election Studies (CCES) have asked a representative sample of respondents in each state to place themselves and prominent political actors on the conventional 1-7 ideological scale. My analysis uses the Maine subsets of the 2012, 2014, and 2016 data (Ansolabehere and Schaffner 2015, 2017a, 2017b). In assigning lower rankings, I assume a voter picks the nearest frontrunner party in unidimensional policy space.

## Common-space Bayesian Aldrich-McKelvey scaling

Raw 1-7 ratings are an obvious way to see what party a voter feels closest to, but there are drawbacks. One is that different respondents may use the scale differently, both within the same sample and/or over time. In the extreme, a respondent may misinterpret instructions and assign “1” to the actors they perceive as most conservative. Similarly, an extremely conservative respondent may misperceive themselves as centrist, placing themselves and some political actors (i.e., “stimuli”) closer to the middle of the scale than we might expect. Aldrich and McKelvey (1977) call this problem “differential item functioning” and have proposed a method for scaling survey data that deals with it. Aldrich-McKelvey (AM) scaling imposes the following model on survey respondents’ placements of stimuli:

$$z_{ij} = \alpha_i + \beta_i \zeta_j + u_{ij} \tag{1}$$

where  $z_{ij}$  is respondent  $i$ ’s raw placement of the  $j$ th stimulus,  $\alpha_i$  is a respondent-level intercept on the underlying dimension,  $\beta_i$  is a respondent-level weight,  $\zeta_j$  is the “true” stimulus placement, and  $u_{ij}$  is an error term.

The trouble with AM scaling is that it discards a lot of data. Based as it is on conventional maximum-likelihood estimation, AM omits respondents who do not rate every stimulus included in the analysis. Estimated stimuli locations may therefore be biased. Even worse, AM makes it impossible to estimate over-time, common-space scores because respondents from different waves necessarily do not rate all stimuli.

To resolve these drawbacks in AM, Hare et al. (2015) have developed Bayesian Aldrich-McKelvey scaling (BAM). As a Bayesian method, BAM effectively imputes missing values with appropriate uncertainty.

This article goes beyond Hare et al. (2015) by combining multiple waves of CCES respondents into a single matrix. This makes it possible to estimate common-space stimuli placements over time. Given that a respondent also

has placed themselves on the 1-7 scale ( $z_{i(\text{self})}$ ), their ideal point  $x_i$  in that space can be calculated with the following formula:

$$x_i = \frac{z_{i(\text{self})} - \alpha_i}{\beta_i} \quad (2)$$

“Bridging observations” with stable values are the key to constructing a well-identified common space. In a legislative roll-call setting, bridges are legislators serving more than one term (Poole and Rosenthal 1997; Rosenthal and Voeten 2004). Shor and McCarty (2011) use winning candidate scores on the National Political Awareness Test (NPAT) to project many states’ legislators into a single ideological space. Noel (2013) uses yea/nay/abstain pronouncements on pending legislation to produce comparable estimates for pundits and the Congress. None of these strictly stable bridges are available for the present exercise.

Fortunately, the CCES in 2012, 2014, and 2016 shared questions on three stimuli: the U.S. Supreme Court, the generic Democratic Party, and the generic Republican Party. Among these, respondents assigned the most stable ratings to the parties, and I use these as bridges to identify my BAM common space.<sup>9</sup> Figure 3 shows that respondents’ placement of these stimuli was remarkably stable over the three waves.

Figure 4 gives the BAM-estimated, common-space locations for all included stimuli. The estimates make sense. 2012 Democratic Senate Candidate Cynthia Dill and the generic Democratic Party anchor the left. On the farthest right are the 2014 U.S. Supreme Court, Governor Paul LePage (R) in 2016, and the 2012 Tea Party. LePage lurches farther right from 2012-16, consistent with his increasingly manifest social conservatism.<sup>10</sup> Moderate Senators Susan Collins (R), Olympia Snowe (R) and Angus King (I) straddle the middle of the space.<sup>11</sup>

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9. One could achieve identification by fixing the values of the bridges. I follow Hare and coauthors by supplying the Gibbs sampler with random start values in  $[-1.1, -0.9]$  (Democratic Party) and  $[0.9, 1.1]$  (Republican Party). I do *not* fix the parties’ values with scalar priors.

10. Scott Thistle, “LePage: Over 90 percent of drug dealers busted in Maine are black or Hispanic,” *Portland Press Herald*, Aug. 25, 2016. <http://bit.ly/2bJ1pH0>.

11. The only strange result is the placement of the 2014 Tea Party, just to the left of 2014 Susan Collins, then a Republican candidate for Senate. This may represent a shift in the policy meaning of the underlying dimension. Collins and the Tea Party also may have been courting each other during her 2014 campaign.

These stimuli placements are interesting in themselves. Note how fiscal conservatives

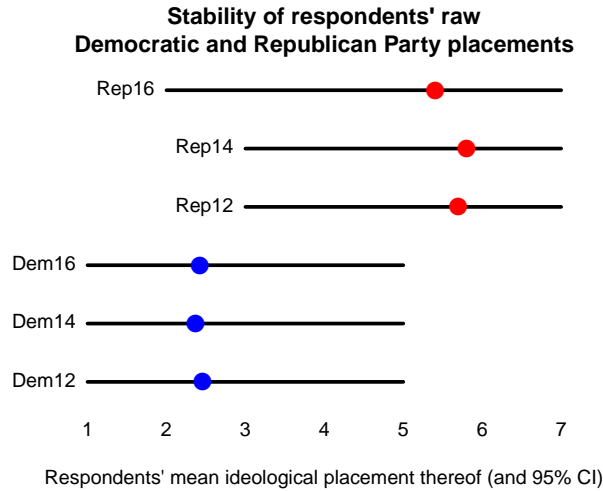


Figure 3: CCES respondents' placement of the generic major parties, 2012-6.

## From ideal points to voters' second choices

The critical question for a viable party is what a voter will do with their second-place ranking. Figure 1 shows that there have been four key players since the first “spoiled” election in 2002: Republicans, Democrats, Greens, and Independents.<sup>12</sup> The ideal data would let us measure each voter’s distance from each of these parties’ candidates. Using those distances, we could construct a would-be AV preference ordering for each voter at each “spoiled” election. We then could estimate the relative probabilities of seeing each pos-

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like Jeb Bush, Mitt Romney, Susan Collins, and Angus King appear at the middle of the spectrum. Figures such as Obama, the country’s first African-American president, and LePage, the latter of which blames his state’s drug problem on racial-minority traffickers from Waterbury (CT), appear to pin the ends of the spectrum.

12. The Independents are a cohesive force in Maine politics. Barbara Merrill, their candidate for governor in 2006, is a former Democratic state legislator. Her departure from the party on January 3 led to an evenly divided state House, with Merrill as the swing vote. Independents’ 2010 candidate was Eliot Cutler, a former Carter administration official endorsed by Angus King, another ex-Democrat, former Independent governor, and now U.S. Senator. Cutler ran again in 2014, again with King’s endorsement until a last-minute, October 29 switch to Democrat Mike Michaud. Cutler now plans to formalize the Maine Independents’ status as a party. See: Michael Shepherd, “Eliot Cutler plans to help independent candidates,” *Maine Sun Journal*, May 2, 2017. <http://www.sunjournal.com/news/maine/2017/05/02/eliot-cutler-plans-help-independent-candidates/2122563>

sible preference profile for each type of voter. If we wanted, we could vary the assumption that voters use their second-place ranking (and not some lower one) as the strategic-voting slot. Unfortunately, the CCES did not capture data on all such candidates, let alone their generic party labels.

Since we cannot estimate how voters might have felt about all Maine’s candidates (nor parties) at every election since 2002, I use the best available data and determine how they felt about the generic Democratic and Republican Parties in 2012, 2014, and 2016. Specifically, I estimate the probabilities that a generic, self-reportedly registered voter with one of the following self-reported affiliations – Democrat, Republican, Independent, and Other – would vote for a generic Democrat or Republican.<sup>13</sup> I then calculate the *generic Democratic advantage* (GDA) for each group as follows:

$$P(\text{vote}_{Dem}) - P(\text{vote}_{Repub}) \tag{3}$$

Getting to the GDA involves sampling from the posterior distributions of respondent ideal points and the parties’ stimuli locations, then simulating all possible pairwise contests (given the sample drawn from each ideal point’s posterior density). In particular:

1. Sample 1,000 values from each respondent’s ideal point,
2. Sample 1,000 values from each stimulus’ (A and B) estimated spatial location,
3. Calculate the distance for every pair of respondent and stimulus A points,
4. Repeat step three for the other stimulus B,
5. Note the proportion of times that A beats B for a given respondent and vice-versa,
6. Repeat steps 1-5 for all respondents in a group of interest (e.g., Independents),
7. Calculate two averages: the proportions of A wins and B wins for all respondents in a group,

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13. Results are not substantively different when calculating the generic Democratic advantage for each category in three-point party identification.

8. Subtract one average from the other to get generic A (or B) advantage within that group for that year,
9. Repeat steps 1-8 for each group of interest.

Positive GDA tells us that a group would be more likely to cast its second-choice vote (at least) for a Democrat. Negative GDA tells us it would have preferred the Republican. So, when second-placed Democrats wonder whether they'd have won the last "spoiled" election under AV rules, they look at the generic Democratic advantage for parties placed third and lower.

## **Partisan incentives to adopt AV, 2002-16**

In short, 2016 was the only year post-1998 that the second-largest party could expect smaller parties to rank it over its front-running opponent. After 2002, runner-up Republicans could not count on Greens for second-choice support. After 2006, the runner-up GOP again could not count on Greens, nor Independents led by a Democratic defector. After 2010, Independents could not count on the second-choice votes of Democrats. By 2016, however, it became clear that the second-placed Democrats in 2014 might later count on transfers from Independents.

### **2002 & 2006: Republicans look to Greens, Independents**

As winners, Democrats had no incentive to adopt AV following the 2002 and 2006 gubernatorial elections. What about the second-largest party in each race, the Republicans? In 2002, Green Party voters held the balance. While CCES data do not permit us to go back that far, nor to measure the preferences of Greens, Herron and Lewis (2007) found that 60 percent of Florida Greens were Democratic-leaning after the 2000 presidential election. If Maine Republicans perceived the same condition after 2002, they would have had no reason to turn to AV. Green second-choice votes would have broken for Democrats.

Independents and Greens together held the balance in the 2006 election. The Independent was Barbara Merrill, a state representative who had just left the Democratic Party to run for Governor. As the second-largest party, Republicans might have expected Merrill's supporters to rank a Democrat

second under AV. Likely Green and Independent voting for Democrats in lower rankings rules out Republican AV support after 2006.

## **2010: Independents look to Democrats**

Why did the Independents not get behind AV after 2010's election? Governor Paul LePage (R) had won on 38 percent of votes. The runner-up was Eliot Cutler (I). Democrat Libby Mitchell came in third. According to the *Bangor Daily News*, Cutler did not support AV until late 2014. Further:

Rob Richie, a ranked choice voting advocate and head of Maryland-based group FairVote, used Cutler's near miss in the 2010 Maine gubernatorial race as an argument for the system, saying *if the second-choice votes under Democratic third-place finisher Libby Mitchell were reallocated, Cutler likely would have leapfrogged LePage into first place* [emphasis mine].<sup>14</sup>

Richie conjectures that 2010 Democratic voters would have given Cutler their second-choice votes. Figure 5 gives the simulation-based generic Democratic advantage in 2012, 2014, and 2016 for registered Democrats, Republicans, Independents, and Other (self-reported). While Independents and Republicans in 2012 are predicted to favor a Democrat, the prediction for Democrats is virtually break-even. If the 2012 estimates tell us anything about post-November 2010 opinion, Cutler had no guarantee of benefitting from would-be-eliminated Libby Mitchell's (D) lower rankings, which instead might have gone to LePage.

## **2014-6: Democrats rebound, look to Independents**

Cutler became an AV supporter in late 2014. Figure 1 offers a ready explanation. Cutler's Independents sank from second- to third-largest gubernatorial party, falling from more than a third of votes in 2010 to under ten percent in 2014. Small parties like the Maine Independents want AV for "expressive" reasons. As the *Bangor Daily News* wrote late in the 2014 campaign:

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14. Seth Koenig, "Cutler calls for ranked choice voting, open primaries in gubernatorial elections," *Bangor Daily News*, Aug. 28, 2014. <http://bit.ly/2pPm3w4>.

Rep. Diane Russell, D-Portland, said Thursday she has advocated for ranked choice voting in the state for seven years and blasted Cutler for not being more supportive of her efforts.

Now in second place, Democrats also began changing their minds:

[Democratic candidate for Governor Mike] Michaud indicated Thursday he was open-minded about the voting reforms Cutler discussed.

By 2016, the Democratic position on AV solidified, and GDA shows why. Independents clearly lean toward Democrats. Since Independents held the balance at the most recent gubernatorial election, Democrats may have calculated that an AV re-run of 2014 would have benefitted their party.

## Did lower office shape party positions?

My analysis is based on gubernatorial politics, but Maine may apply AV to other elections. Might state legislative outcomes have affected party support for AV? I consulted the 2014 state legislative returns to see. Assuming all district-level small-party votes had gone to the runner-up party in each district – and the GDA calculations cast doubt on that assumption – Republicans would have lost one Senate seat, Democrats would have gained one in the Senate but lost two in the House, and Independents would have gained two in the Senate. None of these hypothetical outcomes would have affected chamber control.

I find that small-party vote shares were large enough to have changed the outcomes in three of the 35 Maine Senate districts (Table 1, largest party in **bold**, second-largest in *italics*). Whether AV would have changed those results depends on whether the Green Independents (GI) or Maine Families Party (MFP) identify as CCES Independent or Other for the purpose of calculating generic Democratic advantage. Greens may have spoiled Democrats in District 23 (Sagadahoc County) and Republicans in District 24 (Cumberland County). The MFP may have spoiled Democrats in District 34 (York County). Even if these elections had produced different winners, however, Republicans still would have won a Senate majority (Figure 7).<sup>15</sup>

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15. The election produced 20 Republican and 15 Democratic Senators.

District	D	R	GI	MFP	U
23	<i>0.41</i>	<b>0.47</b>	0.12	0.00	0.00
24	<b>0.48</b>	<i>0.34</i>	0.17	0.00	0.00
34	<i>0.38</i>	<b>0.49</b>	0.00	0.13	0.00

Table 1: Vote shares in potentially spoiled Maine Senate elections, 2014. GI = Green Independent. MFP = Maine Families Party. U = Unenrolled.

In the Maine House of Representatives, six out of 151 districts in 2014 saw contests where the small-party vote share exceeded the gap between the top two parties (Table 2, largest party in **bold**, second-largest in *italics*). Republican voting may have spoiled Independents in Districts 12 (Biddeford) and 62 (Auburn). Greens may have spoiled Republicans in Districts 23 (Standish) and 54 (Topsham), then Democrats in District 33 (South Portland). Finally, an Unenrolled candidate may have spoiled Democrats in District 148 (several northeastern towns). The GDA calculations above suggest that AV would have changed the result in District 33. The likely AV outcomes in the other districts again depend on how Green and Unenrolled supporters might have self-identified in the CCES. Either way, AV likely would not have reversed the Democrats' House majority (Figure 8).<sup>16</sup>

District	D	R	I	GI	LIV	U	other
12	<b>0.42</b>	0.22	<i>0.36</i>	0.00	0.00	0.00	0.00
23	<b>0.48</b>	<i>0.43</i>	0.00	0.08	0.00	0.00	0.00
33	<i>0.44</i>	<b>0.46</b>	0.00	0.10	0.00	0.00	0.00
54	<b>0.45</b>	<i>0.44</i>	0.00	0.11	0.00	0.00	0.00
62	<b>0.48</b>	0.25	<i>0.28</i>	0.00	0.00	0.00	0.00
148	<i>0.37</i>	<b>0.48</b>	0.00	0.00	0.00	0.15	0.00

Table 2: Vote shares in potentially spoiled Maine House elections, 2014. GI = Green Independent. LIV = Lewiston's Independent Voice. U = Unenrolled.

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16. The elections produced a House of 79 Democrats, 69 Republicans, and three Independents.



## The GOP’s strategic AV endorsement

Late in the 2016 referendum campaign, the Maine Republican Party endorsed AV in a press conference.<sup>17</sup> The Yes on [Question] 5 campaign began emphasizing Republican support. For example:

“Democrats, Republicans, Independents, Greens, and Libertarians across Maine understand that the system is broken, and they have taken an important step to help fix it,” said [Dick] Woodbury [proponent of record for Question 5].<sup>18</sup>

Republicans’ last-minute support for AV may have been strategic. Sometimes parties expecting to lose under new rules nonetheless support those rules when change becomes popular (Shugart 2003). In spite of the GOP endorsement, however, some Republicans continued opposing AV.<sup>19</sup> What did Maine Republicans do at the ballot box?

Figure 6 gives ecological inference estimates of support for AV by support for the 2016 presidential candidates: Clinton (D), Trump (R), Stein (G), and Johnson (L). Data are precinct-level and from the *Bangor Daily News* as of March 17, 2017. I use the frequentist method of Goodman (1953), which relies on vote proportions rather than raw totals (Lau et al. 2007). I estimate that fewer than 25 percent of Trump supporters voted “yes” on AV. About 75 percent of Clinton supporters approved of the measure. Greens and Libertarians also appear to have supported AV in large numbers, but there are too few of each type to precisely estimate their support.

## AV is not “proportional-light”

Third-party supporters are vocal advocates for ranked-choice voting. Some expect AV to help them build their parties. Depending on how the major parties approach other election laws in AV’s wake, first-choice totals may help

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17. Avery Arena, “Maine Republicans Endorse Question 5,” Oct. 14, 2016. <http://www.rcvmaine.com/101416a>.

18. Andy O’Brien, “Mainers Vote to Raise Minimum Wage, Legalize Pot, Tax the Rich and Implement Ranked Choice Voting,” *The Free Press*, Nov. 10, 2016. <http://bit.ly/2pKFHut>.

19. Matthew Gagnon, “A plurality is a plurality. Why Question 5 is definitely unconstitutional,” *Bangor Daily News*, Oct. 26, 2016. <http://bit.ly/2pUghur>.

minor parties qualify for ballot access, debate participation, public campaign funds, and other perks the major parties now enjoy. Others may hope to sneak into office, earning enough first-choice votes to survive elimination and win on transfers. This is precisely what happened in Burlington’s (VT) 2009 mayoral election, when Progressive Party candidate Bob Kiss beat four other contenders in a third round of counting. Burlington’s Republican and Democratic Parties summarily worked to repeal AV.<sup>20</sup>

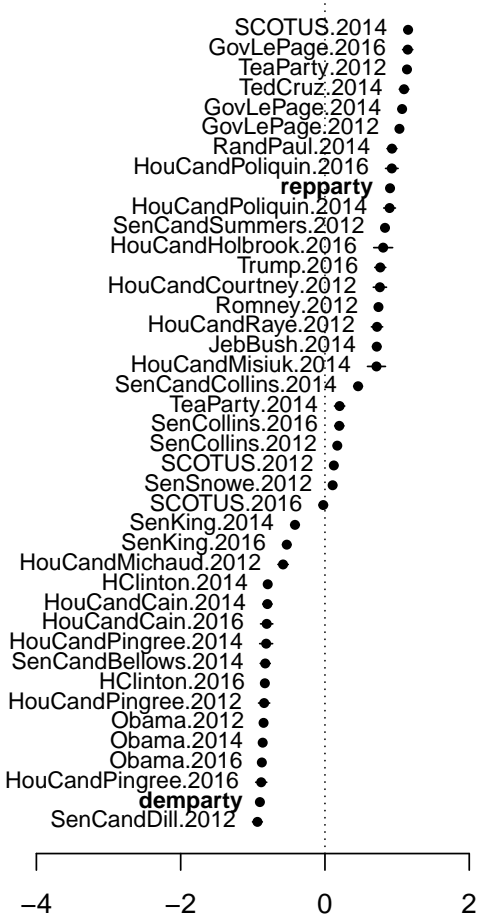
AV lets one party win with votes for another. Proportional representation (PR) lets a party win with votes for itself. In addition to giving might-have-been AV results (on a generous assumption about small-party transfers), Figures 7 and 8 also illustrate hypothetical 2014 legislative results under statewide, party-list PR. Such a system is admittedly implausible (Latner and Roach 2011: 3), but any reasonable form of PR would induce more third-party voting than what Maine saw in 2014 (Duverger 1954; Cox 1997; Taagepera 2007; Li and Shugart 2015). The results are clear. Compared to AV, PR better translates electoral parties into legislative ones. Neither chamber would have had a single-party majority.

Even if voters use first choices sincerely, AV lets one party win with votes for another. Note how interest surges whenever a third-party candidate appears to have caused the election of someone without a majority. We heard a lot about “instant runoff voting” after the 2000 presidential election, when Ralph Nader (I) appeared to have “spoiled” Al Gore (D) in Florida. Now after 2016, Hillary Clinton’s (D) presidential loss to Donald Trump (R) has people imagining a nationwide RCV contest. None of this is surprising. AV interest in each case has come from two basic camps: Democrats who have just lost an election and people who wish they could vote for third parties.

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20. Shay Totten, “Burlington Residents Seek Repeal of Instant Runoff Voting,” *Seven Days*, Dec. 29, 2009. <http://bit.ly/2ppHuBW>.

### Estimated ideological locations of stimuli



Respondents' BAM-estimated ideological placement thereof

Figure 4: Estimated locations of BAM stimuli.

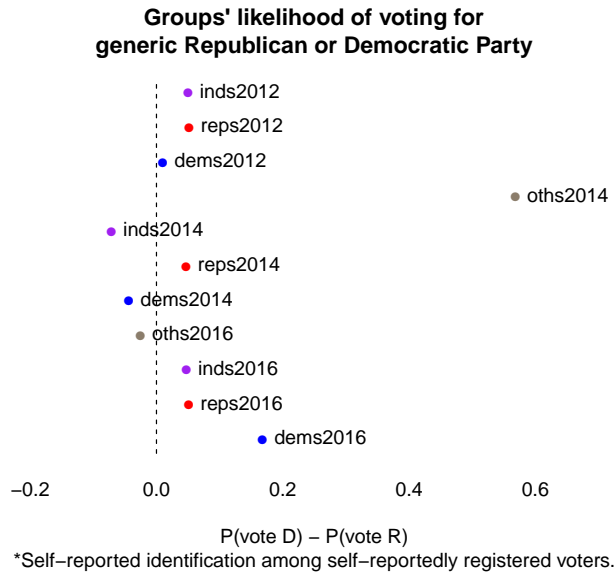


Figure 5: Generic Democratic advantage among key groups, 2012-16.

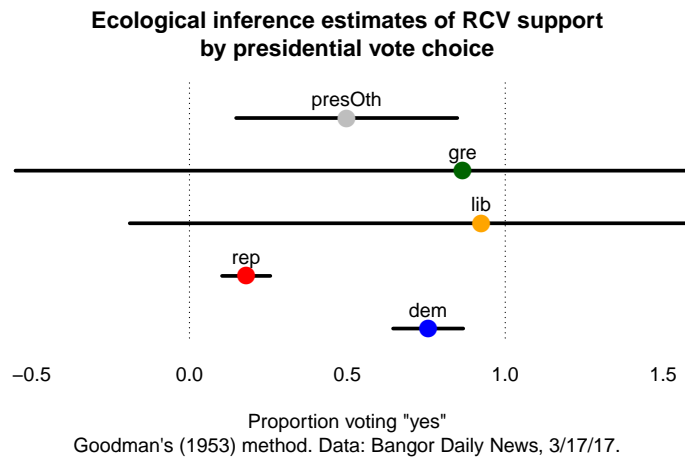


Figure 6: The GOP's AV endorsement looks to have been strategic.

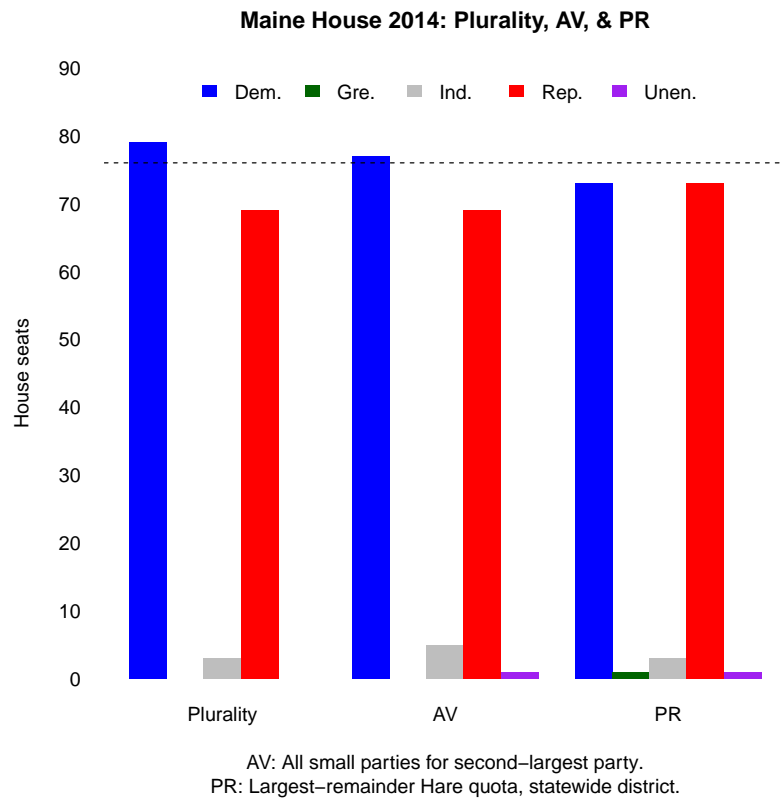


Figure 7: Simulated 2014 House results: actual, AV, and PR. Dashed line is seat majority.

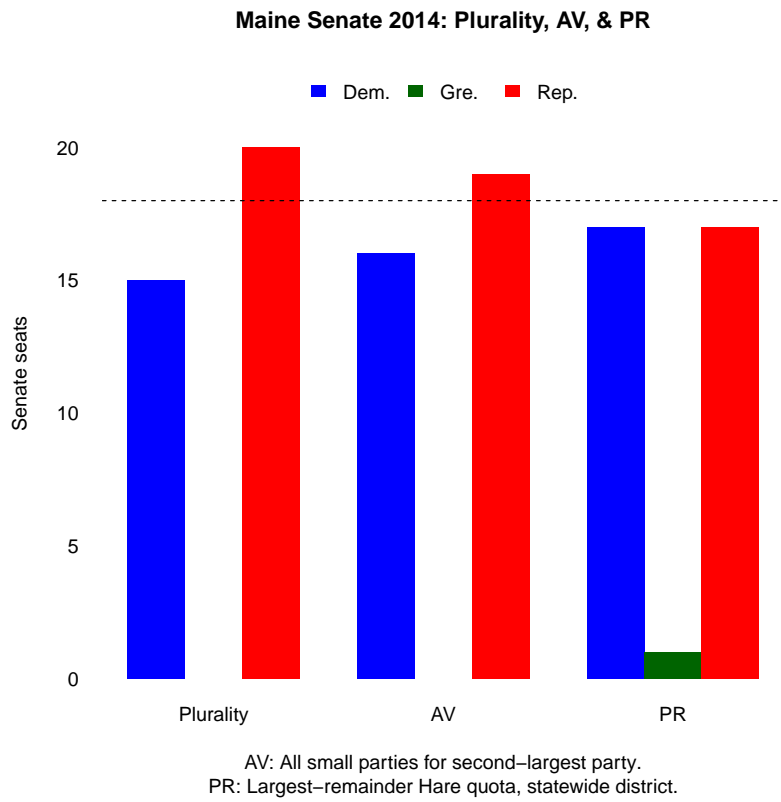


Figure 8: Simulated 2014 Senate results: actual, AV, and PR. Dashed line is seat majority.

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