Exit from Proportional Representation and Implications for Ranked-choice Voting in American Government

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Abstract

Advocates of ranked-choice voting (RCV) aspire to the election of major-party outsiders and, eventually, the introduction of proportional representation (PR) elections. We know little about the stability of outsider-friendly voting systems for fixed-term legislatures like those of the United States. This paper proposes a veto-players understanding of PR's incentive-compatibility. I argue that non-majoritarian groups should collude in efforts to repeal PR when they (a) infrequently control the decisive vote in a legislature, (b) do not control the executive veto point where the executive is a relevant consideration, and (c) expect to grow in a post-PR environment. I test this argument against previously paper-bound roll-call data and archival records from three American cities that used the PR form of RCV: Cincinnati (1929-57); New York City (1938-47); and Worcester, Massachusetts (1950-61). Results imply that permissive voting rules like RCV are stable when the second-largest party shares power with the first on the most salient dimension of conflict. Finally, the exit from PR was not just a resumption of major-party politics. The outsider faction was decisive in Worcester.

Keywords: electoral system change, legislative behavior, proportional representation, ranked choice voting.

1 Introduction

On Election Day 2016, Maine became the first state in American history to replace plurality elections with "ranked-choice voting" (RCV). The incoming form of RCV asks voters to rank candidates in order of preference. If none has a majority in the first round of counting, ballots for the trailing candidate transfer to next-ranked candidates. The counting process repeats until a majority winner emerges. Behind RCV is a coalition of regular Democrats and self-identified independents. Democrats expect to benefit from independents' ballot transfers. Independents hope for more seats in the legislature.[1] Nationally, RCV advocates hope this "single-winner form" will ease transitions to the Hare system of proportional representation (PR).[2]

How long will RCV survive, especially if it does raise independents' presence in the assembly? More generally, why are electoral rules that lower barriers to "outsiders" repealed?[3] The comparative-politics literature says changes like these come from machinations over expected cabinet composition. This insight does not travel neatly to the United States, where legislative terms are fixed. Coalition disloyalty in a parliamentary system triggers snap elections, which threaten to redistribute power. No such device exists in the US. The coalition that organizes a chamber can split with no immediate consequence. RCV's durability is therefore an open question. Its increasing use in state and local government gives urgency to finding an answer.[4]

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1. Jack Santucci, "Will ranked-choice voting succeed in Maine? That depends on the Democrats," *Washington Post* Monkey Cage Blog, October 13, 2016. Accessed November 4, 2016. Online at `http://wapo.st/2ejA3vG`.

2. FairVote, "Fair Representation." Accessed November 7, 2016. Online at `http://www.fairvote.org/fair_representation`.

3. Cox (1997: 20-1) calls these "more permissive" electoral systems. The issue is not RCV or proportional representation versus plurality, but whether rules-change makes it harder or easier for a group to win seats. A proposed rule is only more or less permissive in contrast with whatever exists. Switching from PR to plurality lowers permissiveness. So does raising a PR threshold from five to ten percent, switching from open- to closed-list PR, or from open to closed party primaries.

4. Eleven cities now use RCV for public elections. Others have passed advisory measures or are waiting on compatible voting equipment. See FairVote, "Where is Ranked-choice Voting Used?" Accessed November 4, 2016. Online at `http://www.fairvote.org/where_is_ranked_choice_voting_used`.

I argue that the longevity of a permissive voting rule depends on whether the second-largest faction expects to exercise a policy veto. I focus on the second-largest faction because, as I argue below, this group expects (perhaps mistakenly) to absorb other voters in a post-PR environment. I test this argument by scaling 5,127 roll-call votes from three representative cities using PR during the last wave of RCV interest: Cincinnati (1929-57); New York City (1938-47); and Worcester, Massachusetts (1950-61). Elections were technically non-partisan in two of the cities, so I use newspapers and archival records to identify the operative parties and factions. The argument successfully predicts repeal in all three cities. It also explains factional behavior in failed attempts.

The paper makes four contributions. First, it ports an insight from the study of parliamentary government to the US context of fixed-term legislatures. Second, it shows that legislative behavior matters as much for rule-choice as do expectations about seat distributions. Third, it launches a modern research program into big-city legislative politics. Fourth, it presents sobering results for those who argue "everybody wins under PR" (or any relatively permissive electoral rule). Rules that promote power-sharing in a fixed-term setting are only stable when the two most powerful groups share power.

The paper proceeds as follows. The next section lays out my deductive argument. Section three justifies my case selection. The fourth section addresses data sources and coding decisions. Section five addresses method. My workhorse is a Bayesian, two-parameter, item-response model of legislative voting. Section six presents evidence that relative size and control of a veto point explain factional behavior on the repeal of PR. The final part sketches implications for the future of RCV. The nightmare scenario for Maine reformers would be a non-Democratic governor bargaining with two legislative chambers in which "independents" cast deciding votes. So long as Democrats were more numerous than "independents," they would withdraw support for RCV.

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2 Faction, not party, and the repeal of fixed-term PR

If American politics were multi-factional rather than two-party, we would look not for partisan majorities but factional control of veto points.[5] Veto points are strategic bargaining positions in the lawmaking process. They can exist due to the design of a political system (i.e., institutional veto points), or they can arise from the configuration of parties in a legislature (i.e., partisan veto points). Control of a veto point allows a faction to demand policy concessions in return for consent to policy change (Tsebelis 2002). Sartori (1976: 109) calls this "blackmail potential." Analysis of parliamentary systems shows that expectations about who will have blackmail potential shape preferences about the voting system (Bawn 1993; Benoit 2004, 2007; Katz 2005; Renwick 2010).

Parliamentary and fixed-term settings handle blackmail differently. Cabinet formation in a parliamentary system commits parties to an agenda. The government exercises exclusive proposal power, and refusal to support the government agenda can trigger snap elections. It is an open question as to whether snap elections sufficiently scare disloyal parties into towing the government line. The threat of losing seats probably does deter disloyalty in some places and periods. But in others, we probably see voting-system change because a sufficient set of actors believes snap elections are an ineffective sanction against disloyalty. Another possible motive is all-out refusal

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5. The signs of faction are all around us. The classic case for two-party analysis is also a normative case for two-party politics (Schattschneider, 2004 [1942]). The tension between normative and positive argument goes at least as far back to the debate between Key (1949) and the APSA Committee on Political Parties (1950). Masket (2016) makes the most recent contribution.

The empirical case for two-party politics is weak. T. Schwartz (1989) and Aldrich (1995) argue that having two Congressional parties allow factions to avoid collective indecision, but there is no reliable guide to which party will take shape (Noel 2013). The "three-party system" of the 1930s-60s was a period of structured, stable factionalism (Poole and Rosenthal 1997). Noel (2016b) calls this period one of "alternative coalitions." Cox and McCubbins (2005) show how the agenda control needed to avoid this scenario itself requires low intra-party factionalism. Analyses of more recent politics highlight the continued relevance of faction. Aldrich et al. (2014) and Roberts et al. (2015) find evidence of faction in an unlikely place: party-polarized Congressional voting. Cohen et al. (2016) argue that factionalism is one reason for the unpredictability of recent presidential nominations. Noel (2016a) argues that factions in both parties divide on tactics, while Grossman and Hopkins (2015) see Democrats particularly as a set of loosely connected interests. Finally, a majority of Americans repeatedly identifies with one of the major parties while reporting desire for more alternatives.

by parties (large or small) to set a government agenda in the first place.

Regardless of their effectiveness under parliamentarism, snap elections do not exist in The United States. This potential source of coalition fluidity can exist at all levels of government. Figure 1 illustrates a situation that can persist for the duration of a legislative term. There are three factions: A, B, and C. A simple majority of five votes is needed to pass legislation. No single faction has five votes. Because proposal power is not exclusive to a cabinet – there is no cabinet – the only relevant coalition is a bill-level one. The solid segment represents a vote in which B (3 votes) unites with C (2 votes) against A (4 votes). The dotted segment represents a vote in which A and B unite against C. The dashed segment represents a vote of A and C against B.
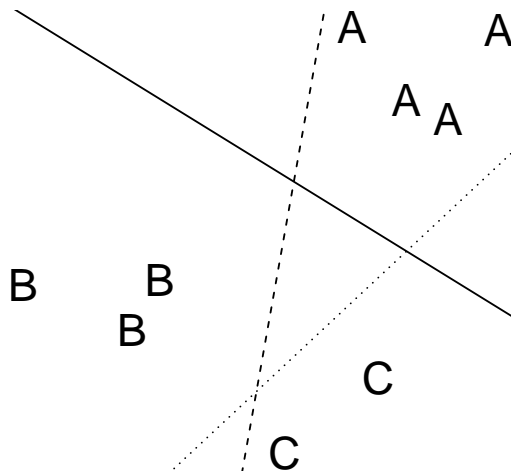

Figure 1: Three non-majority factions in a hypothetical, majoritarian legislature.

If $A - C$ and $B - C$ coalitions each occur more often than $A - B$ coalitions, we might characterize C as most often controlling the decisive vote. It does not matter in what proportion the non-$A - B$ coalitions occur. It simply means that C gets something close to what it wants on more bills than either A or B. Assuming all factions value each bill equally, C is happier than A

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and B. A and B are therefore willing to consider changing the voting system.

2.1   Preferences of largest faction

I assume that the largest faction (A above) always wants to change the electoral rules. Any faction (or party) prefers monopoly control of government to negotiated outcomes. The largest faction's problem is operational, not one of motive. Assuming its share of the legislature accurately reflects its fiat power (Benoit 2004: 374), it needs help to change the voting system.

2.2   Preferences of second-largest faction

I argue that a successful effort at voting-system change involves the second-largest faction (B above). This non-largest faction is most likely to survive the post-PR environment since voters who care about opposing the largest faction should coalesce around it. If the second-largest faction does not control the decisive vote, it should support repeal in an effort to boost its size and gain that vote.

Why should the survivor be the second-largest faction? This group is most likely to benefit from strategic voting, or perceptions that other small factions are hopeless. Cox (1997: Ch. 4) shows formally that strategic voting depends on expectations. Voters cannot strategically desert, to borrow the term of Boix (1999), unless they know where else to go. Cox (1997: 98) speculates that expectations come from polls,[6] but he goes on:

> I think strategic voting survives, both in theory and in practice, because one of the
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> things outcome-oriented elites can do in close races to reallocate resources from trail-

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6. See also Fey (1997). For experimental results involving polls, see Forsythe et al. (1993).

ing to front-running candidates is to flood the mass media with "wasted vote" arguments (including therein both the relevant evidence on candidate standings and the basic logic motivating a strategic vote).

The results of recent elections will shape expectations in the absence of polls.[7] They may even shape expectations in the presence of mistrusted polls. The same is true of elite messaging. Winning-minded elites and journalists may themselves fall back on those results. Experimental evidence from Hix et al. (2014) relies on hypothetical results from a most-recent election, and voters respond strategically *even without elite cues*.

Note it does not matter which non-PR system characterizes the post-PR environment (e.g., single- or multi-winner plurality). All that matters is a perception the strategic environment has become hostile to small factions, then that one faction above others is the focal point for opposition.

2.3 Preferences of other small factions

Non-largest factions that are not second-largest (C above) should support PR to ensure their own survival. Why is independent survival better than a merger? It helps to distinguish coalition parties (e.g., Republicans, Democrats) from coalitions of parties (e.g., the ideal-typical parliamentary setup). If the faction can be pivotal to a coalition at some later date, it can extract more from government than if it merged with a coalition party (Bawn and Rosenbluth 2006). Coalition parties try to use agenda control to suppress the causes of erstwhile factions (T. Schwartz 1989; Aldrich 1995; Cox and McCubbins 2005).

Skeptics will say this is a flimsy reason for non-second-largest factions to oppose a merger. They will say agenda control requires one faction to dominate the internal decision-making of a

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7. See Forsythe et al. (1993) for experimental results.

coalition party. They may say that non-second-largest factions should fear agenda control only if they expect the second-largest faction to control a majority of the coalition-party caucus. This would give rise to a "Hastert rule" whereby only bills desired by a majority of the majority would come to the floor. But the operational meaning of "dominate" is far from clear, and the Hastert rule is one of many ways to silence dissenting factions.

In practice, the cost of repeated fights against agenda control is likely to outweigh that of fighting to keep PR in the now. Factions have lifetimes to fight agenda control. If they can keep PR, however, agenda-control fights will never arise.

2.4 Why the second-largest faction does not always want repeal

Skeptics may now say that second-largest faction B should never tolerate the presence of an independent C because, were C in a permanent $B - C$ party, B would always get what it wants. That is a strong statement. It assumes agenda-control fights are costless to B and that, in those fights, B is assured of victory.[8] B may stand to gain more by negotiating independently with A than managing a $B - C$ coalition party.

2.5 Uncertainty and the largest faction

The largest faction should not agree to repeal PR if it expects all opposition to coordinate on a single opposition faction. That would be policy-suicidal. A would prefer to win on at least some

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8. B has no assurance it will always be the dominant faction in a $B - C$ coalition party. Recent work on nomination politics suggests B will do all it can to remain the dominant faction, but it does not claim that B will always win (Cohen et al. 2008; Bawn et al. 2012). Recent events in the House Republican caucus substantiate this view. One complaint of Tea Party members has been that Republican leadership will not let their bills come to the floor. Further, the Tea Party now usually demands a Speaker's resignation when the "moderate" Republican faction votes with House Democrats to pass a budget.

bills with the help of C rather than witness C go into a permanent majority with B. There must be some uncertainty about the destinations of former C supporters.[9]

2.6 Executive veto points

No non-largest faction should advance repeal, regardless of its legislative status, if it controls a non-legislative veto point. In a world where factions compete as veto players, extracting concessions is more important than advancing a majority-supported agenda. Control of an external veto point confers this ability, and preserving PR means promoting a future chance to extract concessions, should that faction lose control of the external veto point. In terms of Figure 1, being a C president, governor, or mayor offsets being C in a legislature where no bill-level coalition ever includes C.

2.7 Having other factions to absorb

B has no incentive to seek repeal if there are no other small factions to absorb. If there is no C, coalitions including C cannot occur more often than coalitions including B. B is not most often in control of the decisive vote because A is the only other faction in the legislature, and A is too large for B to matter.

2.8 Summary

We can predict the voting-rule preferences of hypothetically non-largest faction B – and therefore the demise of PR – by combining the logics of strategic desertion and decisive-vote control. Table 1 summarizes:

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9. See voluminous literature on Southern realignment and split-ticket voting for real-life examples.

Among non-largest B is:	Largest		Not largest	
	Alone	**Among many**	**Alone**	**Among many**
Pivotal	Yes PR	Yes PR	*Not logically possible*	Yes PR
Not pivotal	Yes PR	No PR	*Not logically possible*	Yes PR

Table 1: How non-largest faction B forms a position on PR. "Pivotal" means most often in control of the decisive vote. This matrix does not incorporate control of an executive veto.

3   Case selection

Examining the record of proportional representation in American cities is one good way to understand the longevity of fixed-term PR. This institutional combination is totally absent in Europe, which generates most of what we know about PR. One could turn to Latin America, but then we would be studying Latin America.[10] We want to know how PR would work in the United States, so I study actually-existing PR in the United States.

Figure 1 gives PR's temporal and spatial incidence.[11] All of these cities used the single transferable vote (STV) form. Except for New York City, all of them used it in tandem with nonpartisan, council-manager systems (Weaver 1986). Except in Boulder, Cleveland, New York, and West Hartford, elections were simultaneous and at-large to councils of seven or nine. Boulder staggered its elections. Cleveland and New York had larger councils. Cleveland, New York, and West Hartford were divided into multi-member districts (Gallup 1921; Maxey 1922; Winter 1982).

My cases are Cincinnati, New York City, and Worcester. One reason for choosing these cities is their overall representativeness. Each is in one of the states where PR use predominated. Each also offers several electoral cycles, which makes it possible to see change in council delegations' sizes and voting records. New York provides variation on executive structure, chamber size, ap-

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10. The Latin American record with PR-presidentialism is interesting. Cox (1999: 55-6) reminds us that military coups were frequent. One could call these extreme forms of PR repeal.

11. Data are from Childs (1965) and Weaver (1986), which I have verified and updated.
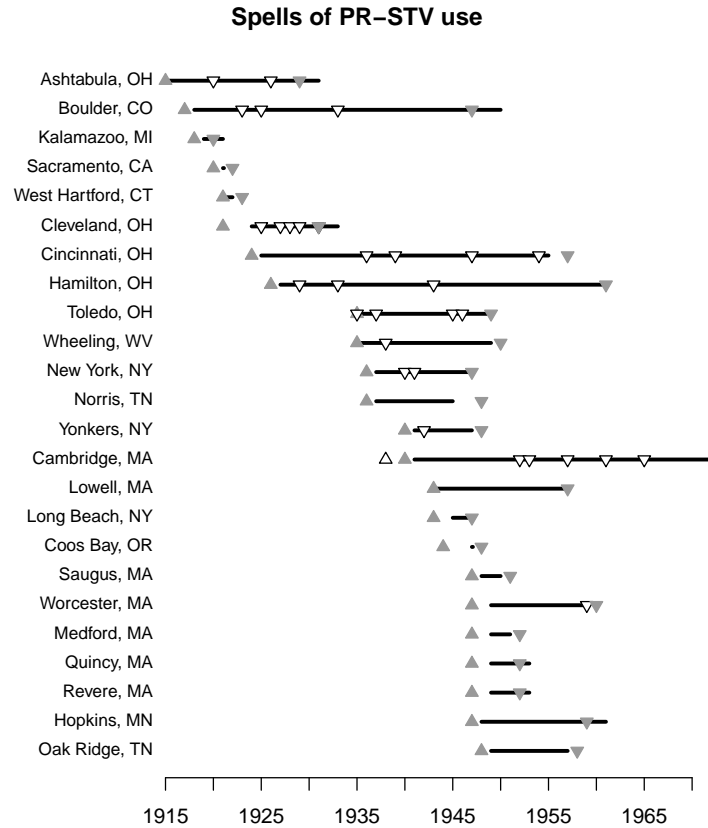
Figure 2: The spatial and temporal distribution of PR use in American cities. Solid, upward triangles denote adoption. Solid, downward triangles denote repeal. Empty triangles denote failed adoption or repeal.

portionment method, and whether the chamber is super-majoritarian.

These three cases also supply conventional wisdom. Table 2 lists seven major studies making comparison-based claims about the end of PR in America. All cover Cincinnati. Five cover New York City. Only three consider Massachusetts cases, and two of these cover Worcester.

Two explanations are most common. Race- and communism-based accounts say blacks and leftists disrupted legislative coalitions, provided an excuse for other repeal motives, or some combination of the two. Machine persistence refers to a situation in which dominant, pre-PR parties repeatedly try at repeal until some exogenous factor leads to success (e.g., "reformer fatigue" or an opportunity to focus attention on blacks and leftists). Trebbi et al. (2008: 326) give a recent

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Work	Cities covered	Explanations
Banfield and Wilson (1966)	Cincinnati, New York City, Worcester.	Race/communism, nomination control.
Childs (1965)	Cincinnati, Cleveland, New York City.	Machine persistence.
Weaver (1986)	Ashtabula, Boulder, Cambridge, Cincinnati, Cleveland, New York City, Quincy.	Ease of repeal, nomination control, machine persistence, reformer fatigue, angry unions, communism.
Barber (1995, 2000)	Ashtabula, Hamilton, Cleveland, Cincinnati, Toledo.	Machine persistence, party discipline, wider-society conservatism.
Kolesar (1996)	Cincinnati, New York City, Worcester.	Race/communism, machine persistence.
Amy (1996)	Cincinnati, New York City.	Race/communism, machine persistence.
Alesina and Glaeser (2004)	Cincinnati.	Race/communism.

Table 2: Major historical works making claims about the repeal of PR and cases from which evidence is drawn.

distillation of this literature: "Proportional representation systems were tried earlier in the past century and then discarded precisely because they favored minority representation (racial and left wing/socialist) too much." What might they mean by "too much"? Were blacks and leftists a factor all? If machine persistence (i.e., repeated attempts by the largest party) explains repeal, what tipped the balance? I suspect it is the second-largest faction's changing position on PR.

4 Data

I argue PR should fall when the second-largest faction (a) does not most often control the decisive vote (nor the executive where executives are relevant) and (b) where it is not just one of two factions. Testing this explanation requires knowing what the factions are, which are pivotal with what probability, then knowing their relative sizes (i.e., the results of the most recent election). I

need three types of data: roll call votes, legislators' factional memberships, and faction-level seat shares at the starts of terms. Because elections were non-partisan in all but New York, factional identification comprises two sets of data: legislator party affiliation and the factional endorsements of those legislators. The data comprise 5,127 roll call votes, 126 unique legislators, and their party-factional affiliations in non-partisan elections over 25 council terms.

Roll calls come from weekly issues of the *City Bulletin: Official Publication of the City of Cincinnati*, 1929-57; semiannual volumes of *Proceedings of the Council of the City of New York*, 1938-1947; and original minutes, 1950-60, housed in the basement of Worcester City Hall. All were photographed with a smartphone, then manually entered into data matrices.[12]

Factional endorsements of candidates come from *Results of Elections in Hamilton County*, semiannual slate announcements in the *Worcester Telegram*, and semiannual listings in the *New York Times*.[13]

Party affiliations of candidates come from the aforementioned newspapers, three secondary sources (Straetz 1958; Binstock 1960; Burnham 1990), candidate biographies in the *Cincinnati Enquirer*, and voter registration index cards on file at the Worcester Election Commission. Figure 2 is an example Worcester voter registration record. The caption explains how I used these to identify the right party for the right person in the right year.

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12. The New York City Council unanimously voted to give itself four-year terms in the 1944-45 term. This provision went into effect for the 1946-47 term. Because PR was repealed in 1947, I have not collected roll calls for 1948-49. Complete sets of Cincinnati City Council roll calls for 1925-9 were not available. I did not include any Worcester roll calls for 1961, since that city repealed PR on Election Day 1960.
13. The *Telegram* is on microfilm at the Worcester Public Library.

Figure 3: An example voter registration record from Worcester lets me identify the politician's party registration for a given year. Combined with annual entries on these cards, a notebook of candidate filings with street addresses (not shown) prevents two errors: mistaking people with the same name, then mistaking party registration if it changes.

5 Methods

I identify the pivotal party with a Bayesian, two-parameter, item-response-theoretic (IRT) model of legislative voting (Jackman 2001; Clinton et al. 2004). I fit a separate model for each session. I make standard assumptions across all models. Absences and abstentions are treated as missing data. No legislators are deleted, either before estimation or from the estimation results (e.g., legislators who die during a term). The IRT model imposes the following functional form on legislators' roll-call voting:

$$y_{ij}^* = \beta_j x_i - \alpha_j + \varepsilon_{ij}$$

Many use this approach to measure revealed legislator ideology, given as scalar ideal points. I

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do not claim to measure ideology.[14] I am using the model to construct one-dimensional descriptions of legislatures. The model aims to predict legislators' votes (y^*_{ij}) from their observed roll-call voting. Legislators' positions along the dimension (x_i) can be "backed out" of their actual votes and two roll-call-level parameters. These are β_j, which says how strongly each roll call (j) is positively or negatively related to the underlying dimension, and α_j, which adds to or subtracts from $\beta_j x_i$ as necessary to maximize correct predictions.

I follow standard practice in the literature by estimating one-dimensional models (Clinton et al. 2004; Shor and McCarty 2011; Fowler and Hall 2016).[15] This means we are recovering legislators' positions along the most salient dimension of legislative conflict. Returning to the example in Figure 1, if $A - C$ and $B - C$ coalitions each occur more often than any non-C coalition, C legislators will emerge as most-pivotal players. Additional dimensions may be interesting for their substantive policy content – say, one in which an $A - B$ coalition occasionally squares off against C – but that is beyond the scope of this research. We are reducing the space in Figure 1 to the space in Figure 4 below, with appropriate uncertainty about legislators' locations.

B   BB   C ACA A A

Hypothetical zone
of potential median
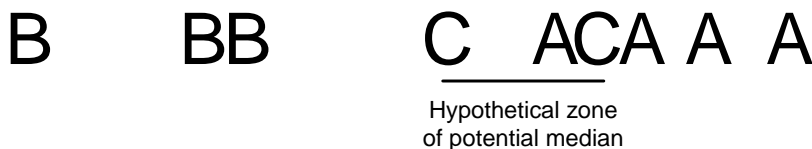
Figure 4: One-dimensional reduction of the hypothetical policy space depicted in Figure 1.

Figure 4 makes clear that we do not know the identity of the pivotal faction. We see that an A legislator occupies the median position in this nine-seat body (the veto point), but all other A

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14. Measures of ideology based on roll-call voting cannot isolate ideology from other coalition pressures. See Clinton (2012) and Noel (2016b).

15. Model-fit statistics are in the appendices.

legislators appear to their right, and this A legislator is flanked by both members of C. Presumably the members of a faction are not voting lock-step, which is why we see C, A, C instead of C, C, A. Results from the IRT model incorporate this uncertainty. Who exactly is the pivot, and does their faction control them?

I construct a *discipline-weighted probability that each faction controls the most decisive vote*. This requires two big steps. The first involves testing hypotheses that each legislator occupies the pivotal position. Say we want to know the median member of a nine-seat city council. Estimation results let us identify the fifth member with appropriate uncertainty. Laid out in Clinton et al. (2004: 360), these steps give us the probability that legislator i occupies rank r:

(1) sample the legislators' ideal points x_i from their joint posterior density; (2) rank order the sampled ideal points; (3) note which legislator occupies a particular pivot or order statistic of interest. We then report the proportion of times the i_{th} legislator's ideal point is the pivot or order statistic of interest over these repeated samples from the posterior of the ideal points.

The second big step is to create a faction-level measure. First I compute a party discipline score for each legislator. This is a standard measure capturing the proportion of times a legislator votes with a majority of their faction.[16] For each legislator with a non-zero probability of occupying the relevant rank, I multiply that probability by the probability they vote with a majority of their faction. Once we know the discipline-weighted probability that member i occupies rank r, we can sum the discipline-weighted probabilities by faction. The result is the probability that each faction controls the most decisive vote.

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16. For two-member factions, voting with the majority only happens on a unanimous vote. R code for computing party discipline of two- and one-member factions is available on request.

Several choices are arbitrary. One set arises in estimating the IRT model. Following Jackman (2001), I generate 1.5 million samples for each parameter, discard the first 100,000 iterations, and retain the value of each $2,000_{th}$ of the remaining 1.4 million. I use default start values and the `ideal()` command in R (Jackman 2015). Trace plots of the legislator estimates all give visual evidence that sampling has converged on stable distributions. Another choice involves setting priors for those distributions. I use uninformative ones. The final choice is the number of samples to draw from the joint posterior density in learning who is pivotal. I use the entire set of values.

Ideal point estimates are not identified unless one restricts them in relation to each other (i.e., local identification) and then a larger coordinate space (i.e., global identification). I solve the first problem by constraining point estimates to be normally distributed. The second issue is not a problem. We are interested in the relative positions of legislators, not, for example, whether the "most conservative" member's mean location is 0.9, 1.5, or 2.2 on the latent dimension.

Global identification can be a problem, however, when the relevant pivot is not the chamber median. The potential trouble here is that the latent dimension may rotate. Consider a nine-seat council in which no law can pass without seven votes. The relevant pivot then becomes the third legislator. In order to make sure we are measuring the probability of a party occupying this pivot, I post-process the estimation results so the point estimates correspond to the coalition of factions that organized the chamber.[17]

The next piece of information we need is each faction's size. I use its share of seats at the start of a session. This reflects how well it got out the vote, directed voters' ballot rankings, and coordinated voters who otherwise might have supported different candidates. Initial seat shares also reflect overall performance in an election, not, for example, tactics used later to fill vacancies.

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17. Post-processing is available in the `ideal` package for R as the `postProcess()` command.

6   Results and discussion

The sections that follow discuss each city. To recap, PR should fall when the second-largest faction is not most likely to control the decisive vote. In cities with executives, the second-largest faction also must not control the executive. Trivially, factions other than the first- and second-largest must be available for absorption. (This is true for every council-term below.)

Each section includes a bar chart of (1) the initial factional divisions of city council, which is the result of the most recent election; (2) a dashed bar indicating which faction was most likely to control the decisive vote; and (3) asterisks below the end-years of legislative terms for which my argument predicts repeal. I include referendum outcomes and narrative evidence as appropriate. I also give a brief history of PR and the party system with which it coincided. Discipline-weighted probabilities that each faction is pivotal are in the appendices.

6.1   Cincinnati, 1930-57

Cincinnati voters ratified PR in 1924 along with a nine-seat, council-manager charter, deposing the Cox-Hynicka Republican organization (Miller 1968). Republican defectors literally used PR to buy Democratic support (Kolesar 1995: 167-70). That bargain endured for 17 cycles in a pre-election slating deal called the Charter Party. Charter accordingly comprises two factions: the official Democratic Party and a faction of defecting Republicans. Case history says the loss of some Democrats' support let regular Republicans finally repeal PR in 1957 (Reed et al. 1957: 48; Miller and Tucker 1990: 92-3).

We are interested in which faction controls the median member of Cincinnati City Council. This is because a majority of all sworn members was required to pass ordinances (Werner 1928).

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Initial seat shares and pivotal status
Cincinnati, 1930–57

Seats (of 9)

5
4
3
2
1

'31 '33 '35 '37 '39 '41 '43 '45 '47 '49 '51 '53 '55 '57

— ■ — Most likely to cast deciding vote (discipline–weighted)

D: Democratic (Charter); r: Charter Republican;
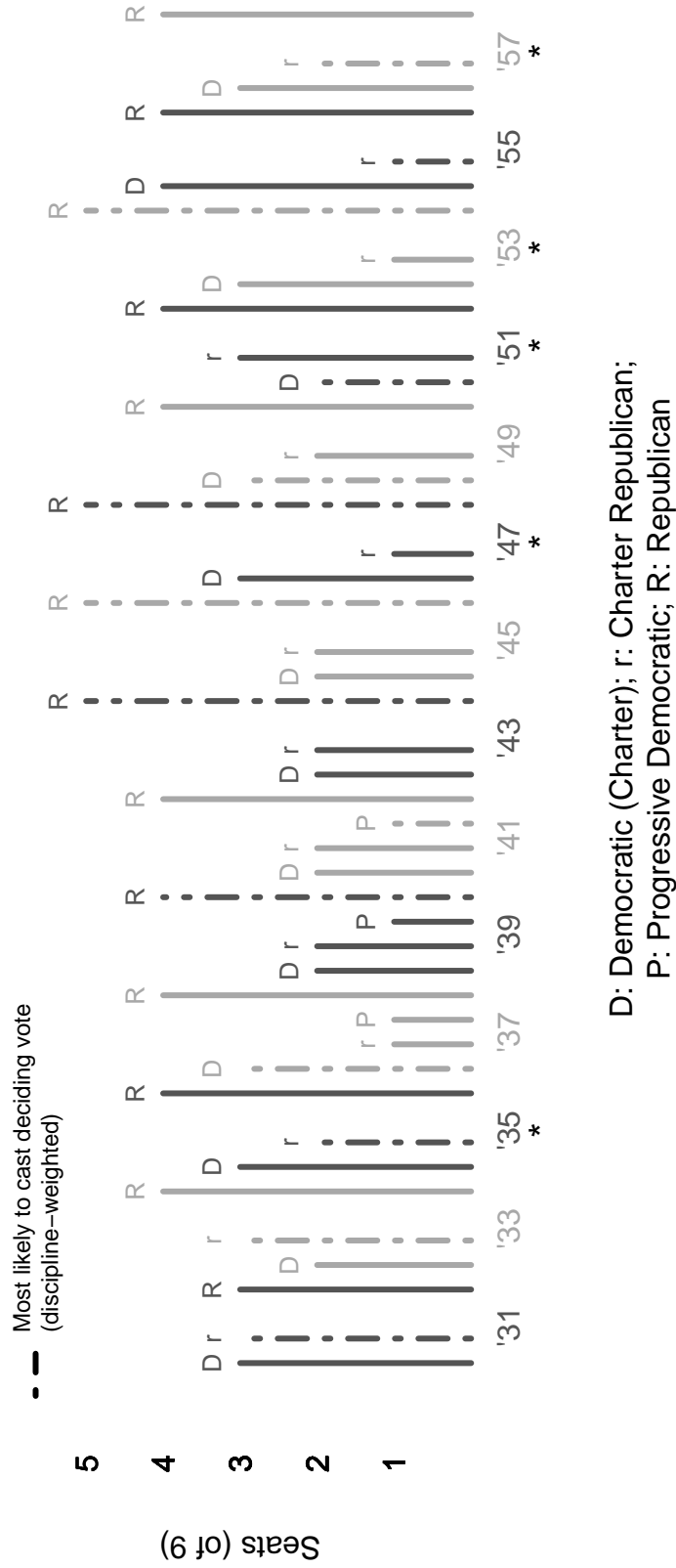P: Progressive Democratic; R: Republican

Figure 5: Factional strength and identity of most discipline-weighted-pivotal faction in Cincinnati.

Figure 5 shows that conditions in five terms were right for successful repeal: 1934-5, 1946-7, 1950-1, 1952-3, and 1956-7. My argument predicts four of these: May 1936 (responding to the 1934-5 term), November 1947, November 1954 (responding to the 1952-3 term), and September 1957, the final and successful repeal attempt. Referendum outcomes in 1936 and 1954 came within one percentage point of success (Table 3). The 1936 attempt initiated, as predicted, with the Republican faction of the Charter pre-election coalition (Kolesar 1995). The 1947 attempt initiated in Council on a party-line, regular-Republican vote. My model cannot explain why Democrats opposed it.[18] The 1954 attempt initiated, as predicted, with the Democratic party. The successful attempt in 1957 initiated with a self-described faction of "old-line Democrats" and the national AFL-CIO.[19]

Referendum	Proposal	Registration	Total vote	Turnout	For PR	Margin for PR
May 12, 1936	9X	243,241	72,469	29.8%	36,650	759 (1.1%)
Jun. 7, 1939	9X	228,912	95,858	41.9%	48,300	820 (0.8%)
Nov. 4, 1947	9X	246,671	155,003	62.8%	81,365	7,592 (5.0%)
Nov. 2, 1954	6X	245,429	150,416	61.3%	75,544	607 (0.4%)
Sep. 30, 1957	9X	242,348	119,843	49.5%	54,097	-11,625 (-9.7%)

Table 3: Five referenda to repeal PR in Cincinnati. "Proposal" refers to the proposed alternative, with the number on "X" indicating the maximum votes a voter could cast in an at-large, plurality election to the nine-seat council. Exact referendum dates are inferred from weekly issues of the *City Bulletin*, 1930-57. Raw vote margins are from Kolesar (1995: 172) and Burnham (1997: 151-2). Burnham reports the 1957 margin as "more than 10,000 votes." I infer the raw 1957 margin from Kolesar's percentages. Comparing inferred raw margins for other years to Burnham's raw margins shows that abstention rates are negligible.

My data errantly predict a Charter-Republican-initiated attempt in response to the 1950-1 term.

18. One possibility is skepticism about labor's fate in a coalition party. Two of three Democrats in council were Congress of Industrial Organizations-endorsed, and Congress had just passed the Taft-Hartley Act on a bipartisan vote over President Truman's veto. Key players had roots in town. Co-sponsor Sen. Robert A. Taft (R-OH) was a Cincinnati native, and his brother was Charles Phelps Taft II, a long-time Charter-Republican member of city council with a record of opposition to the labor-driven Progressive Democrats (Straetz 1958). Labor-oriented Democrats may have been wary of negotiating with liberal, anti-labor Republicans in a post-PR coalition party. These tensions were a factor in PR's 1957 undoing. By then, Charter Republicans were fewer than Democrats, and labor elements believed they could dominate the local Democratic Party. See unpublished manuscript by the author.

19. See unpublished manuscript by the author.

This did not happen because one Charter Republican became a Charter Democrat during that term.[20] This faction-switch reduced the second-largest faction to third-largest. The person who changed sides was President of the local National Association for the Advancement of Colored Persons. He would have been able to draw many independent Republican voters to the Democratic Party in a post-PR environment.

My argument does not predict the repeal referendum of June 1939, but this initiated solely with the regular Republican party. Case history suggests a new, short-lived faction of Progressive Democrats scuttled this attempt (Kolesar 1995).

6.2   New York City, 1938-47

PR came to New York City in November 1936. The new city charter dissolved the Board of Aldermen, created a Board of Estimate with veto authority, and lodged proposal power in a new City Council. PR would be used in each of five boroughs. Council size would vary with voter turnout, with each borough receiving one seat for every 75,000 votes cast therein. The coalition for the new charter included Republicans, ex-Democrats, Fusion, left-wing minor parties, self-styled good government groups, the League of Women Voters, the Merchants' Association, and others (McCaffrey 1939). Republicans joined Democrats in repealing PR in 1947 (Zeller and Bone 1948; Prosterman 2013).

We are interested in whichever faction controls the last member of a two-thirds supermajority since two-thirds of Council were needed to pass a local law. Passage also required consent from the Mayor and Board of Estimate, so I incorporate the factional divisions of those bodies in the

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20. "Charter Group Names Council Candidates With Four Newcomers On Ticket For '49," *Cincinnati Enquirer*, July 7, 1949, p. 8.; Brady Black, "Labor And Negroes Move To Fill Gap As Independents Trek Back To GOP; Both Sides Have Problems for 1953," *Cincinnati Enquirer*, November 21, 1951, p. 4.

discussion (Tanzer 1937: 243-4).

Figure 6 shows three terms in which conditions were right for repeal on the basis of council voting alone. Control of the executive rules out the first two of these (1938-9 and 1942-3). In both cases, council voting predicts American Labor Party (ALP) support for repeal. In both cases, the ALP and GOP jointly controlled a majority of Board votes as well as the Mayor's office.[21]

The 1938-9 term did generate two, Democratic-initiated repeal attempts: a statewide referendum in 1938, then a local referendum in 1940. Both lost by margins of two-to-one (Zeller and Bone 1948: 1127).

Pressure for repeal in response to 1942-3 never materialized due to Republican opposition (Prosterman 2013: 183). This is what my argument predicts. The GOP controlled the Board of Estimate in tandem with the ALP, and even if it had not, the ALP would have benefitted from post-PR desertion.

My argument does not predict a Democratic-initiated repeal attempt in late 1941, but it does predict the outcome: pocket-veto by the Republican-ALP-dominated Board of Estimate.[22] Even if the GOP and ALP had not controlled the Board and executive, Republicans ought to have opposed repeal in 1941 on the basis of council voting. They were both the second-largest faction and most likely to control the deciding vote.

Otherwise, the data predict precisely what happened in 1947: Republican collusion with the Democratic Party to repeal proportional representation. Republicans had lost control of the Board and mayoralty, they were the second-largest council delegation, and they did not most often control the decisive vote.[23]

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21. See the *Annual Report of the Board of Elections in the City of New York* for 1937-47 (odd years). Joint ALP-GOP control is based on cross-endorsement of candidates.

22. See the *Proceedings* for December 9, 1941, then Shaw (1954: 204) for the pocket veto.

23. Readers may be skeptical that Republicans thought about absorbing Laborite and Communist voters or vice-

**Initial seat shares and pivotal status
New York City, 1938–47**

Prop. of seats

0.7
0.5
0.3
0.1

Most likely to cast deciding vote
(discipline–weighted)

'39* '41 '43* '45 '47*

A: American Labor; C: Communist; D: Democratic;
F: Fusion; I: Independent; L: Liberal
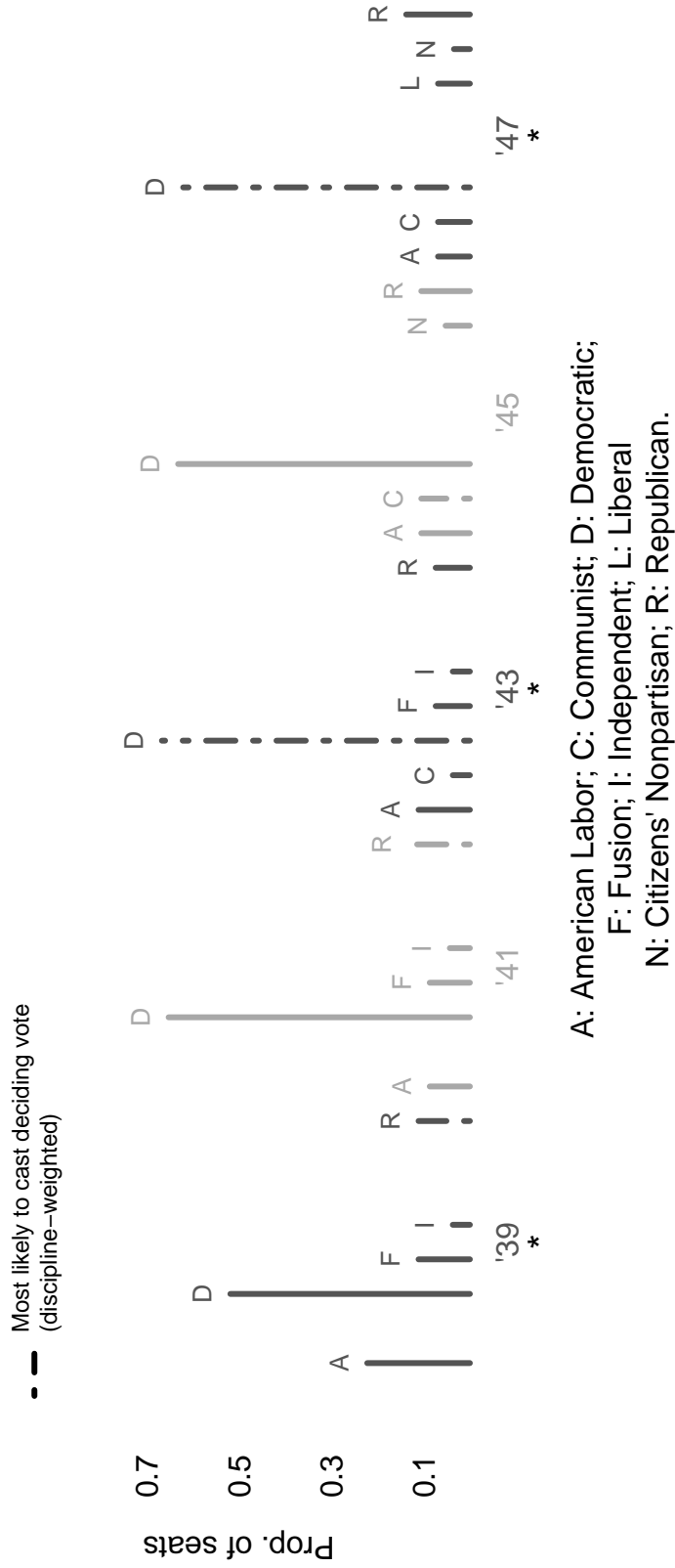N: Citizens' Nonpartisan; R: Republican.

Figure 6: Factional strength and identity of most discipline-weighted-pivotal faction in New York City. Joint American Labor-Republican Party control of the mayoralty and Board of Estimate through 1945 rule out repeal until 1946-7.

6.3 Worcester, 1950-60

PR came to Worcester in 1947 with support from the Citizens' Plan E Association (CEA), a coalition of regular Republicans and defecting Democrats.[24] Like Charter in Cincinnati, CEA slated candidates in PR elections from 1949 until 1960. PR and the CEA were largely Republican projects. CEA's use of GOP cars and headquarters in the 1947 referendum cost the group its first director.[25] Its ticket leader until 1957 was Andrew Holmstrom, Republican and vice-president in the Norton Abrasives Company. Editor Harry Stoddard's *Telegram and Gazette* urged voters to support both Plan E and the Republican mayoral candidate at the same election (Eisenthal 1983: 47, 82). Thirteen years later, the paper withdrew its support for PR (Binstock 1960: A-5).

We are interested in factional control of the fifth vote, since a majority of sworn members was required to enact ordinances.[26]

My argument predicts the final, November 1960 repeal attempt. It also predicts the *Telegram's* withdrawal of support for PR. Neither of its darling factions controlled the decisive vote (CEA Democrats nor the official Republican Party, operating through CEA).

My argument does not predict a Democratic-sponsored repeal referendum of November 1959, but it does predict the outcome. Figure 8 plots the precinct-level results of that vote.[27] The y-

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versa. This was not the modern Republican party, however. New York City Republicans at this time included Fiorello LaGuardia, whose Norris-LaGuardia Act (1932) banned yellow-dog contracts and federal injunctions against unions. They also included Councilmember Stanley Isaacs, a vigorous advocate of public housing (J. Schwartz 1993: 188). Adam Clayton Powell, Jr. famously won election to the U.S. House in 1945 on three ballot lines: Democratic, Republican, and American Labor. (See *Annual Report of the Board of Elections in the City of New York*, 1945, p. 135.) Republican Congressman Jacob K. Javits later followed in a liberal tradition (Turner 1951: 146-7).

24. Plan E is the state-law designation for council-manager charters formerly including PR elections.

25. CEA used vehicles and a hotel room provided by the Republican City Committee in preparation for the 1947 charter referendum. See clippings titled "Daley Resignation Leaves Plan E Group Undisturbed" and "Plan E Committee Votes Expansion; Two Break Away," circa 1948, in the Plan E/CEA Collection, unsorted, at the Worcester Historical Museum.

26. "Plan E Government Summary," 1960, in the Edward C. Banfield Collection, Funk Library, University of Illinois at Urbana-Champaign.

27. Data are from the official election returns for November 1959, on file at Worcester City Hall.
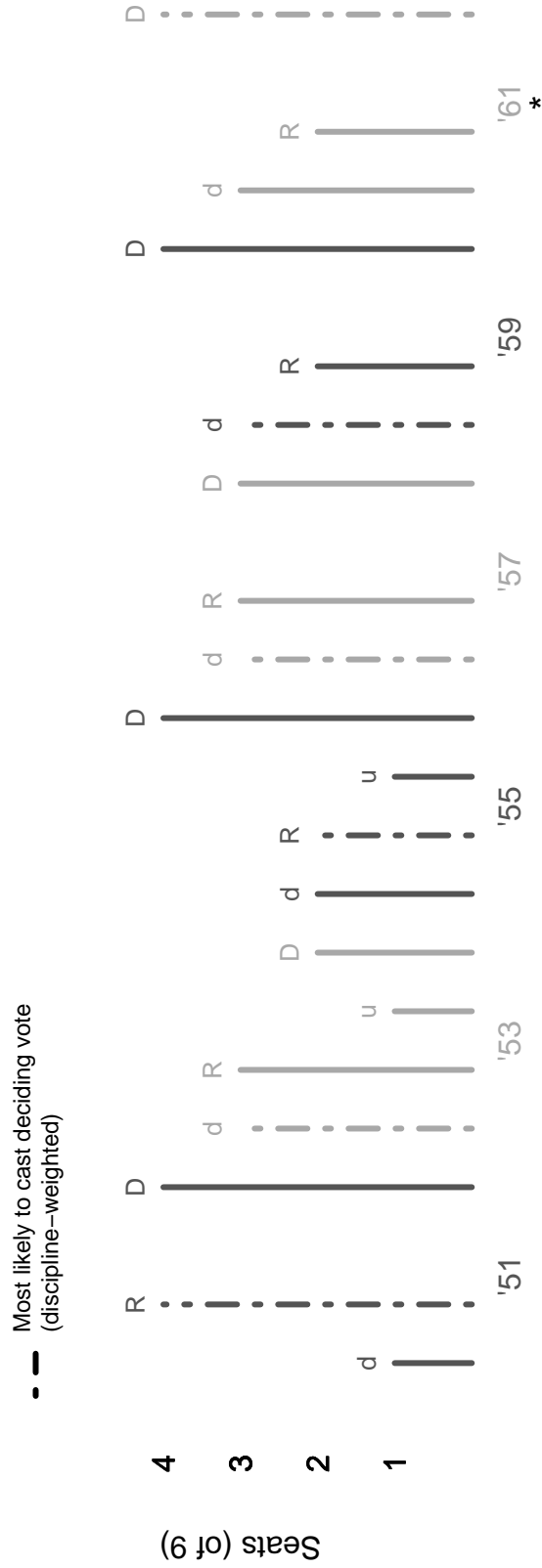
Figure 7: Factional strength and identity of most discipline-weighted-pivotal faction in Worcester.

axis indicates raw support for keeping PR. The x-axis indicates the sum of all first-preference

votes cast for CEA-endorsed candidates in that election. Opposition to repeal tracks support for

CEA candidates in virtually one-to-one fashion ($\beta = 0.96$, $\sigma = 0.03$). This is what we would

expect. CEA Democrats should have opposed repeal because they controlled the most decisive

vote in 1958-9. Republicans (operating through CEA) should have opposed it to avoid their voters'

migration to an all-Democratic CEA.

For PR retention by all CEA support

First−choice votes for CEA candidates
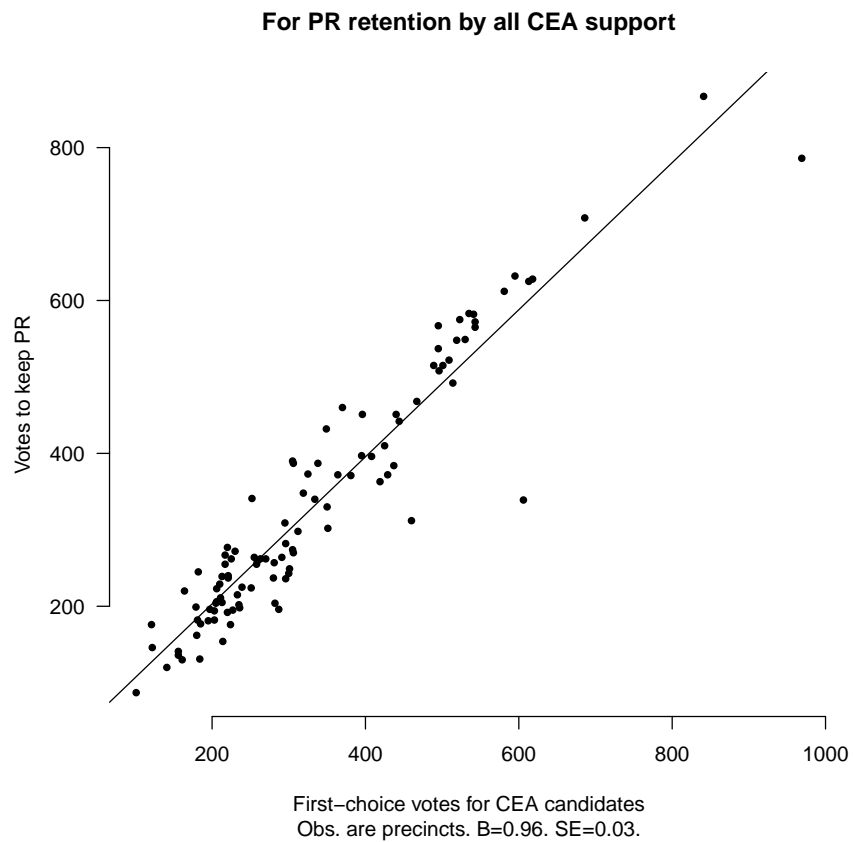Obs. are precincts. B=0.96. SE=0.03.

Figure 8: Outcome of the November 1959 repeal referendum. CEA Democrats (most pivotal) and Republicans (non-second-largest) are predicted to oppose repeal. Precinct-level results are consistent with these predictions.

7 Conclusion and implications

Twenty-four American cities once used the Hare form of proportional representation, known today as "multi-winner ranked-choice voting." All but one of them repealed it. Why did this happen? Experience in parliamentary democracies suggests the answer relates to expectations about cabinet composition. I port this insight to the US context, where terms are fixed, cabinets do not exist, and executives (if they exist) are separate from legislatures. PR is repealed when legislative deal-making infrequently includes the second-largest faction.

My evidence is legislative business from three representative, iconic cases of actually-existing PR in the United States. My argument successfully predicts repeal in all three cases, it accounts for the absence of repeal attempts when they did not occur, and it explains behavior in several referenda that did. I cannot account for the outcome in just one of 25 council terms: the refusal of Cincinnati CIO Democrats to collude with regular Republicans in November 1947.

Was the exit from proportional representation a simple resumption of major-party politics? The case of Worcester suggests it was not. Democrats and Republicans did collude in New York and Cincinnati, but in Worcester, the critical faction was that city's third party: "independent" CEA Democrats.

My analysis implies that permissive electoral systems in fixed-term settings are stable under two scenarios. The first is a strict two-party system. In that case, one party does what it would do under any electoral system: control the chamber. The second is a multi-party system in which no party holds a majority, but the two largest parties cooperate on legislation. Minor parties can win on off-dimension issues without endangering PR (and therefore their own survival), but major-party cooperation has to characterize the most salient dimension of conflict.

Commentators not affiliated with the national PR lobby increasingly advance PR as a solution to polarization. My analysis suggests PR would be unlikely to survive the very conditions its advocates hope to ameliorate. Other small groups can only move into pivotal positions when the largest factions refuse to bargain with each other. Consider what this might mean for the contemporary Congress. On the one hand, PR might lessen overall polarization by facilitating the entry of parties willing to join different majorities for different types of bills. On the other hand, given the current refusal of Democrats and Republicans to negotiate, PR probably would not survive. The second-largest party would not tolerate coalition-switching by its junior(s).

Returning to Maine, RCV will fall there if the second-largest faction loses control of all veto points. Skeptics will say the type of RCV there is not the "multi-winner form." Democrats have imposed it because they expect "independent" ballot transfers to benefit their candidates. But "single-winner RCV" does make possible that, in some races, Democratic ballots will help elect independents. We do not know who will become the second-largest factions in Maine's House and Senate as a result of future elections, but my analysis implies these are the groups to watch. Many of the "independents" backing RCV are fiscally conservative Democrats, no longer at home in either party. This is precisely the sort of group that would stand between Republicans and Democrats, voting with the former on economics and the latter on social issues. Add to that an "independent" governor, and conditions would be right for RCV repeal.

Those who want ranked-choice voting need to address its instability. One option is to put repeal beyond the reach of referendum majorities. The second option will not sit well with those who feel most passionately about RCV: party-system skeptics seeking entry into government. This would be a commitment to caucus with the second-largest party, enforced by way of negative agenda

control.[28] The "independents" would be free to campaign on whatever platform they wanted, but once in government, they would negotiate over which parts of it to enact. They would not be able to switch sides to enact its other parts. That sacrifice would be better for "independents" than losing the voting rule that put them in office.

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28. No city in this analysis ever developed such an institution.

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A   Goodness of model fit

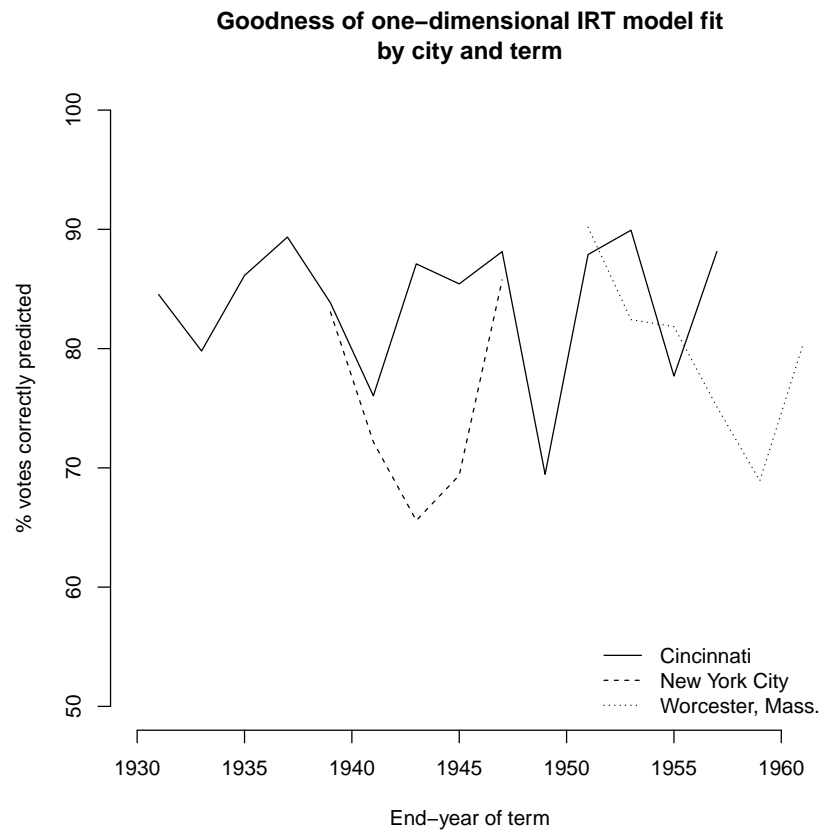**Goodness of one–dimensional IRT model fit
by city and term**

Figure 9: Percent of votes correctly predicted by one-dimensional IRT model of legislative voting, by city and council term.

B   Discipline-weighted probabilities of controlling decisive vote

	1931	1933	1935	1937	1939	1941	1943	1945	1947	1949	1951	1953	1955	1957
C-d	0.06	0.05	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.54	1.00	0.00	0.10	0.12
C-r	0.11	0.08	0.16	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.25	0.18
R	0.00	0.02	0.00	0.03	0.84	0.05	0.26	0.41	0.21	0.00	0.00	0.74	0.00	0.00
P-d	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I-d	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 4: Cincinnati. Discipline-weighted probabilities that each faction controls the decisive vote. C-d is the Democratic Party (Charter). C-r means Charter Republicans. R means regular Republicans. P-d is Progressive Democrats. I-d is one regular Democrat who defected from the Charter coalition. He was present for only two meetings of the final PR session. He lost this seat in a recount of the 1955 election.

	1939	1941	1943	1945	1947
AL	0.17	0.00	0.00	0.06	0.00
R	0.33	0.47	0.03	0.00	0.00
I	0.00	0.10	0.00	0.00	0.00
D	0.00	0.00	0.65	0.00	0.16
C	0.00	0.00	0.00	0.26	0.00

Table 5: New York City. Discipline-weighted probabilities that each faction controls the decisive vote. AL is American Labor Party. R is the regular Republican Party. I is independent, or Al Smith (D-NY) in the 1940-1 term. D is the regular Democratic Party. C is the Communist Party.

	1951	1953	1955	1957	1959	1961
CEA-d	0.07	0.07	0.10	0.36	0.91	0.13
CEA-r	0.14	0.02	0.22	0.00	0.00	0.00
d	0.01	0.05	0.00	0.03	0.00	0.20
CEA-u	0.00	0.03	0.00	0.00	0.00	0.00

Table 6: Worcester. Discipline-weighted probabilities that each faction controls the decisive vote. CEA-d is the Democratic faction of the Citizens' Plan E Association (CEA). CEA-r is the regular Republican Party, operating through the CEA. Lowercase "d" is the regular Democratic Party. CEA-u is one unaffiliated CEA member.