

ROBUST ELECTORAL COMPETITION: RETHINKING ELECTORAL SYSTEMS TO ENCOURAGE REPRESENTATIVE OUTCOMES

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American democracy is struggling. Political polarization has exacerbated division within the electorate, while gerrymandering and hyper-polarization mean only a handful of elections are truly competitive. Voters feel increasingly disenchanting with the major parties and starved for choice. Hungry for solutions, states have turned to a particular form of Ranked Choice Voting called Instant Runoff Voting, now adopted in two states and on the ballot on more this fall. Its promise of greater choice holds intuitive appeal to those interested in improving American democratic institutions.

This article sounds the alarm that the rush to reform by adopting Instant Runoff Voting may prove misguided. Well-intentioned advocates have backed a system that treats symptoms, not the root causes of democratic disfunction. We reframe the discussion in terms of robust electoral competition, evaluating voting systems on their incentive structures shaping the political positioning of candidates' platforms and the extent to which those platforms are responsive to the will of the voters. On those metrics, we argue, the form of Ranked Choice Voting spreading across the country comes up short in much the same ways that our current plurality system fails.

We provide a two-part corrective. On a theoretical level, we offer a framework that ties the representativeness of an electoral system to the degree to which it promotes political competition. We show how alternative voting systems can create stronger competitive pressures resulting in more representative election outcomes. On a practical level, we show an alternative Ranked Choice system called Condorcet voting could restore lost incentives within existing constraints. Unlike our current plurality system or Instant Runoff Voting, Condorcet voting ensures that a candidate preferred by a majority over others must win, thereby creating strong competitive pressures resulting in more representative outcomes. We map a feasible path toward revived democratic responsiveness.

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INTRODUCTION

More than ever, American voters are unhappy with the candidates on the ballots in local, state, and federal elections.¹ Consequently, they feel that elected officials are unresponsive to their interests.² In this article, we make the case that this is because elections have become less competitive. The nationwide two-party “duopoly”³ is failing to provide sufficiently strong motivation for candidates to compete to capture a majority of the electorate. Instead, the incentives of the current electoral system lead candidates to strike a balance between representing the interests of their core supporters, who are increasingly polarized, and the interests of the electorate as a whole.

Reform-minded advocacy groups and policymakers have proposed a series of reforms to make the electoral system more competitive.⁴ The most

¹ See *Americans' Views on Money in Politics*, N.Y. TIMES (June 2, 2015), <https://www.nytimes.com/interactive/2015/06/02/us/politics/money-in-politics-poll.html> [<https://perma.cc/A8QC-LQAC>] (finding that 84% of Americans believe money has too much influence in political campaigns).

² See generally Alan I. Abramowitz & Steven W. Webster, *Negative Partisanship: Why Americans Dislike Parties But Behave Like Rabid Partisans*, 39 POL. PSYCHOL. 119 (2018).

³ On the concept of political duopoly, see Richard H. Pildes, *The Constitutionalization of Democratic Politics*, 118 HARV. L. REV. 28, 58–59 (2004).

⁴ See generally Maxwell L. Stearns, PARLIAMENTARY AMERICA (2024) (putting forth a detailed proposal of a parliamentary system and discussing other reform

popular reform to date is the adoption of Ranked Choice Voting (RCV), a system in which voters list candidates from their most-favored to least-favored instead of one in which voters only report their most-favored candidate. In locales that have adopted RCV, these lists are then used to simulate run-off voting using a system called Instant Runoff Voting (IRV). Following Maine's adoption of IRV in 2018,⁵ and Alaska's in 2020,⁶ voters in Nevada and Oregon are voting on whether or not to adopt IRV this year,⁷ and efforts are underway to put the question to voters in Colorado and Idaho this year as well.⁸ Reform advocates tout that IRV provides voters with more choice, increases turnout, and forces candidates to compete for broader support among the electorate.⁹

Yet in our rush to reform institutions, IRV may prove a misguided solution. Well-intentioned reformers have backed a system that treats symptoms rather than root causes. This article reframes the discussion by evaluating voting systems based on the incentives they create for candidates to respond to the will of voters. We show that the form of Ranked Choice Voting spreading across the country comes up short by this metric, much like the current plurality system. That is, in the presence of polarized electorate, the two major parties face similar contradictory incentives in IRV elections

proposals).

⁵ 9 ME. REV. STAT. tit. 21-A, §1(35-A) (2019) (enacting ranked choice voting in Maine).

⁶ *Alaska Ballot Measure 2, Top-Four Ranked-Choice Voting and Campaign Finance Laws Initiative* (2020), [BALLOTPEDIA, https://ballotpedia.org/Alaska_Ballot_Measure_2_Top_Four_Ranked-ChoiceVotingandCampaign_Finance_LawsInitiative_\(2020\)](https://ballotpedia.org/Alaska_Ballot_Measure_2_Top_Four_Ranked-ChoiceVotingandCampaign_Finance_LawsInitiative_(2020)) [<https://perma.cc/LJZ6-FWZL>].

⁷ Nevada voters passed the first round of a constitutional amendment in 2022, which will become law if voters again approve the amendment in 2024, Clyde, Don, "Nevada voters back big changes to their election system" (<https://www.npr.org/2022/11/13/1136342255/nevada-election-open-primary-ranked-choice-voting>). The Oregon legislature passed a measure to put the issue to a vote in 2024, H.B. 2004, 2023 Or. Laws 1 (enacted), <https://olis.oregonlegislature.gov/liz/2023R1/Measures/Overview/HB2004>.

⁸ *Some on the Right Flirt With a Voting Method the Left Loves*, N.Y. TIMES (Feb 8, 2024), <https://www.nytimes.com/2024/02/08/us/ranked-choice-voting-elections.html?smid=nytcore-ios-share&referringSource=articleShare>] (discussing the efforts to bring IRV to Colorado and Idaho).

⁹ For a detailed discussion of claims made in support of IRV, see e.g. Nathan Atkinson, Edward B. Foley, and Scott Ganz. "Beyond the Spoiler Effect: Can Ranked-Choice Voting Solve the Problem of Political Polarization?" *University of Illinois Law Review*, forthcoming (2023).

as they do in the current electoral system.¹⁰

However, there are alternative methods of RCV that do create robust competitive incentives.¹¹ One such method, called Condorcet voting, has been studied for centuries, and ensures that any candidate who would receive majority support in a two-candidate election against every other candidate on the ballot is guaranteed victory.¹² In other word, the candidate with the broadest democratic support wins. Condorcet methods thus enable third parties to successfully contest elections with more moderate candidates when major party nominees become excessively polarized. Implementing a Condorcet approach thereby promotes competition—if the major parties nominate broadly appealing candidates, there is little incentive for third party entry. But if major party candidates largely ignore the center, Condorcet voting facilitates the successful entry of third-party candidates who do appeal to the middle.

Part I of this Article describes the concept of robust mechanism design, and how it can usefully be applied to the design of electoral institutions. Part II develops a theoretical model of political competition to frame the later analyses. Part III applies that model to established American electoral institutions to show why the electorate so often fails to elect truly representative candidates. In Part IV we support the theoretical analysis by providing empirical evidence to show that congressional representatives are growing more extreme faster than the underlying electorate. Part V takes up Instant Runoff Voting, explaining why it suffers from many of the same shortcomings as our current electoral system. Part VI offers a practical path forward for designing robust and representative electoral systems.

I. A ROBUST MECHANISM DESIGN APPROACH FOR ELECTORAL INSTITUTIONS

Electoral competition is the cornerstone of a healthy democracy. Yet persistent dissatisfaction with unresponsive elected officials signals trouble for American political markets.¹³ This Article tackles that dysfunction by

¹⁰ See *infra* Part V (analyzing incentives created by IRV).

¹¹ See *infra* Part VI (discussing Condorcet methods).

¹² See Duncan Black, On the Rationale of Group Decision-making, 56 J. POL. ECON. 23, 23-34 (1948) (establishing median voter theorem); see also *infra* Part III for why the median voter theorem breaks down in American elections and *infra* Part V for how a Condorcet system reinvigorates the median voter theorem.

¹³ The seminal work discussing how functioning democratic politics should resemble a competitive market is Samuel Issacharoff & Richard H. Pildes, *Politics as Markets: Partisan Lockups of the Democratic Process*, 50 STAN. L. REV. 643, 673-74 (1998).

offering a framework for robust mechanism design and applies it to diagnose flaws in current electoral systems. We ultimately prescribe solutions to strengthen competitive incentives and restore representativeness.

The primary goal of our article is to explore how various electoral systems interact with the preferences of the electorate to produce representative or unrepresentative winners of democratic elections. We take a “robust mechanism design” approach, where our goal is to highlight electoral institutions that promote strong competition for votes and by extension more representative outcomes.¹⁴ This approach builds on a rich tradition of studying markets and political competition in economics,¹⁵ political science,¹⁶ and the law.¹⁷ Only in a competitive political environment can we ensure that candidates and parties will be responsive to the views of the citizens. In other words, competitive electoral institutions are a “mechanism” that promotes electoral outcomes in which voters are well-represented by their elected leaders.

Unfortunately, just like markets for goods, political markets can become uncompetitive. In settings where the electorate is not too polarized, a two-party duopoly combined with partisan primaries may provide sufficient competitive incentives that parties nominate candidates with broad public appeal. However, as the U.S. electorate has become more polarized,¹⁸

¹⁴ For an overview of the field of robust mechanism design, see generally Gabriel Carroll, *Robustness in mechanism design and contracting*. AN. REV. ECON., 11, (2019) 139 (describing how robust mechanism design is concerned with designing mechanisms that are robust to changes in baseline assumptions)

¹⁵ The functional approach to competitions in economics began with Hotelling, Harold, *Stability in Competition*, 39 Econ. J. 41 (1929) (describing the spatial model of competition in product markets).

¹⁶ The spatial model of political competition was introduced to political science by Black, Duncan. "On the Rationale of Group Decision-Making." *J. Pol. Econ.* 56.1 (1948): 23-34 (describing conditions under which democratic outcomes will converge to the location of the median voter's ideal point). This was later built upon by Downs, Anthony. *An Economic Theory of Democracy*. New York: Harper, 1957 (describing the conditions under which economic theory could be productively applied to political decision making).

¹⁷ For applications in election law see e.g. Samuel Issacharoff & Richard H. Pildes, *Politics as Markets: Partisan Lockups of the Democratic Process*, 50 *Stan. L. Rev.* 643, 673-74 (1998). The functional approach has a longer history in corporate-law scholarship, see e.g. Manne, Henry G. "Mergers and the Market for Corporate Control." *J. Pol. Econ.* 73.2 (1965): 110-120. (discussing how competitions over control can lead to efficient outcomes), and Frank H. Easterbrook & Daniel R. Fischel, *The Economic Structure of Corporate Law* (1991) (Focusing on the market for corporate control as the primary driver of corporate law).

¹⁸ See *infra* Part IV (providing empirical evidence for increases in polarization).

countervailing forces have led parties to nominate more partisan candidates with narrower appeal. *Robust* mechanism design requires that, if electoral incentives become too weak to motivate competition for a majority of voters within a two-party duopoly, the electoral system self-corrects by encouraging competitive entry by a third-party that nominates a moderate candidate. That is, a robust design aims to create a system that functions properly across a range of conditions.

We argue that the problem of motivating political competition is, at its core, a function of the electoral system. To do this, we first establish what we mean by political competition and what outcome we might expect in its absence. Just as monopolies distort product markets, unchallenged political actors are unlikely to serve the broad interests of the electorate.¹⁹ Instead, the absence of competition is likely to lead to complacency and to undermine accountability, as can be seen in one-party states.²⁰

Competitive political systems instead motivate candidates and parties to win as many votes as possible in order to win elections and gain the mandate of the voters.²¹ A complacent and ineffective politician can stay in office in an uncompetitive system, but not in a competitive system where voters will replace the incumbent with an electoral challenger.²² This threat of removal has an important disciplining effect on the incumbent politician—if she wants to stay in office, she needs to be responsive to voters’ first order concerns.²³ If an incumbent is not responding to the will of the people, a competitive market should allow an entrant to do so.²⁴

In some cases, two competing major-party candidates—or two dominant political parties—can generate sufficient competition to that election winners

¹⁹ Samuel Issacharoff, *Gerrymandering and Political Cartels*, 116 *Harv. L. Rev.* 593, 615 (2002) (“[T]he absence of competition allows the dominant party to become lazy and unresponsive to voters’ concerns.”)

²⁰ Steven Levitsky & Lucan A. Way, *ELECTIONS WITHOUT DEMOCRACY: THE RISE OF COMPETITIVE AUTHORITARIANISM* 175 (2010) (discussing how lack of political competition in dominant-party states leads to less government accountability).

²¹ Joseph A. Schlesinger, *POLITICAL PARTIES AND THE WINNING OF OFFICE* 23 (1994) (describing electoral and office goals of political parties).

²² Timothy Besley & Robin Burgess, *The Political Economy of Government Responsiveness: Theory and Evidence from India*, 117 *Q.J. Econ.* 1415, 1416 (2002) (noting that “governments are more responsive when the perceived probability of losing office via democratic process in the next election is higher”).

²³ See *id.*

²⁴ Germán Feierherd et al., *UPSTART PARTIES: EXPLAINING ELECTORAL SUCCESS* (2020) (analyzing conditions allowing for successful entry of new political parties).

are responsive to voters' interests.²⁵ Because democratic elections require a majority of votes cast, a two-candidate election requires competing for the vote of the "median voter." To see why, assume that voters are assigned locations on the left-right spectrum according to their political ideology, where liberal voters are to the left of the center and conservative voters are to the right. If one candidate is more liberal than ("to the left of") the median voter and one is more conservative than ("to the right of") the median voter, then if the median voter prefers the more liberal candidate, so will the 50% of the voters that are "to the left" of the median voter. This ensures that the more liberal candidate receives a majority of the votes and wins the election. As a result, if one candidate strays too far towards the extremes, she will lose the support of the median voter—and, by extension, lose the election.²⁶ This competition for the median voter ensures that candidates have platforms with broad appeal.

It is not the case, as is sometimes claimed, that a two-party duopoly is, on its own, uncompetitive. Much like two neighboring pizza stores will compete on price to attract more customers from their rival, two political parties competing for the median voter is sufficient to ensure a representative electoral outcome. In Part I we introduce a simple model of electoral competition and show how it can lead to representative outcomes with just two candidates. Indeed, this model is a good fit for much of the twentieth century, where there was much more robust competition in American politics than there is today.²⁷

However, a problem with the two-party duopoly is that, if it becomes uncompetitive, it is not self-correcting. Returning to the previous example: if one pizza store decides that it is no longer interested in competing on price, its rival can also raise its prices, to the detriment of consumers. In such a case, what is required to ensure robust competition is the ability for a third pizza shop to enter and charge a lower price than the incumbent firms. This is what we are observing in the current context. If one major party becomes less motivated to compete for the median voter, this also weakens the imperative for the rivals to compete for the median voter. Absent a realistic pathway for a third-party candidate to enter and win, majority-rule elections fail to be robust to this sort of unilateral uncompetitive behavior.

²⁵ See *infra* Part I.

²⁶ See Andrew B. Hall, What Happens When Extremists Win Primaries?, 109 AM. POL. SCI. REV. 18, 41 (2015).

²⁷ Anthony Pesce, The Polarization in Today's Congress Has Roots That Go Back Decades, Pew Rsch. Ctr. (Mar. 10, 2022), <https://www.pewresearch.org/short-reads/2022/03/10/the-polarization-in-todays-congress-has-roots-that-go-back-decades/>.

The irony of the current moment in U.S. electoral politics is that elections have become increasingly uncompetitive even as they have also become more acrimonious.²⁸ Far fewer congressional seats are competitive today than in the past.²⁹ Moreover, voters themselves are increasingly polarized and ossified.³⁰ This polarization has changed the calculus of candidates and parties from winning in a general election to appealing to enthusiasts with increasingly extreme views. This is in part because becoming a major party candidate requires first winning a party primary in which the voters have increasingly extreme views.³¹ Competition to become a major party's nominee can result in candidates who represent their party's voters but fail to represent the general electorate,³² given that majorities in both parties now hold either "uniformly liberal" or "uniformly conservative" ideologies.³³ This is one reason why it is increasingly common for a general election to pit a very liberal Democrat against a very conservative Republican,³⁴ which means that the average voter will be increasingly dissatisfied with their choices and electoral outcomes.³⁵ As we also show in a series of data analyses in Part IV that compare the ideology of voters to their elected representatives, polarized voters and partisan primaries do not tell the whole story.³⁶ Elected representatives have actually become more extreme *at a faster rate* than their

²⁸ Richard H. Pildes, *Why the Center Does Not Hold: The Causes of Hyperpolarized Democracy in America*, 99 CALIF. L. REV. 273, 276-81 (2011) (describing increasing polarization and declining political competition).

²⁹ See Alan I. Abramowitz, Brad Alexander & Matthew Gunning, *Incumbency, Redistricting, and the Decline of Competition in U.S. House Elections*, 68 J. POL. 75 (2006).

³⁰ See Shanto Iyengar et al., *Affect, Not Ideology: A Social Identity Perspective on Polarization*, 76 PUB. OPINION Q. 405 (2012).

³¹ See *infra* Part III.

³² Brady et al (2007) provide evidence that congressional candidate position themselves closer to the primary electorate than the general electorate, thereby pulling candidates away from median district preferences.

³³ See *The Partisan Divide on Political Values Grows Even Wider*, PEW RSCH. CTR. (Oct. 5, 2017), <https://www.pewresearch.org/politics/2017/10/05/the-partisan-divide-on-political-values-grows-even-wider/> [<https://perma.cc/6VXM-6KUC>].

³⁴ See *Far-left candidates did poorly in the Democratic primaries*, ECONOMIST. (Sept. 20, 2018), <https://www.economist.com/united-states/2018/09/20/far-left-candidates-did-poorly-in-the-democratic-primaries> (detailing how the distribution of ideologies of House candidates has grown more polarized over time).

³⁵ Cite Pew

³⁶ See *infra* Part IV.

voters.³⁷

In this polarized climate, many locales are looking to reform electoral institutions provide stronger incentives and more representative outcomes.³⁸ The most prominent reform is the introduction of Instant Runoff Voting (IRV).³⁹ We show that, although IRV is a more robust mechanism for generating electoral competition than plurality rule elections—i.e., elections in which voters select one candidate and the candidate with the most votes wins—in setting with more than two candidates, it still leaves much to be desired, especially in a hyper-polarized electorate.⁴⁰ The main benefit of IRV is that it permits democratic elections to be contested without minor-party candidates with extreme views becoming “spoilers” that lead more-representative moderate major-party candidates to be beaten by less-representative major-party rivals.

Spoiler candidates weaken the competitiveness of elections by placing a major-party candidate who seeks to win as many votes as possible in a bind: by appealing to moderate voters to beat their major-party opponent, they risk losing voters with more partisan views to a third-party challenger with more extreme views. This leads to one of two bad outcomes when viewed through the lens of competitive electoral institutions. The candidate may adopt a more ideologically extreme platform to make it less appealing for the third-party candidate to enter (or to win the votes of the third-party candidate’s core constituency). This also has a second-order effect of weakening the incentives for the candidate’s major-party rival to compete for moderate voters, as well. Or the candidate may not adopt an extreme position, lose votes to the third-party candidate, and lose to a more ideologically extreme rival. Or both.

The problem of spoiler candidates is a very real one: it is almost certain that George W. Bush won the 2001 election because Green Party candidate Ralph Nader acted as a spoiler for Democratic candidate Al Gore. Nader ran to the left of Gore, and captured 97,488 votes in the pivotal swing state of Florida.⁴¹ Had Nader not contested the election, then many of his liberal-leaning supporters may have voted for Gore instead of Bush, which would have allowed Gore to overcome his 537-vote deficit to Bush and capture

³⁷ *Id.*

³⁸ See *supra* notes 8-10 and accompanying text.

³⁹ Novoselic, Krist, “A brief history of ranked choice voting” (<https://fairvote.org/a-brief-history-of-ranked-choice-voting/>).

⁴⁰ See *infra* Part IV.

⁴¹ Official election results: https://www.fec.gov/resources/cms-content/documents/FederalElections2000_PresidentialGeneralElectionResultsbyState.pdf

Florida and the presidency.⁴²

The way IRV makes electoral competition more robust is by making third-party candidates with narrow bases and no viable path to winning an election unable to affect the final election outcome. Under IRV, Nader would be eliminated in Florida, and the 1.64% of voters who voted for Nader would have their votes transferred to their next most preferred candidate, almost certainly Gore. This means that the competition among the major-party candidates would be unaffected by Nader's entry, ensuring that Gore would not be penalized for trying to appeal the median voter and Bush, knowing this, would be forced to moderate his platform if he desired to win.

As the example illustrates, IRV is a robust mechanism for ensuring electoral competition to the extent that it makes non-viable candidates irrelevant for major party candidates.⁴³ It overcomes the problem of spoilers by encouraging major-party candidates to behave as if elections were being contested by two-candidate majority rule. This is a good feature in settings where the main concern is third-party candidates who narrow bases of support and voters who desire to make an expressive vote in support of candidates who they know will not win the election.

But, in settings where two-candidate majority-rule elections are providing insufficient competitive incentives, we should be concerned that IRV is a cure for the wrong ailment. If the incentives to win a majority of votes among the major parties are too weak, then what we need is a system where a third-party candidate can enter as a moderate and affect the outcome of the election, rather than be eliminated in the first round of the instant runoff. While IRV permits this in settings where there are many moderate voters or in which there are substantial numbers of liberal Republicans and conservative Democrats, this is a poor description of the current electorate. In a hyper-polarized electorate, entry by a moderate candidate "between" a liberal Democrat and a conservative Republican will be treated by IRV much in the same fashion as a progressive Green Party candidate running against a center-left Democrat and center-right Republican. They will be ignored.

In Part VI, we describe an alternative that promotes robust competition in settings like the one we find ourselves in today: a Condorcet system. Condorcet systems motivate candidates to compete to win moderate voters. In a Condorcet system, if a moderate third-party candidate enters in a polarized electorate and the major party candidates are too extreme, then the third-party candidate is likely to be the first-place choice for a minority of voters, but the first- or second-place choice for a supermajority. Because they

⁴² See Atkinson, Foley, and Ganz *supra* note 12 for a detailed discussion of the 2000 presidential election.

⁴³ For a more general discussion of the spoiler effect and IRV, see *Id.*

are majority-preferred to both the conservative Republican (assuming the number of moderates and Democrats exceed the number of Republicans) and to the liberal Democrat (assuming the number of moderates and Republicans exceed the number of Democrats), a Condorcet system encourages third-party entry when major party candidates are not competing to win a majority of voters. As importantly, it disciplines political parties to nominate candidates who indeed appeal to the median voter to preclude such entry from happening in the first place.

II. ELECTORALLY MOTIVATED CANDIDATES AND ELECTION OUTCOMES

When asked about the biggest problem with elected officials, the number one response that voters give is that elected officials are not focused on people or the right issues.⁴⁴ Only 14% of Americans felt that most elected officials cared about what people like themselves think.⁴⁵ And only 15% believe that people in office ran for office in order to serve the public.⁴⁶ Across the political spectrum there is widespread agreement that the quality of candidates has decreased in recent years.⁴⁷ Moreover, 42% of respondents and 57% of independents say that they usually feel that “none of the candidates represent my views very well.” This is antithetical to the democratic project, whose entire goal is to produce representatives that make choices that reflect the will of the people.⁴⁸

Given that candidates face frequent democratic elections, the broad sentiment that no candidates are appealing to average voters is puzzling. How is this possible? If an employee performed so poorly in an annual review, they would be fired. If customers held such negative views about a firm, that firm would lose revenue and go out of business. If a professor were viewed so negatively, the word would be spread around, and few students would

⁴⁴ Evaluations of members of Congress and the biggest problem with elected officials today, PEW RSCH. CTR. (Sept 19, 2023), <https://www.pewresearch.org/politics/2023/09/19/evaluations-of-members-of-congress-and-the-biggest-problem-with-elected-officials-today/>

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ The Federalist No. 52, at 347 (James Madison) (Harvard Univ. Press ed. 2009); see also The Federalist No. 57, *supra*, at 377 (James Madison) (“[T]he House of Representatives is so constituted as to support in the members an habitual recollection of their dependence on the people.”).

enroll in courses taught by that professor.⁴⁹

These views can only persist because there are not strong forces keeping elected officials and political parties responsive to the electorate. As will be explained in this section, the current political framework propagates a two-party duopoly with incentives for political competition that are too weak.⁵⁰ This allows candidates with extreme views to win elections even though a majority of voters would prefer another candidate.

In this section we develop a simple model of electoral competition drawn from the literature in political science and political economics.⁵¹ With this model in place, we can rigorously define what it means to be an electorally-motivated candidate and why it is desirable for an electoral system to allow entry by electorally-motivated candidates. We then apply the model to our current plurality electoral system, IRV, and Condorcet voting.

The workhorse model of theoretical political economics is the spatial model of elections.⁵² Imagine a political landscape in which there is a single-issue dimension that ranges from “liberal” on one end and “conservative” on the other. Each voter is represented by an ideal point on the spectrum that describes their preferred policy position. That is, a relatively liberal voter will have an ideal point farther to the left than a relatively conservative voter. Candidates take positions on the same spectrum. The spatial model predicts that a voter will choose the candidate that is closest to the voter’s ideal point.⁵³

Consider an election with a Left candidate and a Right candidate. In this model, each voter will vote for the candidate who is ideologically closest to themselves.⁵⁴ The voters with the most extreme views have the simplest decision: the most liberal voters will vote for the Left candidate, and the most conservative voters will vote for the Right candidate. Voters with relatively

⁴⁹ Our condolences to first-year law students who are assigned to courses and have no choice in the matter.

⁵⁰ See *infra* Part III (analyzing competitive incentives).

⁵¹ See, e.g., Anthony Downs, *An Economic Theory of Democracy* (1957); Harold Hotelling, *Stability in Competition*, 39 *Econ. J.* 41 (1929).

⁵² *Id.*

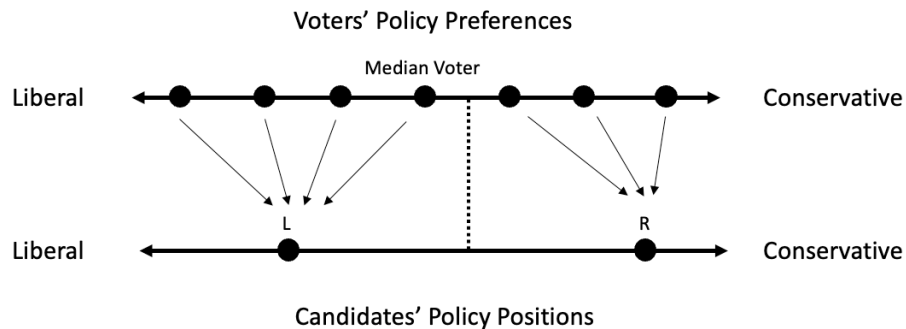
⁵³ Indeed, research in political science has shown that the vast majority of policy preferences can be well-represented by a one-dimensional policy space. See Nolan McCarty et al., *Polarized America: The Dance of Ideology and Unequal Riches* 22 (2006) (showing that a one-dimensional policy space describes members of Congress).

⁵⁴ Other non-policy factors may be at play, including perceived competence, demographic characteristics, and general likability. These characteristics are generally modeled as a separate additive “valence” dimension. See Alexander V. Hirsch and Kenneth W. Shotts, *Policy-Specific Information and Informal Agenda Power*, *Am. J. of Poli. Sci.* 56, no. 1 (2012): 67-83.

moderate views will choose the candidate closest to their own positions in this unidimensional ideological space.

In this framework, the outcome of the election will, perhaps surprisingly, come down to the preferences of the median voter. We make this insight concrete in an example with seven voters. We put those voters in a line with the most liberal on the left to the most conservative on the right. In the middle is the median voter. That is, there are three voters to the median's left who are more liberal than the median and three voters to the median's right who are more conservative than the median. Now introduce the two candidates. With seven voters, a candidate needs at least four votes to win a democratic election. But which four voters? The composition of the winning coalition might change, but we will see that it will always include the median voter.

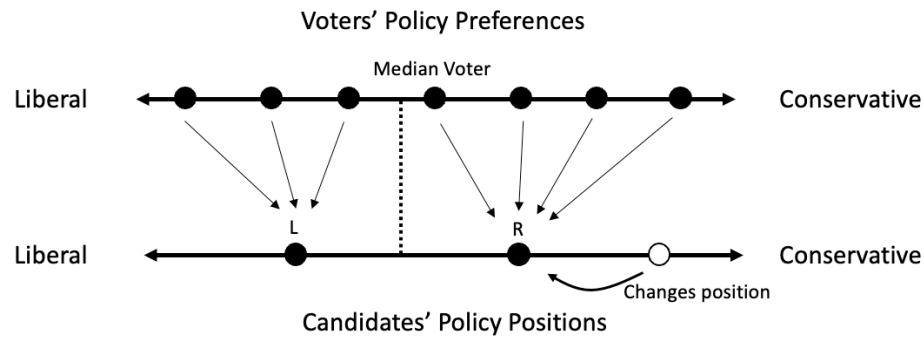
The following figure is a graphical representation of the election. Each of the horizontal lines represents the liberal-conservative policy spectrum. The top line represents the policy preferences for the seven voters, each represented by a black dot, with the median voter at the center. The bottom line shows two candidates running for office: L(left) and R(right).



Each of the voters casts their vote for the candidate closest to their own ideal point. The vertical dotted line represents the halfway point between the two candidates. That is, every voter to the left of the dotted line is closer to the left candidate than the right candidate and every voter to the right of the dotted line is closer to the right candidate than the left candidate. The arrows from voters to candidates represent votes. Because the median voter is to the left of the dotted line, she prefers the left candidate, and the left wins the election with four votes to three.⁵⁵ This example demonstrates a desirable feature about majority-rule voting among two candidates in a spatial model: the candidate whose policy positions are closest to the median voter's always wins.

⁵⁵ Indeed, recent research has shown that more extreme candidates are likely to lose to more moderate candidates. See Hall *infra* note 25.

Now, we depart from the previous example by assuming that candidates' policy positions are not fixed. Instead, candidates are "election motivated". That is, they *compete* to win elections. Now, the candidates can take any position that they would like in the issue space.⁵⁶ In the previous example, the left candidate captured the median voter, and won the election. The right candidate was too extreme relative to the left candidate. Anticipating this, the conservative may campaign with a more moderate position. Suppose that the conservative candidate shifts her position as follows:



The white circle represents the conservative candidate's previous position, and the solid black circle represents the conservative candidate's new position. The conservative has moved closer to the center, and the vertical dotted line that indicates the halfway point between the candidates has correspondingly shifted leftwards. Now the conservative candidate is closer to the median voter than the liberal candidate, so the median voter will cast her vote for the conservative who wins the election four votes to three.

Now that the conservative has adopted a more moderate position, the liberal is losing three votes to four and faces the same incentives as the conservative previously faced. By adopting a position closer to the median voter than the conservative's current position, the liberal can once again capture the median voter and the election. Every time one of the candidates moves towards the center, it incentivizes the other to do the same. The process continues until the two candidates converge at the location of the median voter. This is the most famous result in political science, known as Black's

⁵⁶ One way of thinking of this is to imagine candidates that are motivated by winning the election and choose a position accordingly. Another way to think of this is that there are many potential candidates from across the ideological spectrum, and each of these potential candidates makes a decision of whether or not to run. See e.g. Martin J. Osborne, and Al Slivinski. *A model of political competition with citizen-candidates*. Q.J. Econ. 111.1 (1996): 65-96.

thing—we note that there are other countervailing forces that “push” the parties toward the political poles. That is, there are competition-driven *centripetal* forces that pull parties towards the center and offsetting *centrifugal* forces that push parties towards the extremes.

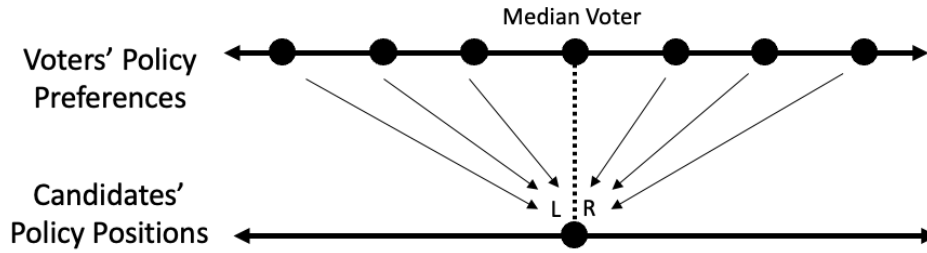
One might expect that a reason we do not observe such strong convergence toward the median voter is because candidates are not solely motivated by winning elections and, instead, care about the policies they will enact once elected. The claim is not that two-party majority-rule elections lead candidates to campaign on the exact same policies, but instead that (absent these countervailing forces) election-motivated candidates face incentives to behave this way. As a result, if the problem that we face is unrepresentative candidates and election winners, a solution is increasing the strength of competition-driven centripetal forces.

Interestingly, merely assuming that candidates are motivated by implementing their preferred policies does not change the predictions of the described model. Assume, for example, that a candidate has her own ideal policy, but can run a campaign on any policy, and the winning candidate enacts the policy which they ran on. Take again the election where the liberal candidate won four votes to three and assume that the policy positions taken by the two candidates are their true ideologies. That is, these are the positions that the candidates would like to implement if they were unconstrained. However, the candidates are not unconstrained. Each needs to capture four votes to win the election.

Recognizing this, the conservative candidate has the same incentives as before. She would prefer to win with a very conservative policy position, but if she runs on such a position, voters will reject her. In this case, the liberal candidate wins the election and implements a liberal policy that is anathema to the conservative candidate. Instead of running on her ideal position and allowing the liberal to win, the conservative candidate can implement a more moderately conservative position to appeal to the median voter. The conservative prefers to win with a moderate position rather than losing to a liberal position. Just as for a purely election-motivated candidates, policy motivated candidates will converge on the median voter to achieve their most preferred policy outcomes, subject to the constraint of voters’ preferences.

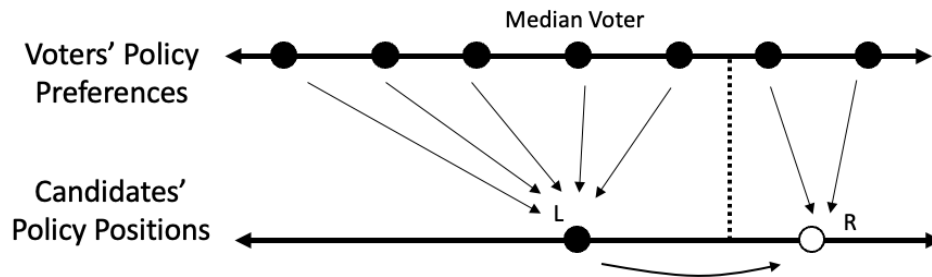
However, in elections with policy-motivated candidates, competitive incentives are weakened relative to elections with election-motivated candidates in an important way: as soon as one candidate fails to vigorously compete for the median voter, it weakens the incentives of the other candidate to do so. In other words, if one major-party’s candidate decides to act non-strategically, then their rival’s best strategy is no longer to appeal to the median voter.

To see this, begin by considering again the competitive equilibrium:



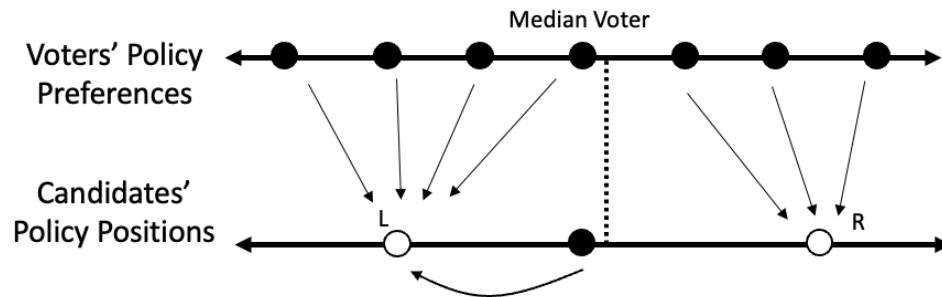
In this case, both candidates have converged to the center to compete to win the election. Only by capturing the median voter can a candidate win the election if both candidates are election-motivated or policy-motivated, so the candidates compete vigorously.

Now suppose that one of candidates, say Right, campaigns the right of the median. The election now looks like this:



Because the conservative candidate is no longer vigorously competing for the median voter, it hands the election to the liberal. In fact, in the setting described here, not only does the median prefer the liberal, but even the moderate conservative voter prefers the liberal candidate to the conservative candidate.

Recall that the liberal candidate staked a moderate policy position even though she would prefer a more liberal position. She only converged to the center because that was the only way to win an election if her opponent was acting competitively. Now that the conservative has stopped behaving so competitively, the liberal is less constrained. Given that the liberal is winning five votes to two, she has no reason to maintain such a moderate position. In fact, she can now adopt a more liberal position that is closer to her own ideal point:



In this case, the liberal has moved far enough left to lose the support of the moderate conservative, but not so far left as to lose the support of the median voter. The liberal thus wins with a non-centrist position with four votes to three.

This illustrates the fragility—or non-robustness—of the plurality system. If some external factors lead to one party behaving less competitively, the competing party has relatively weaker incentives to select “electable” candidates, leading the centrifugal forces pushing candidates away from the median to win out over the centripetal ones.

There are a variety of mechanisms that can explain why the centrifugal forces have grown increasingly powerful relative to the centripetal ones and permit us to analyze how to increase competition to counterbalance this trend. First, voters can influence candidates’ behavior in ways other than elections. There is strong evidence, for example, that the most politically engaged citizens have increasingly extreme preferences relative to less engaged voters.⁵⁹

Increases in affective polarization is another possible mechanism. Affective polarization refers to the phenomenon where voters’ feelings towards their own group grow more positive while their feelings towards an opposing group grow more negative.⁶⁰ Recent polarization in the United States is often characterized by increasing in-group solidarity and hostility towards opposing groups.⁶¹ As a result, candidates who are not perceived as

⁵⁹ A. C. Kozlowski & J. P. Murphy, *Issue alignment and partisanship in the American public: Revisiting the ‘partisans without constraint’ thesis*. SOC. SCI. RES. 94, (2021) (finding some increases in polarization among the most politically engaged citizens).

⁶⁰ Shanto Iyengar et al., *Affect, Not Ideology: A Social Identity Perspective on Polarization*, 78 PUB. OPINION Q. 405 (2014) (discussing how feelings can matter as much as pure ideology in politics).

⁶¹ A. J. Stewart, J. B. Plotkin, N. McCarty, *Inequality, identity, and partisanship: How redistribution can stem the tide of mass polarization*. PROC. NATL. ACAD. SCI. U.S.A. 118, (2021). (Concluding that “As attention is increasingly paid to party, this will induce sorting of group identities along party lines”.)

sufficiently aligned with a party platform may be incapable of building a campaign infrastructure, convincing voters to show up on Election Day, and attracting small-dollar donors.

Coupled with affective polarization is media fragmentation.⁶² Media consumption and content varies greatly based on ones' political leanings.⁶³ This can affect the beliefs of voters, but also the interests of politicians. Affective polarization coupled with media polarization mean that politicians who compromise on what are viewed as core principles lose the support of their base and risk being forced out of politics altogether. Seeing this, politicians may choose positions to maximize their alignment with their party rather than taking positions to appeal to the broader electorate.

These mechanisms are exacerbated by the structure of primary elections that both parties use to determine which candidate to nominate on the general election ballot.⁶⁴ To win a primary election, a candidate must appeal to their party rather than to the general electorate. These primary electorates are not representative samples of the general electorate. In fact, quite the opposite. Candidates that appeal to voters in a Democratic or Republican primary may be quite different from the candidates that would appeal to the general electorate. Candidates therefore face a tension between winning the primary and winning the general election. If they adopt positions to please primary voters, they are more likely to win their primary but may be too extreme to win the general election. If they run with a moderate position, they would do well in the general election, but may fail to advance past the primary.

If candidates were fully election-seeking and voters knew this (and candidates knew that voters knew this, etc.), then the problem of unrepresentative party primaries would be alleviated by "strategic" primary voters who would nominate a moderate candidate to ensure they will perform well in general elections. This is sometimes summarized by evaluating candidates using the criterion of "electability." However, this sort of strategic behavior has generally not been observed in recent U.S. elections. Instead, primary candidates tend to run campaigns that are closely aligned with their party's nationwide platform, perhaps deviating slightly depending on the

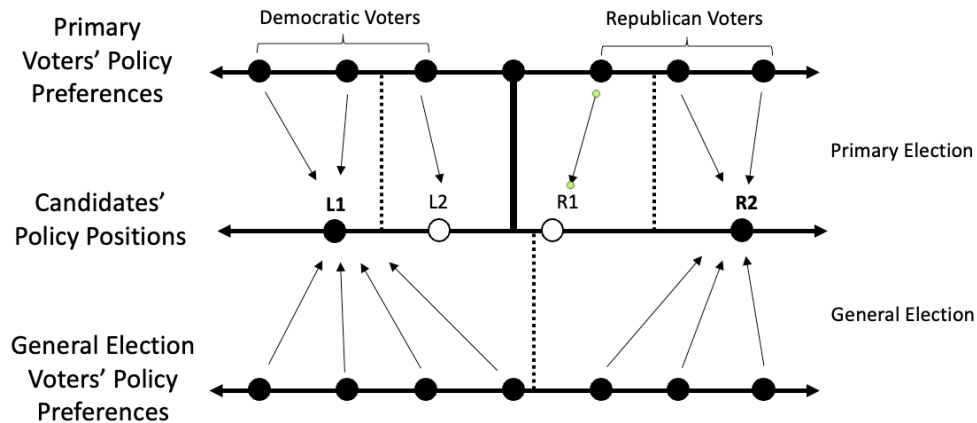
⁶² See e.g. Matthew Gentzkow, *Polarization in American Media*, 46 DUKE L.J. 1695 (2014) (Discussing the impact of media polarization on politics).

⁶³ Riccardo Puglisi and James M. Snyder Jr. *Empirical studies of media bias*. HANDBOOK OF MEDIA ECONOMICS. Vol. 1. North-Holland, 2015. 647-667. (surveying the literature on bias in the media).

⁶⁴ Nolan McCarty, Keith T. Poole, and Howard Rosenthal. *POLARIZED AMERICA: THE DANCE OF IDEOLOGY AND UNEQUAL RICHES* (2016). (discussing the effects of closed primaries on candidate moderation).

unique characteristics of their district.⁶⁵

We next show in detail how party primaries can weaken electoral competition in two-candidate elections. To do this, we extend the model from the previous subsection by adding a primary election. For simplicity, suppose that each primary is contested by two candidates, and that the Democratic primary consists of voters to the left of the median voter and the Republican primary consists of voters to the right of the median voter.⁶⁶ The election can then be described by the following figure:



As before, the horizontal lines represent the liberal-conservative policy spectrum, and the dots represent the locations of the voters and the candidates. First consider the two primary elections. In the primary election, the forces are the same as in the model described in the previous section, but on a truncated electorate. Instead of candidates competing for the median voter of the entire electorate, they compete for the median voter of the primary electorate—either Democrat or Republican.

The Democratic primary pits a liberal Democrat (L1) against a moderate Democrat (L2), shown on the middle policy spectrum. The Democratic electorate consists of the three voters to the left of the median, who cast their votes for the candidate closest to their own policy preferences. As before, the vertical dashed line indicates the halfway point between the two candidates. The two most extreme Democratic voters cast their votes for the liberal

⁶⁵ See e.g. Shigeo Hirano and James M. Snyder Jr. *PRIMARY ELECTIONS IN THE UNITED STATES*. Cambridge University Press, 2019.

⁶⁶ The exact composition may vary but will not affect the overall results of the analysis.

democrat, L1, who defeats the moderate Democrat two votes to one. A similar election occurs with the three Republican voters. The two most extreme Republican voters prefer the conservative Republican (R2) to the moderate Republican (R1), and thus the more conservative candidate wins the primary with two votes to one.

The liberal Democrat and conservative Republican thus progress to the general election, which is pictured in the bottom half of the figure. Just as before, all seven voters vote in the general, with the halfway point between the two candidates indicated by the vertical dotted line. Because the liberal Democrat is slightly closer to the median voter than the conservative Republican, the Democrat captures the median voter and wins the general election four votes to three, and the policy L1 is implemented.

Note that this is not a desirable outcome so far as the median voter is concerned. In fact, while L1 is preferred to R2 by a majority of the electorate, both L2 and R1 are preferred to L1 by a majority of the electorate! That is, had the general election pitted L1 against R1, the median voter would have voted for R1, so R1 would have won the election four votes to three. Alternatively, had the election pitted L1 against L2, L2 would have won the election five vote to two. L1 won the general election only because he was pitted against the most extreme of all the candidates, R2.⁶⁷

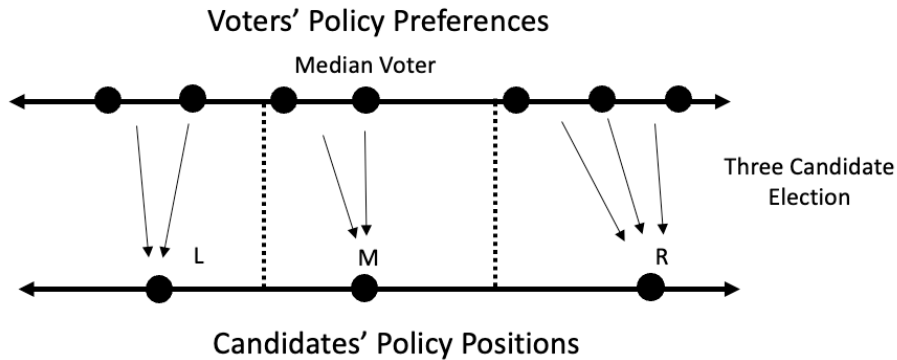
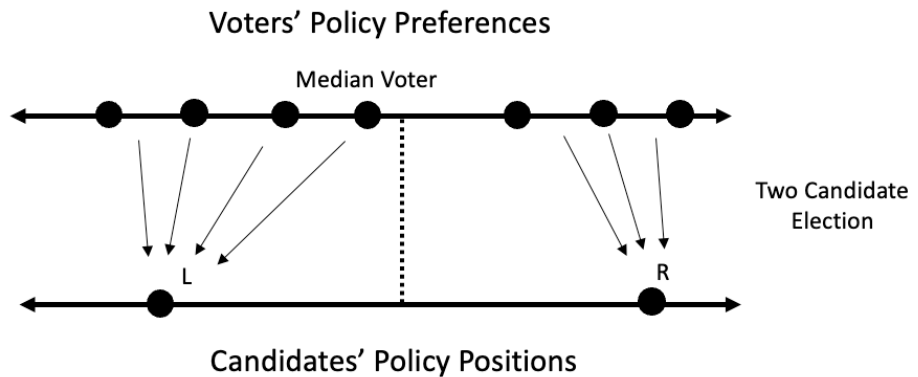
This indicates how partisan primaries may eliminate candidates who would have done quite well in the general election. Candidates close to the median voter in the general electorate may be far from the median voter in a partisan primary. Similarly, candidates who are close to the median voter in a partisan primary may be far from the median in the general electorate. And, if one party uses a partisan primary to select their candidate and it appears that electability is a secondary concern for the primary voters, this weakens the incentive for its rival party to pressure voters to select an “electable” candidate.

One might ask whether the possibility of entry by a third-party candidate can offset the centrifugal forces created by the party primary system. The answer: *it depends*. In some cases, the third-party candidate will add competitive pressure and force major-party candidates to moderate their platforms. But, as we show, the opposite can also occur. The entry of a third-party candidate with broad electoral appeal can lead to a less representative election winner than if the candidate never entered at all.

⁶⁷ This is consistent with empirical evidence on elections. See e.g. Andrew B. Hall, & Daniel M. Thompson. *Who punishes extremist nominees? Candidate ideology and turning out the base in US elections*. AM. POL. SCI. REV., 112 (2018), 509, 524 (finding that when an extreme candidate progresses to the general election, the opposing candidate receives a significant boost in vote share).

Suppose that an election-motivated candidate enters at the location of the median voter. Call this candidate the “median candidate.” As discussed previously, the median candidate is preferred to each of the other candidates by a majority of the electorate. But, because of new entry of a third candidate, the election is no longer contested by majority rule. In most locales, elections with three candidates use plurality rule, i.e., the candidate who is most preferred by the most voters wins. And, despite being preferred to all the other candidates, the median candidate is not *most preferred* by the most voters.

Returning to the two-candidate election pictured in the following figure:



Both major-party candidates are relatively extreme, with the liberal candidate being slightly closer to the median voter and thus is expected to win a two-candidate majority-rule election. Now consider the entry of the median candidate. The two dotted lines indicate the halfway point between the median candidate and the liberal candidate (on the left) and the halfway point between the median candidate and the conservative candidate (on the right). That is, if each voter voted sincerely for the nearest candidate, two voters would vote for the liberal candidate, two voters would vote for the median candidate, and three voters would vote for the conservative candidate.

Under plurality rule, the conservative candidate would win.

This example perfectly illustrates how third-party candidates can cause trouble for the competitiveness of the electoral system when elections are contested by plurality rule. Note that, in this setting, a median candidate has no incentive to enter because they have no chance at winning and—even worse—by entering they cause a candidate with even more extreme outcomes to win. But, absent the threat of entry from a median candidate, there is also no incentive for the liberal candidate to moderate their views to attract a moderate left-leaning voter, which would be required if the median candidate were to enter.

Taking the same logic one step further, plurality rule elections weaken the incentives for voters to act strategically primary elections. If a median candidate cannot enter and win, then primary voters only need to ask whether their candidate is more moderate than the candidate who the other major party will select and not whether their candidate will appeal to the moderates and independents who are likely to vote in general elections. This means that, if one party decides they are no longer interested in competing to win elections, the competitive forces that push the opposing party toward broad-based appeal largely evaporate.

This simple model explains much about our current electoral system. The presence of partisan primaries weakens the centripetal effect of Black's median voter theorem. And plurality-rule elections mean that it is difficult for a third candidate to successfully enter near the median voter under a plurality election. We now turn towards providing novel empirical evidence on the growing forces pushing politicians away from the median in American elections.

IV. ELECTION WINNERS ARE GETTING MORE EXTREME

The baseline spatial model of politics predicts convergence under either electorally motivated or policy motivated politicians.⁶⁸ But in the U.S. we don't observe this political convergence—American elections are frequently divisive contests between relatively extreme candidates on the left and the right.⁶⁹ This is in spite of general election voters' preference for relatively moderate candidates.⁷⁰ In fact, we show the data indicate that election winners are less representative of the electorate than they used to be, even

⁶⁸ See *infra* Part II (discussing convergence predictions).

⁶⁹ See *infra* Part III (analyzing forces leading to polarization)

⁷⁰ Hall, A. B. (2015). *What happens when extremists win primaries?*. AM. POL. SCI. REV., 109(1), 18-42. (Finding that extremists who win primary elections perform poorly in general elections).

after accounting for the extent to which voters are becoming more polarized. In other words, according to the data, centrifugal forces pulling candidates toward the extremes are growing stronger relative to the centripetal forces pulling candidates toward the median voter's preferences.

We show this by relating recent data on the ideology of the average voter in each Congressional district to the ideology of the Member of Congress that they elect. Doing this requires constructing a statistical model that relates one measure of ideology, which is constructed from surveys of voters in each district,⁷¹ to a second measure, which is constructed from the roll-call votes of elected representatives.⁷²

We use a regression analysis to evaluate this relationship. The slope parameter in our regression model is a multiplicative factor that relates the ideological score of a district to that of its representative. A slope of 2, for example, indicates that a district with an ideological score of -1 would be expected to elect a member with an ideological score of -2. Or that a district with an ideological score of 0.5 would be expected to elect a member with an ideological score of 1.

Our focus is not on the slope itself, but in how it changes over time.⁷³ If the number stays steady over time, then we would be identifying a stable relationship between average voter ideology and representative ideology. If the average voter in a district remains unchanged, then the predicted ideology of the representative remains unchanged. If the average voter in a district grows more extreme, then the predicted ideology of the elected representative will grow more extreme.

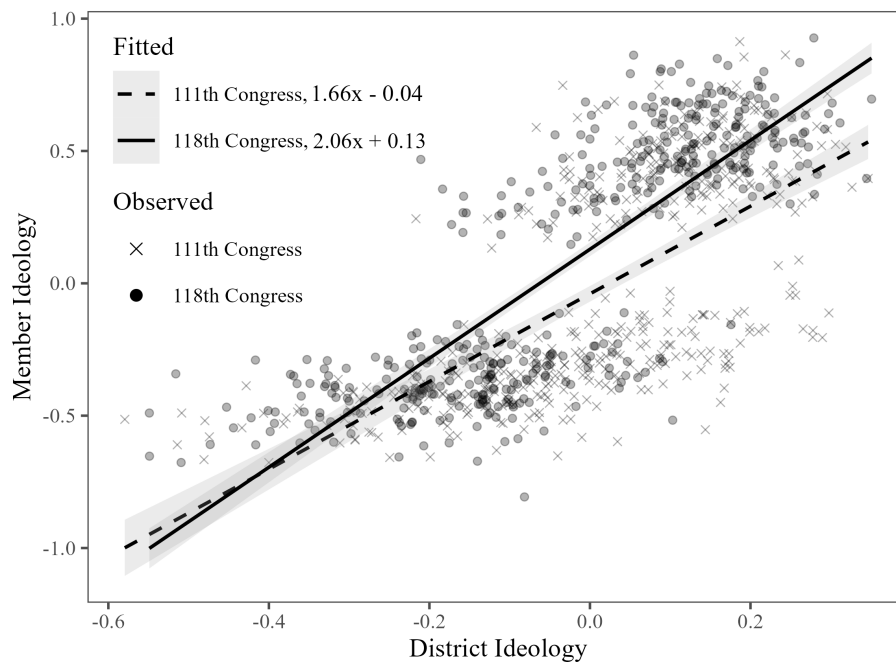
⁷¹ Warshaw, A. & Tausanovitch, C. (2022). *Subnational ideology and presidential vote estimates (v2022)*, Harvard Dataverse, <https://doi.org/10.7910/DVN/BQKU4M>. The authors "use this large national sample to estimate the average policy preferences of citizens in every state, congressional district, state legislative district, and large city in the country. We generate estimates of mean policy preferences using both simple disaggregation and multilevel regression with poststratification (MRP)."

⁷² Lewis, J., Poole, K., Rosenthal, H., Boche, A., Rudkin, A., and Sonnet, L. (2020). *Voteview: Congressional Roll-Call Votes Database*. <https://voteview.com/>

⁷³ We focus on the change rather than the absolute relationship for two reasons. First, we are interested in how the relationship has changed over time. And second, the voter ideology measure and the representative ideology measure are not commonly scaled, so we are wary to directly make claims about the extremity of representatives relative to voters. Instead, we are assuming that one is an affine transformation of the other, without putting additional structure on the relationship. So given just one year, we cannot identify the relation between district and member ideology. But by looking at changes over time through a differences-in-difference type approach, we can identify whether the affine relationship is changing.

If, however, the slope is increasing over time, this means that elected representatives are becoming more ideologically extreme—and thus less representative of their voters—even after accounting for the ideology of the district from which they were elected. That is, even for districts where the average voter does not grow more extreme, representatives are growing more extreme—in other words, the centrifugal forces pushing candidates away from the center are dominating the centripetal forces pulling them in. And for districts where the average voter is growing more extreme, this would imply that the representative is growing more extreme at an increasing rate.

Figure 1. District vs Member Ideology, 111th and 118th Congress



Note: Fitted lines are based on univariate regression estimates for each Congress. Shaded areas indicate 95% confidence intervals.

Figure 1 illustrates the observed relationship between the ideology of the district (on the horizontal axis) with the ideology of the member (on the vertical axis) for the 111th and 118th Congresses. The 111th Congress began in 2009. The 118th Congress is the current Congress. The slope of the regression line relating district to member ideology is 1.66 for the 111th Congress and 2.06 for the 118th. This illustrates that the increases in congressional polarization are not due solely to increases in voter polarization. Instead, elected officials are becoming more extreme at a faster rate than the electorates that they represent.

We now present results from congresses since 2009.⁷⁴ In Table 1, we report results from a series of regression models that explore how this slope parameter has changed over time.

Table 1. Estimated relationship between District and Member Ideology across different Congresses.

	Member Ideology						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
District Ideology	1.937** (0.032)	1.656** (0.087)	1.944** (0.072)	1.979** (0.066)	2.004** (0.068)	2.059** (0.069)	1.706** (0.067)
114th Congress	0.059* (0.019)						0.059* (0.019)
116th Congress	0.132** (0.019)						0.130** (0.019)
117th Congress	0.152** (0.019)						0.151** (0.019)
118th Congress	0.169** (0.019)						0.170** (0.019)
District Ideology x Congress							0.053** (0.013)
Constant	-0.043* (0.013)	-0.040* (0.015)	0.015 (0.014)	0.090** (0.013)	0.110** (0.013)	0.129** (0.013)	-0.040* (0.013)
Observations	2,204	446	441	443	440	434	2,204
R ²	0.621	0.447	0.627	0.670	0.664	0.670	0.624
Adjusted R ²	0.620	0.445	0.626	0.670	0.664	0.669	0.623

Note: Columns (1) and (7) include data from all Congresses while Columns (2) through (6) limit the sample to Congresses 111, 114, 116, 117, and 118, respectively. “District” and “Member Ideology” are normalized measures of political ideology where positive (negative) values correspond to right-leaning (left-leaning) views. “Congress YYY” is an indicator variable for the YYYth Congress. “District Ideology x Congress” is an interaction term between ideology and Congress number.

* $p < 0.01$; ** $p < 0.001$

The first column of the table computes the average slope across all the data (the 111th, 114th, 116th, 117th, and 118th Congresses) and includes control variables that permits the ideology of the average district in each Congress to change over time. That is, the regression in the first column is predicting a representative’s ideology as a function of the particular congress and the ideology of the member’s district, where the relationship between district ideology and member ideology is held fixed over time. The coefficient of 1.937 on district ideology indicates that a district with an ideological score of 1 is associated with a representative of ideology 1.937. The remaining rows in the first column are changes in the “intercept” parameter (which represents

⁷⁴ The data from Warshaw & Tausanovitch *supra* note 64 do not cover all congresses, which explains why we do not have full coverage during the time period.

the expected ideological score for a member elected by a district whose average voter has an ideology of “0”) for each congress relative to the 111th.

The second through sixth columns report the slope parameters for each Congress individually, moving chronologically from left to right. The second column identifies a slope parameter of 1.656 relating district and member ideology in the 111th Congress. That is, a district with an average ideology of 1 is associated with a member with an ideology of 1.656.⁷⁵ Column 3 identifies a relationship of 1.944 in the 114th Congress. A district with an average ideology of 1 is associated with a member with an ideology of 1.944. Note the increase. Holding fixed a district’s ideology, that district is expected to have a more extreme member in the 114th than the 111th Congress.

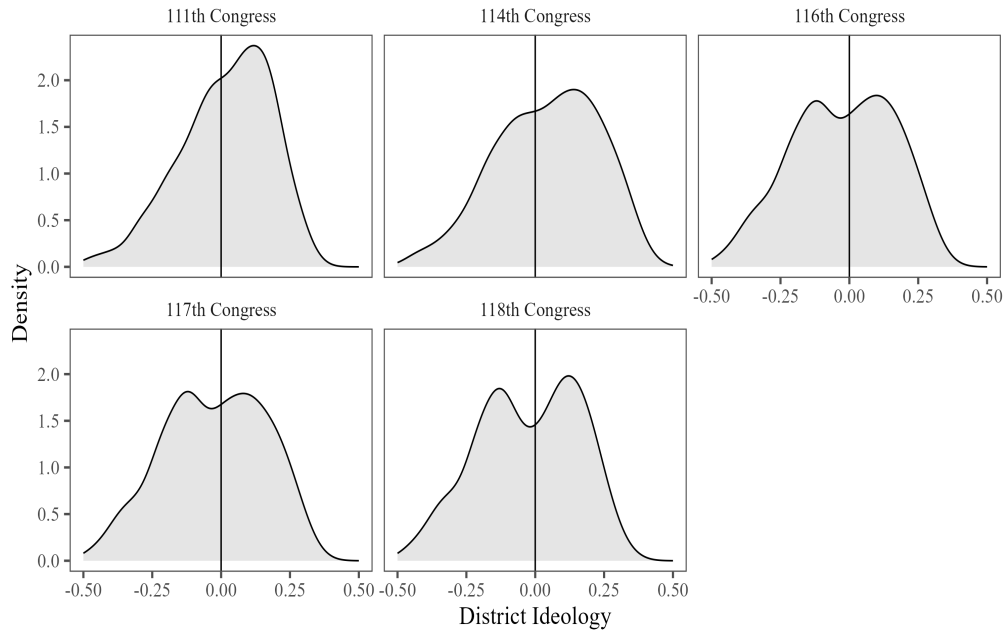
Continuing from the fourth through sixth columns, we see that the relationship between district and member ideology is increasing over time. That is, the slope parameters are increasing. This illustrates that a district of a fixed ideology is predicted to elect more and more extreme members in each subsequent Congress.

The final model includes an interaction term, which can test whether the observed inter-temporal increase in the slope parameter is statistically significant. On average, the slope relating district ideology to member ideology is increasing by 0.05 in each two-year Congress, and this effect is statistically distinguishable from zero at the 0.001 significance level. There is thus strong support for the proposition that congress is polarizing faster than are congressional districts.

Note that this effect is multiplying an underlying increase in political polarization among the districts themselves. Figure 2 visualizes the distribution of ideological scores for congressional districts for each of the five congresses.

The 111th Congress is unimodal: the modal district has an ideology of 0.12, the average district has an ideology of 0.01, and the variance among the districts is 0.03. Moving through each subsequent Congress, we see a hollowing out of the center and more weight being placed on the tails of the distribution. By the 118th Congress is bimodal: the mode “on the left” has an ideological score of -0.13 and the mode “on the right” has as score of 0.12. The average has also shifted to the left somewhat, to -0.03. And the variance has increased to 0.04. This illustrates that congressional districts themselves are becoming more polarized.

⁷⁵ Recall that district and member ideology are not commonly scaled, so it is not correct to say that the average member is 1.656 times more extreme than the average voter.

Figure 2. Ideological distribution of districts in each Congress

Note: Vertical lines are drawn at a district ideology score of 0.

The combination of increased polarization among districts and the growing extremity of elected representatives *conditional on this increased polarization* means that an average voter in an average district is correct to believe that the nation’s elected representatives increasingly do not represent their interests.

But, what should be done?

V. ASSESSING INSTANT RUNOFF VOTING

One way that some locales have sought to overcome the weaknesses of plurality rule elections is through runoff voting.⁷⁶ Runoff voting requires that a candidate win a strict majority of the votes. If no candidate wins a strict majority in the general election, a second “runoff” election is held in which the top-two candidates in the general election compete. In the previous example, runoff voting is indeed more robust than plurality rule, because entry by the median candidate does not lead the election to swing to the more-extreme candidate on the right. (The outcome depends on whether the left or median candidate continues to the runoff election, which in most jurisdictions

⁷⁶ See e.g. *Runoff Election*, Ballotpedia, https://ballotpedia.org/Runoff_election (last visited Feb. 15, 2024).

is determined by a coin flip.) In other words, it is “robust” to entry by a candidate who has no chance of winning, also known as “spoiler” candidates, because of their tendency to “spoil” elections for major-party candidates who would have won under majority rule.

A relatively recent reform in the United States is to adoption of “instant runoff voting” or IRV. IRV follows the same logic as standard runoff voting, but instead of requiring voters to return to the polls, it asks that voters rank all candidates on the ballot from most to least favored. If no candidate is most favored in a majority of the ballots, then a candidate who is most favored by the fewest ballots is eliminated from contention. If there now is a candidate who is most preferred among the remaining candidates in a majority of the ballots, that candidate is the winner. This is sometimes referred to as a “reassignment” because the voters whose most-preferred candidate has been eliminated are reassigned to their second-place candidate. Otherwise, the process of culling candidates and retallying votes continues until such a candidate is identified.⁷⁷

In this section we apply the same spatial model of elections and ask whether an electorally motivated candidate can successfully contest an election under IRV. In other words, is IRV a robust mechanism that ensures that a representative candidate is elected, even if one or both parties choose not to compete for a majority of the votes?

We conclude that IRV is unlikely to be substantially more conducive to the entry of electorally motivated candidates than the current two-party plurality system in the presence of a polarized electorate. In the current context, creating greater electoral competition requires a system that encourages a median candidate to enter by giving them a likely path to victory rather than discouraging entry by making it more difficult for a median candidate to impact the election outcome.

Analyzing IRV is somewhat more complicated than plurality. One of the reasons for this is the wide variety of methods used by locales that adopt IRV for selecting candidates. In Maine, IRV is conducted for the general election following party primaries that ensure that only one candidate from each party is in the general election.⁷⁸ In Alaska, an open primary selects four candidates

⁷⁷ On the legality of IRV, see Pildes, Richard H., and Matthew Parsons. "The Legality of Ranked-Choice Voting." *Cal. L. Rev.* (concluding that plurality- and majority- provisions in state constitutions and state constitutions should not pose a legal obstacle to the implementation of RCV).

⁷⁸ Me. Legislature Law & Legis. Reference Library, Ranked Choice Voting in Maine, <https://legislature.maine.gov/lawlibrary/ranked-choice-voting-in-maine/9509> (last visited Feb. 15, 2024).

for the general election, which is conducted under IRV.⁷⁹ The first round of the constitutional amendment in Nevada contemplates an open primary followed by a five-candidate general election using IRV, which will become law conditional on a second vote in 2024.⁸⁰ Oregonians in 2024 will be voting on maintaining partisan primaries, but where both the primary and general elections are conducted under IRV.⁸¹ The measures which may appear on the ballot in Colorado and Idaho in 2024 both contemplate Alaska-style top four IRV with an open primary.⁸²

To simplify we will abstract away from the primary process and consider the simplest possible scenario: IRV elections with just three candidates—a Left candidate, a Right candidate, and a candidate who is located at the ideal point of the median voter. By fixing the location of the third candidate at the ideal point of the median voter, we can make stronger predictions about the efficacy of IRV. Recall that the median candidate is majority-preferred to all other candidates in head-to-head comparisons. For an analysis with more candidates using real state-level data, we point readers to our work with Ned Foley.⁸³ For a technical analysis of primary elections under IRV and plurality, we point readers to our work with John Mantus.⁸⁴

We will see that, as in plurality elections, there are two competing forces acting on a politician in an election under IRV. The first is a moderating, or centripetal, force. In the final stage of the election, the candidate closest to the median voter stands the best chance of winning. For this reason, an election-motivated candidate has incentives to move towards the center.

However, being at the center only helps if that candidate can survive

⁷⁹ Alaska Div. of Elections, Ranked Choice Voting, <https://www.elections.alaska.gov/RCV.php> (last visited Feb. 15, 2024).

⁸⁰ Nevada Question 3, Top-Five Ranked-Choice Voting Initiative (2022), Ballotpedia, [https://ballotpedia.org/Nevada_Question_3_Top-Five_Ranked-Choice_Voting_Initiative_\(2022\)](https://ballotpedia.org/Nevada_Question_3_Top-Five_Ranked-Choice_Voting_Initiative_(2022)) (last visited Feb. 15, 2024).

⁸¹ Oregon Ranked-Choice Voting for Federal and State Elections Measure (2024), Ballotpedia, [https://ballotpedia.org/Oregon_Ranked-Choice_Voting_for_Federal_and_State_Elections_Measure_\(2024\)](https://ballotpedia.org/Oregon_Ranked-Choice_Voting_for_Federal_and_State_Elections_Measure_(2024)) (last visited Feb. 15, 2024).

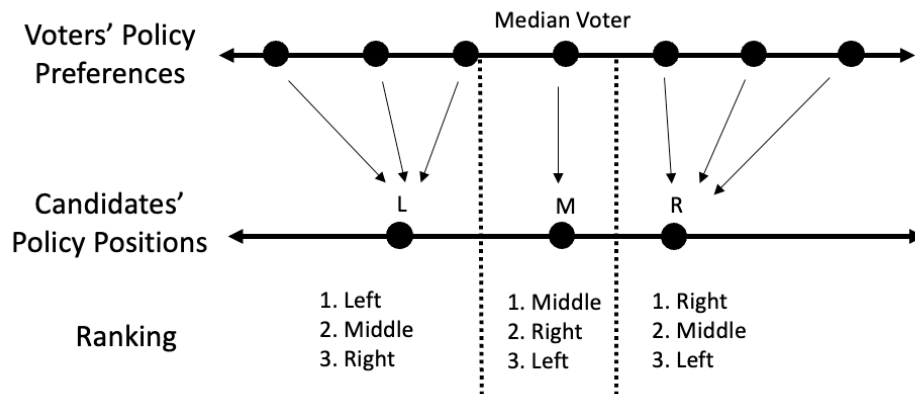
⁸² Colorado Top-Four Ranked-Choice Voting Initiative (2024), Ballotpedia, [https://ballotpedia.org/Colorado_Top-Four_Ranked-Choice_Voting_Initiative_\(2024\)](https://ballotpedia.org/Colorado_Top-Four_Ranked-Choice_Voting_Initiative_(2024)) (last visited Feb. 15, 2024); Idaho Top-Four Ranked-Choice Voting Initiative (2024), Ballotpedia, [https://ballotpedia.org/Idaho_Top-Four_Ranked-Choice_Voting_Initiative_\(2024\)](https://ballotpedia.org/Idaho_Top-Four_Ranked-Choice_Voting_Initiative_(2024)) (last visited Feb. 15, 2024).

⁸³ Atkinson, Foley, & Ganz *supra* note 12.

⁸⁴ Atkinson, Ganz, & Mantus *Plurality Voting vs. Ranked-Choice Voting*. [Paper on file with author].

earlier rounds of elimination. To do so, a candidate needs a strong base of support. That is, the candidate needs to be the most-preferred candidate of enough voters so that she is not eliminated in the first round. If the electorate is highly polarized, a candidate with a platform near the median voter's ideal point may not receive enough votes in the first round and may be eliminated. For this reason, candidates also face an incentive to adopt more extreme positions—a corresponding centrifugal force.

Consider the following IRV election:



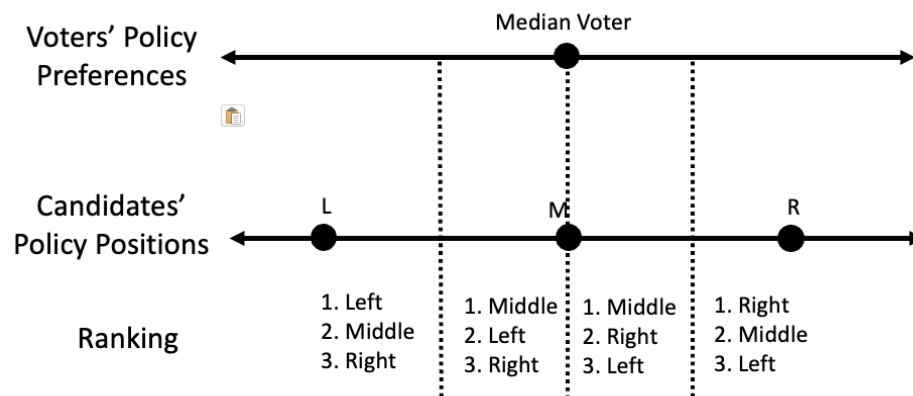
As before, we have seven voters. However, instead of simply voting for one candidate, voters now rank their candidates from most to least preferred, according to distance in ideological space. The vertical dotted line on the left indicates the halfway point between the left candidate and the median candidate, and the vertical dotted line on the right indicates the halfway point between the right candidate and the median candidate. The arrows represent the voters' first-choice votes.

Because the left and right candidates each receive three votes and the median candidate only receives one vote, the median candidate is eliminated from the election. The median voter's vote is reassigned to her next most preferred candidate—the right candidate, who wins the final round of the election four votes to three against the left candidate. This is precisely the outcome that we would expect from a standard two-party plurality election where the median candidate never entered. Although the median candidate has not made the outcome worse for the median voter, IRV has also not offered a meaningful path to victory, which means that the possibility of entry by a median candidate can be ignored by the major party candidates.

However, in other cases, the median may successfully move past the first round of the election. To see how, we move away from the seven-voter

example to consider an election with many voters. This will allow us to understand how the distribution of voters is likely to affect outcomes under IRV.

Consider again an election with the same three candidates. With a continuum of voters, these three candidates break the electorate down into four distinct groups. On the wings we have liberals, who prefer Left to Median to Right; and conservatives, who prefer Right to Median to Left. But we also have two blocs in the center. Left-leaning moderates prefer the median to Left to Right, and right-leaning moderates prefer the median to Right to Left.

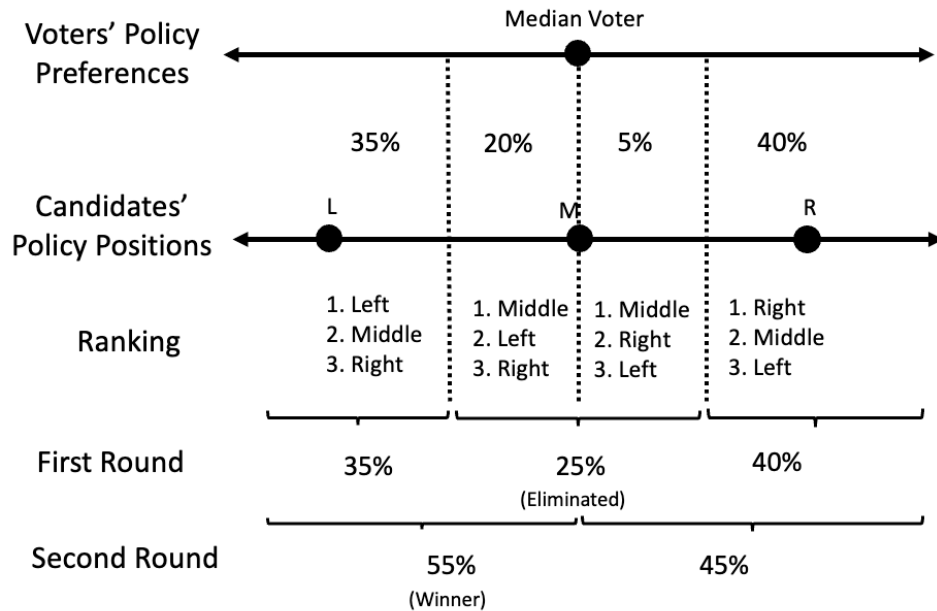


In this setup, the result of the election depends critically on the proportion of voters in each of the blocs. Suppose that the liberal bloc constitutes 25% of the electorate, the conservative bloc constitutes 35% of the electorate, and the two moderate blocs each constitute 20% of the electorate. In this case, Left would capture 25% of the vote, Right would capture 35% of the vote, and the median candidate would capture 40% of the vote.

In an IRV election, Left would be eliminated from the election. Any voter who ranked Left first would then have their votes transferred to their next most preferred candidate. Thus, the liberal voters—20% of the electorate—would have their votes transferred to the median. The final vote count would therefore be 65% of votes for the median candidate and 35% of the votes for Right.

In this case, IRV works well, and the election-motivated median candidate can successfully contest the election. Note that, in this case the median candidate would also have won an election under plurality rule, because she captured more first-choice votes than either of her competitors. The real test of whether IRV supports the entry of electorally motivated candidates are in cases where those candidates would not be able to successfully contest the election under the current plurality system.

Consider a change to the size of the four voting blocs. Suppose that the liberal bloc constitutes 35% of the electorate, the left-leaning moderate bloc constitutes 20% of the electorate, right-leaning moderates constitute 5% of the electorate, and the conservative bloc constitutes 40% of the electorate. The voting blocs and their rankings over candidates are shown in the following figure:



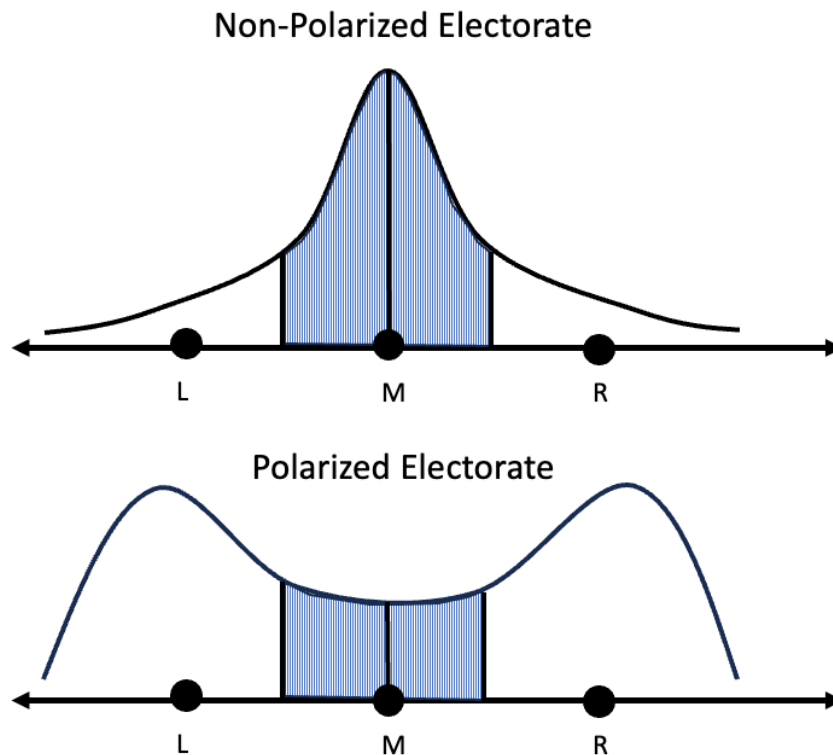
All of the liberal voters rank Left above the median candidate above Right. All of the conservative voters rank Right over the median candidate above Left. The two moderate blocs both rank the median candidate first but differ in their subsequent rankings. The left-leaning moderates place Left over Right and the right-leaning moderates place Right over Left. Taken together the first-round vote totals are 35% of the vote for Left, 25% of the vote for median, and 40% of the vote for Right. Under the rules of IRV, the median candidate is eliminated because she has the lowest vote total.

The moderate voters thus have their votes reassigned to their next most preferred candidates. The left-leaning moderates have their votes transferred to Left and the right-leaning moderates have their votes transferred to Right. After these transfers, Left wins the election with 55% of the votes cast in the second round. This is a classic case where an election-motivated candidate cannot break the two-party duopoly, even with the introduction of IRV.

These two examples illustrate how results under IRV depend critically on the distribution of voter preferences. In one case the median lost whereas in the other case the median won. The outcomes differ because IRV proceeds

by elimination, so, in settings where there are few moderate voters, a median candidate with broad support who is the most preferred candidate of a small number of voters risk being eliminated in the first round.

This difference can be understood more generally by considering the two distributions of voters below. Each horizontal line continues to represent the liberal-conservative political dimension, with the black dots representing the three candidates. The black curves indicate the relative frequency of various voter types. In the top distribution (the unpolarized electorate), there are a large number of moderate voters and a relatively small number of extreme voters. That is, the distribution resembles a normal distribution, which has a lot of mass at the center and not much mass at the tails.



The unpolarized electorate can be compared with the second distribution (the polarized electorate). In this case, there are relatively few moderate voters and a large number of both extremely liberal and extremely conservative voters. That is, this distribution is bimodal, with a hollowed-out center.

Both distributions are symmetrical, so that one half of the voters are to the left of the median voter and one half of the voters are to the right of the

median voter. The candidates are also identically located in the two distributions.

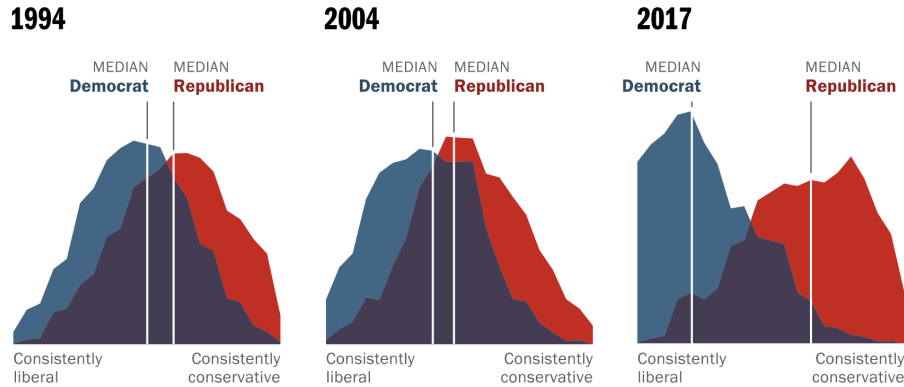
However, the results of a three candidate IRV election differ for the two distributions. The shaded area in the center of the two distributions indicates the set of voters who rank the median candidate first on their ballots. Recall that under IRV, the candidate with the fewest first round votes is eliminated from the election. With the unpolarized electorate, the median candidate captures more votes than either of the other candidates and therefore progresses to the second round of the election, which she then wins. Under the polarized electorate, there are an insufficient number of moderate voters who rank the median candidate first. The other two candidates are most preferred by the largest number of ballots, so the median candidate is eliminated from the election, and the second-round pits Left against Right.

This example shows the competing forces that are placed on candidates in IRV elections when the electorate becomes polarized. Further, these forces are not dissimilar from those placed on candidates who first must win partisan primaries before advancing to a general election. To advance to the second round of an IRV election, a candidate must be the most preferred of a sufficient number of voters, which creates incentives for the candidate to become more ideologically extreme. Then, the candidate must be the most moderate of the two remaining candidates. As a result, if one party decides not to compete for broad support, then the other merely needs to moderate their platform sufficiently to ensure that a third-party candidate will still be eliminated in the first round.

The key question, then, is whether the voters today look like the unpolarized or polarized distribution. Recall Figure 2, which illustrates the distribution of ideology of the average voter in each congressional district. In the 111th Congress, the distribution looks more like the unpolarized distribution. By the 118th Congress, it looks more like the polarized one. This pattern is also reflected in nationwide polls of voters. In 1994 Pew found that 64% of Republicans were more conservative than the median democrat and 70% of Democrats were more liberal than the median Republican. By 2017 the numbers were 95% and 97%.⁸⁵ The gap in political values across partisans has grown substantially. The following figure, also from Pew, shows how the distributions of the parties have grown apart over decades, with a substantial divergence between the medians of the two parties. Taken together, the data are consistent with a bimodal distribution of voters that is growing more polarized—precisely the type of distribution for which IRV is unable to foster

⁸⁵ Center, Pew Research. 2017. “The Partisan Divide on Political Values Grows Even Wider.”

effective competition.



In summary, while IRV is more robust than plurality rule because it overcomes the issue of spoiler candidates, it is not robust to a polarized electorate. With a polarized electorate, the competitive incentives of IRV are more similar to a system with partisan primaries and two-party majority rule. Candidates face contradictory motivations. Some are centripetal and push them toward the median voter. Others are centrifugal and push them toward more extreme ideological positions. Further, because IRV is designed to make third-party candidates uninfluential on election outcomes, it often does not provide a pathway for an election-motivated third-party candidate to enter and election and win. This weakens the incentives for the major-party candidates to moderate their positions, particularly in cases where one of the major parties has decided not to appeal to a broad swath of the electorate.

VI. HOW TO DESIGN A SYSTEM ALLOWS FOR COMPETITIVE ENTRY

There are several reforms that have been proposed as means of increasing competition.⁸⁶ However, we keep our focus on ranked choice voting for a simple reason: it is the only reform for which there is currently sufficient support from voters to pass. Recall, RCV has been adopted by Maine and Alaska, along with scores of municipalities, and voters in at least two other states are voting on adopting RCV in 2024. It is the only substantive reform

⁸⁶ See generally Maxwell L. Stearns, *PARLIAMENTARY AMERICA* (2024) (putting forth a detailed proposal of a parliamentary system and discussing other reform proposals).

that is happening now rather than in the future.

We have discussed why it is desirable for an election system to allow for the successful entry of electorally motivated candidates. Our current two-party plurality system fails at this. We then showed that despite its promise, IRV faces many of the same problems as plurality rule. In this subsection we discuss how an electoral system could be designed to accommodate entry by an electorally motivated candidate.

To do so, we remind readers that IRV is but one form of Ranked Choice Voting. There are many other well-studied systems in which voters rank order candidates. That is, all ranked choice systems share the property of ranking candidates, but then differ on how they aggregate those votes.

Foremost among these systems is a method first proposed by the French mathematician Marie Jean Antoine Nicolas de Caritat, the Marquis of Condorcet—generally referred to as simply Condorcet.⁸⁷ Condorcet’s insight was that in an election with three or more candidates, the natural extension of majority rule is to compare each candidate head-to-head with every other candidate. In Condorcet’s system, if one candidate defeats every other candidate in head-to-head comparison, it is the natural winner. Today we refer to such a candidate at the *Condorcet Winner*.

To better understand the mechanics of a Condorcet method, consider the example below, which is the same example that was considered in the subsection on IRV. Voters can be grouped into one of four voting blocs based on their ranking of the three candidates. A Condorcet method is fundamentally concerned with identifying the candidate who defeats every other candidate in head-to-head comparison. Given that there are three candidates, each candidate is compared to two other candidates.⁸⁸

The ballots cast are the same as in the previous section, but the aggregation differs. In each comparison we only look at voters’ relative ranking between two candidates. First, we compare Left versus Right, and see Left defeats Right with 55% of the vote to 45% of the vote. That is, all of the liberals and the left-leaning moderates prefer Left to Right and all of the conservatives and right-leaning moderates prefer Right to Left.

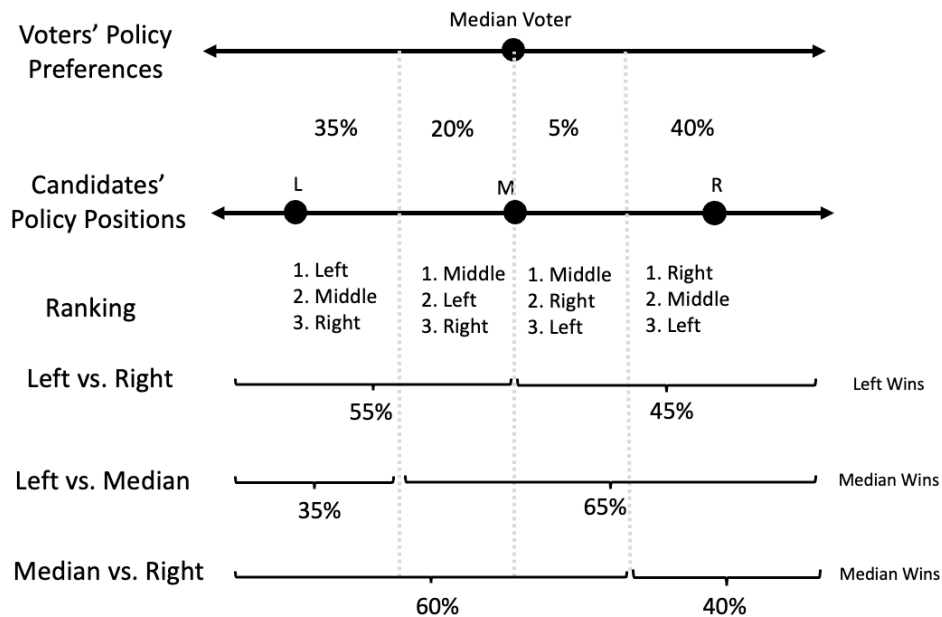
We then move on to the contest between Left and the median candidate.

⁸⁷ For a translation, see McLean, Iain, Arnold B. Urken & Fiona Hewitt eds., CLASSICS OF SOCIAL CHOICE (Univ. of Mich. Press 1995).

⁸⁸ In an election with four candidates, each candidate would be compared with three others for a total of six pairwise comparisons. More generally, given n candidates, each candidate is compared to $n-1$ other candidates, and the total number of pairwise comparisons is given by $n(n-1)/2$. However, it is important to emphasize that the ballots under a Condorcet method are *exactly the same* as the ballots under IRV.

In this case, the median soundly defeats Left 65% to 35% because all of the moderate and conservative voters prefer the median candidate to Left. Finally we can see that the median candidate defeats Right 60% to 40% because the median garners the support of all of the liberal and moderate voters.

Looking at the three pairwise contests, we see that the median candidate is undefeated and is thus the Condorcet winner. That is, the median candidate is preferred to each of the other candidates by a majority of the electorate.



A Condorcet system promotes political competition far better than either plurality rule or IRV. By looking at each pairwise comparison, the Condorcet method does a better job than IRV of ignoring extraneous information and allows an electorally motivated candidate to successfully contest the election.

Because of this, the very threat of entry by an electorally motivated candidate keeps the major party candidates disciplined in a way that they are not under either plurality or IRV. Under the plurality system, we saw that partisan primaries can lead to extremist candidates in general elections. And, if this occurs, an electorally motivated candidate cannot garner sufficient support by entering between the major party candidates. Under IRV, moderate voters could vote for moderate candidates without fear of swinging the election to a more extreme major-party candidate, but because of political polarization it is unlikely that such a candidate would progress to the final round of the election. In both cases therefore, candidates face insufficient

incentives to compete for the support of true majorities of the electorate.

With a Condorcet system, the very threat of entrance by an electorally motivated candidate disciplines the other candidates. In order to be a Condorcet winner, a candidate needs to capture true majorities of the electorate and thus has to compete to have broad appeal. Only by doing so can candidates forestall entry by even more appealing candidates.

A Condorcet system is any system that guarantees the election of a Condorcet winner. There are in fact many well-studied systems that achieve this goal. In fact, these systems only differ in how they select a winner in the absence of a Condorcet candidate, or how they rank the remaining (non-winning) candidates.⁸⁹ We think that the simplest Condorcet method for voters to consider is Copeland's Rule, which resembles a familiar round-robin sports tournament. Under this method each candidate is compared to each other candidate by looking just at the relative positions of those two candidates in voters' rankings. Whichever of those two who gets more pairwise votes gets a "point." The election then iterates through all of the pairs and assigns points accordingly. The candidate with the most points wins.⁹⁰ In the above example, Left scores 1 point, Median scores 2 points, and Right scores 0 points.

Unlike both the plurality system and IRV, a Condorcet system is a robust electoral system. By allowing competitive entry, a Condorcet system disciplines candidates. Note, that the very threat of entry has a disciplining effect, even if a third party candidate never contests the election under a Condorcet election. This points to an important flaw in many discussions around our current electoral system. A wide variety of commentators, academics, and policy makers are focused on the development of a competitive third party in American elections. The thought is that this third party, if established, will act as a disciplining mechanism on the incumbent parties. Indeed, the promise of more candidates and more parties is one of the main properties touted by advocates of IRV.

However, we have shown that the mere presence of a competitive candidate is not enough to guarantee competitive elections under either plurality rule or IRV. Simply having more choice is insufficient for promoting competition. What is needed is a mechanism that allows for competitive entry. Paradoxically, if an election is truly competitive, then no

⁸⁹ In the setup considered here such a "Condorcet cycle" is not possible, because there is a unidimensional policy space.

⁹⁰ In the event of a tie, various tie elimination procedures have been proposed, with the simplest being to declare the candidate with the most votes among the tied candidates the winner (that is, the candidate with the highest Borda count). See e.g. Foley, *Tournament Elections with Round-Robin Primaries*, WISCONSIN L. REV.

more than two candidates are even needed.

Another key advantage of the Condorcet form of RCV is its political feasibility and appeal to voters. Voters in states and municipalities across the country have demonstrated that RCV can be enacted. From a voter's perspective, the ballot looks the same under either a Condorcet or IRV form of RCV. In either case, the voters rank their candidates, and all that differs is the algorithm through which the winner is determined. For this reason, a Condorcet version of IRV is politically feasible today versus many other proposed reforms which could not be enacted until far in the future.⁹¹

For voters, policy makers, and advocates looking for a politically feasible path to restoring competitiveness to American election, a Condorcet form of RCV promises the best path forward today.

CONCLUSION

A truly responsive democratic system requires robust political competition to ensure that elected officials represent the interests of voters. As this Article demonstrates, America's current electoral framework fails on that metric. Deep partisan polarization coupled with plurality voting rules has severely hampered electoral competitiveness and incentives for moderate policymaking. Consequently, election results frequently diverge from majoritarian preferences.

To remedy this disfunction, structural reforms to electoral systems offer great promise. Specifically, we show how a Condorcet form of Ranked Choice Voting can help restore competition and representativeness to American elections. Unlike IRV, a Condorcet approach to ranked choice voting would directly incentivize candidates to compete for the support of the median voter, and thereby, a majority of the electorate. By allowing competitive entry, a Condorcet system would have a strong disciplining effect on the major parties.

Adoption of Condorcet voting faces no insurmountable legal or practical obstacles. Voters have shown their willingness to adopt ranked choice voting, and Condorcet voting is just one form of RCV. For voters looking to restore

⁹¹ Indeed, our co-author Ned Foley has proposed with Eric Maskin a Condorcet procedure which they call "Total Vote Runoff." The advantage of Total Vote Runoff is that with just one small change, Instant Runoff Voting can be changed into a Condorcet system. See Edward B. Foley & Eric S. Maskin, *Alaska's Ranked-Choice Voting Is Flawed. But There's an Easy Fix*, *Wash. Post* (Nov. 1, 2022), <https://www.washingtonpost.com/opinions/2022/11/01/alaska-final-four-primary-begich-palin-peltola/> [<https://perma.cc/2AEZ-YJBH>].

competitiveness to our elections and representativeness to our democracy, Condorcet elections offer the most promising way forward.