THE INEVITABILITY OF GERRYMANDERING: WINNERS AND LOSERS UNDER ALTERNATIVE APPROACHES TO REDISTRICTING

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Apolitical redistricting is an impossibility. To refer to a process or institution as “political” is merely to use an empty epithet. A redistricting process can be criticized as “political” on one of two bases—the individuals to whom authority is delegated, or the geographical algorithms used by those who have redistricting authority. Given that elections in the United States are based around the winner-take-all principle, any redistricting plan will create winners and losers. Therefore, the choice between any set of redistricting algorithms is a choice about who will be winners and who will be losers. Furthermore, because the delegation of responsibility for redistricting is only relevant inasmuch as it affects the choice of redistricting algorithms, the choice of delegation is also a determination of who will win and who will lose. By definition, that choice cannot be apolitical. Moreover, any attempt to evaluate redistricting processes independently of such outcomes devolves the process into a trivial exercise in Nomic.

APOLITICAL REDISTRICTING: ALLOCATION OF RESPONSIBILITY VS. ALGORITHMIC APPROACHES

Complaints about the “political” nature of the redistricting process generally fall into two categories: complaints about who has the authority to redraw lines, and complaints about the geographic

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algorithms used to redraw district lines. With respect to the first complaint, the United States is unique among countries with single-member districts because of the frequency with which partisan officials are granted the authority to redraw district lines. The most common allocation of responsibility is to delegate redistricting authority to the state legislature, where redistricting plans are treated like any other piece of legislation. Although partisan officials have a vested interest in the placement of district lines, that does not mean that they necessarily face a conflict of interest. In fact, they face a confluence of interest—they have political incentives to draw lines in a way that actually benefits voters. Nevertheless, it is possible to delegate authority to those without a stake in the process, be they judges, “special masters,” or mechanical scoring systems for independently submitted plans.

However, an apolitical algorithm is another matter altogether. More than any other aspect of electoral rulemaking, the placement of district lines determines election results because party identification is the strongest determinant of vote choice. Because any election can only have a single winner, every redistricting plan creates a set of winners and losers. Therefore, the choice between any two redistricting algorithms is a choice between two sets of winners and losers. Further, not only do all redistricting plans create winners and losers, they all do so based on politically relevant criteria. Thus, all redistricting plans can be considered “gerrymanders” and an apolitical redistricting algorithm is impossible. Moreover, because the delegation of redistricting authority affects the algorithm that will be used, it follows that the choice of who should have redistricting authority is indistinguishable from the choice of which algorithms to use. Thus, the choice of delegation is itself a choice between winners and losers, and apolitical redistricting is fundamentally impossible.

This essay will examine the three broad categories of redistricting algorithms: the partisan gerrymander, the bipartisan gerrymander, and the competitive gerrymander. The essay will examine who wins and who loses under each approach, and demonstrate that the choice of algorithms is indistinguishable from the question of who should win

and who should lose. Then, because the delegation of authority affects
the choice of algorithms, it follows that the delegation decision is also
a choice about who should win and who should lose. Thus, there can
be no apolitical redistricting in any meaningful sense of the term
because the choice of delegation is as “political” as the choice of
algorithm.

THE MANY FACES OF GERRYMANDERING

The term “gerrymander” has been used so often and in so many
disparate contexts that it no longer has a specific meaning. In modern
political discourse, it is little more than an epithet attached to any
redistricting plan by which someone feels aggrieved. Because all
redistricting plans create some aggrieved group, all redistricting plans
can be considered gerrymanders.

The origin of the term “gerrymandering” does not need to be
recounted here. Historically, the redistricting algorithm to which the
label is most commonly attached is the partisan gerrymander. A
partisan gerrymander uses a “pack and crack” strategy, so labeled
because of how it groups a disadvantaged party’s voters. For example,
if Republicans were to attempt a partisan gerrymander, they would do
so by packing one set of districts with inefficiently large Democratic
supermajorities. In the remaining districts, they would combine
relatively thin Republican majorities with relatively large Democratic
minorities, thereby “cracking” the minority. Doing so maximizes the
efficiency with which Republican voters are allocated to districts, and
minimizes the efficiency with which Democratic voters are allocated
to districts. In doing so, the “pack and crack” plan allows Republicans
to win a greater share of the seats than their proportion of the vote.

Of course, the partisan gerrymander is not the only type of
gerrymander. “Good government” advocates also deride the
bipartisan gerrymander, otherwise known as an incumbent protection
gerrymander. Under a bipartisan gerrymander, each party’s voters are
packed inefficiently into separate sets of districts. Hence, every district
has either an inefficiently large Democratic supermajority, or an
inefficiently large Republican supermajority. The result is that
incumbents face no threat of loss in the general election, and each
party is guaranteed a number of seats that they cannot go far above
or below.
Because the partisan gerrymander spreads one party’s voters out as efficiently as possible and the bipartisan gerrymander spreads each party’s voters out with equal inefficiency, by mathematical necessity, the default alternative to either approach is a plan that does not pack any district with voters of either party. Each district (or at least as many districts as possible) in such a plan combines equal numbers of Democrats and Republicans so that neither party has an efficiency advantage, and incumbents of neither party are protected from general election challenges by the partisan contours of their districts. The frequently explicit and sometimes implicit objective of advocates of an “apolitical” approach to redistricting is usually to make such plans more common based on the either implicit or explicit belief that such a plan is itself apolitical. This approach, however, also creates winners and losers—it will advantage some, and disadvantage others. As such, the “apolitical” approach is equally deserving of the pejorative label, “gerrymander.” Such plans should be known as “competitive gerrymanders.”

WINNERS AND LOSERS UNDER EACH ALGORITHM

In the context of redistricting, process only matters insofar as it promotes preferable outcomes. Any redistricting algorithm will create a set of winners and a set of losers. The choice of a redistricting algorithm, then, is the choice of who should win and who should lose. This section examines who wins and who loses under the partisan gerrymander, the bipartisan gerrymander, and the competitive gerrymander.

The Partisan Gerrymander

The winners and losers of a partisan gerrymander are quite clear. A partisan gerrymander creates a systematic advantage for the party with efficiently distributed voters and a systematic disadvantage for the party with inefficiently distributed voters. On average, the advantaged party will win more seats than its proportion of the population, and the disadvantaged party will win fewer.

By definition, a partisan gerrymander promotes bias, and the conventional wisdom about delegation of authority is that if partisan officials have the authority to redraw district lines, they will use the partisan algorithm. However, risk-averse partisan officials have
incentives to avoid a partisan gerrymander. After all, the plan works by creating thin majorities in as many districts as possible, which creates the risk that a small but consistent shift in public opinion towards the disadvantaged party will cost the offending party a large number of seats. Nonetheless, the sole purpose here is to examine who wins and who loses under each plan.

The Bipartisan Gerrymander

Suppose that the electorate of a state is divided between M voters affiliated with Party A and N voters affiliated with Party B. Suppose further that the state must be divided into d districts. Presuming even divisibility, the extreme bipartisan gerrymander would create \(d\left(\frac{M}{M+N}\right)\) districts in which all voters are affiliated with Party A, and \(d\left(\frac{N}{M+N}\right)\) districts in which all voters are affiliated with Party B. The incumbents are clear winners under this algorithm because each incumbent will represent a district in which all voters are affiliated with the incumbent’s party. Thus, incumbents will face no threat of loss in the general election. One might initially argue, then, that the losers are the incumbents’ general election opponents, but under such an extreme bipartisan gerrymander, there would be no general election opponents. In the \(d\left(\frac{M}{M+N}\right)\) districts in which all voters are affiliated with Party A, there are no voters affiliated with Party B, so given residency requirements, there will be no candidates of Party B in such districts. Hence, among general election candidates, there are no losers. Similarly, there are essentially no losers among the electorate because all voters will be represented by a legislator of their own party. Thomas Brunell argues that this alone is sufficient reason to enact bipartisan gerrymanders.

Of course, there can be no perfect bipartisan gerrymander. Any

2. See, e.g., Howard Scarrow, *The Impact of Reapportionment on Party Representation in the State of New York*, 9 POL’Y STUD. J. 937, 939–40 (1981) (“If there are a large number of districts which are closely matched (e.g., won by margins of 51%–49%), the chances are that all of them will alternate each election as party fortunes ebb and flow. The high disproportionalities which would result each year would then stem not from partisan bias in the apportionment-districting system, but . . . from the extreme sensitivity of these districts to changes in voter preferences.”).

attempt at a bipartisan gerrymander inevitably will place some voters in districts in which the overwhelming majority of voters disagree with them. The result will be regular elections in which the majority party incumbent regularly defeats a minority party sacrificial lamb, and the losers are the misplaced minority party voters, minority party candidates, and potential candidates who do not even bother to run because they are certain to lose. Advocates of evenly-balanced districts might argue that while balanced districts will create more losers by imposing a victor on a larger minority, evenly-balanced districts are preferable because nobody is relegated to the status of permanent loser. Whether or not we accept that claim will affect our preference between bipartisan and competitive gerrymanders, but the purpose of the analysis here is simply to describe the winners and losers under each redistricting algorithm, and bipartisan gerrymanders produce few losers in partisan terms, and the degree to which they do produce losers is simply a function of insufficient district homogeneity, not insufficient district heterogeneity.

Opponents of bipartisan gerrymanders argue that such gerrymanders promote legislative polarization by forcing legislators to remain responsive to non-centrist primary electorates rather than centrist general electorates. To the degree that this is true, ideological extremists are the electoral winners under a bipartisan gerrymander, and ideological centrists are the losers because they will be left without representation. This claim leads to one of the most common arguments against bipartisan gerrymanders: if most voters are not ideologically extreme and bipartisan gerrymanders promote polarization, then bipartisan gerrymanders create more losers than winners by giving extremists disproportionately large representation in Congress and by giving centrists disproportionately little representation.

However, the effect of such gerrymanders on legislative polarization is measurable and, indeed, small. This consistent

4. BRUNELL, REDISTRICTING AND REPRESENTATION, supra note 3, at 96.
empirical finding is puzzling to some because blaming gerrymandering has such intuitive appeal. The House of Representatives has become dramatically more polarized over time. Figures 1 through 14 below show DW-NOMINATE scores for each House of Representatives elected in a presidential election year from 1952 to 2004.

Figures 1–14

![Figure 1](image1)

![Figure 2](image2)

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6. DW-NOMINATE scores are estimates of legislators’ locations in an ideological space calculated based on their roll call votes.

7. The first dimension of a NOMINATE score represents a legislator’s degree of liberalism or conservatism, with negative scores indicating liberalism, and positive scores indicating conservatism. Scores are computed by Keith T. Poole and Howard Rosenthal and are available at http://voteview.com/dwnomini.htm.
Figure 3

Figure 4

Figure 5

Figure 6

Figure 7

Figure 8
These graphs indicate that the House of Representatives became dramatically more polarized over the course of the post-WWII period. Further, conventional wisdom holds that state legislatures
have become increasingly sophisticated in their approach to redistricting, allowing them to systematically eliminate competitive legislative districts in order to protect incumbents through bipartisan gerrymandering. Eliminating competitive districts takes away the threat that legislators might lose a general election. Hence, electoral pressures force legislators to move towards ideological extremes in order to win primaries. To many, the intuition is so clear that the idea it is wrong seems inconceivable. However, two pieces of information explain why so many empirical studies have demonstrated that bipartisan gerrymandering is not responsible for polarization. First, the disappearance of competitive districts over time is, itself, a myth.8 Figure 15 shows the proportion of U.S. House districts in which the Democratic and Republican presidential candidates were separated by less than ten points in the two party vote, for every election from 1952 to 2004. These districts should be the most competitive, and a competitive gerrymander would maximize the number of such districts.

Figure 15

The first significant hole in the argument linking legislative polarization to bipartisan gerrymanders should be apparent. The

8. Buchler, The Redistricting Process, supra note 1, at 170; see also Buchler, Redistricting Reform, supra note 6, at 4 (“In order for the disappearance of marginal districts to explain the increase in legislative polarization over time, marginal districts would have to disappear over time. They didn’t.”).
trend towards polarization in Figures 1 through 14 can only be explained by the disappearance of competitive districts if those districts did, indeed, disappear. Figure 15 demonstrates that the number of competitive districts has not declined. The number of competitive districts has fluctuated, but ironically, there were slightly more competitive districts in 2004 than in 1952, despite the dramatically higher levels of polarization in the 109th Congress than in the 83rd Congress. Throughout the post-WWII period, most districts have not been competitive. Despite that, Congress managed to avoid dramatic polarization up to the 1980s and 1990s, thereby demonstrating that having a relatively small number of competitive districts does not produce polarization. Further, because polarization increased without a consistent decline in the number of competitive districts, polarization in the House of Representatives cannot be explained by bipartisan gerrymanders. Moreover, reconciling the polarization of the 109th Congress (as shown in Figure 14) with the observation that nearly a quarter of all districts in 2004 saw a spread of less than ten points between President George W. Bush and Senator John Kerry demonstrates that even competitive districts do not elect moderates in the modern era. Polarization is not the result of bipartisan gerrymanders, and it would persist regardless of how district lines are drawn.

The second critical piece of evidence that polarization is not the result of bipartisan gerrymandering is that the same trend towards polarization is visible in the Senate. Figures 16 through 29 show Senate ideology scores for the same period of time.
Figures 16–29

Figure 16

![Histogram showing Density vs. First Dimension of DW-NOMINATE Scores for 83rd Senate]

Figure 17

![Histogram showing Density vs. First Dimension of DW-NOMINATE Scores for 85th Senate]

Figure 18

![Histogram showing Density vs. First Dimension of DW-NOMINATE Scores for 87th Senate]

Figure 19

![Histogram showing Density vs. First Dimension of DW-NOMINATE Scores for 89th Senate]

Figure 20

![Histogram showing Density vs. First Dimension of DW-NOMINATE Scores for 91st Senate]

Figure 21

![Histogram showing Density vs. First Dimension of DW-NOMINATE Scores for 93rd Senate]
Figure 22

Figure 23

Figure 24

Figure 25

Figure 26

Figure 27
The same trend towards polarization visible in the House of Representatives is evident in the Senate as well. Because redistricting is not a factor in Senate elections, it follows that whatever is causing centrists to be electoral losers, it is not redistricting. However intuitive the redistricting argument may be, the consistent empirical result is that bipartisan gerrymanders do not dictate that extremists win and centrists lose. For whatever reason, that happens in the modern political environment anyway. The losers under a bipartisan gerrymander are simply those who are placed in the “wrong” districts: the small number of Republicans who reside in heavily Democratic urban districts, and the small number of Democrats who reside in heavily Republican rural and suburban districts.

The Competitive Gerrymander

To many advocates of “good government” reform, a competitive gerrymander is a “fair” redistricting plan. In a sense, the winners and losers in a competitive gerrymander are less obvious than the winners and losers under the other two gerrymanders. If the parties are evenly divided within a state, then a competitive gerrymander does not provide any ex ante advantage to either party. Thus, voters of neither party are intrinsically disadvantaged. Moreover, incumbents do not have any built-in protection from general election challenges, nor do they face an intrinsically hostile environment. The appeal of the competitive gerrymander is that if every seat is “up for grabs,” then everybody is treated, in some sense, equally. Hence, while elections
will always have winners and losers, a competitive gerrymander does not preordain specific winners and losers.

However, even though a competitive gerrymander does not determine who the specific winners and losers will be, it can have other pernicious effects because of how winners and losers will be determined in such a plan. The previous section demonstrated that bipartisan gerrymanders are not responsible for polarization. But, for the sake of argument, let us assume that “good government” advocates were correct to argue that competitive districts promote centrist. If so, then the winners under the competitive gerrymander would be centrists and the losers would be extremists. Although there is intuitive appeal to that spread, the representational consequences of that pattern depend on the degree to which the population actually is centrist.

If voters can be characterized by ideal points in a single policy dimension, and elections function in the way that reformers assume, then a competitive gerrymander promotes ideological centrist in the legislature by drawing district lines such that each district has a centrist median voter. However, when there are a significant number of non-centrists in the population, centrist outcomes will leave many without any representation in Congress. Further, the population need not be as bimodal as Congress for us to be bothered by the lack of representation for ideological non-centrists. Consider two possible population distributions as depicted in Figure 30.
Both distributions have a median location of 0, but the distribution with a standard deviation of 0.4 is much more tightly clustered around that median than the distribution with a standard deviation of 2. If the population looks more like the distribution with a 0.4 standard deviation, then most of the population will be happy with an electoral system that promotes centrism because most of the population is centrist. However, if the population looks more like the distribution with a standard deviation of 2, then a redistricting plan that forces all legislators to be centrist will leave many more voters dissatisfied with their representatives. After all, there is greater average ideological distance between voters and the median location in the distribution with a standard deviation of 2 than with a standard deviation of 0.4. Moreover, empirical findings demonstrate that voters’ satisfaction with their representatives is due more to the perceived differences between their own preferences and the positions of their representatives than to the degree of electoral
competition.\textsuperscript{9} Thus, even if the reformist argument that competitive gerrymanders make winners out of the centrists is accepted, wide swaths of the population will become “losers” because they will be left without representation.

However, the consistent finding that the reformist argument about competition and polarization is wrong cannot be ignored. Redistricting has played only a minor role in the polarization that has developed in Congress over the last two decades, as discussed earlier. So, if polarization is inevitable regardless of how district lines are drawn, what does that imply about losers in the competitive gerrymander? Suppose a state consists of voters whose ideologies form a Normal distribution with a mean of 0 and a standard deviation of 2, as in Figure 30. If so, a competitive gerrymander would simply make each district a microcosm of the state.\textsuperscript{10} Even if the winning candidate in such a district maximizes voter satisfaction by adopting a location of 0, the result is still a relatively dissatisfied electorate because so many voters are ideologically distant from the winner. However, if the winning candidate adopts a polarized location, voter dissatisfaction is even greater because average ideological distance between voters and their representative increases. Thus, if polarization is a given based on the empirical observation that even competitive districts now elect non-centrists, then a competitive gerrymander actually dictates that most of the electorate will be losers, although it does not dictate which specific narrow segment will be winners.

Alternatively a bipartisan gerrymander by definition creates more homogeneous constituencies with voters more tightly clustered around the mean. Thus, the bipartisan gerrymander necessarily creates fewer losers. The cost is simply that the losers in a bipartisan gerrymander are predetermined by the redistricting algorithm rather than by election results that will inevitably leave most voters dissatisfied.

**DELEGATION VS. ALGORITHM**

The preceding analysis reveals that there is no such thing as an

\textsuperscript{9} Thomas L. Brunell & Justin Buchler, Ideological Representation and Competitive Congressional Elections, 28 ELECTORAL STUD. 448, 454 (2009).

\textsuperscript{10} Justin Buchler, Competition, Representation and Redistricting: The Case Against Competitive Congressional Districts, 17 J. THEORETICAL POL. 431, 440 (2005).
apolitical redistricting plan. Every plan creates winners and losers, and the choice of redistricting plans involves inevitable tradeoffs between worthy goals. The partisan plan dictates that the winners will be the voters and candidates of the party implementing the plan, and that the losers will be the voters and candidates of the disadvantaged party. Contrary to conventional wisdom, the bipartisan plan does not dictate that extremists win and that centrists lose. Instead, the winners under the bipartisan plan are incumbents and “correctly” placed voters, whereas the losers are voters and candidates who reside in districts in which they are a small minority. The competitive plan does not dictate winners ex ante, as the partisan and bipartisan plans do, but it leaves large swaths of the electorate as losers anyway. After all, because polarization among candidates occurs in evenly-balanced districts as well as in heavily partisan districts, the losers in a competitive plan are not just the nearly 50% of voters forced to accept victory by candidates for whom they did not vote, but also the potentially significant majority forced to accept representation by officials with distant ideologies. All redistricting plans create winners and losers, so all are deserving of the pejorative labels of “political” or “gerrymander.”

The choice of delegation, then, must be equally political. The choice to delegate redistricting authority to the state legislature is a decision that will potentially result in a partisan, or more likely, a bipartisan gerrymander. After all, most involved in the redistricting process are aware that the Republicans’ attempt to gerrymander New York after the 1972 election backfired in 1974, so the well-known risks associated with a partisan gerrymander make the bipartisan

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11. See, e.g., Nathaniel Persily, In Defense of Foxes Guarding Henhouses: The Case for Judicial Acquiescence to Incumbent-Protecting Gerrymanders, 116 HARRY L. REV. 649, 677–78 (2002) (“Redistricting cannot be truly randomized or automated . . . . [B]ecause such neutral principles uniformly applied by automated redistricting will have predictable effects in a given demographic context, political officials that choose among those principles can inject their bias at an earlier stage of the redistricting ‘process.’”).


13. Scarrow, supra note 2, at 943.
gerrymander more appealing to the risk-averse. Those still concerned with the threat of a partisan gerrymander could simply add a supermajority requirement for passage of a redistricting plan, steering the process away from a partisan gerrymander and towards a bipartisan gerrymander. The choice to delegate redistricting authority to an independent commission charged with creating evenly-balanced districts is indistinguishable from choosing a competitive gerrymander, as is the decision to allow independently submitted plans to be scored mechanically in a way that favors creation of competitive districts. Any delegation decision affects the plan that will be chosen, so any delegation decision simultaneously creates winners and losers. One might reasonably argue that a competitive gerrymander is preferable to a bipartisan gerrymander on the grounds that even though the competitive gerrymander creates more losers, it is better not to relegate anyone to the status of permanent loser, as the bipartisan gerrymander does. Nonetheless, this choice necessarily creates winners and losers and is therefore undeniably political.

**PROCESS VS. OUTCOME**

This essay has examined redistricting purely from the perspective of outcomes—specifically winners and losers. Of course, redistricting algorithms and delegation decisions can be judged by other criteria, such as the degree to which they promote political participation, civic engagement, policy-centered debate, responsiveness of policy over time to shifts in public opinion, or any other such outcome. However, the remaining question is whether or not a redistricting process can be evaluated independently of outcomes.

Consider the game of Nomic.\(^{14}\) Nomic is essentially a game about making rules. Play generally consists of proposing changes to the rules of Nomic, and more circularly, changes to rules about changing the rules of Nomic. The game is a philosophical exercise motivated by the question of whether rules about rulemaking can be changed, or whether doing so intrinsically violates initial rules. It is the epitome of process for the sake of process, and it can be so because the outcome of a game of Nomic is utterly irrelevant. In fact, in most iterations of

the game, the rules of the game will be rewritten such that there are no outcomes other than the creation or modification of rules of the game.

Changing the process for redistricting is a literal case of changing the rules by which electoral rules are written. In principle, that can be done in a manner that does not consider electoral outcomes, as though the process of redistricting were nothing more than a game of Nomic. However, unlike Nomic, legislative elections have outcomes that matter. Legislative election results determine who will pass laws about war and peace, healthcare, and other issues involving matters of life and death. District lines determine legislative election results. Redistricting algorithms determine district lines, and those delegated with redistricting authority choose redistricting algorithms. Hence, both the algorithms we use to draw district lines and the decisions we make about who should have the authority to choose them have critical social and policy consequences that sometimes involve life and death. Such matters are too important to turn electoral rulemaking into an exercise in Nomic by evaluating redistricting processes independently of electoral outcomes. Allowing the redistricting process to devolve into Nomic would be harmless frivolity at best, and fundamentally dangerous at worst because legislative election outcomes are of such critical importance.