Districts for a New Decade—Partisan Outcomes and Racial Representation in the 2021–22 Redistricting Cycle

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This article provides an overview of the new congressional and state legislative districts that were drawn around the country during the 2021–2022 redistricting cycle. We provide background on the redistricting landscape, most notably the changing federal role in both partisan and minority representation. We also discuss the process used to draw the new districts in each state. We then provide an empirical look at partisan fairness, competitiveness, and minority representation in the new plans. We find that both parties have enacted increasingly extreme partisan gerrymanders when they control the redistricting process. The combination of Republicans' control of the redistricting process in far more states than Democrats and the inefficient concentration of Democrats in cities has enabled Republicans to largely maintain an advantage in the translation of votes to seats in both Congress and many state legislatures. As a result, the policymaking process in many states will continue to be skewed in a conservative direction. At the same time, nonpartisan commissions appear to offer a consistent means to produce less biased and more competitive maps than when parties drawn the lines. Finally, while Black and Latino representation has improved in some places, both groups of voters remain underrepresented. We conclude by discussing lessons for both scholars and advocates.

The United States predominantly uses first-past-the-post, single member districts to elect members of Congress and state legislators around the country. The redrawing of these districts once a decade to reflect changes in the population of each state is crucial to representation in state legislatures and the U.S. House of Representatives. Indeed, the relationship between the distribution of partisan support in the electorate and the partisan composition of the government—what (Powell 2004) calls "vote–seat representation"—is a critical link in the longer representational chain between citizens' preferences and governments' policies. If the relationship between votes and seats systematically advantages one group over another, then some citizens will enjoy more influence—more "voice"—over

elections and political outcomes than others (Caughey, Tausanovitch, and Warshaw 2017).

Federalism in the United States further complicates this representational link. Redistricting can have national consequences, particularly for the U.S. House. Yet the states have broad autonomy to dictate election policy, and the Constitution explicitly constrains and shapes federal involvement. A number of important recent developments in U.S. redistricting stem directly or indirectly from these complex federal structures.

This article seeks to bring readers abreast of the latest developments in U.S. redistricting. We describe recent legal and technical developments and their connections to the American federal system, and then evaluate the new plans drawn in the wake of these changes. The legal developments have left the states tremendous latitude over redistricting, leading to a wide range of approaches and philosophies. From this diversity, Republicans have largely maintained their advantage in the translation of votes to seats in both Congress and state legislatures, contributing to a conservative skew to the policymaking process in many states. With fewer constraints, both parties have also enacted more extreme partisan gerrymanders when they control the redistricting process. At the same time, a number of states have adopted nonpartisan commissions, which on balance appear to produce less biased and, possibly, more competitive plans than their partisan counterparts.

The remainder of this article proceeds as follows. First, we discuss important developments in the redistricting landscape over the past decade: federal courts' abdication of any role in policing partisan gerrymandering, changes in the Voting Rights Act that scale back its influence, and technical developments in measuring gerrymandering that have been deployed in both legal and political arenas. Combined, these changes have reduced the role of the federal government and magnified the importance of state political processes and courts in determining the legislative districts that will be used around the country. Next, we discuss the details of the redistricting process in each state, including whether the process was controlled by the state legislature or a commission. Then we look at partisan fairness, competitiveness, and minority representation in the new plans. We briefly conclude with lessons for scholars and reformers.

Background on the Federal Role in Redistricting

Election regulation in the United States inevitably raises questions of Federal power. The U.S. Constitution requires equipopulous legislative districts (*Baker* v. *Carr*, 369 U.S. 186 [1962]). Otherwise, it leaves the "times, places, and manner" of elections up to the states, but permits Congress to regulate Federal elections if it chooses. Congress can also regulate any election through the Fifteenth Amendment

if the purpose is to address racial discrimination in voting. And the Constitution's Fourteenth Amendment can forbid any practice that unjustifiably burdens the right to vote. This makes for a constantly shifting boundary between state and federal control of elections.

Over the past ten years, each of these approaches to election regulation has been considered and debated for redistricting. In each case, this resulted in a weak federal role: either no federal authority to replace an ambiguous status quo; retreat from previously robust activity well supported by the law; or failure to expand federal power where legal authority clearly existed. In the void left by the federal government, a diverse range of state policies on racial and partisan representation has stepped in to take its place.

Federal Court Review of Partisan Gerrymandering: Ambiguity to Absence

Partisan gerrymandering is the practice of drawing district lines to give one party more seats than its share of the vote would fairly support. It is difficult to regulate through the normal legislative process because such regulation would require the state's majority party to limit its own power. That has made reformers especially keen on containing the practice through the federal courts, where legislative approval is not required and a decision could bind all states to the same standard.

Prior to 2019, jurisprudence regarding federal supervision of partisan gerrymandering and the possibility of a national ban on the practice had been ambiguous. The U.S. Supreme Court had neither endorsed nor rejected it. In the midst of this ambiguity, some states pursued aggressive gerrymanders while many others were more cautious than they might have been for fear of federal action.

Just before the 2011 round of redistricting, several related developments together offered the "means, motive, and opportunity" to upset this status quo and kill gerrymandering, at least in extreme cases. The "opportunity" came from two U.S. Supreme Court decisions, *Vieth* v. *Jubilerer*, 541 US 267 (2004), and *LULAC* v. *Perry*, 548 US 399 (2006). In those decisions, swing vote Justice Anthony Kennedy believed a standard could be developed for striking down gerrymanders using the Fourteenth Amendment, but he challenged the legal and technical communities to develop the necessary measures and concepts. This in turn prompted scholars to develop the "means" for a standard through new metrics wedded to innovative legal theories.

The "motive" for the effort was the "Great Gerrymander of 2012" (Wang 2013). State legislators in 2011 and 2012 showed a renewed willingness to extract maximum partisan advantage from the redistricting process, especially in the Republican-controlled states of Michigan, North Carolina, Ohio, Pennsylvania, and Wisconsin, and in the Democratic-controlled state of Maryland (Caughey and Warshaw 2022; Stephanopoulos and McGhee 2015). This provoked a substantial

backlash that worked its way through the courts for most of the next decade, seeking to define Justice Kennedy's elusive standard with the new metrics and theories.

These cases culminated in a landmark decision in 2019, *Rucho* v. *Common Cause*, 139 S. Ct. 2484 (2019). The outcome was not what reform advocates had hoped. By this point Justice Kennedy had retired from the court, and in his absence, a five-four majority shut the door for good. The majority declared a federal constitutional standard functionally impossible, eliminating any chance for a single set of jurisprudential constraints on partisan gerrymandering for all states.

The Voting Rights Act: Muzzled Enforcement Power

If the federal legal status of partisan gerrymandering was ambiguous, the same could not be said for racial discrimination in voting. The Fifteenth Amendment clearly forbids it and empowers Congress to attack it with "appropriate legislation," which Congress had done through the landmark Voting Rights Act of 1965 (VRA). The VRA historically offered two means of protecting underrepresented racial and ethnic minorities in the redistricting process. Section 2 of the Act is a post-hoc cause of action to ensure that districts empowering a group are drawn where, among other things, that group is sufficiently large, geographically compact, and politically distinct. Section 5, by contrast, has required plans in certain parts of the country (mostly the South) to "preclear" with the U.S. Justice Department. The Section 5 standard is also stricter, requiring proof that none of the covered groups were made worse off by a plan, and to do so *before* the plan could be enacted.

In *Shelby County* v. *Holder*, 570 US 529 (2013), the U.S. Supreme Court struck down the coverage formula for identifying which states and localities are subject to the Section 5 pre-clearance requirement, arguing that the formula no longer reliably identified jurisdictions with racially discriminatory voting practices. This freed all existing covered jurisdictions from complying with that portion of the law, leaving Section 2 as the only avenue for supporting racial and ethnic opportunity districts in the current cycle. This has made it more difficult to establish that a plan's treatment of racial and ethnic minorities violates the law, and it has also shifted the burden of proof from the state to those who would challenge a plan. Section 5 had been one of the most assertive examples of federal power in existing law; without it, the federal government's role in this space has been radically diminished.

Congress: The Dog That Didn't Bark

Neither *Rucho* nor *Shelby County* had to be the final word. In response to *Rucho*, Congress could have imposed a single national standard for congressional redistricting through its express authority to regulate federal elections. In fact, one

could make the case that, between congressional and state legislative redistricting, congressional redistricting ought to be a higher priority. Pernicious state legislative plans can be damaging but will only affect one state, while each state's congressional plan feeds into a single national chamber (the House of Representatives) where it can affect national policy for all states (Keena et al. 2021).

The response to *Shelby County* could have been even more straightforward. The Court struck down the existing coverage formula, but it did not strike down Congress's broader authority under the Fifteenth Amendment. The fix could have been as a simple as designing a better formula and providing a clearer justification for it.

Democrats in the 117th Congress have been trying to take both steps by crafting an omnibus elections bill called the Freedom to Vote: John R. Lewis Act. This bill sets guardrails for partisan gerrymandering and references some of the same metrics that were used in the court cases. It also reestablishes Section 5 coverage and requires racial coalition districts to be drawn where possible. But the bill has been bottled up in the U.S. Senate, where the filibuster prevents a straight up or down vote and the key swing senators have shown no appetite for overriding the filibuster in this case. At the time of this writing, there is no prospect of movement on the bill.

State Authority: Into the Breach

The *Rucho* and *Shelby County* decisions have given the states much more latitude in redistricting. They have taken advantage, adopting new processes and in many cases producing plans that might have been considered unacceptable before.

The majority opinion in *Rucho* specifically invited state-level action to combat partisan gerrymandering.[1] Like the work at the federal level, state-level action has been pursued through both the courts and statutory reform. The results have been mixed, but with more success than has so far been achieved through Congress or the federal courts.

Some court action has occurred through partisan fairness provisions in state law. Lawsuits of this kind have been successful in Florida (*League of Women Voters* v. *Detzner* [179 So.3d 258 2015]), North Carolina (*Harper* v. *Lewis*, N.C. Super. Ct., Wake Cnty., No. 19-CVS-012667 [2019]), and Pennsylvania (*League of Women Voters of Pennsylvania* v. *Pennsylvania*, 178 A.3d 737 [2018]). Florida voters had adopted an initiative explicitly forbidding plans that favored any party or incumbent, but the other two state court cases were based on novel interpretations of the state constitution. It is not clear how much potential exists in other states for such a strategy, but more cases of this kind seem likely. In the current redistricting cycle, lawsuits have successfully challenged the partisan fairness of

state legislative or congressional plans in Maryland, North Carolina, New York, and Ohio.

Commission-style state reforms have also offered new opportunities to constrain or challenge partisan gerrymandering (Bates 2005; Caughey and Warshaw 2022; Kubin 1996; Seabrook 2017; Stephanopoulos 2016). Commission reforms shift responsibility for drawing lines from the state legislature to a separate body impaneled solely for redistricting. This new body can be composed of either average citizens or politicians and can be appointed by politicians or selected through a largely independent process. Though many states had some kind of commission process already in 2011—often dating back decades—Arizona and California had the most fully independent approaches and were considered the vanguard of the reform movement at that time.

The Great Gerrymander prompted new commission reforms across the country, some more aggressive than others. Colorado and Michigan adopted commissions modeled closely on the California approach; these commissions drew their first lines in 2021. Missouri passed an initiative in 2018 that handed responsibility to an independent state demographer and placed strict constraints on the sort of plans that could be drawn, but then scrapped this process just two years later through a new initiative crafted by the legislature.[2] Several states also created commissions that were not truly independent. Three of them—New Mexico, New York, and Utah—set up processes that gave the state legislature final say in the maps that would be adopted.[3] Two others—Ohio and Virginia—left more openings for the courts should the commission fail to agree on maps or draw maps in potential violation of new constraints imposed by the commission law.

On the whole, state level action has created more possibilities for constraining gerrymanders than existed in 2011, often in some of the large states that have had the most problematic relationships with gerrymandering in the past. Together these changes should shape what we would expect to see in this cycle.

On the VRA side, *Shelby County* has necessarily meant greater latitude for some states because they are no longer required to submit plans for preclearance. However, many of the same states that would have gone through Section 5 preclearance before *Shelby County* have still faced Section 2 lawsuits, and most of these cases are still pending.[4] Decisions in Alabama and Florida have struck down maps on VRA grounds, but both are under appeal and the U.S. Supreme Court granted a stay on the Alabama decision while the litigation continues. As with the partisan gerrymandering lawsuits, delays might require using the contested maps in 2022—exactly the sort of lagging enforcement that Section 5 preclearance was originally designed to avoid.

Partisan Gerrymandering: The Role of Measurement

The efforts to combat partisan gerrymandering both in the federal courts and at the state level have leveraged recent scholarly efforts at better measurement. Since we will also rely on some of these metrics for our analysis, we briefly outline these developments here.

Early political science work on measuring partisan advantage relied heavily on the concept of "symmetry" or "bias" (Tufte 1973). Symmetry imagined a very basic notion of fairness: equal parties should be treated equally (Katz, King, and Rosenblatt 2020). The idea is easy to measure if both parties have half the votes, because in that case each should receive half the seats. Outside this special case, however, the metric requires imagining what would happen *if* the parties were equal (McGhee 2017). What would be the seat share if the minority party suddenly received 50 percent of the vote? Or the minority suddenly won a vote share just as large as the majority party currently enjoyed, would it receive the same share of seats, or face a headwind?

For decades, symmetry was the most common measure of partisan advantage in the political science literature, and the focus of several groundbreaking studies (Gelman and King 1994b; King and Browning 1987; Niemi and Deegan 1978). As recently as 2007 Grofman and King could credibly claim, "We are aware of no published disagreement or even clear misunderstanding in the scholarly community about partisan symmetry as a standard for partisan fairness in plurality-based American elections ... " (Grofman and King 2007).

But since then a number of other options have been placed on the table (McGhee 2020; Warrington 2019). McDonald, Best, and Krasno (2011) proposed a simpler measure—the difference between the mean and median district vote share—that produces results comparable to symmetry. Several metrics have also sought to eliminate the counterfactual required for both symmetry and the mean–median difference. McGhee (2014) and Stephanopoulos and McGhee (2015) proposed an "efficiency gap" calculated by taking the partisan difference in the number of "wasted" or "inefficient" votes not contributing to victory (for example, votes cast for losing candidates or in excess of the number needed for winning ones). There have also been variants of the efficiency gap (Barton 2018; Nagle 2015), and Warrington (2018) proposed a novel "declination" that uses the geometry of a plan's seat distribution to get at a similar concept.

Finally, "ensemble analysis" uses computers to generate a large number of comparison plans that ignore partisan outcomes. This approach started with Chen and Rodden (2013) but has been refined further by multiple contributors, many of them coming from mathematics or computer science (Chikina, Frieze, and Pegden 2017; DeFord, Duchin, and Solomon 2021; Fifield et al. 2020; Tam Cho, Liu, and Wang, n.d.). The approach helps identify the intent behind a plan: if a given plan's

outcome is an outlier relative to a large ensemble of maps that ignore partisanship, then it is likely that partisan outcomes were an important consideration when the plan was drawn.

These new metrics have been coupled with better data and more free online tools. For instance, the Dave's Redistricting App (2022), Districtr (2022), and DistrictBuilder (2022) websites offer tools for drawing districts and for measuring their properties. The Princeton Gerrymandering Project (2022) rates plans that have been drawn, and PlanScore (2022) specializes in calculating partisan advantage metrics for plans that users upload to the site (and serves as the basis for many of the metrics in this article). The Algorithm-Assisted Redistricting Methodology (ALARM) Project has released ensembles of simulated alternative congressional redistricting plans for nearly all fifty states (McCartan et al. 2022). Meanwhile, the Voting and Election Science Team is the first comprehensive source for the precinct boundary files required to do much of this work (Voting and Election Science Team 2020).

Together these new metrics and data allow analysis of more plans on more dimensions than in past redistricting cycles. While in this article we mostly use one metric in particular—the efficiency gap—the availability of so many ways to evaluate maps might potentially constrain partisan outcomes in this cycle more than before these developments.

2021–2022 Redistricting Cycle

In this section, we provide an initial evaluation of the 2021–2022 redistricting plans. Republicans control the redistricting process for state legislatures in twenty-four states and for Congress in twenty-one states. Democrats control the redistricting process in far fewer states—ten states for state legislatures and eight states for Congress. Table 1 shows the number of states in each category. The remainder of states have divided government or are controlled by commissions (see table 2 for details on all states). The growth in districting commissions is one of the most important reforms over the past decade. In fact, twelve states used commissions for their state legislative plans in 2021–2022 and ten states used commissions for their congressional plans.

After their initial plans were completed, a number of states had their maps challenged in state and federal courts. The congressional plan in Alabama was challenged under section 2 of the Voting Rights Act. Civil rights groups alleged that the map under-represented Black voters. These groups won a victory in a lower federal court, but this decision was stayed by the Supreme Court, and looks unlikely to be upheld. As a result, to our knowledge, no plan has yet been struck down this cycle under the Voting Rights Act. The Rucho decision also left federal courts unable to address partisan gerrymandering. The inability of the federal

Table 1 Control of the 2021–2022 redistricting process by type

Type	State Legislature	Congress
Backup Commission	1	1
Bipartisan or Nonpartisan Commission	12	10
Democrats	10	8
Republicans	24	21
Divided Gov.	3	4
Single seat		6

government to regulate redistricting this cycle has fueled a growing role for state courts.

State courts struck down gerrymandered maps in a number of states (see states with a star next to them in table 2). In North Carolina, the state Supreme Court struck down both congressional and state legislative maps as partisan gerrymanders. The state legislature then passed a new state legislative plan that satisfied the Supreme Court. The state's congressional plan was drawn by a court-appointed, nonpartisan special master. In New York, a nonpartisan Commission failed to agree on a congressional or state legislative plan. In the wake of this failure, the Democratic governor and state legislature drew their own congressional and legislative maps. These maps were challenged in court, and ultimately struck down as partisan gerrymanders. A state court then drew new plans. In Maryland, a state court struck down the state's congressional maps as a partisan gerrymander, and a new compromise plan was passed by the political branches. In Ohio, the state Supreme Court also struck down both congressional and state legislative maps as partisan gerrymanders. However, the Ohio constitution does not give the Court the power to enact its own maps. As a result, Ohio's process stalemated, and the maps struck down by the Court are likely to be used for at least the 2022 elections. The Kansas congressional plan was challenged as a partisan gerrymander, and litigants won in a lower court. But the state supreme court allowed the legislature's plan to stay in place.

In other states, the courts played a role due to divided government or failed Commission-based processes. In Pennsylvania and Wisconsin, the state legislatures were controlled by Republicans and the Governors were Democrats. As a result, the redistricting process stalemated in both states, and their state supreme courts played a key role in selecting the final plans.[5] In Virginia, the commission could not agree on congressional or state legislative plans. So the state supreme court enacted its own plans. A similar outcome happened in Connecticut.

Table 2 Control of the 2021–2022 redistricting process in each state. A * denotes plans enacted by Courts as-of May 22, 2022. A # indicates if the plan for a state has not been finalized yet as-of May 22, 2022

State	State Legislature	Congress
Alabama	Republicans	Republicans
Alaska	Republicans	Single seat
Arizona	Commission	Commission
Arkansas	Republicans	Republicans
California	Commission	Commission
Colorado	Commission	Commission
Connecticut	Backup Commission	Backup Commission*
Delaware	Democrats	Single seat
Florida	Republicans	Republicans
Georgia	Republicans	Republicans
Hawaii	Commission	Commission
Idaho	Commission	Commission
Illinois	Democrats	Democrats
Indiana	Republicans	Republicans
Iowa	Republicans	Republicans
Kansas	Republicans	Republicans
Kentucky	Republicans	Republicans
Louisiana	Republicans	Republicans
Maine	Divided Government	Divided Government
Maryland	Democrats	Democrats*
Massachusetts	Democrats	Democrats
Michigan	Commission	Commission
Minnesota	Divided Government	Divided Government
Mississippi	Republicans	Republicans
Missouri	Commission	Republicans
Montana	Commission#	Commission
Nebraska	Republicans	Republicans
Nevada	Democrats	Democrats
New Hampshire	Republicans#	Republicans#
New Jersey	Commission	Commission
New Mexico	Democrats	Democrats
New York	Democrats*	Democrats*
North Carolina	Republicans*	Republicans*
North Dakota	Republicans	Single seat
Ohio	Republicans	Republicans
Oklahoma	Republicans	Republicans
Oregon	Democrats	Democrats

(continued)

Table 2 Continued

State	State Legislature	Congress
Pennsylvania	Commission	Divided Government*
Rhode Island	Democrats	Democrats
South Carolina	Republicans	Republicans
South Dakota	Republicans	Single seat
Tennessee	Republicans	Republicans
Texas	Republicans	Republicans
Utah	Republicans	Republicans
Vermont	Democrats	Single seat
Virginia	Commission*	Commission*
Washington	Commission	Commission
West Virginia	Republicans	Republicans
Wisconsin	Divided Government	Divided Government*
Wyoming	Republicans	Single seat

It is also worth noting that there are likely to be mid-decade changes in several states. In Ohio, there is still a chance that ongoing litigation will lead to new maps for elections in 2024. Litigation is also ongoing challenging the congressional maps in several other states, including Florida, Texas, and Utah. On the other hand, changes in the composition of state supreme courts could lead to gerrymandered, legislative maps being re-established (or solidified) in both Ohio and North Carolina.

National Trends

How has the 2022 redistricting cycle affected the fairness of the U.S. House? We begin by showing national trends for Congress in various metrics of partisan bias based on estimates produced by the PlanScore website (figure 1).[6] The pro-Republican bias of the maps reached its maximum in the 2012 congressional elections in the wake of the "Great Gerrymander of 2012" (Wang 2013). In this election, Democrats narrowly won the national vote but Republicans claimed 54 percent (234) of the seats. PlanScore's estimates indicate Republicans would have won 56 percent of the seats in a tied national election.

The partisan bias in the congressional maps slowly declined over the rest of the decade, though they always had a large pro-Republican bias in the translation of votes to seats. By 2020, Democrats were able to retain a narrow House majority with 51.5 percent of the popular vote. PlanScore estimates indicate that in a tied national election, Republicans would have won about 53 percent of the seats (down from 56 percent in 2012).[7]
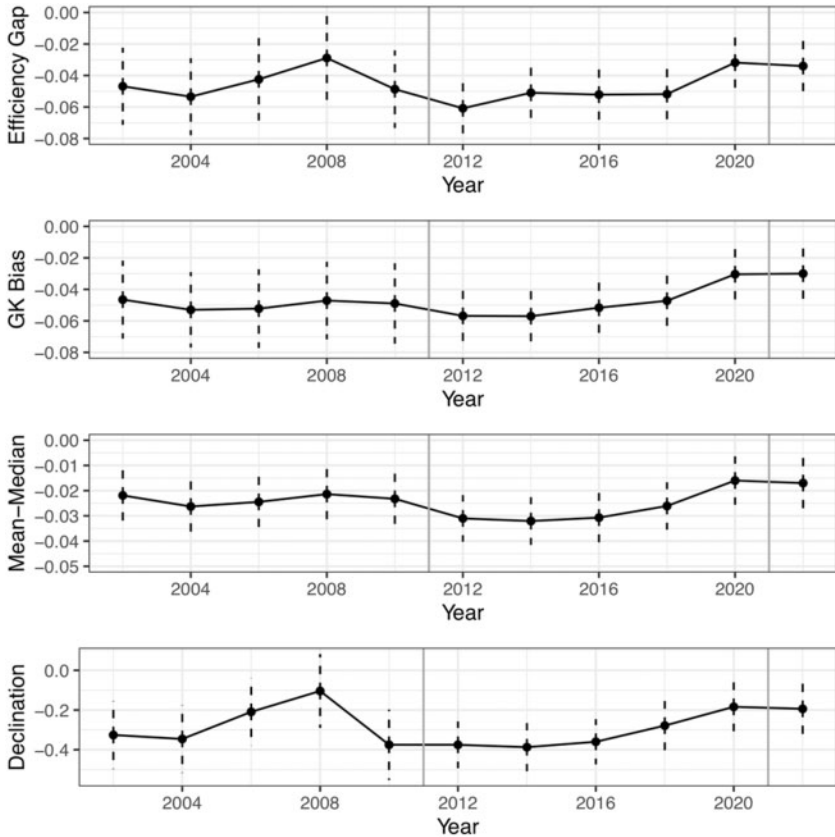
Figure 1 National Trends in Partisan Bias of Congressional Maps. This plot shows trends in bias based on PlanScore's model using the efficiency gap, Gelman-King bias, the mean-median difference, and declination. Vertical lines show the decennial redistricting periods.

The 2022 maps largely continue the status quo at the national level. While the new maps are more fair than the Great Gerrymander of 2012, they mostly perpetuate the existing Republican advantage along every metric. According to PlanScore's model, Republicans have an advantage of about 3.5 percent in the efficiency gap (compared to about a 6 percent pro-Republican efficiency gap in 2012 and a 3 percent pro-Republican efficiency gap in 2020), 2 percent in the mean-median difference, and 3 percent in symmetry on the new plans. In Congress, PlanScore's model indicates that Republicans would likely win about 53 percent of the seats (230 seats) in a tied national election.
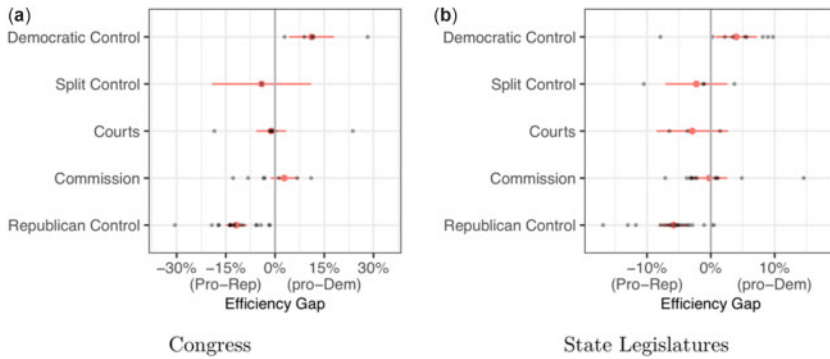
Figure 2 Partisan control and bias in Congressional and state legislative plans. The dots show individual states.

Effect of Partisan Control of the Redistricting Process

Beneath these national patterns, we might expect party control of the redistricting process to matter a great deal. Recent research has generally found a strong link (Caughey and Warshaw 2022; McGann et al. 2016; McGhee 2014; Stephanopoulos 2018), with party control producing several percentage points of extra seat share compared to neutrally drawn plans. With *Rucho* removing even the threat of federal court intervention, the link may be stronger still this cycle.

Figure 2 shows estimates of the association between partisan control of redistricting and the fairness of congressional and state legislative plans.[8] Not surprisingly, it shows that plans drawn by Democrats have a pro-Democratic efficiency gap, while plans drawn by Republicans have a pro-Republican efficiency gap. This suggests that Republicans' advantage in the translation of votes to seats in Congress largely reflects the fact that they controlled the redistricting process in more states than Democrats. Indeed, partisans generally draw plans that give their party an advantage in the translation of votes to seats. In contrast, plans drawn by divided governments, courts, and commissions tend to be much fairer than plans drawn by partisans. In each case, the average efficiency gap is indistinguishable from zero.[9]

However, a number of other factors could affect the efficiency gap of plans, including state-specific rules and political geography. To at least partially address such confounds, we benchmark each state's plans against the 2011 plans in use from 2012 to 2020 and nonpartisan simulations from the ALARM Project. (We only benchmark with the 2011 plans for state legislature since nonpartisan simulations of those plans are not available.)

Figure 3 shows the effect of partisan control of the redistricting process on two-party seat shares. The top-left panel shows that Democratic control of congressional redistricting increased expected Democratic seat shares by about 10
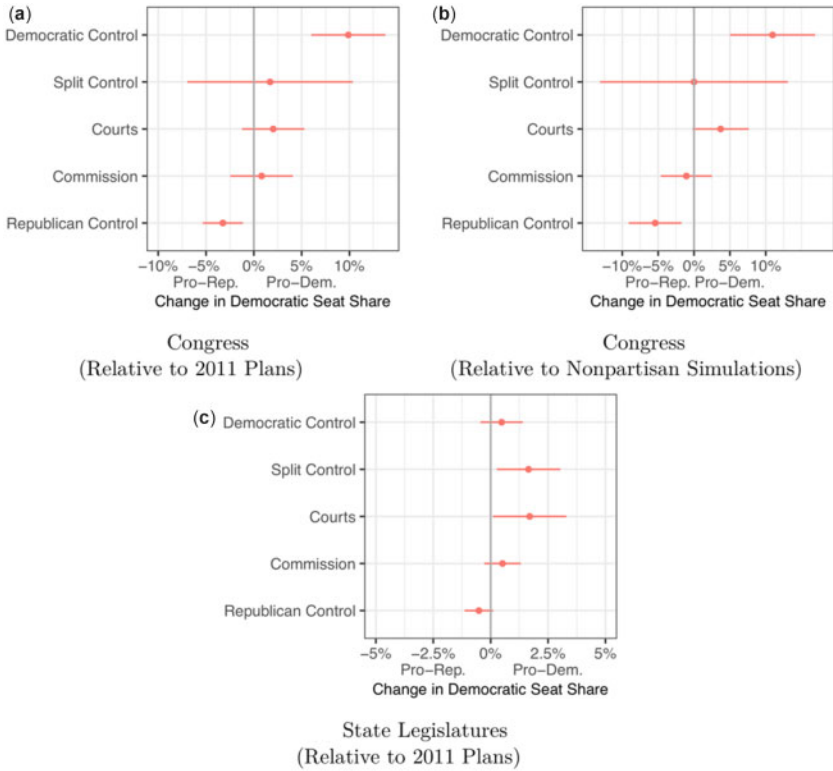
Figure 3 Effect of redistricting on seat shares in Congressional and state legislative plans.

percent relative to the 2011 plans, while Republican control decreased expected Democratic seat share by about 3 percent. The top-right panel of figure 3 shows that partisan control also had large effects relative to nonpartisan simulations. Democratic control increased expected Democratic seat shares by about 11 percent relative to the simulations, while Republican control decreased Democratic seat share by about 5 percent.

Partisan control had smaller effects on state legislative plans, at least relative to the plans from 2011 (see bottom panel of figure 3). When Democrats controlled the redistricting process, they increased their expected seat shares relative to the 2011 plans by about 1 percent, while Republicans decreased Democratic seat share by 0.5 percent when they controlled the process. These smaller apparent effects might reflect the larger typical number of total seats, which serves as the denominator in a seat share calculation. It could also suggest that incumbency protection matters more in state legislative plans than congressional ones. Protecting majority control is foundational for power in a state legislature; for
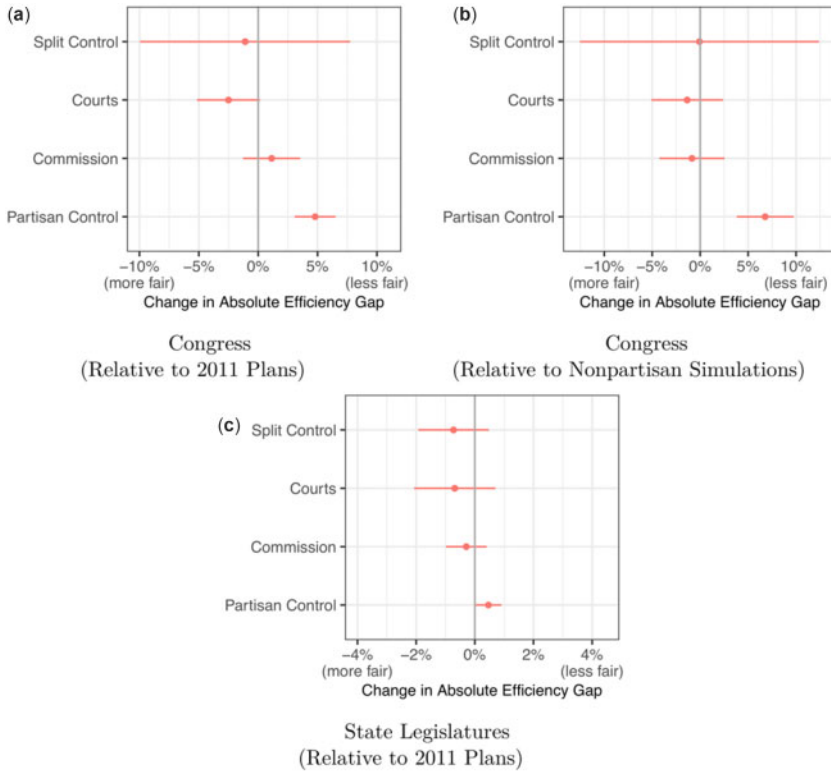
Figure 4 Effect of control on partisan fairness in Congressional and state legislative plans.

Congress the critical majority is national in scope, and even uncompetitive states can contribute extra seats to help a party cross that threshold.

There is an interesting asymmetry to these results—Democrats extracting more advantage than Republicans—that is precisely the opposite of the pattern from ten years ago. The plans from ten years ago were drawn at a high point of Republican state legislative control; therefore, more of the Democratic than Republican plans this time around represent a change in party control. Democrats also continue to struggle against some disadvantages in the geographic distribution of their party supporters (Chen and Rodden 2013), and that may lead them to favor plans that deviate more from the simulation baseline in an effort to make up for this gap.

Figure 4 shows how control of redistricting affects the fairness of the maps. We measure partisan fairness for this analysis based on the absolute value of the efficiency gap in each state. Across all three panels, we find that partisan control of the redistricting process leads to less fair maps. This is true whether the benchmark is the 2011 plans or nonpartisan simulations. The evidence is less clear for whether

courts or commissions improve partisan fairness, but they do not appear to degrade representation by making the maps less fair.

Competitiveness

Beyond partisan fairness, commission-style reforms have typically been sold as a way to promote competition. Yet research has found surprisingly little connection between redistricting and competitive races. Gelman and King (1994a) found a boost in competition from redistricting *per se*—regardless of party control—and Carson and Crespin (2004) concluded that courts and commissions did produce more competitive maps (even in the years before the advent of fully independent redistricting). But Abramowitz, Alexander, and Gunning (2006) argued against any link between competition and redistricting at all, and Henderson et al. (2018) found that commissions generally produced *less* competitive maps than a comparison set of plans drawn for the same state at the same time.

For the analyses that use the 2011 plans as the benchmark, we use PlanScore to estimate the percentage of the districts in each plan that have at least a 50 percent chance of flipping between the parties at some point during the ten-year life of the plan. This is roughly equivalent to districts where the two-party vote shares are between 45 percent and 55 percent.[10] For the analysis that uses nonpartisan simulations as a benchmark, we assume that a district is competitive when the normal vote is between 45 percent and 55 percent.

Figure 5 shows the effect of partisan control of the redistricting process on electoral competition. Across all three panels, we find that partisan control of the redistricting process is associated with less competitive maps.[11] Once again, this is true whether the benchmark is the 2011 plans or nonpartisan simulations. The evidence is less clear for whether courts or commissions increase the competitiveness of the maps. However, we find no evidence that any of these institutions decrease competition (Henderson, Hamel, and Goldzimer 2018).

Minority-Influence Districts

It is not as obvious that there would be a link between party control of redistricting and representation for racial and ethnic minorities, especially when the VRA has historically constrained the range of plans that might be legally drawn. When the VRA was first used assertively to draw minority opportunity districts in the 1990s, many argued that the practice hurt Democrats by packing loyally Democratic voters in a handful of districts, leaving the remaining districts to be narrowly won by Republicans (Canon 1999; Lublin 1997). More recent work using ensemble analysis has found little trade-off between partisan and minority representation, and if anything concludes that the act of drawing minority opportunity districts in the South *improves* Democratic performance (Chen and
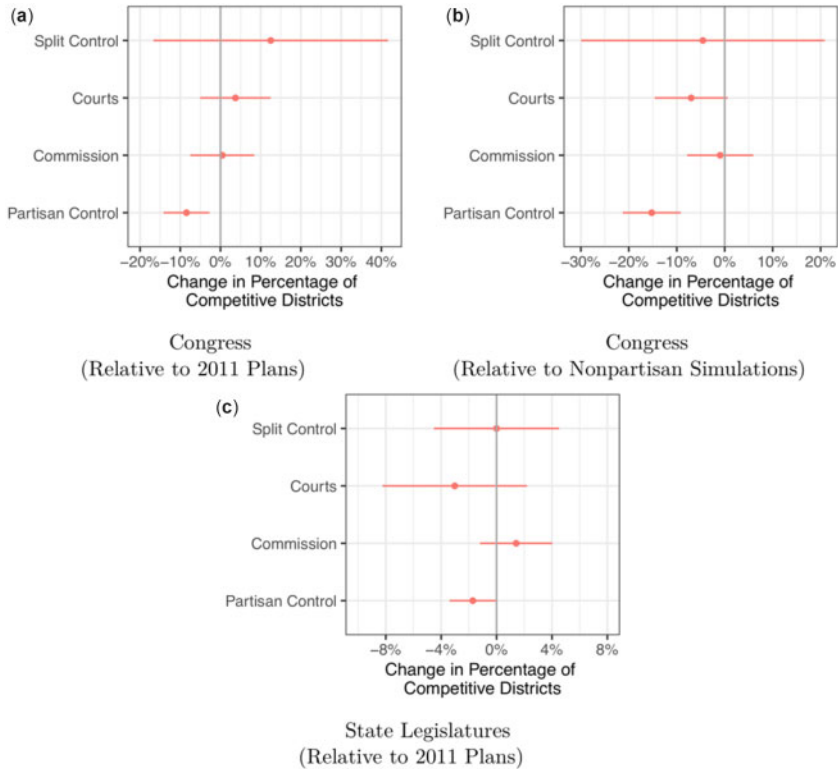
Figure 5 Effect of partisan control of redistricting process on electoral competitiveness in Congressional and state legislative plans in each state.

Stephanopolous 2021). Regardless, without Section 5 of the VRA the past approaches of commissions, courts, and partisan state legislatures may not predict their behavior this cycle.

We start by estimating the share of districts in each plan where Blacks and Hispanics constitute at least 40 percent of the citizen voting-age populations (CVAP) and compare this percentage with Blacks' and Hispanics' share of the statewide CVAP. Figure 6 shows this comparison for Blacks in states where Blacks constitute at least 10 percent of the population. The diagonal grey line indicates the percentage of Black influence seats we would expect if it matched Blacks' share of the statewide population.

The plot shows that there are fewer Black influence districts in most states than Blacks' overall share of the state citizen voting age populations. Nationwide, Blacks constitute 17.8 percent of the population in states that have at least three congressional seats and Blacks constitute at least 10 percent of the population, but they are more than 40 percent of the population in just 12.7 percent of the districts
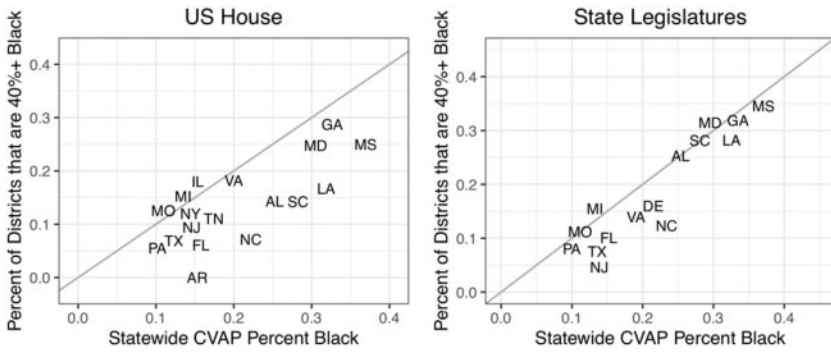
Figure 6 Relative representation of Blacks on state legislative and congressional plans. Congressional plans are only shown in states with at least 3 congressional seats.

(the disparity is similar in state legislative plans). Figure 6 also indicates that there are fewer Black influence districts relative to their share of the population in southern states, especially for Congressional plans.

Figure 7 shows the relative representation of Hispanics, again limiting to states where Hispanics are at least 10 percent of the population. These plots also show that there are fewer Hispanic influence districts in most states than Hispanics' overall share of the state citizen voting age populations. Nationwide, Hispanics constitute 22.7 percent of the population in states that have at least 3 congressional seats and Hispanics constitute at least 10 percent of the population, but they are more than 40 percent of the population in just 19.3 percent of the districts (the disparity is even larger in state legislative plans).

Figure 8 shows the effect of partisan control of the redistricting process on the number of minority-opportunity districts in each state (Keena et al. 2021). We find few consistent patterns across different analyses here. Relative to the 2011 congressional plans, commissions appear to increase the share of minority-opportunity districts, while courts and Democratic mapmakers have that effect when the benchmark is nonpartisan simulations (though the effect of Democratic control falls somewhat short of 95 percent statistical confidence). There is little evidence that control of the redistricting process has any effect on the percentage of minority-opportunity districts in state legislative plans.

Discussion

This article provides an overview of the new Congressional and state legislative districts that were drawn around the country during the 2021–2022 redistricting cycle. While the process is still playing out in a handful of states, there are a number of preliminary lessons of this decade's decennial redistricting process.
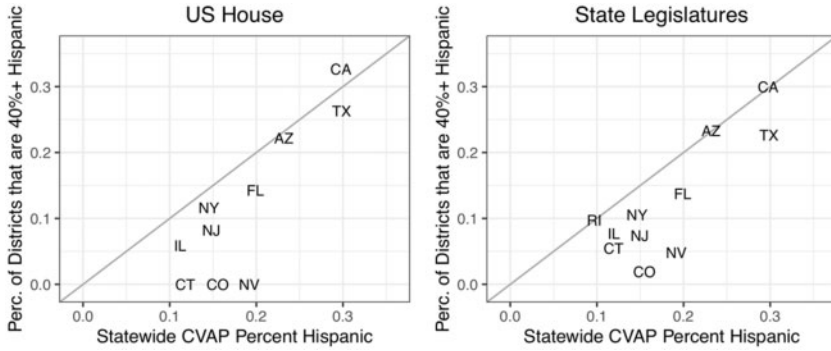
Figure 7 Relative representation of Hispanics on state legislative and congressional plans. Congressional plans are only shown in states with at least 3 congressional seats.
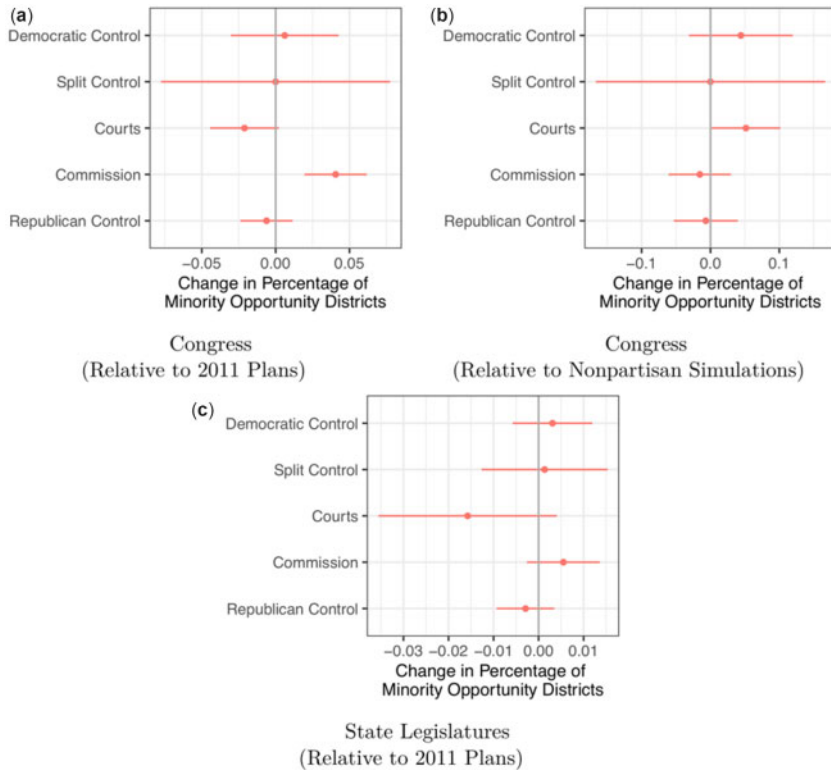

Figure 8 Effect of partisan control of redistricting process on minority-opportunity districts.

First, Republicans continue to have a national advantage in the translation of votes to seats in both Congress and state legislatures. In Congress, for instance, Republicans would likely win about 53 percent of the seats (230) in a tied national

election based on the plans passed so far. This is partly due to their geographic advantages (Chen and Rodden 2013) and partly due to the fact that Republicans control the redistricting process in more states than Democrats do (Caughey and Warshaw 2022). This leads to a substantial conservative skew in the political process in both state capitals and Washington, DC.

Second, both parties have continued to enact more and more extreme partisan gerrymanders when they control the redistricting process. But divided government and commissions reduced some of the Republican gains from the past redistricting cycle. As a result, the partisan balance of power did not change much at the national level during this cycle. In some Republican-controlled states, though, the number of competitive districts declined precipitously, as GOP officials attempted to lock-in their hold on power. This was particularly true in Texas, where nearly 40 percent of congressional districts were competitive in the old maps, but only about 10 percent of the districts are likely to be competitive in the recently enacted plans for the next decade. Thus, the partisan gerrymanders of this cycle and the past decade are likely to reverberate far into the future.

Third, a number of states have adopted nonpartisan commissions over the past decade. At least twelve states are using commissions for either their state legislative or congressional districts. These commissions generally produce less biased and more competitive plans than when one party controls the process. We do find that courts and split control achieve comparable ends, but a commission law helps ensure a consistent process from one redistricting cycle to the next. Though commissions are not always perfect, these results recommend the approach as something more states should consider for the next redistricting cycle. They can be an especially powerful reform when accompanied by explicit rules requiring them to draw fair maps that give everyone an equal voice in the political process.

Overall, the federal government's retreat from redistricting has led to a wider range of results. In terms of partisan fairness and competition, states that have adopted commissions or seen state court intervention have often ended up with notably better maps than ten years ago. But majority parties in states without these constraints have often pushed strongly in the opposite direction, extracting more advantage than they might have even considered ten years ago. In terms of minority representation, the loss of VRA Section 5 has been still more consequential. No Section 2 case has been successful so far this cycle, including on maps that likely would have raised Section 5 objections in the past.

These consequences of a diminished federal role are not surprising. Throughout American history, federal intervention has usually sought to bolster groups without power at the local level, and so ensure a minimum set of rights that the majority is not allowed to violate. Federal retreat does allow for a wider range of outcomes, but that range will often empower local majorities to assert dominance that was previously forbidden. This is no less true in redistricting, even though federal

intervention itself was sometimes ambiguous in the status quo ante. Though individual states may seek outcomes not too different from what a national standard might have achieved, the modal result will probably disadvantage weaker local groups until such time as a stronger federal role becomes conceivable again.

Notes

The authors would like to thank Devin Caughey, Nicholas Stephanopoulos, and Ruth Greenwood for many helpful conversations. McGhee worked as a consultant to the state Supreme Court's special master in North Carolina's redistricting process. In addition, Warshaw worked as an expert witness for civil rights groups challenging plans in Kansas, Michigan, and Ohio. He also provided a report to the Pennsylvania Legislative Reapportionment Commission on its state house plan. The underlying data for our analysis is at https://planscore.campaignlegal.org/2022-redistricting-review/ and will also be posted on the Harvard Dataverse upon publication of the article.

1. Writing for the majority, Chief Justice Roberts suggested that, "[p]rovisions in state statutes and state constitutions can provide standards and guidance for state courts to apply" 139 S. Ct. 2484, p. 31.
2. The legislature bundled this change with a series of other good government reforms.
3. New York state courts ended up playing a large role in the process anyway, as we discuss in greater detail below.
4. According to the nonpartisan website, All About Redistricting, https://redistricting.lls.edu/, at the time of this writing there are lawsuits with VRA claims in Alabama, Arkansas, Florida, Georgia, Louisiana, North Carolina, and Texas.
5. The Wisconsin supreme court selected the final plans for Wisconsin's congressional map and its state legislature, but the state legislative plan it ultimately selected was the one submitted by the state legislature. So it largely perpetuated the status quo. In Pennsylvania, the state supreme court selected its final congressional plan.
6. Most of our analysis is conducted with the PlanScore website mentioned above. PlanScore accepts redistricting shapefiles and partitions census and presidential elections data into those districts. The census data are aggregated to compute citizen voting-age population by race. The aggregated presidential elections data are used in tandem with a model run on historical data to predict the partisan outcome for each seat, which in turn is used to compute a range of partisan metrics. Details of PlanScore's modeling can be found here: https://planscore.campaignlegal.org/models/data/2021F/. We uploaded all current and newly enacted plans to PlanScore to generate the comparisons below. Because PlanScore uses the same data and model for any given state, comparisons between maps for the same chamber within a state are only a function of the districts themselves.
7. Note that PlanScore's estimates do not take into account the incumbency advantage, which likely helped Democrats retain their majority in 2020.
8. The graph is based on a regression of the association between the efficiency gap in each state and control of its redistricting process. We only include states with at least three congressional districts.

9. We obtain similar results using other metrics, including the declination and mean-median difference.

10. To calculate this number, PlanScore uses a seat's probability of a Democratic victory in any given election to estimate the chance that the seat will be won by the same party in all elections under the plan. If p is the probability of a Democratic win and n is the number of elections, then $(1-p)^n$ is the probability of flipping at least once for $p >= 0.5$, and $1 - (1 - p)^n$ is the same for $p < 0.5$. This assumes independent probabilities across elections, a reasonable approximation that may overstate the true probability somewhat by ignoring incumbency effects.

11. In Figure 5a, however, this result is largely driven by the Texas congressional map, where a partisan plan passed by Republicans dramatically cut the number of competitive districts.

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