

INSIGHT

Prison Gerrymandering Distorts Representation

A Study of 11 States

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Prison gerrymandering — the practice of counting incarcerated people at their detention facilities rather than their homes during redistricting — distorts political representation, inflating the clout of active voters living in districts with prisons at the expense of the communities from which incarcerated people come.¹ This report assesses the level of distortion in state lower-house maps due to prison gerrymandering and illustrates how power could shift if all people were instead counted at their homes.

Prison gerrymandering is an artifact of the U.S. Census Bureau's practice of counting all people incarcerated on Census Day at their detention facility; this count is used to create district plans that remain in place for 10 years, even if a person is being held only temporarily. There are legitimate reasons for tracking where people are incarcerated, but whether political power ought to be assigned to those numbers is a separate matter. Most people in state prisons serve short sentences, return home upon release, and while confined receive constituent services from their home representatives, highlighting the importance of counting incarcerated people at their homes for purposes of equitable representation.²

To analyze the potential distortion of prison gerrymandering, this study considers thousands of redistricting simulations across 11 states, comparing results using traditional

At a Glance

- >> The practice of counting incarcerated people at their prisons rather than their homes deprives urban communities of color of representation.
- >> Across the 11 states in this study, an additional 14 Black-majority districts could be created by reallocating incarcerated populations back to their homes.
- >> The U.S. Census Bureau should collect relevant data so that all states can count incarcerated people at their last known address.

census data with the results when incarcerated people are reallocated to their homes. It finds that counting prison populations in their home districts has the potential to result in a cumulative 14 additional Black-majority districts across 8 of the 11 states in the study, with an increase of 6 Black-majority districts in Georgia alone.³ Some states could also see additional Latino-majority districts, although that outcome is less certain. Because these data account only for state prisons — not local jails or federal prisons — the estimates are necessarily conservative.

Prisons are disproportionately located in white and rural areas, despite incarcerated people overwhelmingly coming from urban communities of color, which endure the highest levels of policing.⁴ These communities lose the most political voice to communities with prisons. We know that rural districts lean conservative and urban areas lean liberal, so when urban areas pick up people from incarcerated populations being reallocated back to their homes, we expect that to be reflected in the candidates who are elected. To that end, we assess the effect on Democratic districts (recognizing that the impact would be converse for Republican districts).⁵ This change in population does not necessarily translate to additional Democratic seats, however; instead the simulations create urban districts that have more concentrated Democratic populations.

Thirteen states ended prison gerrymandering for state legislative districts for the 2020 redistricting cycle, and three more are poised to do so in time for the 2030 cycle.⁶

Counting people where they are imprisoned instead of at their homes reinforces a perception that prison is their rightful location. Undoing prison gerrymandering in the remaining states is a crucial step toward ensuring equitable political representation.

Historical and Legal Context

In a process known as decennial redistricting, states are required to redraw their electoral boundaries every 10 years, following the census, to account for population changes and ensure equal representation.⁷ Gerrymandering occurs when district boundaries are manipulated during the redistricting process to manufacture electoral outcomes.⁸

Prison gerrymandering derives from the Census Bureau's "usual residence" rule, established in 1790 with the first decennial census, which counts people where they live and sleep most of the time.⁹ This rule means that all people who are incarcerated on the day the census is taken are counted at their place of incarceration for the next 10 years, even if they will be released well before then.¹⁰

The Supreme Court, however, has recognized that the usual residence rule does not always promote fair representation. In *Franklin v. Massachusetts* (1992), the Supreme Court considered where military personnel deployed abroad ought to be counted for the purposes of apportionment. The Court determined that overseas federal employees' "allegiance or enduring tie[s]," not their physical presence, should be the guiding principle, allowing them to be counted at their domestic home of record.¹¹

There are good reasons to extend this principle to people in prison. While foreign service officers, for example, typically spend 20 years of their 30-year careers abroad, incarcerated people serve on average less than

three years.¹² They do not typically have any ties to the area where they are imprisoned other than the state's decision to place them there, and the vast majority of incarcerated people return to their home communities when released.¹³

The case law on prison gerrymandering is scant and inconclusive. *Calvin v. Jefferson County Board of Commissioners* (2016) challenged the Jefferson County (Florida) board of commissioners' redistricting plan, in which the incarcerated population made up almost 40 percent of the total population of one district. A federal district court ruled that this plan violated the one person, one vote doctrine, which requires districts to have substantially equal populations. Specifically, it found that the election districts did not promote representational equality because the incarcerated population lacked any "representational nexus" to the district's representative.¹⁴

Davidson v. City of Cranston, R.I. (2016) concerned city council districts in which a prison population made up approximately 25 percent of one ward. A federal district court rejected this plan and ordered the city to create one that excluded the incarcerated population. However, the U.S. Court of Appeals for the First Circuit reversed this decision, leaving in place the gerrymandered district.¹⁵

The day-to-day work of representation reinforces the case for counting incarcerated people at their homes. Elected representatives of prison districts often do not view incarcerated people as their constituents and tend not to be receptive to their needs and interests.¹⁶ In one study, Indiana state legislators were asked who they would "feel was more truly a part of [their] constituency," a person incarcerated in their district but with no other ties to it, or an incarcerated person from their district who is held elsewhere. All 40 respondents, regardless of political affiliation, chose the latter.¹⁷ It is most often the representatives from home communities who provide any constituent services that incarcerated people receive.¹⁸

Mass Incarceration

The pervasiveness of prison gerrymandering is due to the magnitude of mass incarceration. The exponential increase in incarceration started in the 1970s, surged in the 1980s, and continued through the 1990s, driven by the war on drugs and "tough on crime" policies, which resulted in the disproportionate incarceration of Black populations.¹⁹ From 1974 to 2019, the number of state prisons increased from fewer than 600 to almost 1,000.²⁰

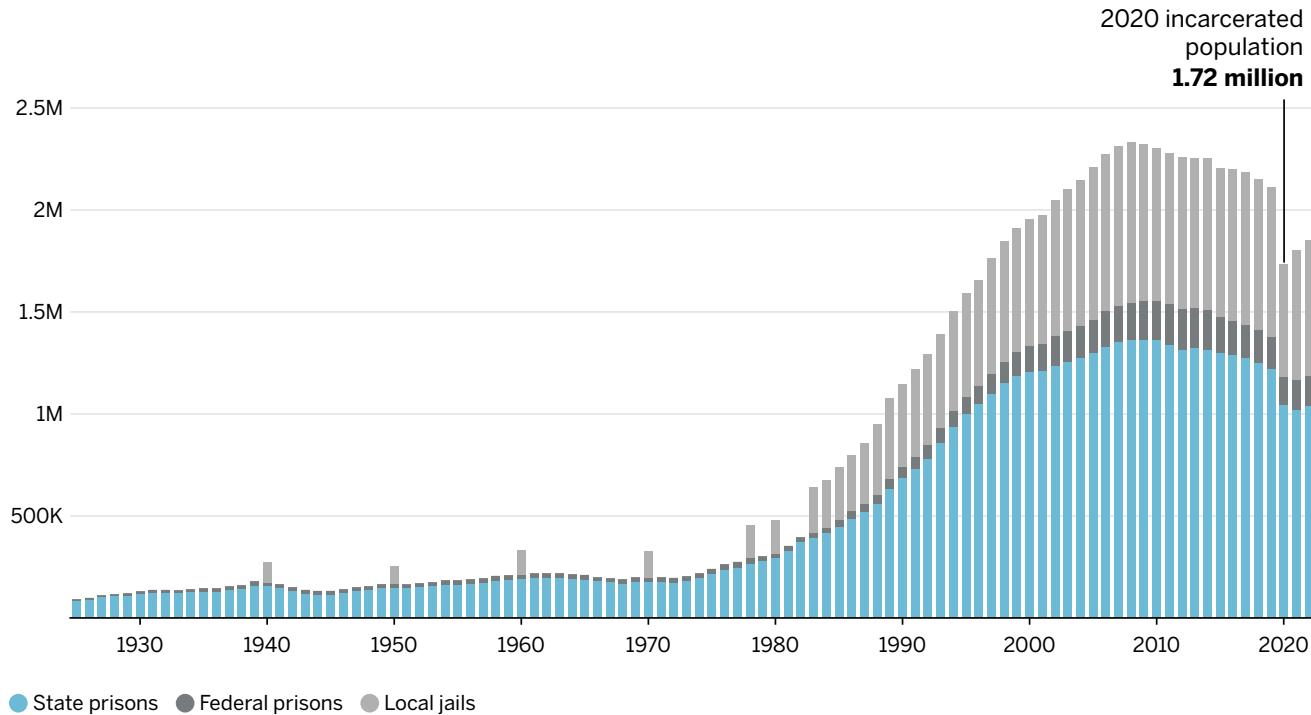
In 2020 nearly 1.1 million people were incarcerated in state prisons in the United States; an additional 150,000 were in federal prisons and 550,000 were in local jails (figure 1). The prison population alone was larger than the population of eight states and Washington, DC.²¹

Almost two-thirds of people held in state prisons are located at least 100 miles from their homes.²² For those in federal prisons, that number is 500 miles.²³ The vast majority (78 percent) of arrests happen in metropolitan

FIGURE 1

Incarceration Counts, 1925–2022

Total population on a single day



● State prisons ● Federal prisons ● Local jails

Note: Local jail populations are not available for all years.

Source: Prison Policy Initiative.

areas.²⁴ Yet more than 70 percent of prisons built since the 1970s have been in rural towns.²⁵ This mass movement of people distorts representation as it pulls individuals from urban areas — especially people of color — and places them in predominantly white, rural locales.²⁶

Given that levels of incarceration surged in the mid-1980s, prison gerrymandering has meaningfully distorted representation for four redistricting cycles: 1990, 2000, 2010, and 2020.²⁷ The 2010 and 2020 cycles were the first for which widely available technology made it possible for the public to access and analyze data to measure the scope and implications of prison gerrymandering.

The Current State of Prison Gerrymandering

Prison gerrymandering is especially pernicious given that in 48 states, people in prison are not permitted to vote.²⁸ Where they can vote — the District of Columbia, Maine, Puerto Rico, and Vermont — they are required to vote

absentee from their last known residential address, despite being counted in the prison district for the purposes of redistricting.²⁹ Incarceration does not change a person's registered voting address in any state, underscoring that they are constituents not of their prison district, but rather of their home districts.³⁰

Nineteen states have taken some action to end prison gerrymandering. Sixteen states have rules in place to reallocate incarcerated individuals to their home location for the purposes of state legislative redistricting; thirteen of them have enacted legislation to that effect, and three more did so in the 2020 cycle by resolution of their redistricting commission. Ten of these states also reallocate incarcerated populations for congressional districts.³¹ Two more do so for certain local districts. (Massachusetts's approach is more complicated.)³²

Maryland and New York were the first states to take action, implementing legislation to undo prison gerrymandering for the 2010 redistricting cycle.³³ California, Colorado, Connecticut, Delaware, Nevada, New Jersey, Virginia, and Washington followed suit, passing legislation for the 2020 redistricting cycle.³⁴ Pennsylvania, Rhode Island, and

Montana did not pass any legislation; rather, their redistricting commissions stopped prison gerrymandering in 2020 of their own volition.³⁵ Following this commission initiative, Montana enacted legislation that will be in effect for the 2030 redistricting cycle.³⁶ Illinois, Maine, and Minnesota have enacted similar legislation for 2030.³⁷

States employ different methods for adjusting data for incarcerated populations during redistricting. People from within the state are counted at their last known address when held in state facilities, but those in federal facilities, depending on the state, may be counted at their last known address, excluded from population counts, or counted at their facility.³⁸ People from outside the state are either excluded from the population entirely, counted at the facility, or counted as residents of the state at large for population counts. Some states count people serving life sentences without the possibility of parole as residents of their detention facilities.³⁹

Simply removing the incarcerated population from prison districts is insufficient as it does not account for the loss of political power in their home communities, especially in those with high rates of incarceration.⁴⁰ This analysis looks at the difference that reallocation to home communities can make with respect to representation. It is one of the first to look into the distortion of districts due to prison gerrymandering using simulations and estimated reallocated population data. This approach goes beyond the normative argument against prison gerrymandering to demonstrate its tangible harms to representation.

Data and Methodology

To assess the racial and partisan effects of prison gerrymandering on the electorate, I investigated how the population of state lower house districts would shift were state prison populations reallocated to be counted in their home communities. I examined how current maps would change and how districts' demographics might shift if districts were drawn using reallocated prison population data instead of traditional census counts.

There is limited data on precisely where incarcerated people come from across the country. As a proxy, Kramer, Wilson, and Remster produced "2020 Counterfactual Prisoner Adjusted Redistricting Data," which is hosted on the Redistricting Data Hub.⁴¹ This work reallocates incarcerated populations of state prisons back to the estimated census block of their pre-incarceration home based on block-level race for the sentencing county; so, if a block has, for example, 1 percent of the sentencing county's Black population, then it will receive 1 percent of the sentencing county's Black population from state prisons.⁴² These estimates are the closest publicly available data on where incarcerated populations come from.⁴³ The data set also includes traditional census counts.

To estimate precinct partisanship, I aggregated the two-party vote share of 2016, 2018, and 2020 state-level election results by precinct from the Voting and Election Science Team.⁴⁴ Averages across a multitude of races and years show how people tend to vote by precinct.⁴⁵

While prison gerrymandering impacts all districts regardless of size, there are likely to be larger effects in districts with smaller populations, since the incarcerated population can make up a larger percentage of the total. I therefore focused on lower-house districts, as any shifts in the electorate will likely be more pronounced there than in state senate or congressional districts.

This study covers 11 states: Arizona, Arkansas, Georgia, Illinois, Louisiana, Mississippi, New Mexico, North Carolina, Ohio, Texas, and West Virginia. Of the 34 states that do not already reallocate incarcerated populations for lower-house districts, 32 had counterfactual data available. From this subset of states, I focused on those with high rates of incarceration and particularly high racial disparities in the prison populations relative to the general population; large populations of color; or gerrymandered lower-house districts.⁴⁶ While there is no guarantee that these states are representative, they can provide insight into prison gerrymandering's distorting effects.

There is a growing body of literature on using algorithms to analyze redistricting plans and to assess questions of race and gerrymandering as a means to compare how typical a plan is among a set of possible ways to divide a state.⁴⁷ Most recently, redistricting simulations were used in arguments before the U.S. Supreme Court regarding racial gerrymandering in *Alexander v. South Carolina State Conference of the NAACP*.⁴⁸ I used these analytical approaches to investigate prison gerrymandering and its effects on the partisan and racial composition of districts.

Using the Algorithm-Assisted Redistricting Methodology (ALARM) Project, I ran redistricting sequential Monte Carlo (SMC) simulations for lower-house districts across the selected 11 states using 2020 precincts as the building blocks.⁴⁹ I ran 5,000 district plan simulations twice for each state, once with census data and again using counterfactual adjusted data, to generate two sets of possible plans with the different population bases.⁵⁰ Finally, once I had the full sets of simulated district plans, I filtered each set to unique simulations so that no duplicated plans skewed the data.⁵¹ The appendix contains a more detailed discussion on the comparison of the simulations with the currently enacted districts.

I used precincts instead of census blocks as the base geography for three reasons: (1) Historical voting data to determine partisanship is available at the precinct level, so this avoids the need to interpolate the data to other geographies, creating rough estimates. (2) Running simulations at the block level is computationally intensive.⁵² (3) Precincts are the geographic unit for administering

elections, determining a voter's polling place and ballot, and are grouped to create legislative districts.⁵³

After presenting results across the 11 states, this paper looks more closely at Georgia and Ohio. These states have some of the highest incarceration rates in the country.⁵⁴ Georgia also has a large Black population, so its results demonstrate the racial effects of prison gerrymandering on a larger scale.⁵⁵ Ohio has historically gerrymandered its legislature, so its results illuminate the partisan effects of prison gerrymandering.⁵⁶

Results

The empirical evidence here confirms our theoretical knowledge: Prison gerrymandering distorts the electorate and representation, although the magnitude of the distortion varies depending on geography, race, and incarceration rates.

To maintain "substantially" equal populations, state legislative districts are typically allowed to deviate up to 5 percent from the ideal district size; the largest district should be no more than 10 percent larger than the smallest.⁵⁷ Of the 11 states in this study, 9 currently have one or

more districts that would fall outside this range were prison populations to be reallocated (table 1); they would therefore need to be redrawn to rebalance populations. Texas had the most districts (23) and West Virginia the highest percentage of districts (19 percent) outside of legal deviation. The two states that did not have any districts fall outside this requirement, Georgia and Illinois, originally had particularly small population deviations (2.9 and 0.5 percent, respectively). These results do not account for federal prisons or local jails, which if included would likely cause even larger shifts in population across the states.

When prison populations are reallocated to their home communities, the counties that lose the most population tend to be in rural areas, whereas counties that contain major cities gain population. In Georgia, almost all the counties that lose population due to their prison populations being reallocated are in the southern half of the state, outside any large metro areas. Meanwhile, many of the state's largest cities — Atlanta, Albany, and Augusta — gain population (figure 2). This finding is hardly surprising given the discrepant geography of mass incarceration in the state. For instance, in 2023 Johnson State Prison housed 4.5 percent of the state's prison population despite only 0.1 percent of that population coming from surrounding John-

TABLE 1

State House District Population Deviations with Census and Reallocated Data

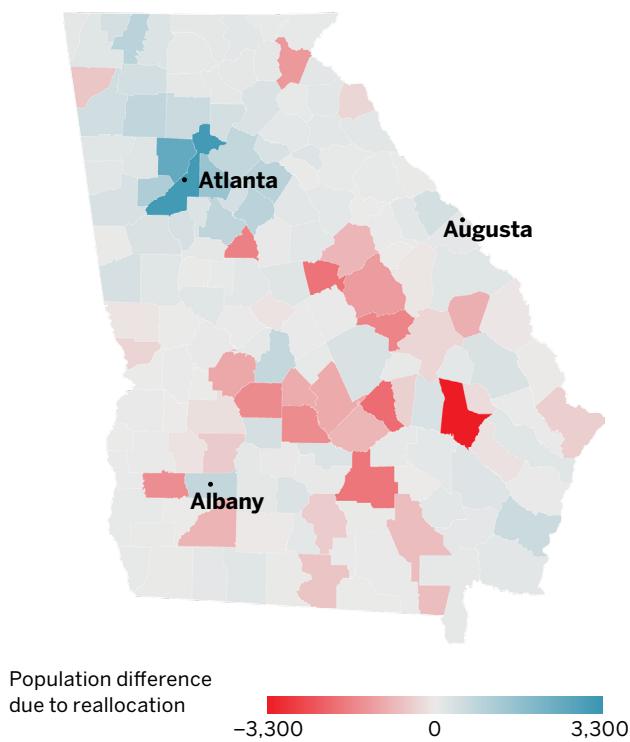
STATE	TOTAL DISTRICTS	DISTRICTS OUTSIDE +/-5% DEVIATION – REALLOCATED DATA	PERCENTAGE OF DISTRICTS OUTSIDE +/-5% DEVIATION – REALLOCATED DATA	POPULATION RANGE – CENSUS DATA	POPULATION RANGE – REALLOCATED DATA	INCREASE IN RANGE
Arizona*	30	1	3%	9%	10%	9%
Arkansas	100	4	4%	7%	16%	138%
Georgia	180	0	0%	3%	7%	145%
Illinois	118	0	0%	0%	4%	803%
Louisiana	105	9	9%	10%	13%	29%
Mississippi	122	13	11%	10%	18%	82%
New Mexico	70	10	14%	10%	12%	18%
North Carolina	120	8	7%	10%	11%	11%
Ohio	99	17	17%	10%	17%	67%
Texas	150	23	15%	10%	13%	33%
West Virginia	100	19	19%	10%	14%	45%

Note: Range is calculated as the difference in population between the largest district and the smallest district divided by the ideal district population.

*Arizona's legislative districts elect two house members each.

FIGURE 2

Georgia County Population Changes Due to Reallocation



son County, one of the state's smallest by population.⁵⁸ Similarly, in Ohio the counties that lose the most population due to reallocation are in the less populated parts of the state, while Cleveland, Columbus, and Cincinnati gain the most population (figure 3).

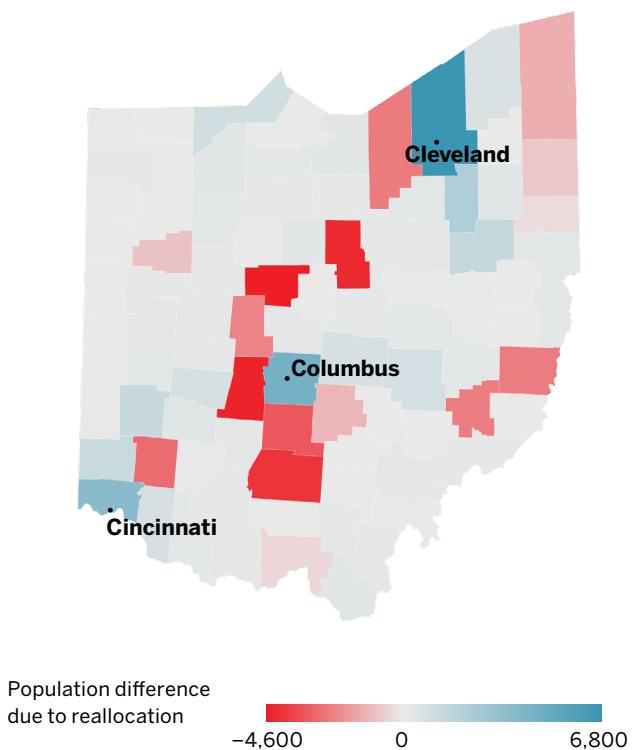
Racial Bias in Prison Gerrymandering

Black-Majority Districts

As seen in figure 4, prison gerrymandering distorts the racial composition of districts. Among the 11 states, 8 have a large and compact enough Black population to form Black-majority districts.⁵⁹ Of these, all but Texas see an increase in Black-majority districts when incarcerated people are properly reallocated to their homes. Taken together, these eight states in total see an average increase of 14 Black-majority lower-house districts across the simulations. Most states see an average increase of one to two Black-majority districts; Georgia sees an average increase of almost six.

FIGURE 3

Ohio County Population Changes Due to Reallocation



The additional Black-majority districts in Georgia appear in the areas surrounding Augusta and Albany; in some cases in the metro Atlanta area; and across the Black Belt — a region throughout the South that cuts across central Georgia with a historical and current Black-majority population. Ohio, which has a less drastic but still substantively large increase in Black-majority districts, sees one to two additional districts primarily in the Columbus area. No simulation with traditional census data draws a Black-majority district within the city, whereas reallocated plans draw up to two Black-majority districts there.

Latino-Majority Districts

The difference in Latino-majority districts is less clear-cut. Of the eight states in the study with counterfactual data available for Latino populations, only five (Arkansas, Arizona, Illinois, New Mexico, and Texas) have a large and compact enough Latino population to form Latino-majority districts in either their currently enacted plans or the simulations. With reallocation, these five states see a cumulative average increase of about one Latino-majority district relative to simulations using traditional census data. Texas, with two additional Latino-majority

FIGURE 4

Average Number of Black-Majority Districts in Simulations

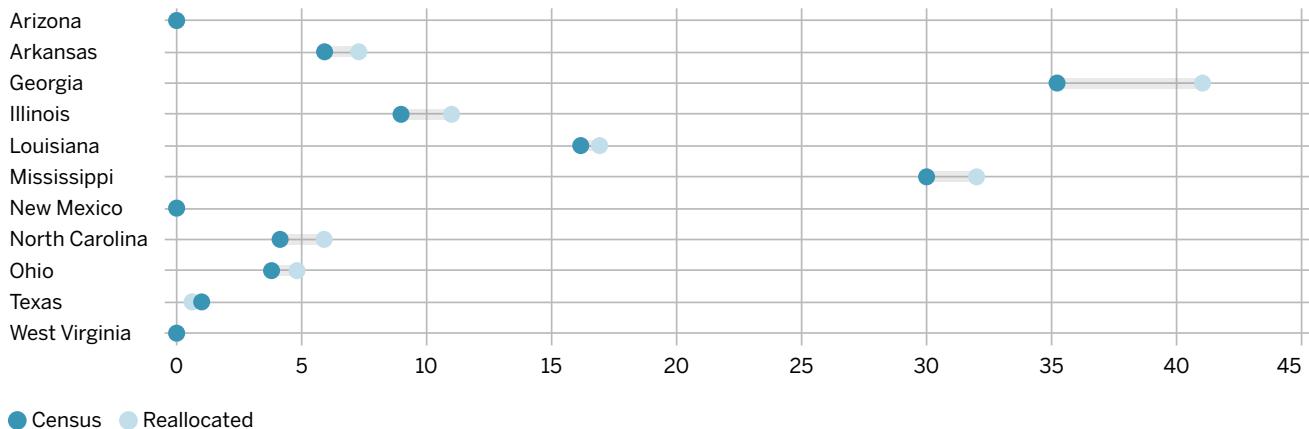
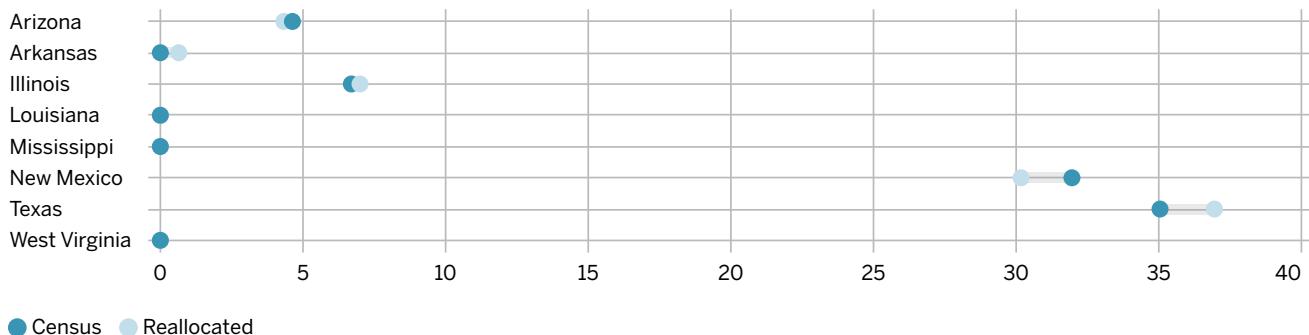


FIGURE 5

Average Number of Latino-Majority Districts in Simulations



districts, has the largest increase; Arkansas and Illinois see minor increases in Latino-majority districts when using reallocated data. Arizona has a minor decrease of 0.3 and New Mexico a decrease of 1.8 districts (figure 5).

One reason for the less distinctive change in Latino-majority districts than in Black-majority ones has to do with the population distribution in the simulations with reallocated data. Figures 6 and 7 show the percentage of the population that is Latino in each district in each simulation for both census and reallocated data. Each black dot represents one district, while the red lines show the Latino population in the enacted plan using the respective population base.

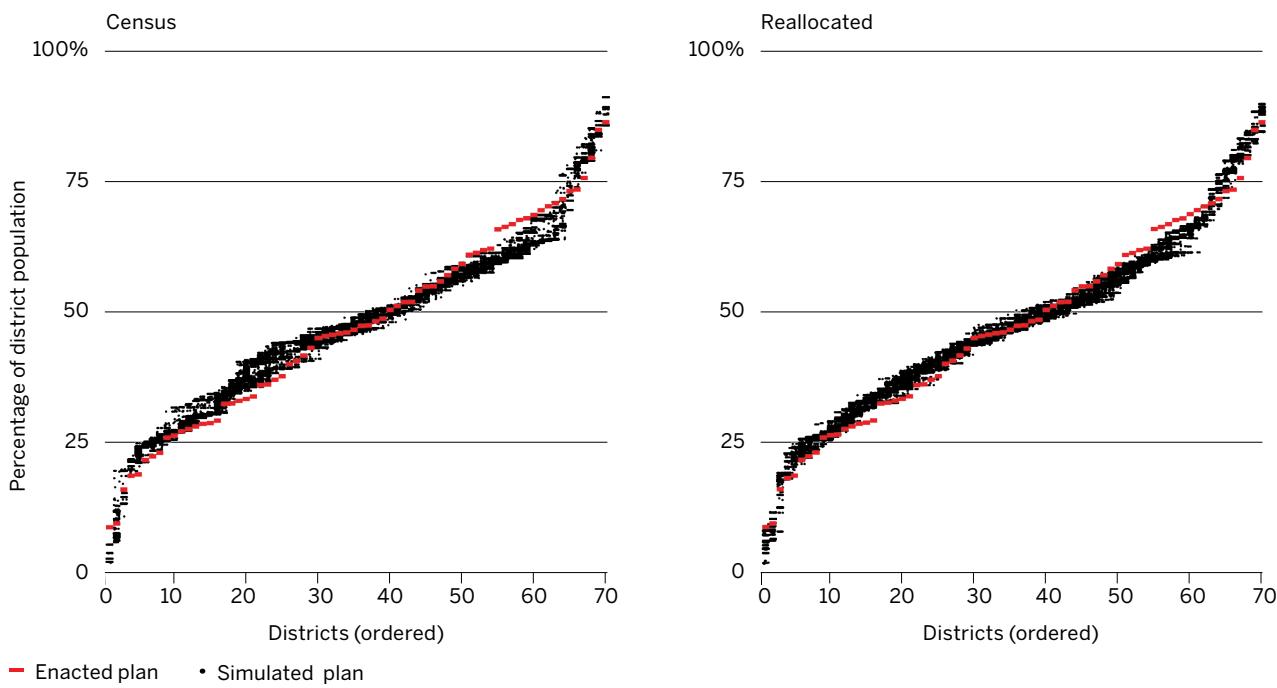
Simulations in Arizona using traditional census data create more Latino-majority districts than those using reallocated data. Under reallocation, Latinos get spread across more districts. While there are fewer Latino-

majority districts, there are more opportunity districts—that is, those in which Latinos comprise 40–50 percent of the population (figure 6). In New Mexico, by contrast, under reallocation Latinos are largely added to areas that already have a substantial Latino population. Rather than being spread into additional Latino-majority districts, the population is condensed into a few packed districts in which Latinos make up upwards of 66 percent of the population (figure 7). In both cases, redistricting using a reallocated population base could yield more Latino-majority districts than using a traditional census population base, depending on how the map drawer takes these new population distributions into account.

There is also more variability in the outcome of reallocation for Latino-majority districts because Latino populations have lower rates of incarceration than Black populations in every state. Almost half of all states see

FIGURE 6

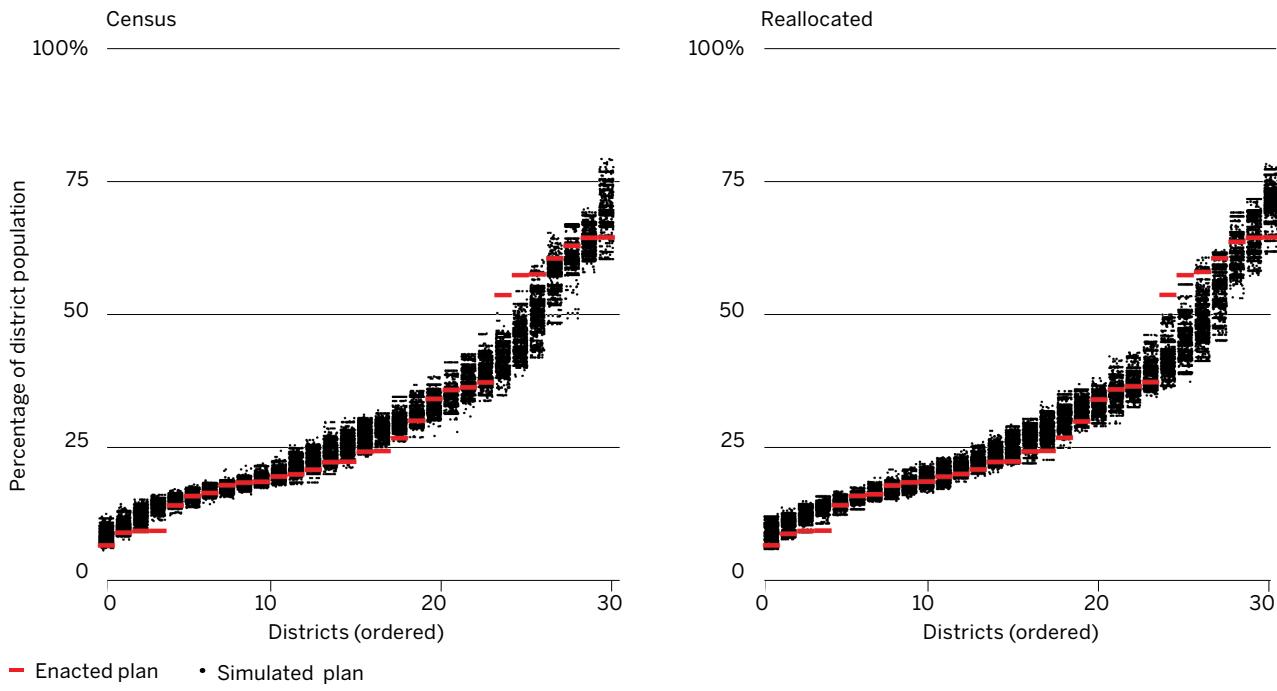
Arizona's Latino Population in Simulations Compared with Enacted Districts



Note: The districts are ordered according to Latino population percentage. Each dot represents the Latino population of a district in one simulation.

FIGURE 7

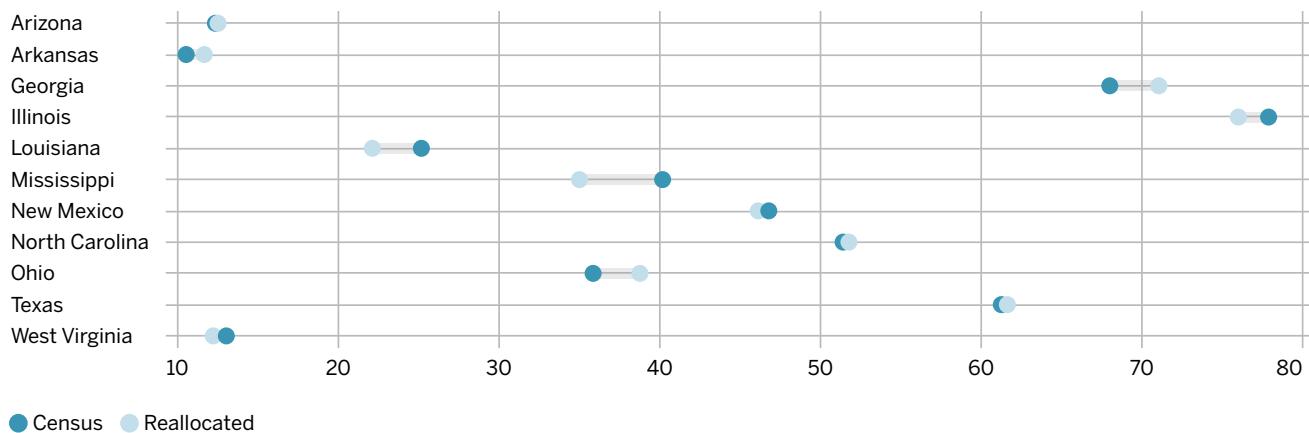
New Mexico's Latino Population in Simulations Compared with Enacted Districts



Note: The districts are ordered according to Latino population percentage. Each dot represents the Latino population of a district in one simulation.

FIGURE 8

Average Number of Democratic-Majority Districts in Simulations



white people incarcerated at higher rates than Latino people.⁶⁰ Therefore, adjustments for Latino populations due to reallocation are not likely to be as large as those for Black populations.

Partisan Effects of Prison Gerrymandering

Surprisingly, reallocating prison populations would not definitively advantage one party over the other. The average increase in Democratic districts across all 11 states is 0.2 when using reallocated data as compared with traditional census data, with a median increase of 0 (figure 8). Five of the states see a change of less than one district, meaning the change in partisan composition due to reallocation would be minimal. Results would likely vary more in actuality, however, since these results look at the averages from the plans, but map drawers do not always choose the average plan and may be guided by other considerations. Additionally, when partisanship is

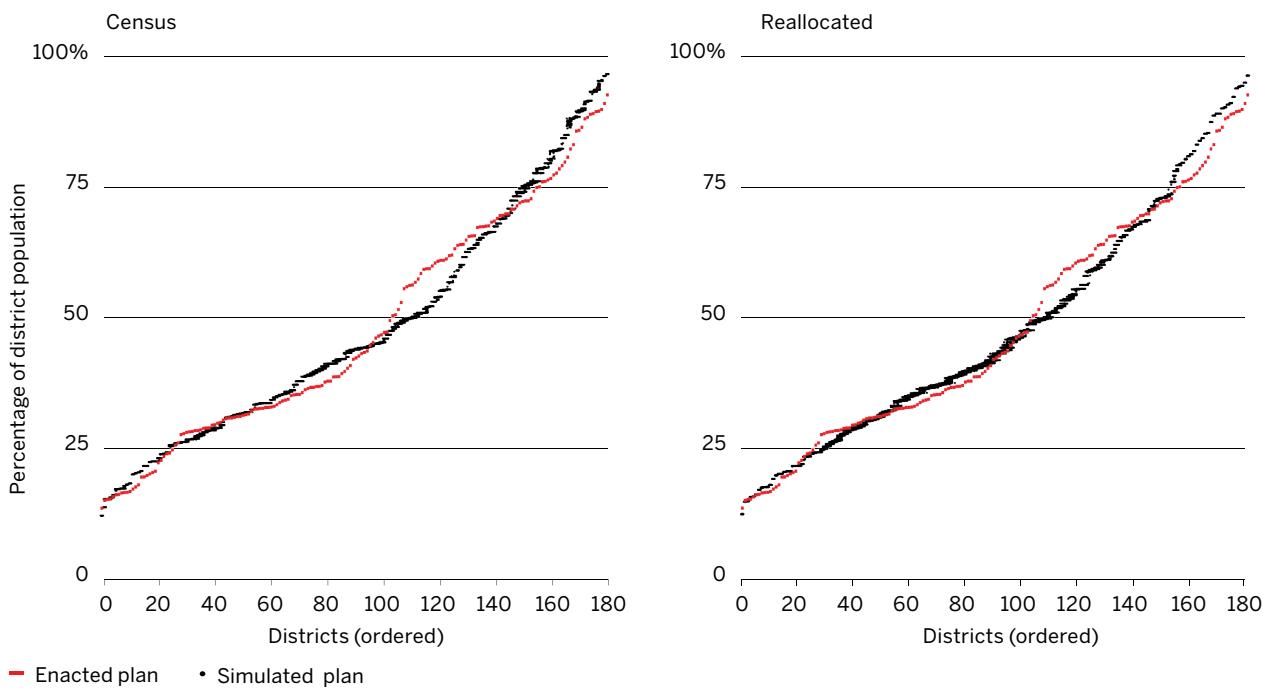
correlated with geography and population density, algorithms that code for compact and contiguous districts will be biased against the political party of urban areas. This phenomenon is due to the relatively homogeneous political preferences seen in urban districts, which lean Democratic, compared with rural or suburban areas, which are more spread out and Republican-leaning.⁶¹

As with Black- and Latino-majority districts, part of this outcome may be because there would be more packed and more opportunity districts. This pattern plays out in Georgia, where the 35 or so most Democratic districts become even more so in the simulations, and there are more opportunity districts as well. Because the Democratic population is more densely packed in some districts and more diffuse in others, there are fewer Democratic gains overall (figure 9). In contrast, Ohio's simulations more closely mirror the enacted plan's partisan distribution (figure 10), producing districts where the Democratic population is more diffuse.

Due to the density of Democratic voters in urban areas, there is likely to be a greater increase in Democratic districts when maps are actually drawn.

FIGURE 9

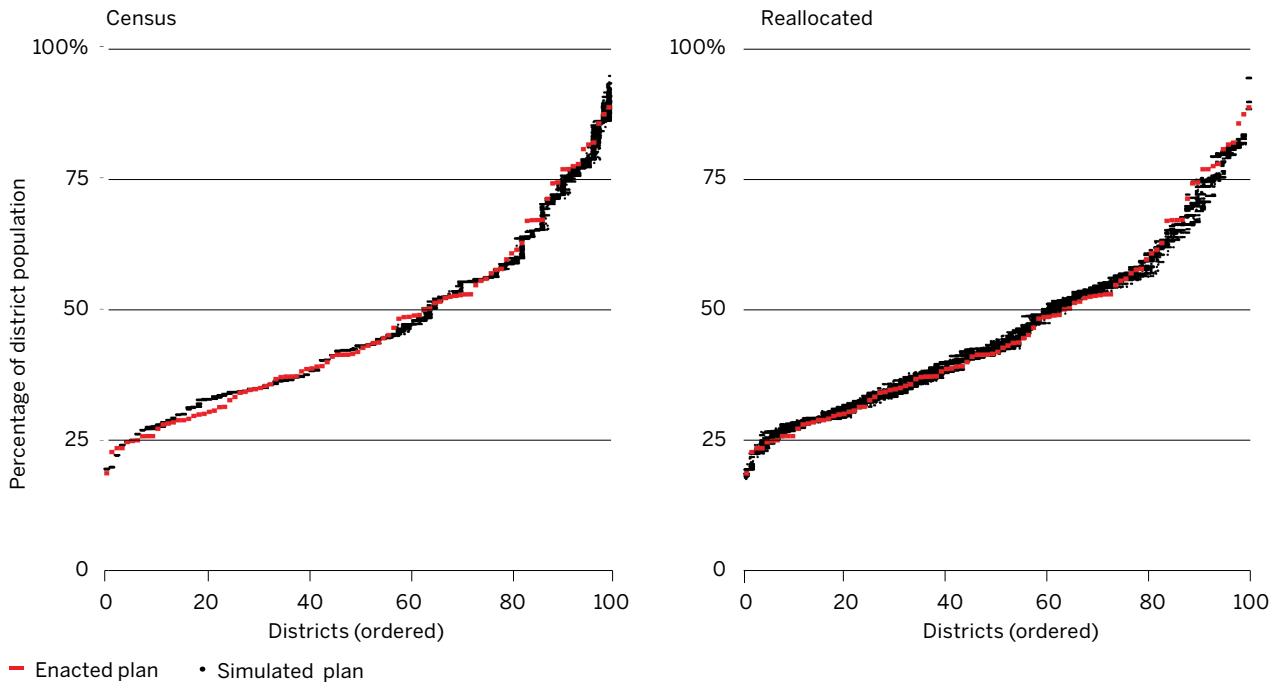
Georgia's Democratic Population in Simulations Compared with Enacted Districts



Note: The districts are ordered according to Democratic population percentage. Each dot represents the Democratic population of a district in one simulation.

FIGURE 10

Ohio's Democratic Population in Simulations Compared with Enacted Districts



Note: The districts are ordered according to Democratic population percentage. Each dot represents the Democratic population of a district in one simulation.

Conclusion

Undoing prison gerrymandering is important for racial equality in the electoral system. Relocating incarcerated populations to their home communities is a necessary step toward achieving more, and more representative, districts for communities of color. The simulations here only show possibilities, however; there is no guarantee that new maps would be drawn with these new majority-nonwhite districts.

Given that the data available accounts only for state prisons and reallocates these prison populations only within their sentencing counties, the estimates here are conservative. Should the Census Bureau count all incarcerated people — those in jails, state prisons, and federal prisons — at their homes, a much larger population would be reallocated. More accurate data on the home addresses of incarcerated people for the purposes of redistricting is crucial to ensuring proper racial representation within the electoral system.

Relocating incarcerated people to their homes is important for recognition of their humanity. Counting people at their detention facility formalizes prison as their home and deprives their communities of opportunities for political power, compounding the United States' legacy of disempowerment, oppression, and disenfranchisement of communities of color.

Political considerations should not be a barrier to reform, since these simulations show no definitive partisan bias with reallocating prison populations. Furthermore, federal funds are allocated on the basis of complex formulas that take into account many factors, not just a dollar amount per person, so ending prison gerrymandering will have little to no effect on the federal funding that districts housing incarcerated people receive.⁶² Building on previous recommendations from the Brennan Center, this study underscores that the Census Bureau should provide accurate adjusted data and that the states and Congress should ensure that all people are accurately accounted for.⁶³

Endnotes

1 Prison Gerrymandering Project, "The Problem," Prison Policy Initiative, accessed April 4, 2025, <https://www.prisonersofthecensus.org/impact.html>.

2 Danielle Kaeble, "Time Served in State Prison, 2018," Bureau of Justice Statistics, March 2021, <https://bjs.ojp.gov/document/tssp18.pdf>; Aleks Kajstura, "Most Incarcerated People Will Return Home; the Census Bureau Should Count Them There," Prison Policy Initiative, May 14, 2024, <https://www.prisonersofthecensus.org/news/2024/05/14/home-addresses/>; and Garrett Fisher, Taylor King, and Gabriella Limón, "Prison Gerrymandering Undermines Our Democracy," Brennan Center for Justice, October 22, 2021, <https://www.brennancenter.org/our-work/research-reports/prison-gerrymandering-undermines-our-democracy>.

3 Section 2 of the Voting Rights Act requires the establishment of certain criteria, including meeting *Gingles* preconditions and taking into account the "totality of circumstances," to mandate such a majority racial district. This study is not determining whether the districts discussed here meet these requirements, but illustrating the scope of what is lost due to prison gerrymandering. The term *majority district* in this study only refers to a district whose population contains more than 50 percent of the studied demographic. See Paige L. Whitaker, "Redistricting: A Circuit Court Split over Whether the Voting Rights Act Permits Vote Dilution Claims by Multiple Minority Groups," Library of Congress, April 30, 2025, <https://www.congress.gov/crs-product/LSB11297>.

4 Prison Gerrymandering Project, "The Problem"; Fisher, King, and Limón, "Prison Gerrymandering Undermines Our Democracy"; and Michelle Alexander, *The New Jim Crow: Mass Incarceration in the Age of Colorblindness* (The New Press: 2012).

5 Dale Ho, "Captive Constituents: Prison-Based Gerrymandering and the Current Redistricting Cycle," *Stanford Law & Policy Review* 22, no. 2 (2011): 355–94, <https://law.stanford.edu/wp-content/uploads/2018/03/ho.pdf>.

6 Prison Gerrymandering Project, "Quick-Reference Chart: State Reforms Ending Prison Gerrymandering," Prison Policy Initiative, updated July 3, 2024, <https://www.prisonersofthecensus.org/models/chart.html>.

7 Redistricting Data Hub, "Redistricting Basics," accessed July 14, 2025, <https://redistrictingdatahub.org/resources/redistricting-basics/>. *Gray v. Sanders* (1963), *Reynolds v. Sims* (1964), and *Wesberry v. Sanders* (1964) instituted the "one person, one vote" principle that districts must have substantially equal populations. *Gray v. Sanders*, 372 U.S. 368 (1963); *Reynolds v. Sims*, 377 U.S. 533 (1964); and *Wesberry v. Sanders*, 376 U.S. 1 (1964).

8 See Julia Kirschenbaum and Michael Li, "Gerrymandering Explained," Brennan Center for Justice, updated June 9, 2023, <https://www.brennancenter.org/our-work/research-reports/gerrymandering-explained>.

9 Lindsay Holcomb, "Prison-Based Gerrymandering and the Systemic Dilution of Minority Political Voice," *Princeton University Journal of Public and International Affairs* (2017): 78–100, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3825191.

10 U.S. Census Bureau, "2020 Census National Redistricting Data Summary File," U.S. Department of Commerce, February 2021, https://www2.census.gov/programs-surveys/decennial/2020/technical-documentation/complete-tech-docs/summary-file/2020Census_PL94_171Redistricting_NationalTechDoc.pdf.

11 *Franklin v. Massachusetts*, 505 U.S. 788 (1992); and Ho, "Captive Constituents."

12 Ho, "Captive Constituents," 373; and Kaeble, "Time Served in State Prison, 2018."

13 Ho, "Captive Constituents."

14 *Calvin v. Jefferson County Board of Commissioners*, 172 F. Supp.3d 1292 (N.D. Fla. 2016); and Julie A. Ebenstein, "The Geography of Mass Incarceration: Prison Gerrymandering and the Dilution of Prisoners' Political Representation," *Fordham Urban Law Journal* 45, no. 2 (February 2018): 323–72.

15 See *Davidson v. City of Cranston*, R.I., 188 F. Supp.3d 146 (Dist. Ct. of R.I. 2016); *Davidson v. City of Cranston*, R.I., 837 F.3d 135 (U.S. Court of Appeals for the First Circuit 2016); and *Evenwel v. Abbott*, 578 US __ (2016).

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31 California, Colorado, Maine, Maryland, Minnesota, Montana, Nevada, New Jersey, Virginia, and Washington use adjusted population for congressional districts. Delaware uses adjusted population for state legislative districts but contains only one congressional district and is therefore not included in the congressional district count.

32 Massachusetts is included in the count of states that have taken action, although it does not reallocate incarcerated populations to their home addresses. The redistricting committee takes the detention facility populations into account so that the districts fall within population requirements even without counting the detention facility populations. Michigan and Tennessee only have legislation addressing certain local government districts. Michigan's legislation addresses county and city/town districts, and Tennessee's addresses county districts. In addition, more than 200 local governments (counties, cities, towns) avoided prison gerrymandering for the 2020 redistricting cycle through various methods such as removing the prison population entirely, distributing prison population evenly among districts, or overpopulating prison districts to offset the prison population. Prison Gerrymandering Project, "Quick-Reference Chart"; and Prison Gerrymandering Project, "Local Governments That Avoid Prison-Based Gerrymandering," Prison Policy Initiative, updated August 19, 2024, <https://www.prisonersofthecensus.org/local/>.

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50 While running these simulations, I did not code for individual state requirements beyond population constraints. These plans are not meant to constitute all legally viable maps, but rather to represent the realm of possibilities during the redistricting cycle. While not representative of maps that exclusively meet all legal requirements, this method allows us to see possible racial and partisan variation among hundreds of simulated district plans to get an idea of the range of possibilities. I kept variables for compactness, population tempering, and adjustment of weights during resampling at their default settings. I set the population tolerance to $+/-5$ percent, the standard population deviation constraint for state house districts. Jason Douglas Todd, Curtis Bram, and Arvind Krishnamurthy, "Do At-Large Elections Reduce Black Representation? A New Baseline for County Legislatures," *Electoral Studies* 88 (2024): 102750, <https://doi.org/10.1016/j.electstud.2024.102750>; and Ariel White, Helen Webley-Brown, and Zachary Markovich, "'Prison Gerrymandering': How Much Do Prison Population Counts Matter for Redistricting Outcomes?," MIT Political Science Department Research Paper no. 2024-6, March 24, 2024, <https://ssrn.com/abstract=4783018>.

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producing similar ranges for the studied demographics, may have more variation in Georgia than in other states in this study.

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ACKNOWLEDGMENTS

The Brennan Center extends deep gratitude to all our supporters, who make this report and all our work possible. See them at brennancenter.org/supporters.

The author is grateful to her colleagues Peter Miller and Kevin Morris for their support and guidance on this project. She is also grateful to Coryn Grange, Jinmook Kang, Jia Zhang, Kareem Crayton, Ben Nyblade, Zachary Laub, Elise Marton, Alden Wallace, and Anna Christian for their contributions.

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