Exhibit 3

IN THE CIRCUIT COURT OF THE SECOND JUDICIAL CIRCUIT IN AND FOR LEON COUNTY, FLORIDA

COMMON CAUSE; LEAGUE OF WOMEN VOTERS OF FLORIDA, INC.; and **LEAGUE OF UNITED LATIN AMERICAN CITIZENS,**

Plaintiffs,

CASE NO: **2026 CA 00928**

vs.

RON DESANTIS, Florida Governor; **CORD BYRD**, Florida Secretary of State; **JAMES UTHMEIER**, Florida Attorney General; **DANIEL PEREZ**, Speaker of the Florida House; **BEN ALBRITTON**, President of the Florida Senate; **MIKE REDONDO**, Chair of the Florida House Select Committee on Congressional Redistricting; **KATHLEEN PASSIDOMO**, Florida Senate Committee on Rules Chair; **DON GAETZ**, Florida Senator; **JENNA PERSONS-MULICKA**, Florida Representative; the **FLORIDA HOUSE**; and the **FLORIDA SENATE**,

Defendants.

____/

DECLARATION OF DR. MOON DUCHIN

Report on Florida Congressional Redistricting

Moon Duchin

May 10, 2026

1 Background, qualifications, and materials consulted

I am a Professor of Data Science and Computer Science at the University of Chicago. I hold a Ph.D. from UChicago and an A.B. from Harvard University. I have provided reports and/or testimony in numerous redistricting matters.

My general research areas are discrete geometry and the applications of mathematics and computing to the study of democratic systems. My research has had major grant support from the National Science Foundation, including a CAREER grant from 2013–2018 and a Convergence Accelerator grant from 2019–2021 entitled "Network Science of Census Data." I was elected a Fellow of the American Mathematical Society in 2017 and was named both a Radcliffe Fellow and a Guggenheim Fellow in 2018. Case citations and further professional details are available on the CV that is included with this report.

Materials

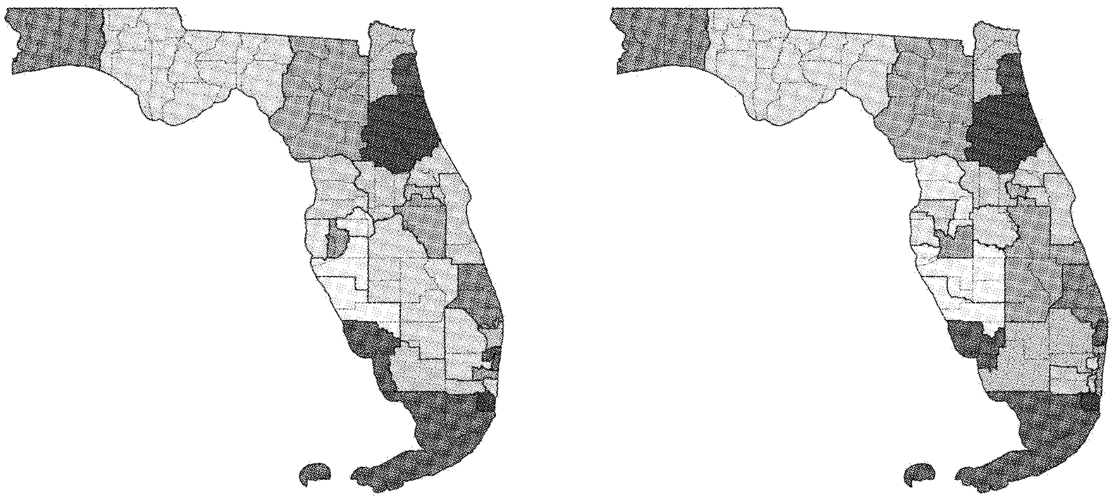
I consulted a range of materials while preparing this report.

- Data published by the U.S. Census Bureau, especially the PL 94-171 Redistricting Data, the American Community Survey ("ACS"), and the Census Places dataset.
- Incumbent addresses, demographics, and election results provided by counsel, with block equivalency files defining district boundaries in `Cong2022` and `Cong2026`.
- The Florida Constitution (Article III, Section 20) was consulted for redistricting standards. I also reviewed the Memorandum on Congressional Map Submission from Governor DeSantis ("DeSantis Memo"), dated April 27, 2026.

2 Summary

This report compares the 2022 Congressional plan (`Cong2022`) and the newly enacted 2026 Congressional plan (`Cong2026`). I first compare them by means of maps and metrics that capture the traditional districting principles. I then compare the partisan properties of `Cong2022` and `Cong2026` to those from a large collection of maps that have been randomly generated by an algorithmic process made with no use whatsoever of data regarding the race, ethnicity, or partisan preference of Florida residents. This *ensemble* of alternative plans is made with population balance, contiguity, and compactness as the primary considerations; the integrity of counties and municipalities (i.e., respect for political boundaries) has also been incorporated as a priority. I test both an ensemble with moderately strong compactness scores and a variant that is tuned to have extremely high preference for Polsby-Popper compactness, while maintaining the other priorities.

Figure 1: Congressional districts in the 2022 and 2026 Congressional plans.



`Cong2022` `Cong2026`

Main findings

- **Population balance got worse under growth estimates.** While the DeSantis Memo cites a goal of taking population growth into account, `Cong2026` has *greater* population discrepancy than `Cong2022` based on the most recent estimates. (§3.1)
- **Less compact; more splits.** The new plan is less compact than the one it replaces by all three of a set of common scores. (Table 1) The new plan splits more counties than the old, and splits nearly twice as many cities. (Table 3)
- **Extreme partisan skew.** The previous plan already showed indications of a significant Republican-favoring gerrymander in most of the common scores of partisan advantage; the newly enacted plan is far more extreme. (Table 4 and Figures 2,3)
- **Disrupted districts have a partisan pattern.** Across districts with Republican incumbents, over 82% of voters are preserved in their districts. But for those with Democratic incumbents, the retention is about 41%. The heavily disrupted districts include four that are likely to flip to Republicans under recent electoral patterns. (Table 5)
- **Ten million alternative plans never reproduce this partisan skew.** Compared to a large ensemble of alternative plans made without election data, `Cong2022` was already past the 98th percentile of partisanship. The new plan has a Republican advantage well beyond what was *ever* observed in ten million trials.
- **Compactness does not account for the difference.** Dialing up the emphasis on compactness has little effect on the partisan statistics, and indeed produces a set of plans slightly *less* favorable to Republicans. This means that `Cong2026` is a bigger partisan outlier among highly compact plans.

In sum, I find that `Cong2026` shows unmistakable signs of extreme partisan gerrymandering, using every available test and metric.

3 Traditional districting principles

The "Tier 1" standards for Congressional redistricting in the Florida Constitution hold that

> No apportionment plan or individual district shall be drawn with the intent to favor or disfavor a political party or an incumbent; and districts shall not be drawn with the intent or result of denying or abridging the equal opportunity of racial or language minorities to participate in the political process or to diminish their ability to elect representatives of their choice; and districts shall consist of contiguous territory.[1]

The "Tier 2" standards then hold that "districts shall be as nearly equal in population as is practicable; districts shall be compact; and districts shall, where feasible, utilize existing political and geographical boundaries." The standards thus align well with traditional districting principles ("TDPs") that are universally in play for American redistricting—population balance, contiguity, compactness, and respect for political boundaries (chiefly county and municipal boundaries).

Other TDPs that are frequently cited in other states' guidelines include least change (creating a map that reassigns the fewest people) and respect for COIs or "communities of interest." I will address least change below in §5.1, but omit discussion of COIs since they are not listed in the constitutional guidelines.

Finally, while some consider partisan motivations and/or incumbent favoritism to be legitimate redistricting principles, I will not treat them as such since they are expressly barred in Florida's constitution. A discussion of minority opportunity-to-elect is also deferred to a possible future report.

3.1 Population balance

Both `Cong2022` and `Cong2026` are contiguous (made up of connected territory) and have *de minimis* population deviation according to the total population in the 2020 Decennial Census. Deviation is conventionally measured by a **top-to-bottom** difference, calculated as the difference between the largest and smallest district. Here, both plans have either 769,220 or 769,221 people in each district, meaning 1-person deviation.

However, I also noted the following passage in the DeSantis Memo of April 2026:

> In addition, since the 2020 census, Florida's population has continued to grow at a breakneck pace, adding almost 2 million more residents as of July 1, 2025—an 8.9% increase. The most population growth appears to have occurred in the outlying areas surrounding Tampa and Orlando and north of Palm Beach County up the eastern coast. While still based on 2020 census data, the proposed map nevertheless attempts to account for these dramatic population changes by reconfiguring districts around the areas of high growth.

The footnote refers specifically to the increase in total population in Florida in U.S. Census Bureau estimates. This passage strongly suggests that the balancing of growing population was a goal in the redistricting—certainly it would not be reasonable to account for growth by reconfiguring in growth areas but making the balance worse. Yet this is exactly what the redraw accomplishes.

To measure this effect, I compared the population estimates in Florida between the 2018-2022 ACS (the five-year interval centered on 2020, so most in line with the official census count) and the 2020-2024 ACS (the most recent estimates available). I have

[1] See `www.flsenate.gov/laws/constitution#A3S20`.

used ACS rather than the Census PEP (Population Estimate Program) or Florida's EDR (Office of Economic and Demographic Research) data because the PEP and EDR datasets are restricted to counties and municipalities, so do not permit for estimates on entire Congressional districts.

Cong2022 had a 32,923-person top-to-bottom deviation according to estimates in the 2018-2022 ACS. The discrepancy rose to a 65,435-person level according to 2020-2024 ACS numbers—some increase in imbalance is typical as populations shift. But the 2026 Plan makes these disparities worse, not better, using updated numbers: its discrepancy is 78,876 according to the newest population estimates.

In other words, in the face of what the State's memo calls "dramatic population changes," **the newly enacted plan exacerbates the deviation.**

3.2 Compactness

Table 1 shows the average Polsby-Popper score, the average Reock score, and the plan-wide cut edges score (on census blocks) for the 2022 and 2026 Congressional district plans. **The new plan is less compact than the one it replaces by all three scores.** Table 2 shows the Polsby-Popper and Reock scores by district for Cong2022 and Cong2026.

Table 1: Overall compactness comparison.

	Cong2022	Cong2026
Avg Polsby-Popper (higher is better)	0.434	0.413
Avg Reock (higher is better)	0.464	0.462
Cut edges (blocks) (lower is better)	6087	6797

Table 2: Polsby-Popper and Reock metrics by district.

	2022 Plan		2026 Plan	
CD	PP	Reock	PP	Reock
1	0.478	0.538	0.478	0.538
2	0.482	0.458	0.482	0.458
3	0.501	0.573	0.502	0.573
4	0.318	0.384	0.318	0.384
5	0.525	0.560	0.525	0.560
6	0.482	0.736	0.482	0.736
7	0.404	0.468	0.404	0.468
8	0.452	0.323	0.442	0.436
9	0.468	0.490	0.359	0.467
10	0.373	0.409	0.365	0.463
11	0.357	0.519	0.330	0.412
12	0.381	0.446	0.407	0.415
13	0.584	0.509	0.547	0.498
14	0.474	0.480	0.437	0.521
15	0.577	0.577	0.257	0.326
16	0.449	0.447	0.372	0.391
17	0.393	0.282	0.320	0.269
18	0.422	0.423	0.403	0.662
19	0.386	0.331	0.384	0.458
20	0.277	0.497	0.412	0.479
21	0.495	0.497	0.509	0.491
22	0.421	0.442	0.403	0.483
23	0.288	0.496	0.460	0.494
24	0.484	0.476	0.321	0.382
25	0.381	0.423	0.161	0.166
26	0.326	0.291	0.546	0.526
27	0.727	0.711	0.691	0.669
28	0.241	0.216	0.241	0.216

The Polsby-Popper and Reock scores are "contour-based" scores of compactness for each district. **Polsby-Popper** is computed by comparing the district's area to its perimeter using the formula $4\pi A/P^2$. This can be interpreted as the ratio of the district's area to a circle with the same perimeter. **Reock** simply divides the district's area by the area of its smallest circumscribing circle. Both scores give a ratio of 1 for circles and fall below that for every other shape. **Cut edges** is a score based on the geographical units rather than the map projection: it measures the "scissors complexity" of the plan by counting the number of pairs of neighboring census blocks that receive *different* district assignments. A simpler plan has a lower cut edges count.[2]

3.3 Political boundaries

Florida contains 67 counties and 411 municipalities (267 cities, 123 towns, and 21 villages), according to the Census Places file. This may differ in small respects from local records on municipal boundaries, but is typically treated as a stable and reliable source.

Table 3 shows counts for how these localities are split between districts. For each type of geography, **splits** counts the number of areas of that type that have parts included in more than one district (this is what the State's Data Packet calls "Counties split into more than one district.") On the other hand, **pieces** counts how many ways the area is split by district boundaries (this is the sum of "whole" and "parts" in the Data Packet).[3]

Table 3: County/municipality splits and pieces. Note: two county pieces in each plan, including one of the Orange County pieces, contain zero population.

	2022 Plan	2026 Plan
County splits (out of 67)	17	19
County pieces	98	101
City splits (out of 267)	15	27
City pieces	286	299
Town splits (out of 123)	1	2
Town pieces	124	126
Village splits (out of 21)	0	1
Village pieces	21	22
Muni splits (out of 411)	16	30
Muni pieces	431	447
Miami-Dade County pieces	4	5
Broward County pieces	4	5
Orange County pieces	5	5

The new plan splits more of every kind of geography, sometimes dramatically—the number of split cities nearly doubles. Both plans have a pronounced tendency that when counties or cities are split, they are split into many pieces. Notably, **the State's new plan splits off an extra piece in both Miami-Dade and Broward counties** compared to Cong2022. Orange County, despite having only enough population for about 1.86 districts, is **split across five districts** in both Cong2022 and Cong2026.

[2]For a comparison of compactness scores, see Duchin and Tenner, "Discrete Geometry for Electoral Geography," *Political Geography* **109**, March 2024. doi.org/10.1016/j.polgeo.2023.103040. In this report, I omit the convex hull score; it is used more rarely in litigation and is not especially suited to Florida in particular, which is one of the least convex states.

[3]Some splits divide geographies, but produce pieces with zero population. If unpopulated pieces are ignored, the splits numbers reported here do not change, but Cong2022 and Cong2026 lose two pieces each, dropping to 96 and 99 county pieces, respectively. There is no change to municipality splitting or the piece counts.

4 Partisanship

4.1 Partisan metrics

In this section I report a suite of standard partisan scores across all statewide general elections held from 2014 to 2024. Major-party vote shares are used for all computations; votes for other candidates are not included.[4] For each election I compute the following scores. I chose the Republican party as the point-of-view party, meaning that V is the Republican vote share and S is the Republican seat share.

- The **disproportionality** (i.e., the difference $S - V$). If you have more seat share than vote share, your party is at an advantage.
- The **efficiency gap** scores: original efficiency gap, denoted OEG, is calculated by taking the "wasted votes" for Democrats across all districts, subtracting the wasted votes for Republicans, and taking the difference as a share of all cast votes. Here, all losing votes, and winning votes in excess of 50%, are tagged as wasted votes. The simplified efficiency gap is given by $SEG = S - 2V + \frac{1}{2}$. The simplified score is the same as the original score when each district has the same number of votes; the original score has a noise factor related to the turnout differential between districts, while the simplified score is more clear about idealizing a target for how much representation is deserved based on a given vote share.
- Three **partisan symmetry** scores: the two most popular scores in this family are mean-median MM and partisan bias PB. Mean-median compares the overall average vote share across districts to the share in the median district. It is interpreted as measuring how far short of 50% votes Republicans can fall while still controlling 50% of the Congressional delegation. Partisan bias is similar: it measures how much surplus representation Republicans could get with 50% of the votes.
- Finally, the Eguia **county score** is based on a counterfactual that treats the counties themselves as comparator districts. In the Eguia metric, the fair share of representation for Republicans is figured by asking what share of Floridians live in *counties* won by Republicans. If Republicans get more seat share than their county-weighted vote share, then the metric says the plan leans their way.

All of these are *signed* scores which can be positive, zero, or negative. Computing them from the Republican point of view means that positive scores are thought to indicate an advantage for Republicans, while negative scores are thought to flag Democratic party advantage.

Results for the two plans are compared in Table 4. Most scores report `Cong2022` to be a sizable gerrymander in favor of Republicans; only the Eguia county metric, which centers the importance of county lines, is less conclusive in recent elections. Miami-Dade County flipped to favoring the Republican candidate after 2020, so the Eguia score takes that as a basis to set a higher target for Republican seats. The newer `Cong2026` is unmistakably more severe across the board, and even surpasses this county-based target.

[4]The 19 contests in my dataset include several each for U.S. President (Pres16, Pres20, Pres24), U.S. Senate (Sen16, Sen18, Sen22, Sen24); Governor (Gov14, Gov18, Gov22); Attorney General (ATG14, ATG18, ATG22); Chief Financial Officer (CFO14, CFO18, CFO22); and Agriculture Commissioner (Agr14, Agr18, Agr22). I chose to focus on elections since 2014, but it would be equally reasonable to start with a later window, say 2016 to present. The results are materially unchanged by this shift, or by restricting attention to "up-ballot" elections like President, Governor, Senator, and Attorney General.

Table 4: Partisan metrics for `Cong2022` and `Cong2026`. Red colors indicate Republican advantage, while blue indicates Democratic advantage. The intensity of coloring shows disproportionality cutoffs at 15 and 25 percentage points; efficiency gap cutoffs at 8 and 20 percentage points, MM at 3 points, PB at 5 seats (0.179) and 7 seats (0.250), and Eguia at 20 and 30 points.

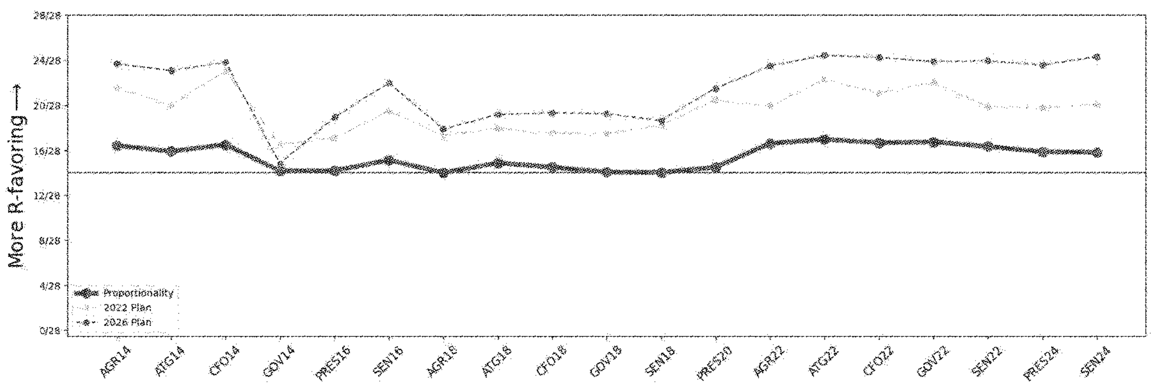
`Cong2022`	V (Repub)	S (Repub)	Disprop ($S-V$)	*OEG*	*SEG*	*MM*	*PB*	Eguia
GOV14	50.57%	60.71%	0.101	0.137	0.096	0.029	0.107	0.137
ATG14	56.74%	71.43%	0.147	0.118	0.080	0.039	0.143	0.094
CFO14	58.93%	82.14%	0.232	0.170	0.143	0.046	0.143	0.066
AGR14	58.65%	78.57%	0.199	0.141	0.115	0.048	0.143	0.099
PRES16	50.62%	60.71%	0.101	0.129	0.095	0.049	0.107	0.073
SEN16	53.98%	71.43%	0.175	0.151	0.135	0.038	0.143	0.128
SEN18	50.07%	64.29%	0.142	0.178	0.142	0.036	0.143	0.240
GOV18	50.20%	64.29%	0.141	0.173	0.139	0.036	0.143	0.236
ATG18	53.06%	64.29%	0.112	0.118	0.082	0.041	0.143	0.041
CFO18	51.74%	64.29%	0.126	0.143	0.108	0.040	0.143	0.124
AGR18	49.96%	60.71%	0.108	0.146	0.108	0.045	0.143	0.201
PRES20	51.69%	71.43%	0.197	0.202	0.180	0.029	0.179	0.293
SEN22	58.29%	71.43%	0.131	0.095	0.048	0.034	0.214	-0.031
GOV22	59.77%	78.57%	0.188	0.129	0.090	0.034	0.143	-0.029
ATG22	60.59%	78.57%	0.180	0.113	0.074	0.038	0.179	-0.029
CFO22	59.48%	75.00%	0.155	0.108	0.060	0.036	0.214	-0.065
AGR22	59.30%	71.43%	0.121	0.076	0.028	0.039	0.179	-0.101
PRES24	56.61%	71.43%	0.148	0.120	0.082	0.022	0.179	-0.031
SEN24	56.50%	71.43%	0.149	0.122	0.084	0.019	0.143	-0.031

`Cong2026`	V (Repub)	S (Repub)	Disprop ($S-V$)	*OEG*	*SEG*	*MM*	*PB*	Eguia
GOV14	50.57%	53.57%	0.030	0.062	0.024	0.018	0.036	0.066
ATG14	56.74%	82.14%	0.254	0.213	0.187	0.031	0.179	0.201
CFO14	58.93%	85.71%	0.268	0.202	0.179	0.037	0.179	0.101
AGR14	58.65%	85.71%	0.271	0.207	0.184	0.044	0.179	0.171
PRES16	50.62%	67.86%	0.172	0.194	0.166	0.045	0.179	0.144
SEN16	53.98%	78.57%	0.246	0.223	0.206	0.017	0.179	0.199
SEN18	50.07%	67.86%	0.178	0.217	0.177	0.031	0.179	0.276
GOV18	50.20%	67.86%	0.177	0.212	0.175	0.030	0.179	0.272
ATG18	53.06%	67.86%	0.148	0.157	0.117	0.038	0.179	0.077
CFO18	51.74%	67.86%	0.161	0.183	0.144	0.035	0.179	0.160
AGR18	49.96%	64.29%	0.143	0.183	0.144	0.032	0.179	0.236
PRES20	51.69%	78.57%	0.269	0.271	0.232	0.023	0.214	0.364
SEN22	58.29%	85.71%	0.274	0.227	0.191	0.029	0.286	0.112
GOV22	59.77%	85.71%	0.259	0.198	0.162	0.029	0.250	0.042
ATG22	60.59%	85.71%	0.251	0.181	0.145	0.032	0.214	0.042
CFO22	59.48%	85.71%	0.262	0.208	0.168	0.030	0.250	0.042
AGR22	59.30%	85.71%	0.264	0.207	0.171	0.032	0.250	0.042
PRES24	56.61%	85.71%	0.291	0.254	0.225	0.022	0.250	0.112
SEN24	56.50%	85.71%	0.292	0.256	0.227	0.018	0.250	0.112

4.2 Visualizing seats vs. votes

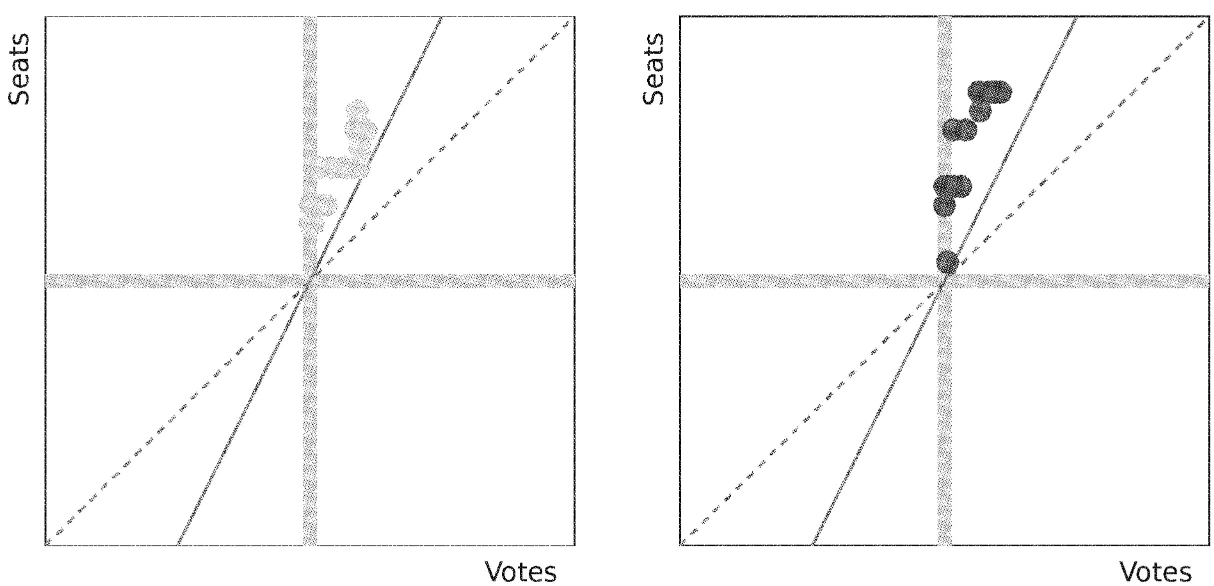
In Figure 2, we see that the previous plan Cong2022 (pink) already conferred a substantial representational advantage to Republicans compared to the voting patterns (blue). The new plan Cong2026 (red) escalates that advantage dramatically.

Figure 2: The thick blue line shows the changing vote share by election, in favor of Republicans. The pink and red lines show the seat shares in the same elections under Cong2022 and Cong2026, respectively. We can see that the 2022 plan delivers consistent advantages to Republicans, and the 2026 plan pushes even farther.



Another way to view the seats to votes relationship is seen in Figure 3, still from the Republican point of view. The same votes (x axis) are converted into far more seats (y axis) in the Cong2026 (red) than the Cong2022 (pink).

Figure 3: These plots show the same statewide general elections that are used throughout the report. The dotted diagonal line shows seats-to-votes proportionality. The solid diagonal line is the efficiency gap ideal, where the simplified score *SEG* would consider an election to be perfectly fair to both sides.



5 Core retention and incumbency

5.1 Core retention and partisan targeting

Core retention in redistricting generally refers to the percentage of the population whose district assignment remains the same in the new plan as in the old plan.

Table 5: Core retention and partisan shifts from 2022 districts to 2026 districts. Green cells show low-retention districts (those with retention under 60%). Red and blue cells show districts that changed their leading party to Republican or Democratic advantage, respectively.

District	Retention wrt 2022	Incumbent party	PRES20 (Repub)		GOV22 (Repub)		PRES24 (Repub)	
			2022	2026	2022	2026	2022	2026
1	100.00%	R	66.44	66.44	73.52	73.52	68.77	68.77
2	100.00%	R	55.56	55.56	62.04	62.04	59.17	59.17
3	100.00%	R	57.12	57.12	64.31	64.31	60.63	60.63
4	100.00%	R	53.39	53.39	61.01	61.01	55.98	55.98
5	100.00%	R	58.00	58.00	65.89	65.89	60.85	60.85
6	100.00%	R	61.94	61.94	68.51	68.51	65.15	65.15
7	100.00%	R	52.80	52.80	60.25	60.25	56.31	56.31
8	79.23%	R	58.92	55.45	65.07	62.14	61.28	58.20
9	57.79%	D	41.20	53.43	50.85	63.41	48.22	58.97
10	76.89%	D	33.92	33.34	41.52	40.85	38.49	37.86
11	84.60%	R	55.49	54.83	63.22	62.81	58.20	57.91
12	41.45%	R	64.51	52.96	69.91	60.31	67.43	57.78
13	78.83%	R	53.41	53.94	58.46	59.22	55.99	56.73
14	31.48%	D	40.31	51.44	47.43	59.07	46.12	55.31
15	36.21%	R	51.60	55.37	59.28	62.86	55.68	60.04
16	51.96%	R	54.49	52.77	61.87	59.04	57.80	56.91
17	85.35%	R	58.04	57.00	64.67	64.04	62.05	61.12
18	63.31%	R	61.51	55.11	69.54	62.96	64.82	58.55
19	80.11%	R	60.58	61.09	69.68	70.16	64.68	65.21
20	65.94%	D	23.66	25.70	30.07	31.63	30.02	31.26
21	95.45%	R	54.75	54.45	62.60	62.49	58.34	58.18
22	12.83%	D	41.14	48.55	48.41	57.81	47.19	55.30
23	0.00%	D	43.35	36.58	50.40	44.24	49.04	43.03
24	69.60%	D	25.35	21.55	31.49	26.63	34.84	30.47
25	16.27%	D	39.98	47.45	47.49	54.41	47.31	54.61
26	61.35%	R	58.97	50.59	70.49	60.02	67.58	59.25
27	98.42%	R	50.18	50.12	58.36	58.31	57.39	57.35
28	98.42%	R	53.26	53.31	63.98	64.01	62.79	62.81

Under optimal district numbering, plan-wide core retention in the 2026 plan relative to 2022 is 75.23%. That means that roughly one in four Floridians enumerated in the 2020 Decennial Census would be reassigned to a new district in the new plan.[5]

Table 5 records core retention by district and its partisan correlates. There is an extremely clear pattern of disrupting districts to change their partisan bottom line. **The average core retention for 2022 districts represented by Democrats is 41.35%, while for those represented by Republicans, it is 82.73%.**

This is largely due to the fact that there are ten districts that change very little or not at all, all with at least 95% retention—and all currently held by Republican incumbents.

6 Comparing to alternative plans

6.1 Controlling for geography

In this section, I use collections called "ensembles" of alternative maps in order to disentangle the partisan scores of the proposed plans from the implications of impartially dividing up the physical geography and human/political geography of Florida. To do this, I employ algorithmic generation methods to create alternative maps under the federal rules and the districting principles applicable to Florida redistricting.

We use a method known as *recombination* to generate **ten million** Congressional plans made out of VTDs.[6] We can then see whether the partisan scores of the proposed plans are outliers compared to these alternative plans, which are constructed from real Florida geography under a process that is fully "blind" to race and party.

6.2 Ensemble comparison

Figure 4 shows that the partisanship of the newly enacted Cong2026 map is out of range of all ensemble results. The median number of Republican wins in a randomly generated plan is 355. By contrast, the previous plan Cong2022 has 373 district-level wins. Only 39,943 of ten million random plans matched that level exactly and 111,068 were more extreme, so this result falls above the 98th percentile. The highest Republican win total *ever* observed in a random party-blind plan was 394, which occurred once in ten million attempts. By contrast, Cong2026 has an enormously elevated **411** Republican wins.

This basic ten-million-plan ensemble obtains statistics comparable to the State's map on most traditional districting principles. However, without a special emphasis on compactness, random plans are distinctly less strong on compactness metrics, especially the Polsby-Popper score. To test whether this could play a role in partisanship measurements, I generated a highly compact ensemble variant, with the new plan's $PP = 0.413$ score within the ensemble's range. I found that the partisanship was very comparable for the neutral and the highly compact ensembles, and in fact that the boost in compactness actually led to a slightly *lower* Republican performance. In particular, while the median number of Republican wins was 355 for the neutral ensemble, it was 352 when strongly prioritizing Polsby-Popper compactness, as shown in Figure 5.

[5] For the most part, the district numbers in Cong2026 are assigned in an optimal match to previous district numbers. The only exception is a three-way cycle: Cong2026 CD 22 best matches Cong2022 CD 25; Cong2026 CD 25 best matches Cong2022 CD 23; Cong2026 CD 23 best matches Cong2022 CD 22. Per-district values in Table 5 use the same-number convention; the cycle in numbering noted here accounts for the difference between the table average and the 75.23% figure reported above.

[6] We subdivide VTDs (which are Census Bureau approximations of Florida precincts) by their intersections with municipalities in order to promote respect for both sets of units simultaneously. Other details are provided in Appendix B.

Figure 4: Ten million plans are shown in the gray histogram. Here, the number of Republican district-level wins is added up over the 19 statewide elections since 2014. A total of $19 \cdot 28 = 532$ wins would be the maximum number possible. An advantage more extreme than Cong2022 occurs in roughly 1.1% of random maps. An advantage as extreme as Cong2026 is simply never observed.

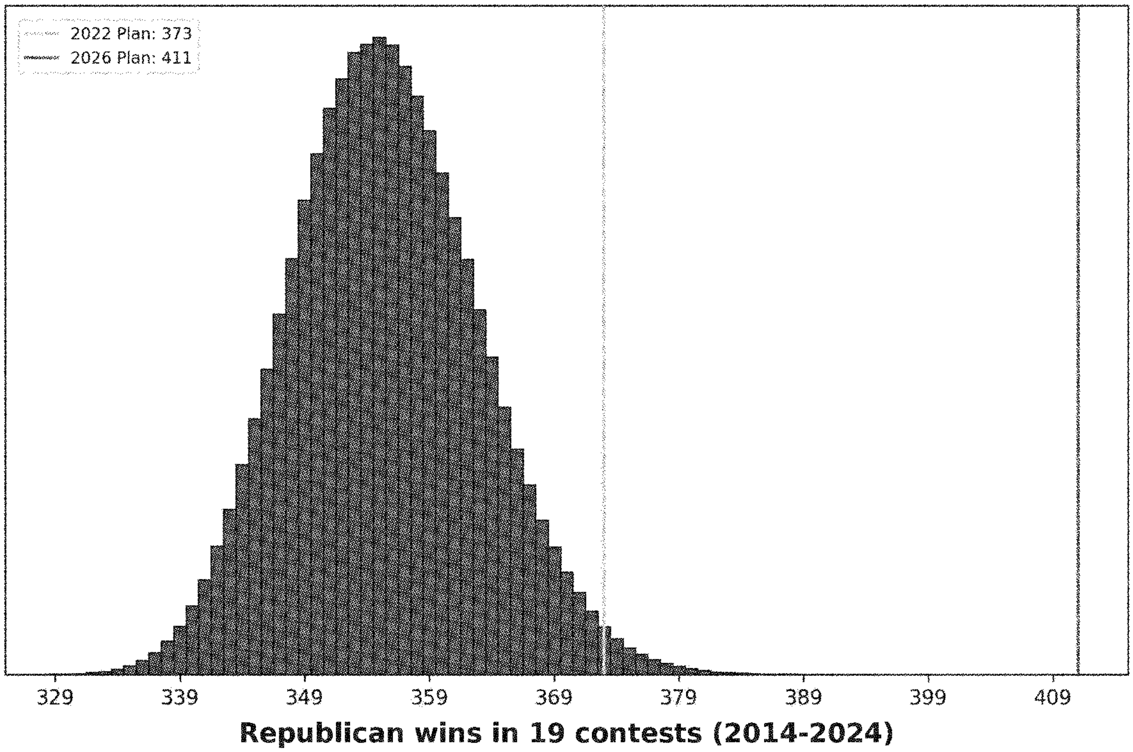
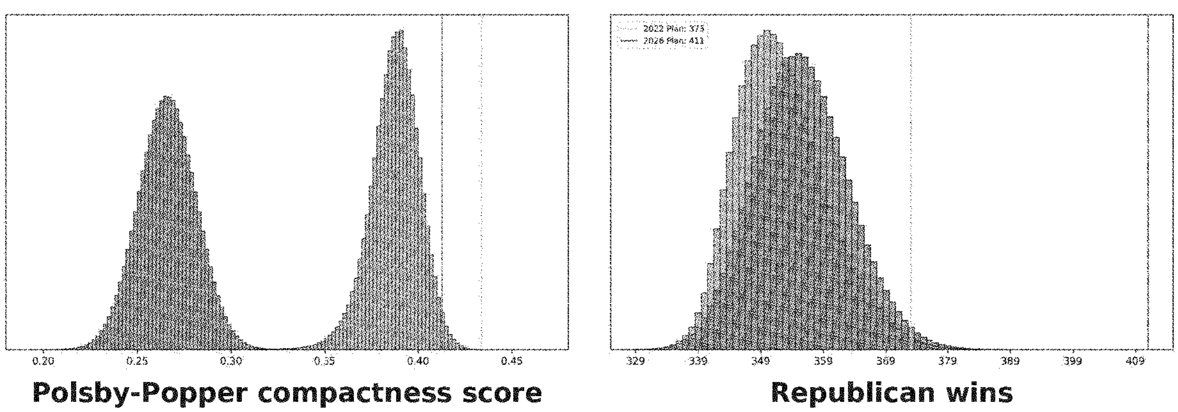
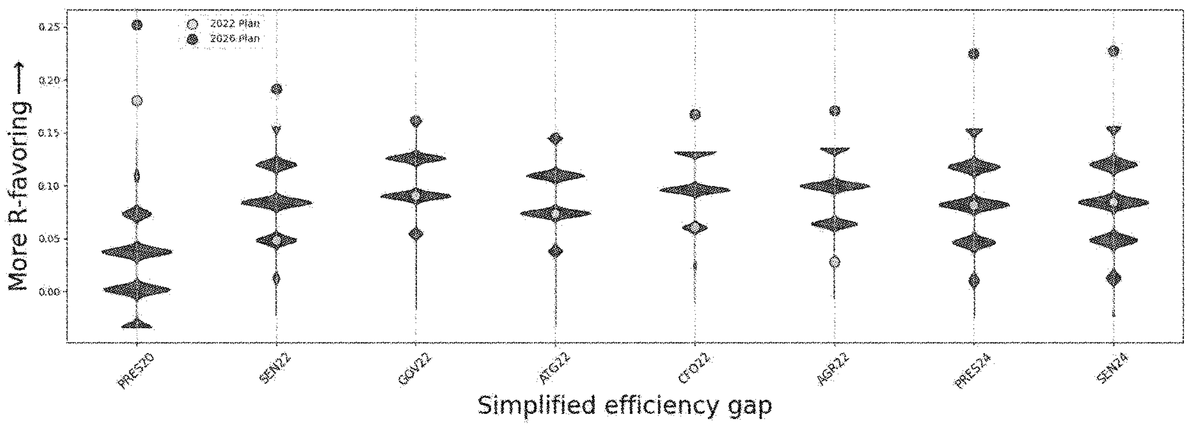


Figure 5: To test whether compactness could drive higher Republican wins, a second ensemble with more than 14 million distinct plans is produced (shown in blue) by placing a high emphasis on Polsby-Popper compactness. This meets and sometimes exceeds the compactness of Cong2026. However, the partisan impact is the opposite: the very compact plans are slightly more favorable to Democrats, making Cong2026 even more of a partisan outlier.



Finally, Figure 6 shows that the extreme values of partisan metrics observed in Table 4 are also not explained by the physical, human, or political geography of Florida. I illustrate this with the efficiency gap (*SEG*) score: the high Republican-favoring values in Cong2026 are consistently far out of line with what is ever observed in party-blind alternatives shown in gray. The plot focuses on years since 2020 for greater readability.[7]

Figure 6: For each recent election in the dataset, the column contains scoring for the efficiency gap—the gray shapes show how often the ten million random plans in the principal ensemble took each efficiency gap value. For example, in the Pres20 voting pattern (first column), random plans achieved efficiency gaps ranging over $[-.03, +.13]$, with $+.03$ being the most commonly observed. The Cong2022 score of $+.180$ and the Cong2026 score of $+.252$ are off-scale entirely.



The authors of the paper that launched the efficiency gap into wide use proposed that magnitudes of over .08 should be considered presumptively gerrymandered.[8] This figure shows that scores higher than that are sometimes observed for reasons simply tracing to the political geography of Florida; however, the Republican advantage secured by Cong2026 far exceeds this geographical effect.

7 Conclusion

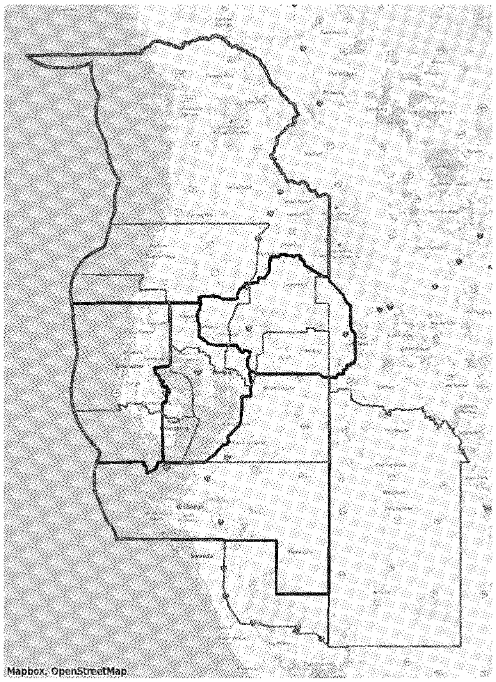
By every test and measure available to me, I find that the newly enacted Florida Congressional plan is an extreme partisan gerrymander. The clear pattern of Republican benefit in one recent vote pattern after the next suggests an intense focus on partisan advantage on the part of the mapmakers.

[7] See Appendix Figure 18 for the full range of election years.

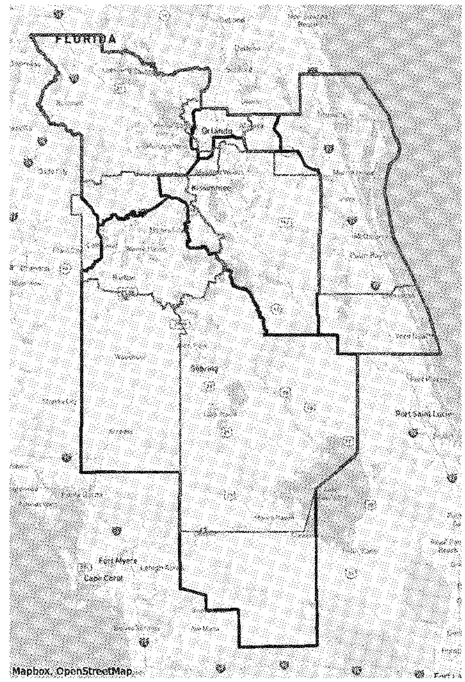
[8] Nicholas O. Stephanopoulos and Eric M. McGhee, "Partisan Gerrymandering and the Efficiency Gap," *University of Chicago Law Review* **82** (2015): 831–900.

A Regional and district maps

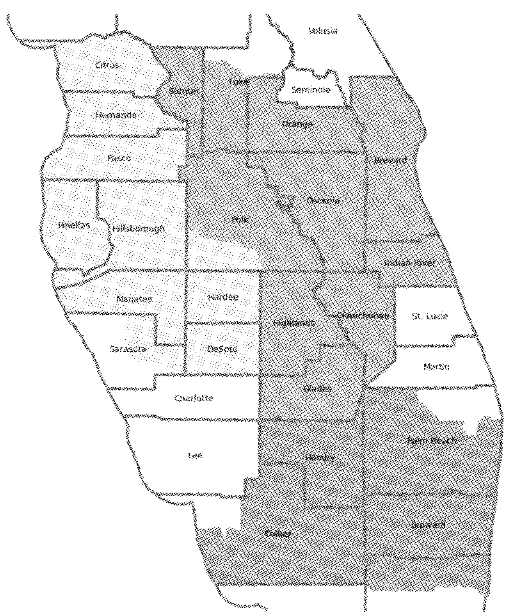
Figure 7: These maps show the Tampa region, Central Florida, and South Florida, situated in the state on a county map (lower left). The regional boundary maps show Cong2022 lines (black) and Cong2026 lines (red).

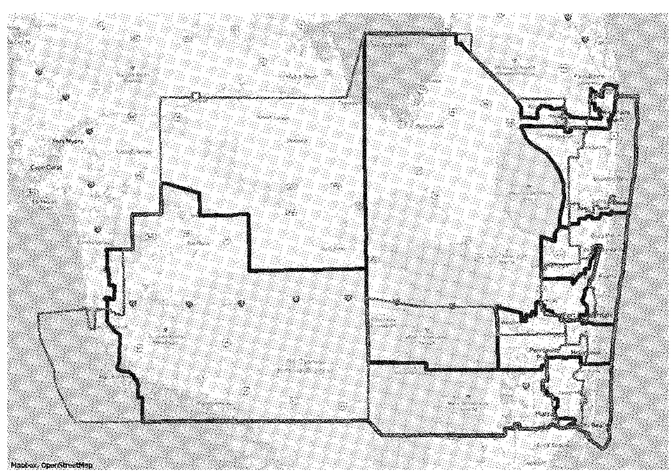


Tampa region – CD 12, 13, 14, 15, 16



Central Florida – CD 8, 9, 10, 11, 18

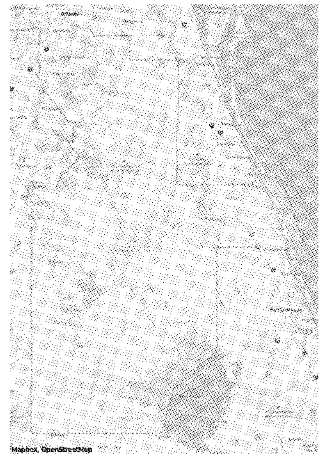




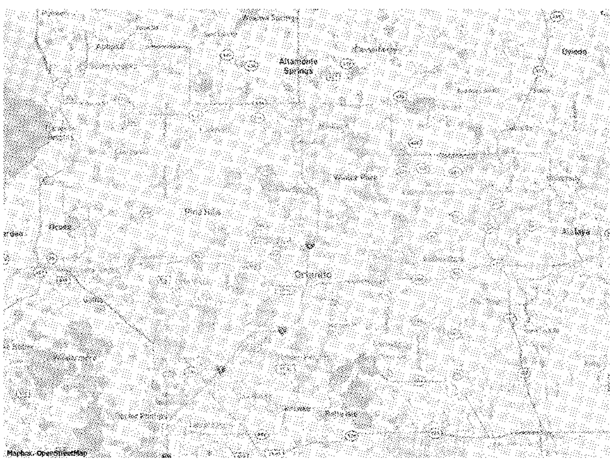
South Florida – CD 20, 22, 23, 24, 25, 26

Figure 8: Individual districts (CD 8–CD 13), with base maps.

CD 8



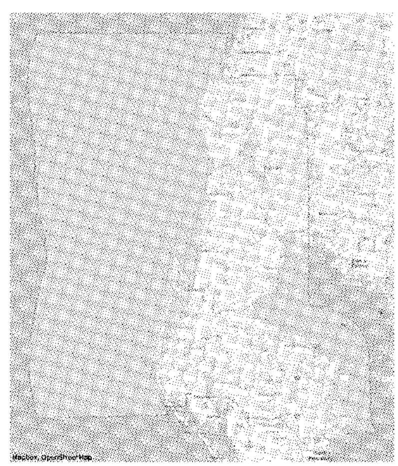
CD 9



CD 10

CD 11

CD 12



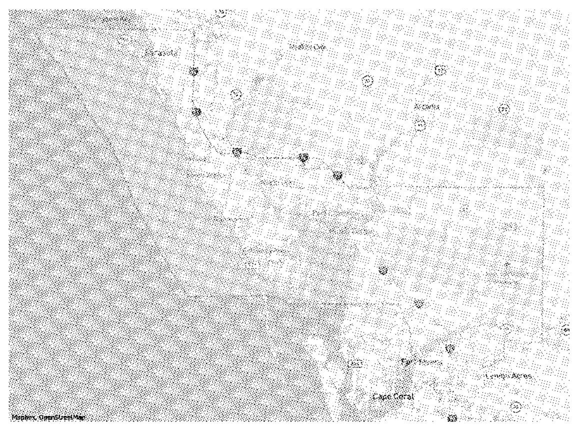
CD 13

Figure 9: Individual districts (CD 14–CD 19), with base maps.

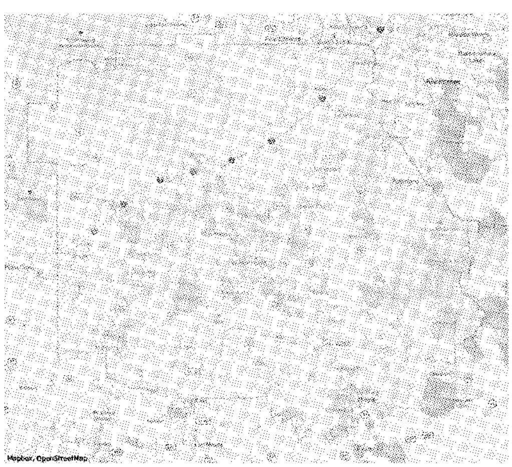
CD 14

CD 15

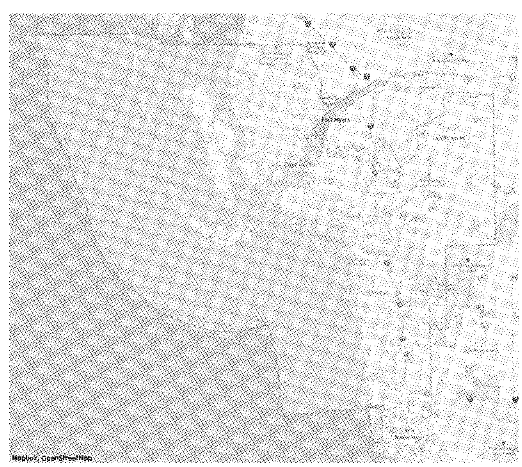
CD 16



CD 17

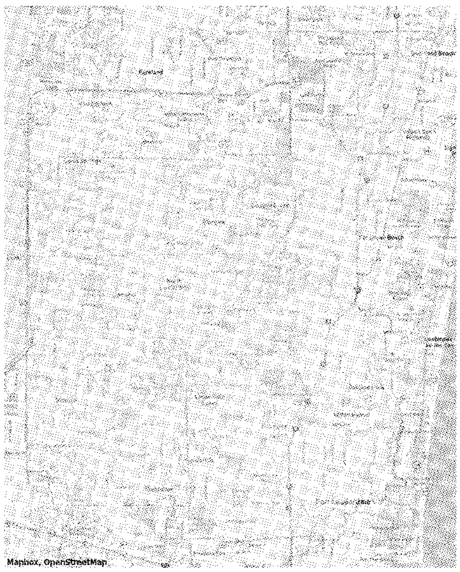


CD 18

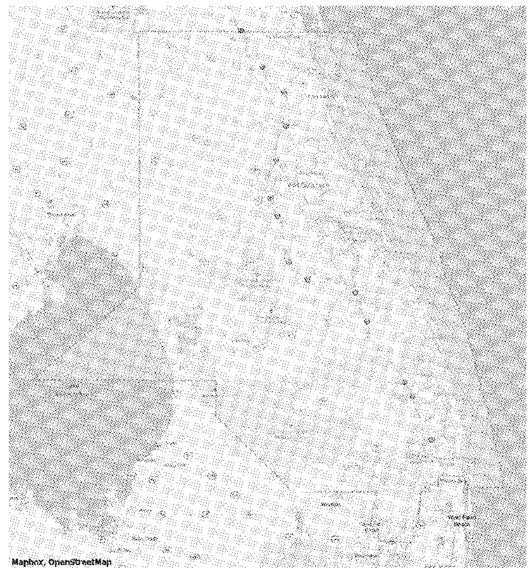


CD 19

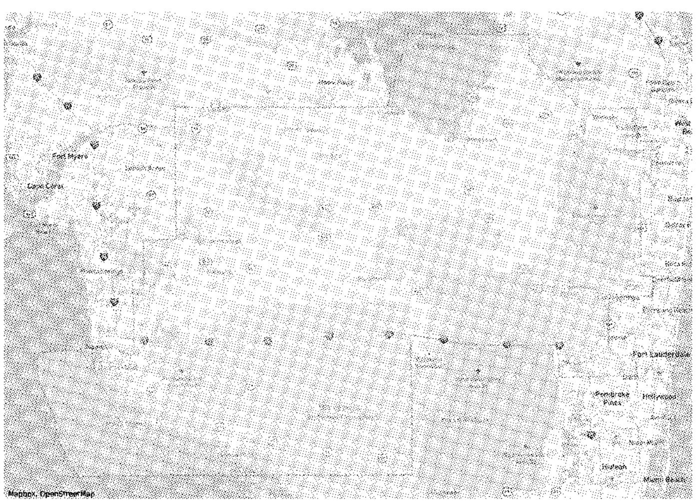
Figure 10: Individual districts (CD 20–CD 23), with base maps.



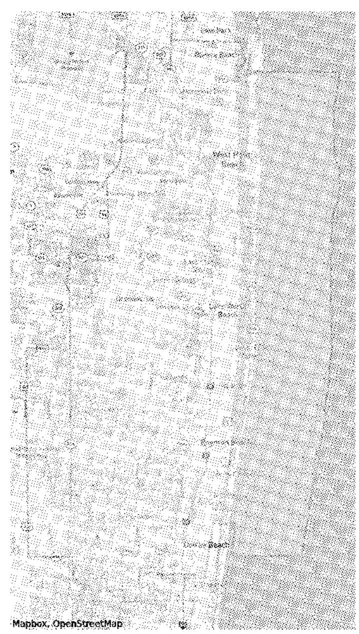
CD 20



CD 21

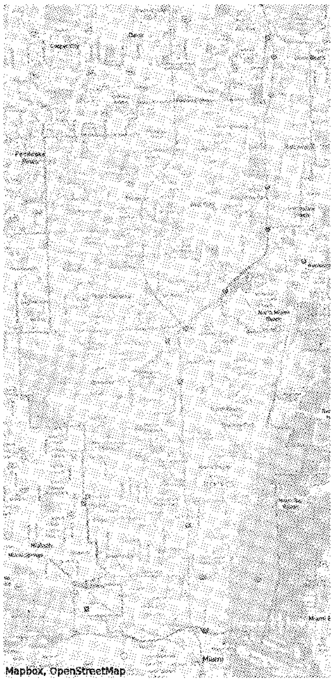


CD 22

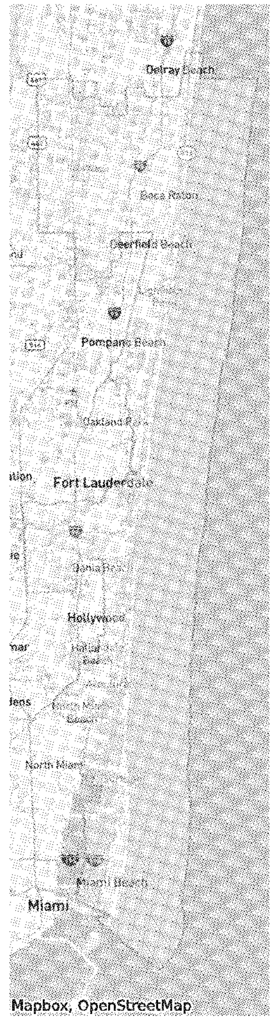


CD 23

Figure 11: Individual districts (CD 24–CD 28), with base maps.



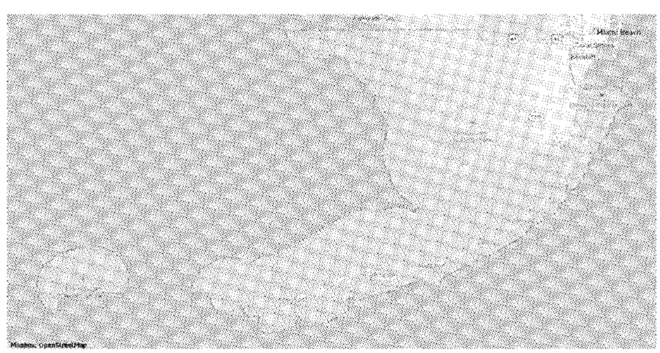
CD 24



CD 25

CD 26

CD 27



CD 28

Figure 12: Before and after pictures in the Tampa region. Both show the VTDs (precincts) colored by their votes in Pres24, but the district lines are changed between the plots.

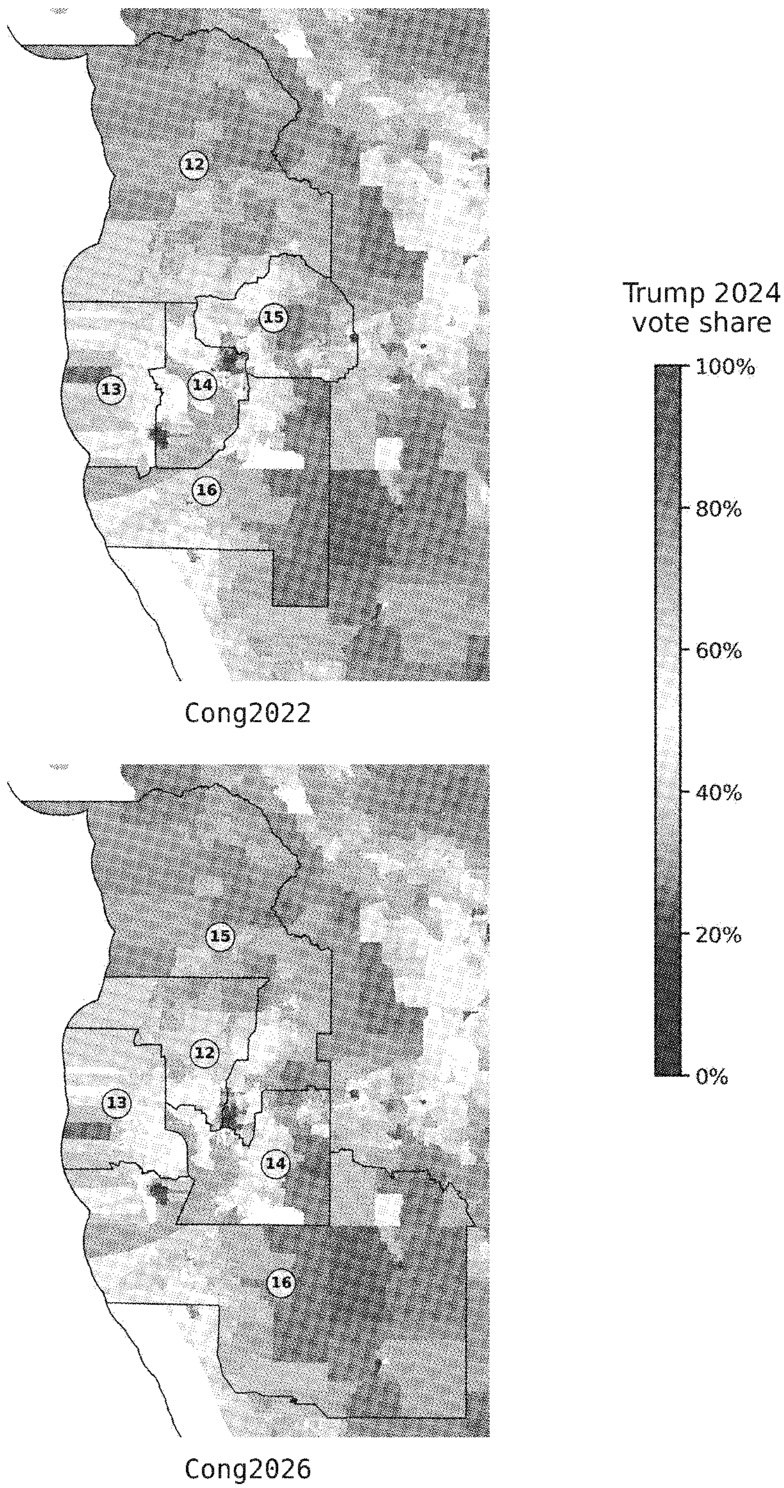


Figure 13: Before and after pictures in Central Florida. Both show the VTDs (precincts) colored by their votes in Pres24, but the district lines are changed between the plots.

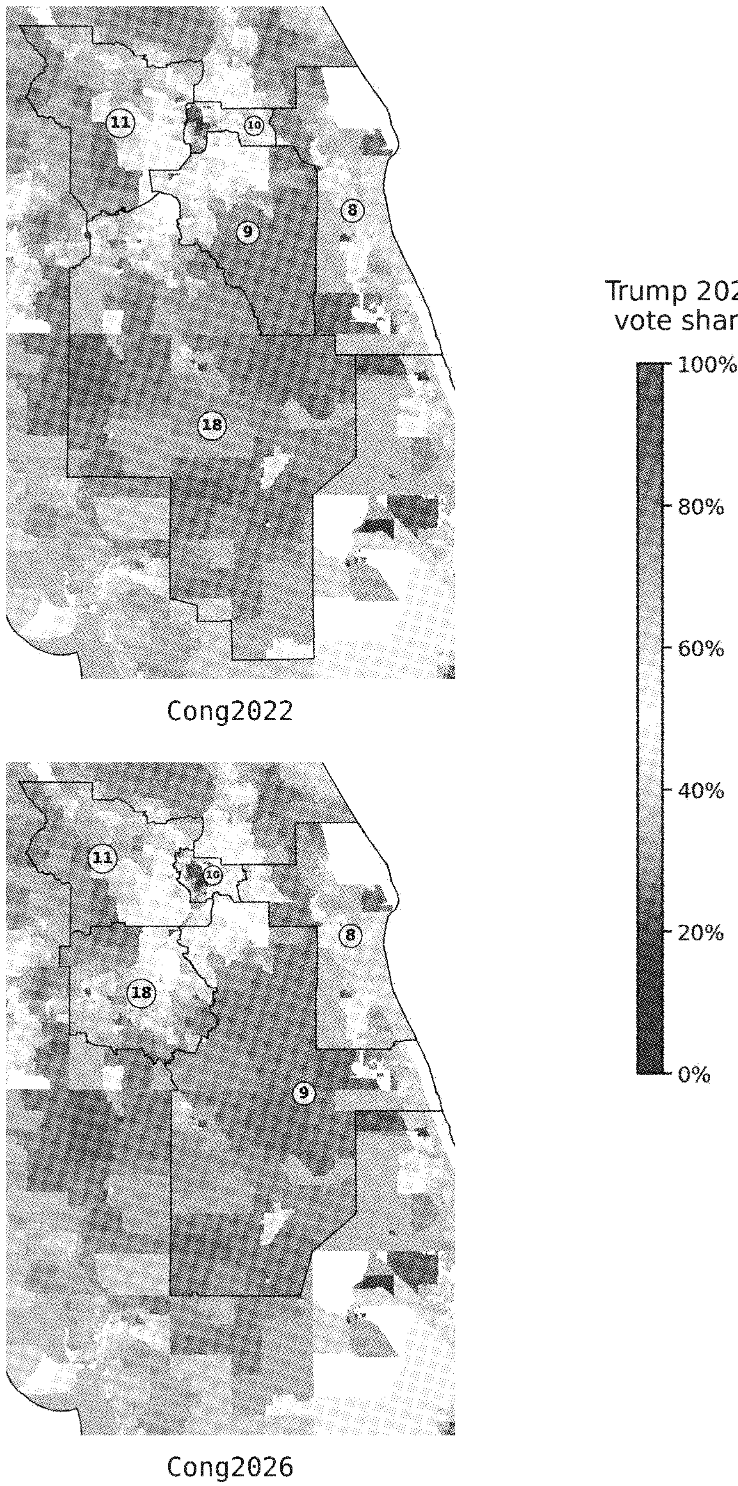
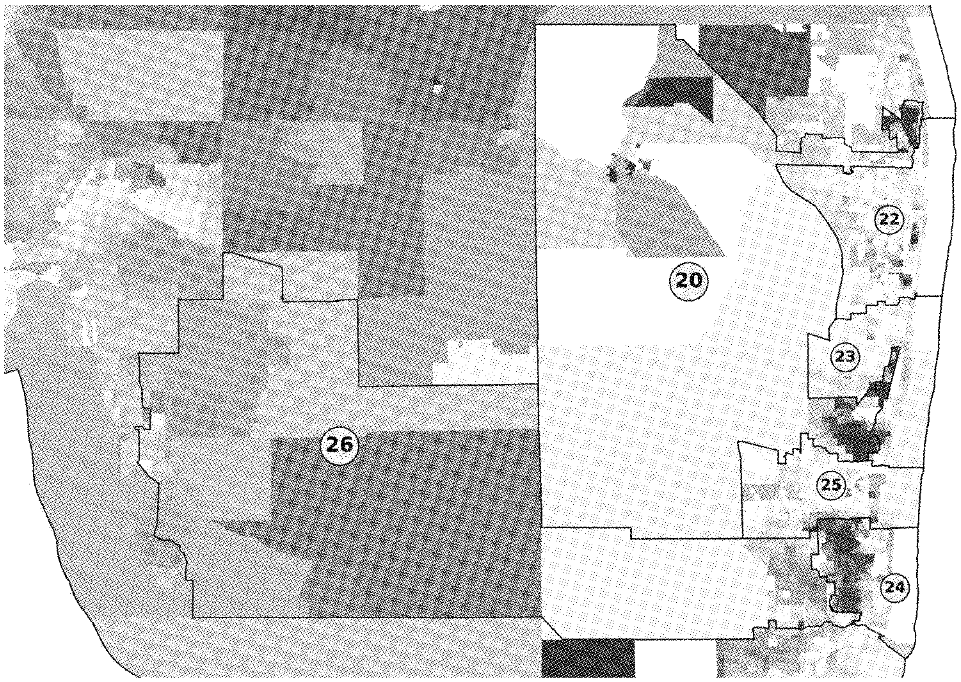
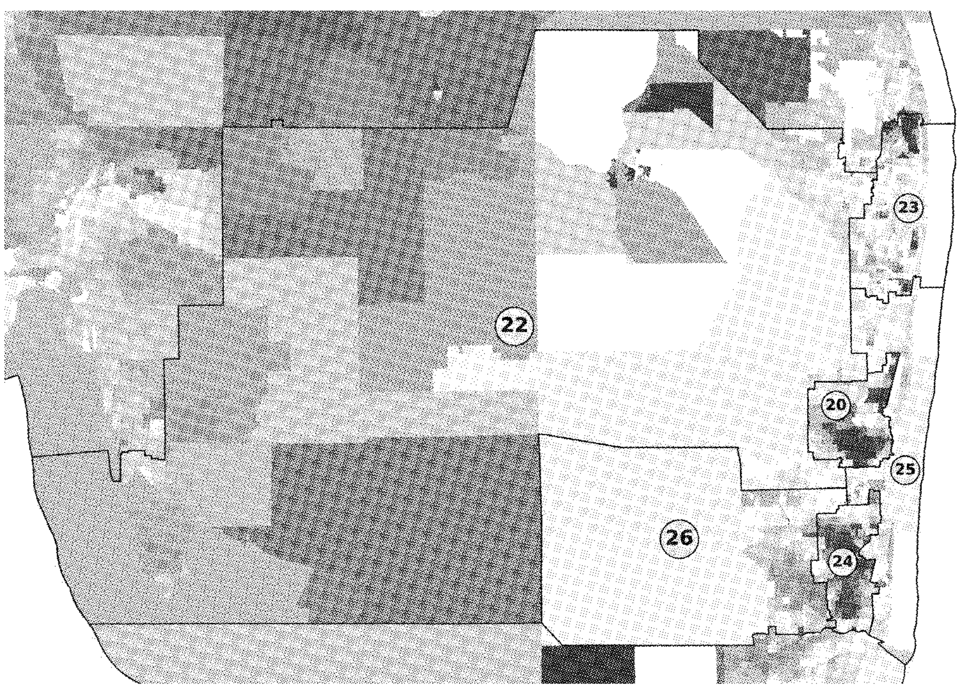


Figure 14: Before and after pictures in South Florida. Both show the VTDs (precincts) colored by their votes in Pres24, but the district lines are changed between the plots.



Cong2022



Cong2026

B Ensemble methodology

Alternative districts for this report were created using the open-source Python/Rust package called `GerryChain`, which implements a graph algorithm known as *recombination*. My research lab introduced the algorithm and we designed and maintain the software, which is free and open for public use. The central idea is to use a discrete geometry object called a *spanning tree* to split districts as part of a Markov chain, or "random walk," approach to plan generation. Spanning tree methods for redistricting were introduced by my research group in 2018 and have become the standard core methodology in computational redistricting.[9]

District generation parameters.

- Contiguity is enforced throughout runs of the Markov chain recombination algorithm. Population balance is enforced by requiring each step to leave districts within 1% of ideal population.[10]
- Compactness is favored through the use of spanning trees to draw districts, which favors districts with more interior connectivity.[11] Spanning trees are selected using a Kruskal-style minimum spanning tree (MST) algorithm where initial weights are drawn uniformly from $[0, 1]$.
- County integrity is favored through the use of a "surcharge" of 0.6 on the edge weights for edges whose endpoints lie in different counties. Similarly, municipalities were identified by block equivalence and VTDs were split at municipal boundaries to create building blocks more suited to keeping cities whole. Municipalities also received a 0.6 surcharge, as for counties.[12]

In addition to the principal run that relies on spanning tree geometry for its level of compactness, I also executed a variant methodology seeking to drive up the compactness of the plans. This was accomplished with heuristic optimization runs using the short bursts local search method studied by Cannon et al.[13] Runs are launched from multiple starting points, using an objective function based purely on the Polsby-Popper scores of the districting plans. The maps generated through this process are then combined into a single large collection.

Diagnostics. Variations on the choices that define the ensemble analysis included the surcharges that promote the intactness of counties and municipalities, the starting points for the Markov chain runs, and the random number seeds. I conducted runs with VTDs as building blocks and with census blocks themselves as the smallest atoms, as well as the VTD/muni refined pieces described above. All gave comparable findings.

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[9] See especially Daryl DeFord, Moon Duchin, and Justin Solomon, *Recombination: A Family of Markov Chains for Redistricting*, Harvard Data Science Review **3**(1) (Winter 2021). doi.org/10.1162/99608f92.eb30390f.

[10] This is a standard level of population balance used for algorithmic runs, including in expert work on all sides of redistricting cases. This 1% margin allows for better exploration by the random walk, and any 1% balanced plan can be polished to 1-person balance in seconds by a tuning algorithm, or in roughly ten minutes by hand, without significant change to any of the other plan statistics.

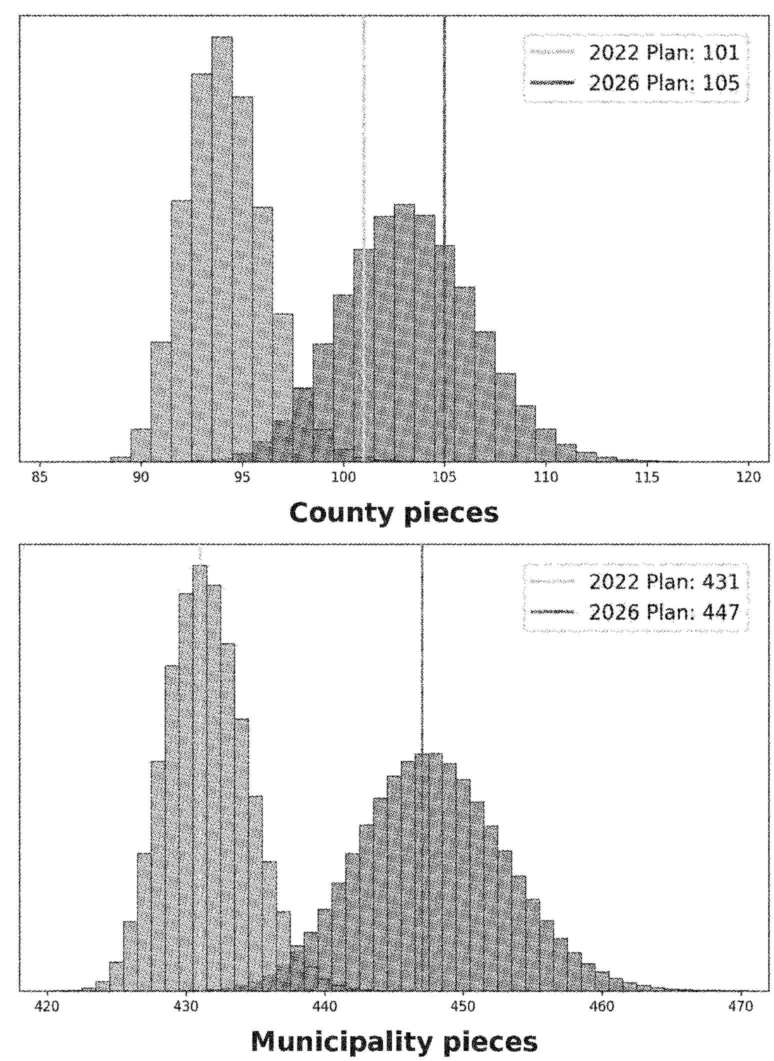
[11] See Duchin–Tenner, cited above, for more details.

[12] For a discussion of MST and "surcharge" methods, see Babson et al., "Models of Random Spanning Trees," *Random Structures and Algorithms* **68**(3), May 2026. doi.org/10.1002/rsa.70063

[13] Sarah Cannon, Ari Goldbloom-Helzner, Varun Gupta, J.N. Matthews, and Bhushan Suwal, *Voting Rights, Markov Chains, and Optimization by Short Bursts*, Methodology and Computing in Applied Probability **25** (1): 1–38 (2023). doi.org/10.1007/s11009-023-09994-1

I also varied the measurements on which the outputs were assessed by considering restricting to elections since 2016 (15 contests) or to only Pres–Gov–Sen–ATG contests since 2016 (11 contests), and even considered going back further in time to 2012 (21 contests). The partisan outlier findings are robust to all these alternatives, and indeed the 2014–2024 electoral window that I have chosen to highlight in this report gives the least extreme outlier finding for Cong2022. (1.1% of the ensemble was more Republican-favoring than Cong2022 against 2014–2024 elections, compared to 0.7%, 0.2%, and 0.9% for the other electoral windows.) Every option shows Cong2026 completely out of range.

Figure 15: The principal ensemble (gray) is comparable to both plans in county pieces and comparable to the new plan Cong2026 in municipality pieces. The highly compact ensemble (blue) is better than the State's plans on county pieces, and comparable to Cong2022 on municipality pieces.



The consistency of measurements across these variations raises my confidence, based on my experience researching the sound interpretation of outlier tests, that the findings of **extreme outlier partisanship** are highly robust.

C Partisan outlier results in individual elections

This section presents detailed, election-by-election histograms and boxplots that show the magnitude of the Republican advantage in the Cong2022 and Cong2026 maps.

C.1 Per-contest histograms of Republican seats

In contest after contest, the pattern is clear: Cong2026 gets a pickup of one or more seats over Cong2022, typically beyond the 90th percentile of random maps, over and over. To optimize against a single voting pattern takes some work, but to simultaneously optimize against a large set of patterns and get an advantage in 18 out of 19 voting patterns suggests careful design. Only if voting patterns resembled the Gov14 contest—a gubernatorial campaign twelve years in the past—would the new plan fail to outperform its predecessor for Republican advantage.

Figure 16: Histograms for ensemble scores for Republican seat share for various elections, with scores from Cong2022 and Cong2026 marked. This set shows the 11 statewide contests from 2014 to 2018.

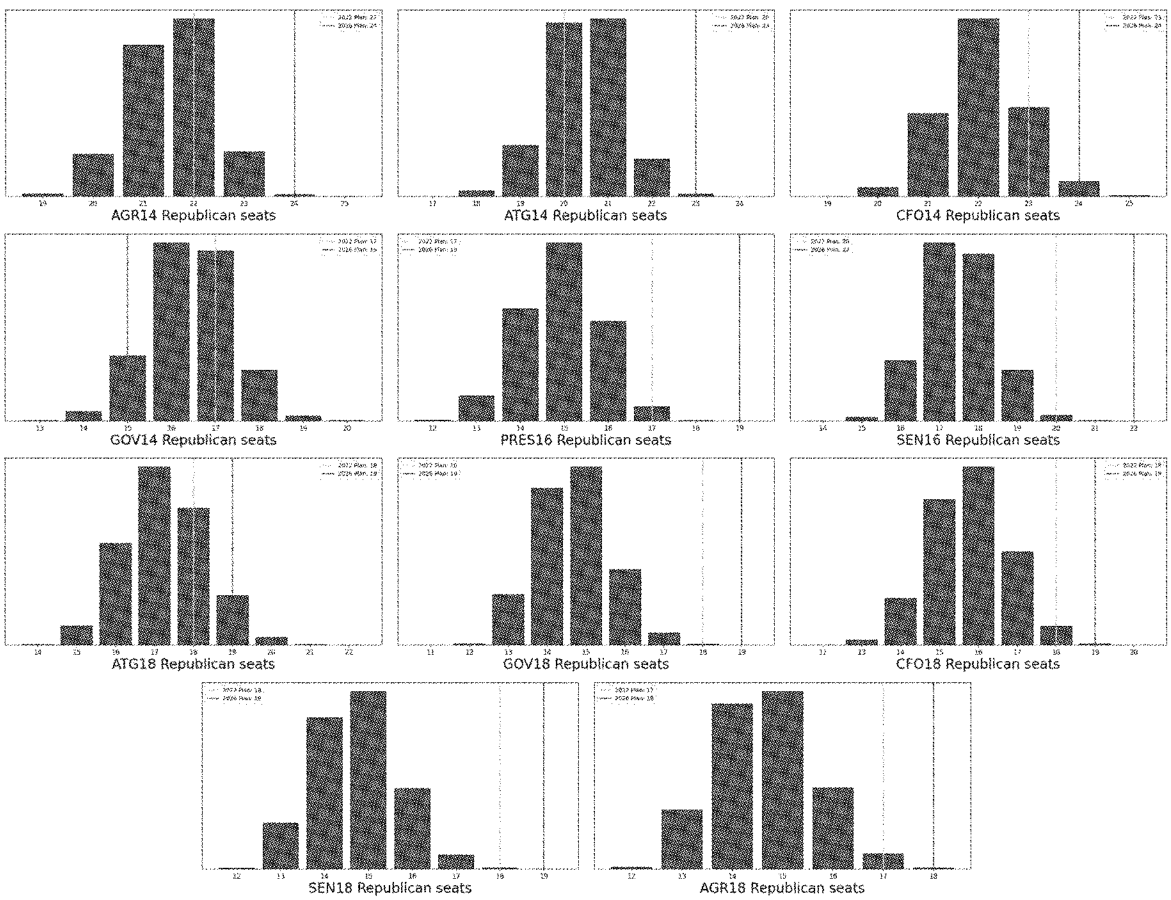
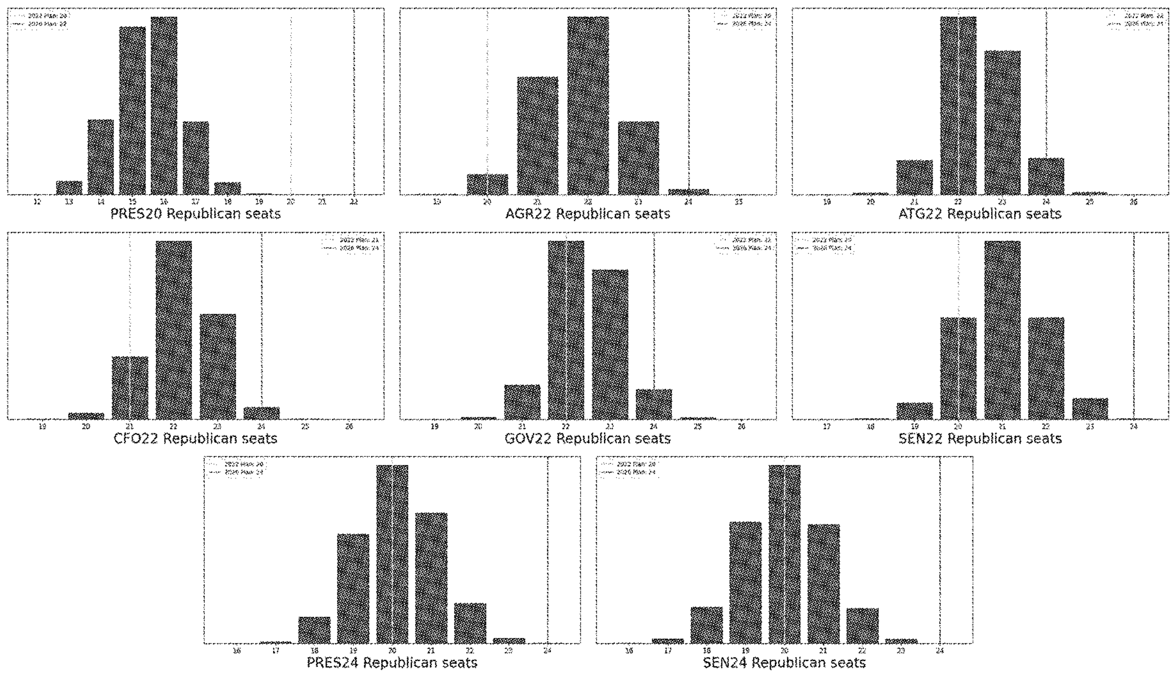
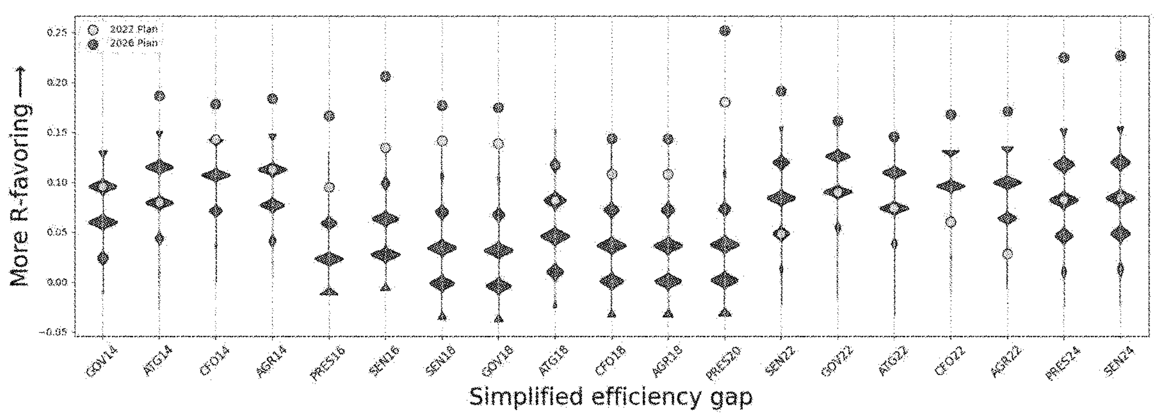


Figure 17: Histograms for ensemble scores for Republican seat share for various elections, with scores from Cong2022 and Cong2026 marked. This set shows the 8 statewide contests since 2020.



C.2 Efficiency gap violin plot

Figure 18: The full violin plot for 2014-2024, from which Figure 6 was an excerpt.



C.3 Per-district boxplots of Republican share

In this next set of plots (Figures 19–23), I break out each plan by district. Importantly, these districts are sorted from the lowest to the highest Republican share of the major-party vote, not by their published district numbers. Therefore, for a plan that is designed to reduce Democratic representation from eight seats (as in the status quo) to four, we would expect to see the red dot far above the pink and above the ensemble in the columns numbered 5 through 8.

Boxplots, or box-and-whiskers plots, show a box that runs from the 25th-75th percentile of the data, with the median (50th percentile) marked with a line. Whiskers are set to range from the 1st to 99th percentile. This means that anything past the whiskers is in the 1% of most extreme observations. Values far past the whiskers were likely never observed in the dataset.

Figure 19: Boxplots for ensemble scores for Republican vote share by district for various elections, with scores from the 2022 and 2026 plans for comparison. This set from 2014 shows **modest** elevation for Cong2026 compared to Cong2022 (red vs. pink) in columns 5-8.

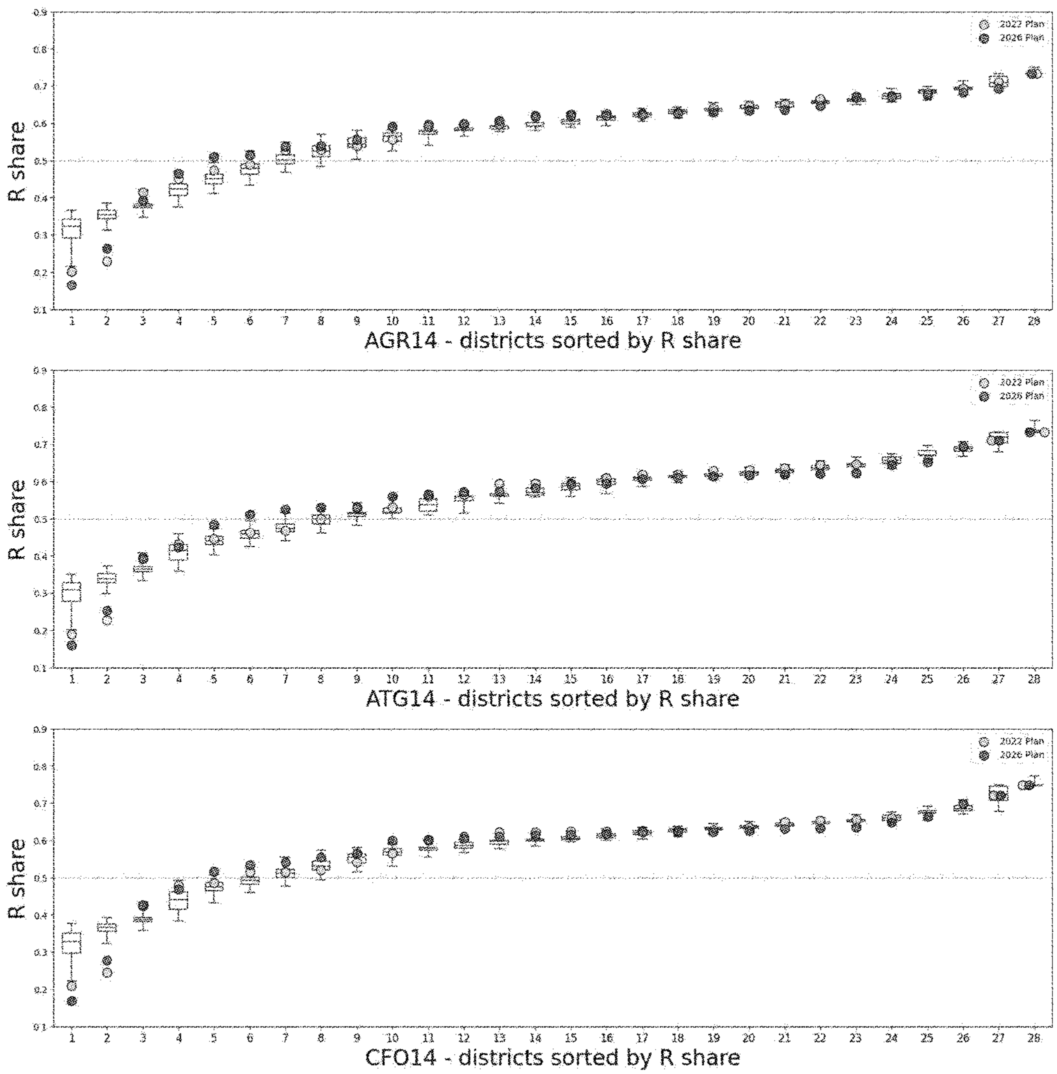


Figure 20: Boxplots for ensemble scores for Republican vote share by district for various elections, with scores from the 2022 and 2026 plans for comparison. This set from 2014–2018 shows **modest to significant** elevation for `Cong2026` compared to `Cong2022` (red vs. pink) in columns 5-8.

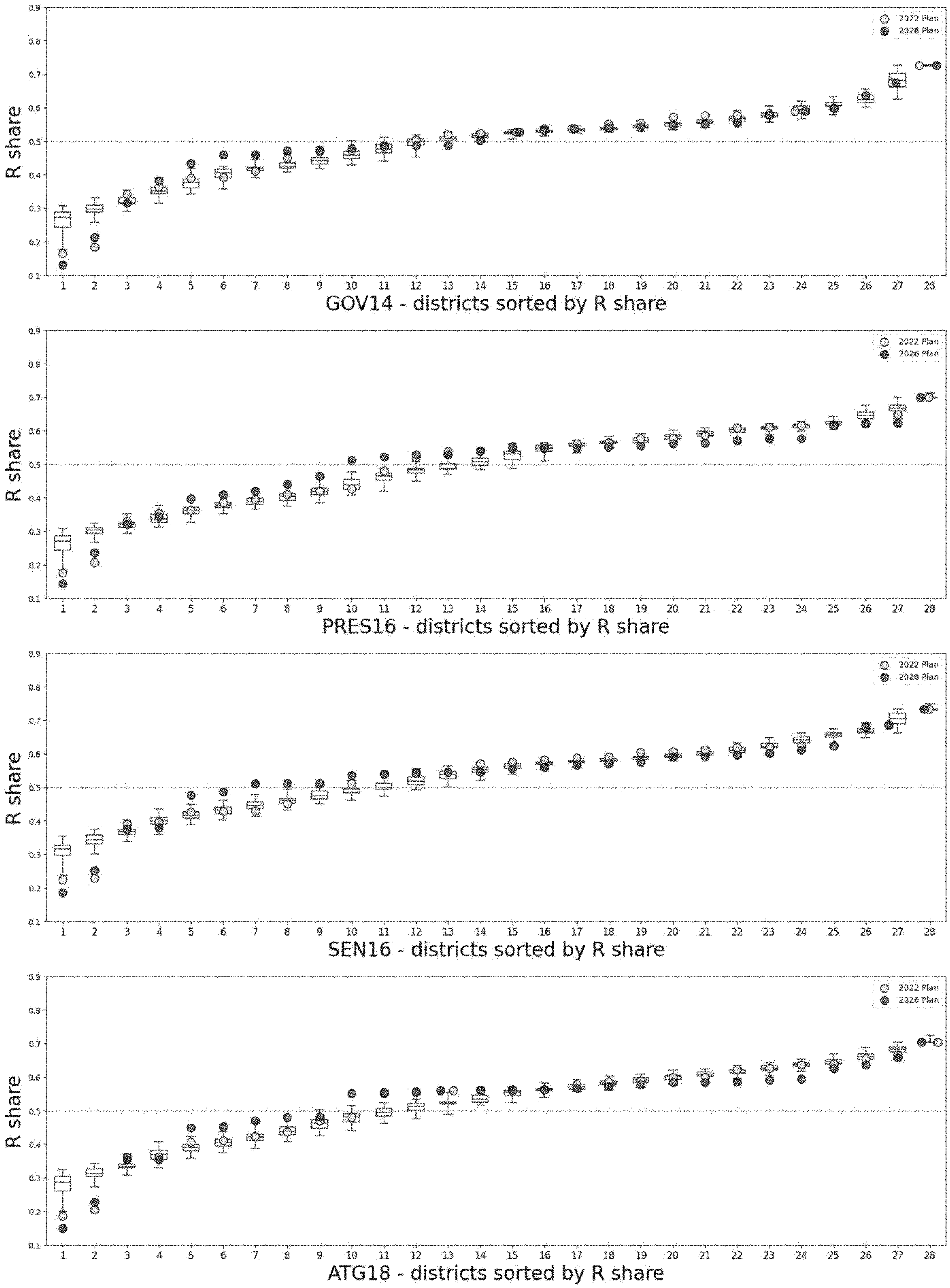


Figure 21: Boxplots for ensemble scores for Republican vote share by district for various elections, with scores from the 2022 and 2026 plans for comparison. This set from 2018 shows **pronounced** elevation for `Cong2026` compared to `Cong2022` (red vs. pink) in columns 5-8.

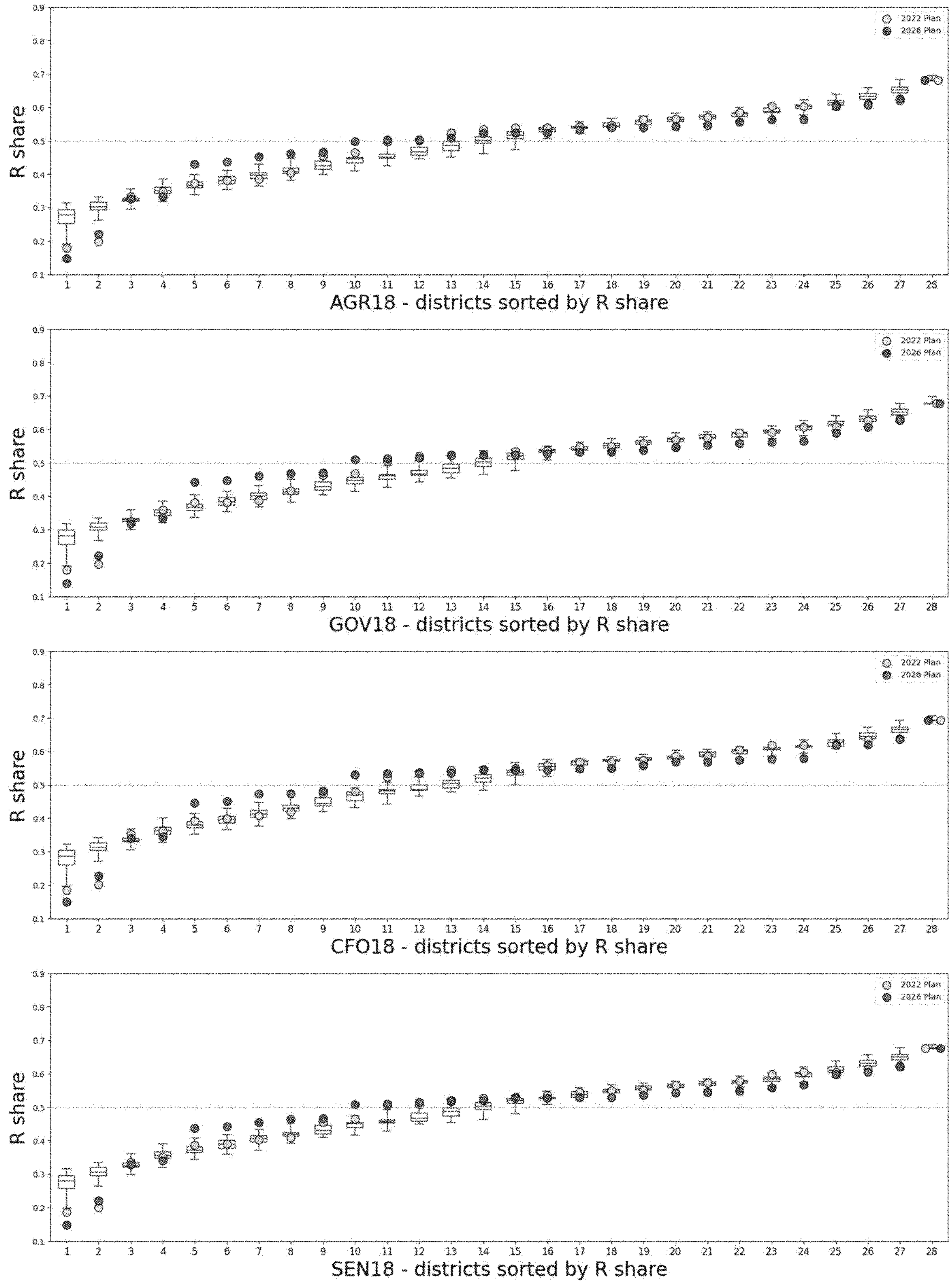


Figure 22: Boxplots for ensemble scores for Republican vote share by district for various elections, with scores from the 2022 and 2026 plans for comparison. This set from 2020–2022 shows **extreme** elevation for `Cong2026` compared to `Cong2022` (red vs. pink) in columns 5-8.

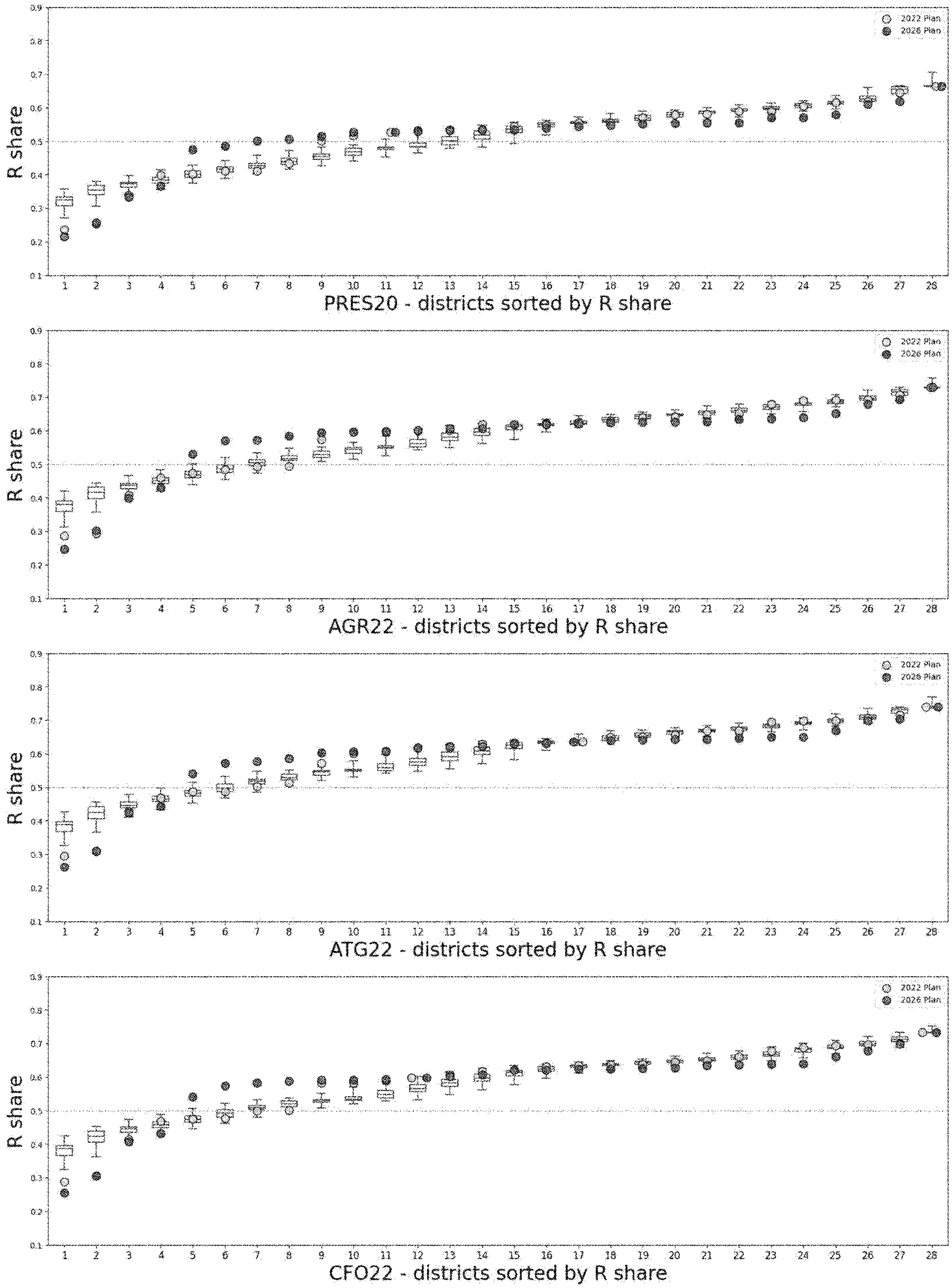
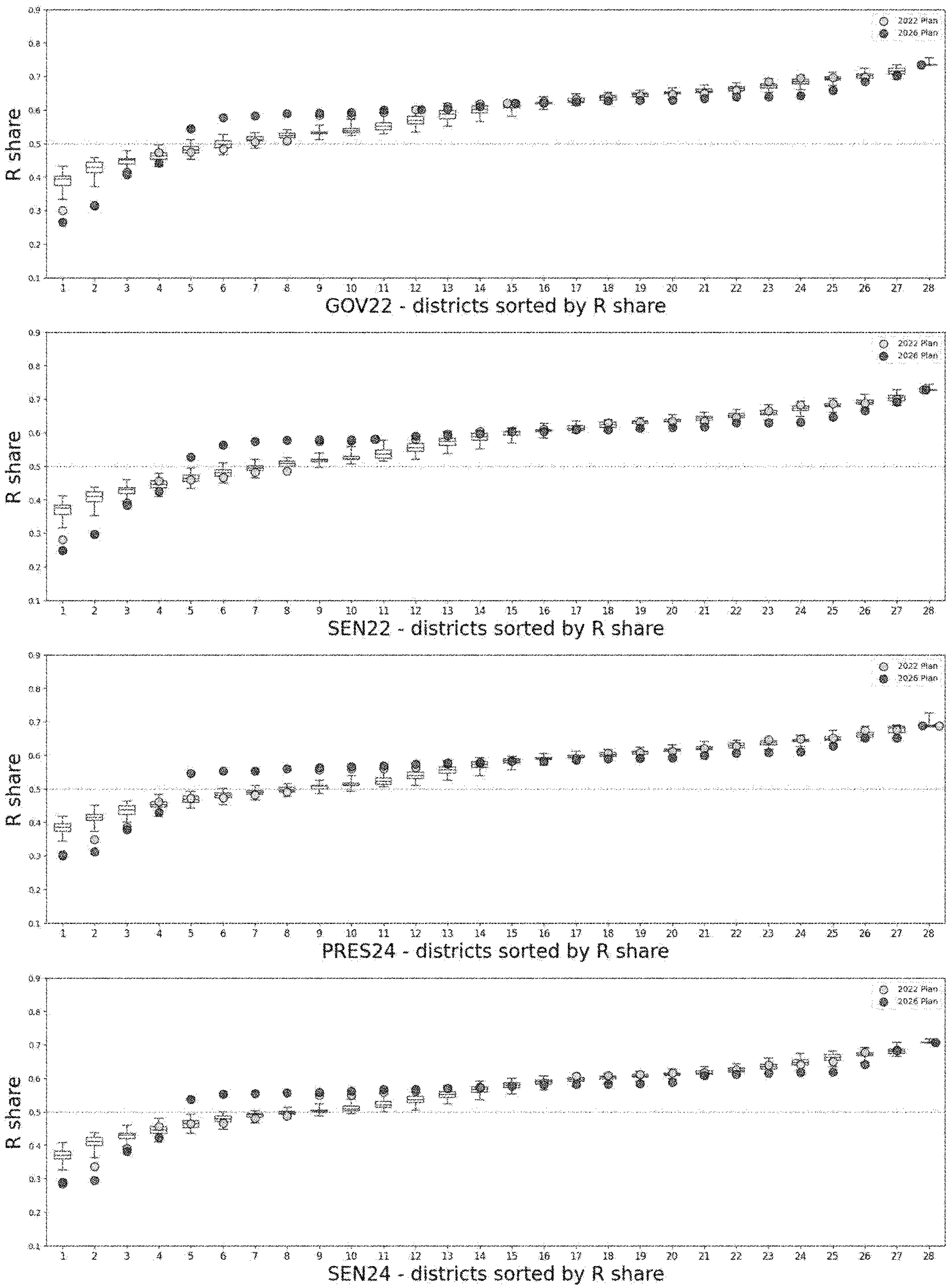


Figure 23: Boxplots for ensemble scores for Republican vote share by district for various elections, with scores from the 2022 and 2026 plans for comparison. In this most recent set of elections from 2022–2024, we see **the greatest level yet** of elevation for `Cong2026` compared to `Cong2022` (red vs. pink) in columns 5-8. This is extremely suggestive of a mapmaking goal of picking up four additional seats for Republicans.



D Demographics

The statewide voting age population (VAP) of Florida is 15.54% Black, 23.87% Hispanic, and 60.59% Other (mostly White). Within "Other," the voting age population is about 92% non-Hispanic single-race White. I define demographic categories for TOTPOP and VAP based on the 2020 Decennial Census (PL 94-171) as follows: "Black" includes all persons who self-identified as Black, whether alone or in combination with any other races. "Hispanic" includes all persons not already counted in "Black" and who self-identified as Hispanic. "Other" includes all other persons, which is largely made up of non-Hispanic White population.

The statewide citizen voting age population (CVAP) is 15.06% Black and 21.36% Hispanic, with some overlap between these two categories. CVAP data was provided to me by counsel; I confirmed that it is consistent with prorating the 2022 5-year American Community Survey to the census block level.

Table 6 shows demographic percentages for VAP and CVAP by district for the 2022 and 2026 Congressional district plans.

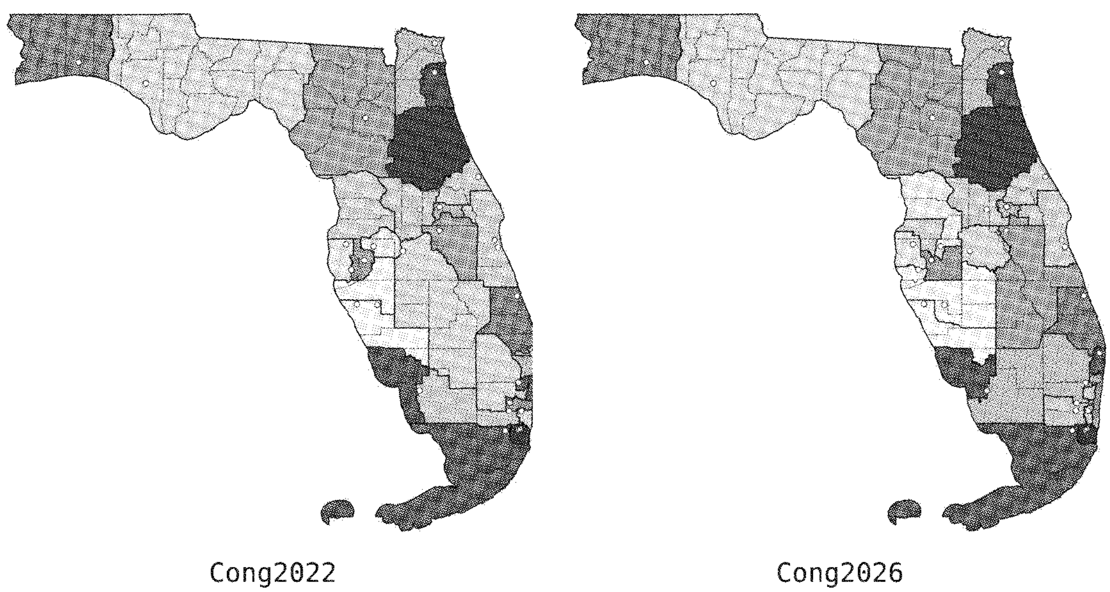
Table 6: Voting age population (VAP) and citizen voting age population (CVAP) percentages by district for 2022 and 2026 plans.

	2022 Plan VAP		**2022 Plan CVAP**		**2026 Plan VAP**		**2026 Plan CVAP**	
District	BVAP	HVAP	BCVAP	HCVAP	BVAP	HVAP	BCVAP	HCVAP
1	13.54	6.30	13.66	5.50	13.54	6.30	13.66	5.50
2	23.09	5.99	23.58	4.90	23.09	5.99	23.58	4.90
3	15.88	10.07	16.34	9.08	15.88	10.07	16.34	9.08
4	31.66	6.98	30.77	6.82	31.66	6.98	30.77	6.82
5	12.80	10.15	12.83	9.19	12.80	10.15	12.83	9.19
6	11.22	9.26	11.07	8.96	11.22	9.26	11.07	8.96
7	10.53	17.79	9.28	18.45	10.53	17.79	9.28	18.45
8	9.68	9.48	9.18	9.56	10.88	13.33	9.78	13.44
9	13.02	47.10	10.14	49.05	10.67	34.43	9.28	33.38
10	25.98	26.60	24.89	26.09	27.84	28.30	27.04	27.80
11	12.76	16.22	12.49	15.51	10.76	18.88	10.28	17.54
12	5.29	11.11	4.79	11.56	10.70	23.44	9.81	22.80
13	7.09	9.10	7.06	8.19	6.43	9.78	6.85	8.98
14	19.13	24.44	18.80	22.75	13.40	24.57	13.12	22.38
15	15.40	21.44	14.20	21.13	15.05	13.92	13.71	14.62
16	11.98	17.71	12.01	15.08	11.98	12.47	11.64	10.27
17	5.56	11.13	5.35	9.62	6.94	10.58	6.72	8.72
18	13.21	22.80	13.13	20.66	15.31	23.52	14.23	23.13
19	6.07	15.70	5.73	12.94	5.07	18.35	4.67	15.40
20	50.11	21.47	49.65	20.12	42.08	21.78	41.08	21.38
21	12.48	14.55	11.78	13.12	13.11	14.46	12.43	12.98
22	15.88	23.74	15.20	20.05	13.57	30.14	13.18	27.25
23	13.17	19.64	12.80	18.65	23.14	24.82	22.93	20.03
24	42.17	35.79	45.21	34.44	47.72	37.57	50.06	34.81
25	17.52	40.55	17.43	38.41	7.42	26.87	7.02	26.06
26	6.92	71.15	6.11	67.78	10.66	72.22	10.45	69.29
27	7.07	72.36	6.50	71.37	7.06	72.45	6.51	71.50
28	10.32	71.58	9.84	68.69	10.33	71.48	9.83	68.57

E Incumbency

I was provided with incumbent addresses for 27 of the 28 incumbents as of 2025. The address for the incumbent in CD 15 was not available, so I used the address of the district office in place of a home address. In Cong2022, 5 districts each had two incumbent addresses, while another 5 districts had no incumbents residing in the district. Moreover, this data slightly undercounts the mismatch: as far as the addresses go, only 20 out of 28 incumbents live in the Cong2022 districts from which they were elected. This means that an analysis of incumbent favoritism based on addresses only tells a very partial story. I nonetheless include the "double bunking" count of districts containing two incumbents, for the sake of completeness.

Figure 24: These plan images show incumbent addresses as white dots. For one incumbent, Laurel Lee (CD 15), the district office location is used as a proxy.



Double-bunking. (Paired incumbent addresses)
(Cong2022): CD 8, CD 13, CD 17, CD 25, CD 27.
(Cong2026): CD 8, CD 16, CD 22, CD 27.

I, Dr. Moon Duchin, swear under penalty of perjury that the following information is true to the best of my knowledge and state as follows:

1. I was retained by Plaintiffs in *Common Cause, et al. v. DeSantis, et al.*

2. I prepared an expert report in support of Plaintiffs' motion for a temporary injunction, attached to this declaration. The expert report is true and correct to the best of my knowledge.

3. If called to testify under oath, my testimony would be consistent with this report.

4. The findings and conclusions in this report are based upon information that has been made available to me or known by me to date. My work in this matter is ongoing, and I reserve the right to modify, update, or supplement my analyses, findings, and any conclusions as additional information is made available to me or as I perform further analysis.

Under penalties of perjury, I declare that I have read the foregoing declaration and attached report, and that the facts stated in them are true to the best of my knowledge and belief.

Executed on: May 10, 2026

Dr. Moon Duchin

Moon Duchin

mduchin@uchicago.edu - data-democracy.org
Last updated May 2026

Education

University of Chicago — MS 1999, PhD 2005
Mathematics

Harvard University — BA 1998
Mathematics and Women's Studies

Appointments

University of Chicago
Professor of Data Science, Computer Science, and the College — 2025—
Faculty Director | Data and Democracy Research Initiative — 2025—

Cornell University
Professor of Mathematics and Public Policy – *on leave 2025–2026* — 2024–2025

Santa Fe Institute
External Faculty — 2024—

Tufts University
John Dibiaggio Professor of Citizenship and Public Service — 2023–2024
Professor of Mathematics (previously Associate Professor, Assistant Professor) — 2011–2024

Selected Awards & Distinctions

Sloan Professor, Simons-Laufer Mathematical Sciences Institute (SLMath) — Fall 2023
Seelye Fellow, University of Auckland Department of Mathematics — 2023
Radcliffe Fellow - Evelyn Green Davis Fellowship — 2018–2019
Guggenheim Fellow — 2018
Fellow of the American Mathematical Society — elected 2017
NSF C-ACCEL (PI) - Harnessing the Data Revolution: Network science of Census data — 2019–2020
NSF grants (PI) - CAREER grant and continuous grants from Topology/Geometric Analysis — 2009–2024

Selected Talks and Lectures

Keynote Lecture — June 2026
International School & Conference on Network Science (NetSci), Boston, MA

Keynote Lecture — October 2025
Computational Social Choice Workshop (COMSOC), Vienna, Austria

Plenary Lecture — October 2024
SIAM Conference on Mathematics of Data Science (MDS24), Atlanta, GA

Plenary Lecture — June 2023
Symposium on Computational Geometry (SoCG), Dallas, TX

Distinguished Plenary Lecture — June 2021
75th Anniversary Meeting of Canadian Mathematical Society, Ottawa, Ontario — *online (COVID)*

Selected Publications

open access links included

Political Geometry: Rethinking Redistricting in the U.S. with Math, Law, and Everything In Between
25 chapters, 475 pages. Birkhäuser Books 2022. Preprint online. (eds. Moon Duchin, Olivia Walch)
see: Introduction, Compactness, Communities of Interest, Clustering, Random Walks, Ranked Choice Voting.

Spanning trees and redistricting: New methods for sampling and validation
SIAM Review, to appear. Preprint. (with Sarah Cannon, Dana Randall, and Parker Rule)

VoteKit: A Python package for computational social choice research
Journal of Open Source Software **10** (109), 7477. Open access.
(with Christopher Donnay, Jack Gibson, Zach Glaser, Andrew Hong, Malavika Mukundan, and Jennfier Wang)

Discrete geometry for electoral geography
Political Geography, Volume 109, March 2024. Open access. (with Bridget Eileen Tenner)

Redistricting for proportionality
The Forum: A Journal of Applied Research in Contemporary Politics, Vol. 20, No. 3-4, Jan 2023, 371–393.
Open access. (with Gabe Schoenbach)

Private numbers in public policy: Census, differential privacy, and redistricting
Harvard Data Science Review, Spec. Iss. 2, June 2022. Open access. (w Aloni Cohen, JN Matthews, Bhushan Suwal)

Computational redistricting and the Voting Rights Act
Election Law Journal, Volume 20, Number 4 (2021), 407–441. Open access.
(with Amariah Becker, Dara Gold, and Sam Hirsch)

Selected Professional Service and Public-Facing Work

Program committees and editorial boards

Harvard Data Science Review	since 2019
ACM Conference on Fairness, Accountability, and Computing (FAccT)	2022
Symposium on Foundations of Responsible Computing (FORC)	2021
Advances in Mathematics	2018–2023

Committee on Science Policy 2020–2022
American Mathematical Society

Amicus Brief of Mathematicians, Law Professors, and Students 2019
principal co-authors: Guy-Uriel Charles and Moon Duchin
Supreme Court of the United States, in Rucho v. Common Cause - cited in dissent

Expert work for redistricting litigation 2018—
reports, deposition, and/or trial testimony
Pennsylvania, Wisconsin, North Carolina, Alabama, South Carolina, Texas, Boston, Georgia

League of Women Voters of Pa. v. Commonwealth, 178 A.3d 737 (Pa. 2018); *Johnson v. Wis. Elections Comm'n*, No. 2021AP1450-OA, 2022 WL 621082 (Wis. Mar. 3, 2022); *N.C. League of Conservation Voters v. Hall*, Nos. 21 CVS 015426, 21 CVS 500085, 2022 WL 2610499 (N.C. Super. Ct. Feb. 23, 2022); *Allen v. Milligan*, No. 2:21-cv-01530-AMM (N.D. Ala.) (three-judge ct.); *Carter v. Chapman*, No. 7 MM 2022, 2022 WL 702894 (Pa. Mar. 9, 2022); *S.C. State Conf. of the NAACP v. Alexander*, No. 3:21-cv-03302-MBS-TJH-RMG (D.S.C.) (three-judge ct.); *LULAC v. Abbott*, No. 3:21-CV-00259-DCG-JES-JVB (W.D. Tex.) (three-judge ct.); *O'Shea v. Boston City Council*, No. 1:22-cv-12048-PBS (D. Mass.); *Ga. State Conf. of the NAACP v. Georgia*, No. 1:21-cv-05338-ELB-SCJ-SDG (N.D. Ga.) (three-judge ct.); *Alpha Phi Alpha Fraternity, Inc. v. Raffensperger*, No. 1:21-cv-05337-SCJ (N.D. Ga.)

Presenter on Public Mapping, Statistical Modeling 2019, 2020
National Conference of State Legislatures

Committee on The Future of Voting: Accessible, Reliable, Verifiable Technology 2017–2018
National Academies of Science, Engineering, and Medicine

Committee on the Human Rights of Mathematicians 2016–2019
American Mathematical Society