

Exhibit A

STATE OF NEW YORK
SUPREME COURT : COUNTY OF STEUBEN

Index No. E2022-0116CV

TIM HARKENRIDER, GUY C. BROUGHT,
LAWRENCE CANNING, PATRICIA CLARINO,
GEORGE DOOHER, JR., STEVEN EVANS, LINDA
FANTON, JERRY FISHMAN, JAY FRANTZ,
LAWRENCE GARVEY, ALAN NEWPHEW,
SUSAN ROWLEY, JOSEPHINE THOMAS, and
MARIANNE VOLANTE,

Petitioners,

-against-

DECISION and ORDER

GOVERNOR KATHY HOCHUL, LIEUTENANT
GOVERNOR AND PRESIDENT OF THE SENATE
BRIAN A. BENJAMIN, SENATE MAJORITY LEADER
AND PRESIDENT PRO TEMPORE OF THE SENATE
ANDREA STEWART-COUSINS, SPEAKER OF THE
ASSEMBLY CARL HEASTIE, NEW YORK STATE
BOARD OF ELECTIONS, and THE NEW YORK STATE
LEGISLATIVE TASK FORCE ON DEMOGRAPHIC
RESEARCH AND REAPPORTIONMENT,

Respondents.

PRESENT: Hon. Patrick F. McAllister
Acting Supreme Court Justice

The Petitioners, through their attorneys, are seeking to set aside the newly enacted congressional districts and senate districts. The Petitioners allege that the Respondents did not have the authority under the constitution to create the new congressional and senate districts as they did, and further that the Respondents engaged in prohibited gerrymandering when creating the districts. The Respondents oppose the Petitioners' application. The court heard oral argument on March 3, 2022. The court reserved decision pending further development of the record. The court heard testimony of several experts and final arguments were heard on March 31, 2022.

In making this Decision and Order the court has considered all the submissions made in this matter. To specifically innumerate them would needlessly waste pages of paper and lots of ink. The e-file system has them all enumerated.

Background:

Although it has been quite some time since one party controlled the Senate, the Assembly, and held the governorship, New York State has a long history of gerrymandering when it comes to the creation of new voting districts. Whichever major political party has been in power has used the creation of new voting districts to their own advantage and to the disadvantage of their opposition. The result was that 98% of incumbents were getting reelected before the constitutional amendment in 2014.

The scourge of gerrymandering is not unique to New York. In recent years the courts throughout the country have been called on to invalidate gerrymandered districts and to create new fairer districts. League of Women Voters v. Commonwealth, 178 AD3d 737 (Pa. 2018); League of Women Voters of Fla. v. Detzner, 172 So. 3d 363 (Fla. 2015); Rucho v. Common Cause, 204 L.Ed. 2d 931 (2019). In 2014, New York State took major steps to avoid being plagued by gerrymandering by amending Article III §§4 & 5 of the New York State Constitution. The 2020 census was the first time after the constitutional amendment that led New York to draw new districts. Therefore, this is a case of first impression in many respects.

Under New York's very old rule there was a district seat for each county, except for Hamilton County. The Federal Courts found that unconstitutional because some counties were sparsely populated resulting in the citizens of those counties receiving disproportionate representation as compared to the heavily populated counties. Reynolds v. Sims, 377 U.S. 533 (1964); In re Orans, 15 NY2d 339 (1965). The law was changed to create districts that were roughly equal in population. In doing so other redistricting criteria in the Constitution such as not crossing county lines were given less value. See, Wolpoff v. Cuomo, 80 NY2d 70 (1992).

In the past most redistricting challenges were heard in federal court. However, in Rucho v. Common Cause, 139 S.Ct. 2482 (2019) the court ruled that federal courts do not have the authority to strike down maps based on partisan gerrymandering. Hence, this action is brought in state supreme court.

The courts have recognized that redistricting requires a balancing of sometimes competing Federal and State Constitutional requirements. "The test is whether the Legislature has 'unduly departed' from the State Constitution's requirements regarding contiguity, compactness and integrity of counties (Matter of Schneider v. Rockefeller, 31 NY2d 420, 429) in its compliance with federal mandates. It is not our function to determine whether a plan can be worked out that is superior to that set up by the legislature. Our duty is, rather, to determine whether the legislative plan substantially complies with the Federal and State Constitutions." Wolpoff v. Cuomo, (*supra*. at 78). To again quote Wolpoff "This is no simple endeavor". "Balancing the myriad requirements imposed by both the State and the Federal Constitution is a function entrusted to the Legislature. It is not the role of this, or indeed any, court to second-guess the determinations of the Legislature, the elective representatives of the people in this regard. We are hesitant to substitute our own determination for that of the Legislature even if

we would have struck a slightly different balance on our own.” ” Wolpoff v. Cuomo, (*supra*. at 79).

Standing:

The Respondents challenge whether or not the Petitioners in this case have standing to bring this action since the various Petitioners live in only a small number of Congressional and State Senate Districts.

It is the law’s policy to only allow an aggrieved person to bring a lawsuit. One not affected by anything a would-be defendant has done or threatened to do ordinarily has no business suing. *New York Practice 6th Ed.* Seigel §136 Pg. 270.

Many of the prior redistricting challenges where the courts have found petitioners do not have standing were cases focused only on a particular district boundary. In those cases if the petitioner did not live in the district he/she did not have standing. The Petitioners in this case are challenging the entire process as being in violation of the Constitutionally prescribed method for redistricting and in particular that the Congressional and State Senate maps were drawn with a political bias that is contrary to the Constitution. In Dairylea Cooperative, Inc. v. Walkey, 38 NY2d 6 (1975) a milk distributor sought to challenge a Commissioner of Agriculture decision which granted a milk dealer license to another entity. The court found there was standing because the Plaintiff was in the “zone of interest.” Further, only when there is a clear lack of injury would standing be denied.

In Society of Plastics Industry, Inc. v. County of Suffolk, 77 NY2d 761 (1991) the court made clear that having an economic interest is not sufficient to find standing if the issue is a non-economic interest. In that case to have standing the Plaintiff needed to show non-economic issues such as environmental or aesthetic reasons to challenge the legislation.

If this court finds the method used in enacting these maps violated the Constitution this would not affect just a handful of districts, but in fact would effect every district in New York. It would be impractical to require someone from every district to serve as a Petitioner. Once one district is invalid it impacts neighboring districts. But if the entire process is invalidated then everyone is impacted. The court finds these Petitioners have standing.

The 2014 Constitutional Amendment:

The 2014 amendment to the New York Constitution includes both a provision to prohibit discrimination against racial or language minority voting groups and a prohibition against creating maps with partisan bias. The prohibition against discriminating against minority voting groups at the least encapsulated the requirements of the Federal Voting Rights Act, and according to many experts expanded their protection. That new provision is not currently being challenged. Therefore, the court will focus on the prohibition against partisan

bias and the process by which redistricting was to take place.

To tell how important the people considered the issue of partisan bias not only was Article III section 4 amended to add “Districts shall not be drawn to discourage competition or for the purpose of favoring or disfavoring incumbents or other particular candidates or political parties”, but the Constitutional process for redistricting was also revised to create an Independent Redistricting Committee (IRC), which was to create non-biased bipartisan maps. This provision creating an IRC was intended to take the creation of proposed redistricting maps out of the hands of a one-sided, partisan legislature as much as possible. This IRC committee was to consist of appointees as follows: two members by the temporary president of the senate, two members by the speaker of the assembly, two by the minority leader of the senate and two by the minority leader of the assembly, plus two additional members which were to be appointed, one by the Democratic committee members and one by the Republican committee members. NY Constitution Art. III §5-b. Although the word “compromise” is not used it is clear from reading the constitutional amendment that the people of the State of New York believed that nonpartisan maps agreed upon as a result of a compromise were the best way to avoid gerrymandering when redistricting. At the very least in the event one party controlled both the senate and the assembly the amended constitution required there to be both support from some of the Democrats on the committee and also by some of the Republicans on the committee in order for the redistricting plan to receive the minimum seven votes necessary for the plan to be submitted to the legislature for approval, and to the governor for signature. NY Constitution Art III §5-b(f).(1) reads as follows:

“In the event that the speaker of the assembly and the temporary president of the senate are members of the same political party, approval of a redistricting plan and implementing legislation by the commission for submission to the legislature **shall** require the vote in support of its approval by at least seven members including at least one member appointed by each of the legislative leaders.” (Emphasis added)

In 2022 the Democrats controlled both the senate and the assembly. Nevertheless, the IRC committee failed to come up with any plan that obtained the minimum seven votes. There was no plan that received bipartisan support. That eventuality was anticipated in the constitution and according to Art. III §5-b(g) the plan or plans receiving the highest vote were to be submitted to the legislature. The Democrat committee and the Republican committee each submitted their own plans known as Plan A and Plan B with an equal number of IRC votes, but only from their own respective subcommittees. The court heard limited testimony concerning both Plan A and Plan B and received copies of those plans as exhibits. Even though a few of the proposed districts seemed to be the same in both plans, the IRC was not able to come up with a bipartisan plan that received seven votes. Both Plan A and Plan B were submitted to the legislature and the legislature quickly rejected both plans. According to the amended constitution, the committee was then to submit to the legislature a second set of redistricting plans. NY Constitution Art. III §4(b).

In 2022 the committee never submitted a second revised redistricting proposal to the legislature. Hence, the legislature went ahead and in a few days drafted and passed their own redistricting maps. A couple of Democrats voted against the legislature's redistricting maps, but otherwise the legislation was passed along party lines. It is these Congressional and Senate redistricting maps that this court must review to determine whether they violate the state and/or federal constitutions.

Before analyzing the specifics of the redistricting plans that were passed, it is important to review what did not happen. The IRC committee never embraced the task of coming up with compromise plans. It was clear from the amended constitution that the people of the State of New York believed the best way to avoid partisan politics in drawing new district lines was for a small group to work together to come up with compromise plans that obtained some bipartisan support. The plans did not have to be unanimously approved by the members of the committee, but at least some members of each subcommittee had to support the plan. The court comes to this conclusion from the following:

1. The Constitution was amended to add Article III §4(c)(5) which now reads as follows:
“Districts shall not be drawn to discourage competition or for the purpose of favoring or disfavoring incumbents or other particular candidates or political parties.” ;
2. The Constitution created an Independent Restricting Committee (IRC);
3. The IRC was constructed in such a way that neither political party would attain the seven votes necessary without bipartisan support;
4. The Constitution specifically reads that the approved plan had to have support from at least one appointee of each of the political leaders that appointed members to the IRC.
5. That even if the IRC plan was rejected it was the IRC and not the legislature that was authorized to draw a second set of revised maps.
6. That even if the second set of IRC maps was rejected, the legislature could only vary the enacted maps slightly from the IRC maps. There could be no more than a 2% deviation in any district according to the Redistricting Reform Act of 2012.
7. The people of the State of New York rejected the 2021 ballot proposal that would have authorized the legislature to draw the maps in the event the IRC was not able to come with maps.

By contrast the important constitutional amendment that protected racial and language minority voting groups from being discriminated against had only one provision. Article III §4(c)(1). There was no new committee appointed to insure that this amendment to the Constitution was carried out. The court can only conclude that the people of the State of New York thought the creation of a non-biased, nonpartisan IRC committee that must work together to arrive at bipartisan redistricting maps was crucial to avoid gerrymandering - and even though the legislature, under certain circumstances, had the power to create their own redistricting maps, the legislature would have been under scrutiny in rejecting two sets of proposed bi-partisan maps before drawing their own maps, a circumstance that would invite the wrath of the electorate. Further, the law only permits slight alterations of the IRC maps by the legislature.

The legislature is not free to ignore the IRC maps and develop their own.

In a democracy it is rare if ever that one party has all the right answers and all the right policies. A democracy works best when every responsible adult has a voice and when by listening to each other a compromise is worked out that incorporates part of everyone's opinion. Unfortunately, in recent years the idea of "compromise" has gotten the reputation as being something distasteful and something to be avoided. Yet compromise is the foundation upon which the United States Constitution, our political system, and our country was established. It is compromise that is the safest way to avoid the plague of partisan gerrymandering. If gerrymandering is allowed to occur then certain groups of voters will be discriminated against and become disenfranchised. Discrimination comes in many forms whether it be against ones race, sex, age, religion, political party or something else. The New York Constitution specifically says, "When drawing district lines, the commission shall consider whether such lines would result in the denial or abridgement of racial or language minority voting rights, and districts shall not be drawn to have the purpose of, nor shall they result in, the denial or abridgment of such rights. Districts shall be drawn so that, based on the totality of the circumstances, racial or minority language groups do not have less opportunity to participate in the political process than other members of the electorate and to elect representatives of their choice." Art. III §4(c)(1).

Gerrymandering discrimination hurts everyone because it tends to silence minority voices. Then none of us receives the benefit from the input of the silenced. Imagine a society where only Democrats are able to work on cancer research or only Republicans could be board certified as heart surgeons. Imagine all the accomplishments and discoveries that would never come to pass because the majority thought it best to eliminate minority positions or views. Lives and the common good are at stake. When we choose to ignore the benefits of compromise we not only hurt others, we hurt ourselves as well.

There is nothing in the constitution that permits the IRC to just throw up their collective hands. Courts are very familiar with juries who say "We can't come to an agreement" during deliberations. However, the more the court keeps requiring them to go back and try again the more likely they are to finally reach a consensus. It is rare for the court to end up with a hung jury. Here the IRC stopped working well before their deadline. What someone should have done was bring an action to compel the members of the IRC to continue their work or for the political sides of the legislatures that appointed 8 of the 10 members of the IRC to remove and replace any IRC member that did not embrace his/her constitutional role. NY Constitution Art III §5-b(a)(1)-(4). Then either the court could have compelled the IRC to work together until they came up with a plan or the IRC new members could develop new bipartisan maps. Instead the IRC was permitted to throw up their hands and the legislature stepped in. Does the Constitution permit the legislature to take over if the IRC fails to do it's job? By the Constitution the IRC's drop dead date for submitting a plan was February 28th. This action was commenced long before that deadline.

Under the “new” process that was put in place a committee (IRC) was formed to try to create a fair redistricting map. The committee had 4 Democrats, 4 Republicans and 2 people that could not be Democrats or Republicans. The Democrats chose 1 of the 2 and the Republicans chose the other. This year the committee met and considered a number of plans. The Democrats came up with a plan (Plan A) and the Republicans came up with a different plan (Plan B). The IRC could not come up with a compromise plan so both the Democrat and Republican plans were submitted to the legislature, although neither plan had obtained the required seven votes. Seven votes in favor of a plan were required since the Democrats control both the Senate and the Assembly. Both submitted plans were rejected by the legislature and sent back to the committee. The committee could not agree on anything different. They had a 15 day deadline but the IRC stopped working well before the deadline. So the legislature created it’s own map. The legislature’s plan differed significantly from either Plan A or Plan B submitted by the IRC.

Under the 2014 amendment the districts shall not be drawn to discourage competition or for the purpose of favoring or disfavoring incumbents or other particular candidates or political parties. Under constitutional criteria the maps must be compact, contiguous, of equal populations, avoid abridgment of racial or language minority voting rights, maintain cores, and not cross the boundary lines of pre-existing subdivisions such as counties, cities, towns and communities of interest and there was to be no partisan gerrymandering. “The anti-gerrymander provision of the State Constitution is found in article III. Section 4 requires that Senate districts ‘be in as compact form as practicable’ and ‘consist of contiguous territory’; and section 5 provides that Assembly districts shall be formed from ‘convenient and contiguous territory in as compact form as practicable. As we recognized in Matter of Orans, (15 NY2d 339, 351, supra), these constitutional requirements remain binding although they must be harmonized with the first principle of substantial equality of population among districts.” Schneider v. Rockefeller, 31 NY2d 420 (1972).

The Failed 2021 Constitutional Amendment and Subsequent 2021 Legislation:

The political powers realized that the redistricting compromise plan envisioned by our 2014 amended constitution had a flaw. The plan lacked a way to handle the contingency of the committee not coming up with a bipartisan plan(s). Thus another constitutional amendment was proposed and put before the voters in November of 2021, under which the legislature could create and the Governor enact its own redistricting plan in the event the IRC committee failed to carry out its constitutionally prescribed duties. This constitutional amendment was voted down by the people of the State of New York - Republicans, Democrats, and Independents alike. Just three (3) weeks later, the legislature enacted legislation signed by the governor giving themselves the power to do exactly what the people of the State of New York had just voted down three (3) weeks earlier. Even though the proposed 2021 Constitutional Amendment contained other new provisions, none were hot button issues. In part this decision will focus on that legislation that was enacted just three (3) weeks after the proposed 2021 Constitutional Amendment was voted down.

Redistricting Reform Act of 2012 (The 2% Rule):

Another key component of the Redistricting Reform Act of 2012 that directly impacts the subsequent 2014 constitutional amendment was that: **“Any amendments by the senate or assembly to a redistricting plan submitted by the independent redistricting commission, shall not affect more than two percent of the population of any district contained in such plan.”** Redistricting Reform Act of 2012 N.Y. Sess, Laws 17 §3. The currently enacted plans vary by more than 2% from either of the plans submitted by the IRC. The Respondents do not allege that the plans they developed adhere to the 2% modification limit of either IRC map that was submitted. The Respondents contend that the “Notwithstanding any other provision” language of the newly enacted 2021 legislation made it so the legislature was not bound by the 2% rule. Obviously, it could not be compared to a final IRC map as such a map was never submitted. The court finds the 2% variance rule was another important procedural check to avoid partisan gerrymandering. These current maps ignore that procedural requirement. In essence, the legislature through the 2021 legislation, freed themselves from the constitutional process and the 2% limitation.

Analysis:

The New York Constitution Article III §§4 & 5 describes the process for the creation of election districts. Unconsolidated Laws §4221 says the supreme court has the jurisdiction to hear a petition brought by any citizen that wishes to challenge the redistricting law. The court is mandated to give this case the highest priority. The court has 60 days in which to render a decision from when the petition was filed. The Petition was filed February 3, 2022 so a decision must be rendered by April 4, 2022. If the court finds the redistricting plans invalid the legislature shall have a reasonable opportunity to correct their deficiency. Art. III §5. The Petitioners contend that this provision should be ignored by the court because the legislature never properly had jurisdiction to create these maps in the first place, since the IRC never submitted a second map to be considered.

The Petitioners seek to have this court find the 2022 Congressional Map and the 2022 Senate Map to be void *ab initio*. The Petitioners allege the legislature lacked the constitutional authority to enact redistricting maps because the Constitution proscribed an exclusive process, which in 2022 was not followed.

Not only must this court interpret the redistricting process under the 2014 amendment to the Constitution, but must also determine whether or not the legislature had the authority to alter the constitutional process by passing the recent 2021 legislation, when granting that same legislative authority was voted down by the people of the State of New York in the 2021 proposed Constitutional Amendment three weeks earlier.

On the November, 2021 ballot there was a proposed constitutional amendment to Article III Section 4(b) of the New York State Constitution that would have added language that

in the event the IRC redistricting commission fails to vote on a redistricting plan and implementing legislation by the required deadline then each house should introduce a redistricting plan and implementing legislation. When the constitutional amendment was voted down by the People of the State of New York the legislature passed a 2021 amendment to the Redistricting Reform Act of 2012 Section 4 (a) & (c) to provide that if the commission does not vote on any redistricting plan for any reason the legislature shall draft redistricting maps and implementing legislation and submit it to the governor.

In challenging the recently enacted 2021 legislation this court must start with the presumption that the legislation is constitutional. Matter of Moran Towing Corp. v. Urbach, 99 NY2d 443 (2003). Further, facial constitutional challenges like this one are disfavored. Overstock.com, Inc. v. New York State Dept. of Taxation and Fin., 20 NY3d 586 (2013). A challenge to a duly enacted statute requires the challenger to satisfy the substantial burden of demonstrating that in every conceivable application the enacted law suffers wholesale constitutional impairment. Center for Jud. Accountability, Inc. v. Cuomo, 167 AD3d 1406 (Third Dept. 2018); appeal dismissed 33 NY3d 933 (2019). Basically the challenger must establish that there is no set of circumstances under which the legislation could be valid. Overstock.com, Inc. v. New York State Dept. of Taxation and Fin., (supra). This court must make every effort to interpret the statute in a manner that otherwise avoids a constitutional conflict. See, People v. Davidson, 27 NY3d 1083 (2016).

The Petitioners contend that the November, 2021 legislation not only amended the Redistricting Reform Act of 2012 but also created a second path for redistricting that is not in the constitution. The constitution envisions the redistricting process to occur through the IRC. Only after the IRC has twice submitted maps that are rejected by the Legislature does the Legislature take up the process. The Constitution uses such words as “**the**” and “**shall**” to indicate this was the way and the only way that redistricting maps were to be drawn.

The 2021 legislation purportedly revised the 2012 Redistricting Reform Act so that if the IRC fails for any reason to submit a plan then the legislature shall prepare their own redistricting maps. However, the legislature can not override a constitutional barrier by passing a new law. City of N.Y. v. N. Y. State Div. of Human Rights, 93 NY2d 768 at 774 (1999). Further, this 2021 legislation purportedly negated the 2% variance limitation if the legislature drafted their own maps.

This court finds that by enacting the legislation in November of 2021 the legislature made it substantially less likely that the IRC would ever submit a bipartisan plan when the senate, assembly and governorship are all controlled by the same political party. Since the senate and assembly leaders appoint four of the ten members of the IRC, these four members, and by extension the legislature, would essentially have carte blanche veto power to keep the vote below the seven votes necessary to pass such a bipartisan plan. The intent of the 2014 constitutional amendment is to have bipartisan maps drawn by the IRC commission submitted and passed by the legislature.

Some might argue that whether the IRC failed to twice submit bipartisan maps or whether they did submit bipartisan maps and the legislature voted them down twice that it doesn't make any difference; that the legislature had the power to step in under either scenario. However, this court sees a difference. In this case the Legislature can say the IRC did not come up with bipartisan maps so we had to act. The IRC was a scapegoat for the legislature. If on the other hand the constitutional process were followed, the legislature would be in the awkward political position of having to vote down two sets of proposed bipartisan redistricting maps before drafting their own maps, at the risk of raising the ire of the voters at the next election. In addition the legislature, in drafting their own maps, would be under pressure and scrutiny to adopt a good portion of the proposed bipartisan maps submitted by the IRC commission, and they would also be limited by the no more than 2% alteration rule. The conclusion is that the currently enacted maps would have been substantially different had the constitutional process been followed.

This court finds that the November, 2021 legislation which purported to authorize the legislature to act in the event the IRC failed to act was not a mere enactment of legislation to help clarify or implement the Constitution, but in fact substantially altered the Constitution. Alteration of the Constitution can only be done by constitutional amendment and as recently as November, 2021 the people rejected the constitutional amendment that would have granted the legislature such authority. Therefore, this court finds the recently enacted Congressional and Senate maps are unconstitutional. Further, the enacted maps are void *ab initio*. Under the currently constructed Constitution when the IRC failed to act and submit a second set of maps there is nothing the Legislature has the power to do. Therefore, the court will need to step in. The court would note that not only are the Congressional District Maps and Senate District Maps void but the Assembly District Maps are void *ab initio* as well. The same faulty process was used for all three maps. Therefore new maps will need to be prepared for the Assembly Districts as well.

The People of the State of New York have spoken clearly. First, in the 2014 Constitutional Amendment not only did the People include language to prevent gerrymandering, but they also set forth a process to attain bipartisan redistricting maps through the IRC. The People of the State of New York again spoke loudly when they soundly voted down the proposed 2021 Constitutional amendment that would have granted authority to the Legislature to bypass the IRC redistricting process.

Although the court has already stricken the enacted redistricting maps as unconstitutional the court will discuss the Petitioners' further argument that the congressional and senate redistricting maps were the result of partisan bias. The standard of proof is beyond a reasonable doubt.

When considering redistricting there are two fundamental federal law principles that apply. There is the Equal Protection Clause of the 14th Amendment and the Voting Rights Act. The Equal Protection clause requires districts to be composed of the same number of residents

or within acceptable variance thereof. The Voting Rights Act prohibits drawing lines that deny racial or language minorities a fair opportunity to elect a candidate of their choice. In addition to those federal requirements, the New York constitution adds several other factors which must be considered, including the district being contiguous, compact, drawn so as to not favor or disfavor an incumbent or a political party, trying to keep county and town boundaries within the same district, and trying to maintain the cores of prior districts. Because of the need to make districts equal in population it is not always possible to meet all of the other factors to be considered. Article III §4 (c) 1 - 5 list a number of factors which “shall” be considered. “**Shall**” is a requirement.

What is compactness? “Reapportionment is one area in which appearances do matter.” Shaw v. Reno, 509 U.S. 630 at 647 (1993). Compactness has been described in scientific terms as the extent to which a district’s geography is dispersed around its center. In practice many courts use the eyeball test. Bush v. Vera, 517 U.S. 952 at 959 (1996). The Petitioners in this case claim districts that look like snakes or are elongated over hundreds of miles violate the Constitutional requirement of compactness. What the courts have found is that “compactness” may vary depending on whether or not the issue is racial gerrymandering or dilution of vote cases. “Dramatically irregular shapes may have sufficient probative force to call for an explanation.” Shaw v. Reno, (*supra*. at 647); Karcher v. Daggett, 462 U.S. 725 at 755 (1983).

A contiguous district requires that all parts of the district be connected. This is usually measured by whether it is possible to travel to all parts of the district without ever leaving the district. In this case, some of these proposed districts you would need a boat to go from one section of the district to another, but at least you do not have to cross district lines, just County lines and other political boundaries.

According to the eyeball test there are some districts that don’t look like they are compact. They include Congressional Districts 1,2, 3, 7, 8, 10, 17, 18, 19, 22 and 24. However, the eyeball test is not proof beyond a reasonable doubt.

The preservation of the cores of prior districts. At least 11 states, including New York, include this as part of the criteria when drawing new maps. The likely theory behind this is that by maintaining continuity of districts you maintain continuity of the representation for the citizens within that group. Obviously, when the number of districts has to change it is impossible to fully comply with this criteria.

According to *Redistricting Law 2020* by Davis, Strigari, Underhill, Wice & Zamarripa 18 states have now included language prohibiting redistricting to be drawn with the intent of favoring or disfavoring an incumbent or a political party, with 12 other states currently in the process of adopting neither favoring or disfavoring language. This language was the new anti-gerrymandering requirement added by the 2014 New York Constitutional Amendment.

Although the Federal Courts no longer have the authority under the First and/or

Fourteenth Amendments to invalidate maps based on partisan gerrymandering, numerous states and state courts have been addressing these issues. Rucho v. Common Cause, (*supra.*). States have been addressing this through constitutional amendments, the appointments of independent commissions and by prohibiting the drawing of district lines for partisan advantage. Rucho v. Common Cause, (*supra.*). In recent years both Florida and Pennsylvania courts have found and overturned maps based on partisan gerrymandering. See, League of Women Voters of Pa. v. Commonwealth 644 PA 287 (2018); League of Women Voters of Fla. v. Detzner, 172 So. 3d 363 (2015). In both of these cases the courts interpreted their respective constitutional provision which prohibited redistricting with the intent to favor or disfavor a political party or an incumbent. In the 2014 Constitutional Amendment Art. III §4(c)(5) New York added “Districts shall not be drawn to discourage competition or for the purpose of favoring or disfavoring incumbents or other particular candidates or political parties.” The meaning of this portion of the constitution and how it applies to the recently enacted Congressional and State Senate maps is key. Courts have for a long time struggled with being able to adequately define a standard to apply in such situations. Everyone agrees that politics plays some part in redistricting. In Davis v. Bandemer, 478 U.S. 109 (1986). At what point does permissible partisanship become unfair or unconstitutional? How much is too much? Comm. for a Fair & Balanced Map v. Ill. State Bd. of Elections, No. 11 C 5065 2011 U.S. Dist. LEXIS 117656 (2011).

In this case the Petitioners have presented expert testimony through Shawn Trende indicating that he ran at first 5,000 and then 10,000 potentially unbiased simulated redistricting maps. Respondents’ expert Michael Barber testified he ran 50,000 maps attempting to duplicate Trende’s maps. Trende and Barber’s maps came up with the same results. The result according to Trende’s Gerrymandering Index was that the maps adopted by the Legislature and signed by Governor Hochul were the most favorable to Democrats of any of the sample maps. Barber disagreed with Trende’s use of a Gerrymandering Index and concluded that the enacted maps actually favored Republicans. Likewise, Respondents other experts came to the conclusion that the enacted maps actually favored Republicans. The court finds it strains credulity that a Democrat Assembly, Democrat Senate, and Democrat Governor would knowingly pass maps favoring Republicans. Petitioners had two experts testify and Respondents had five experts testify. However, it is not the number of experts that is determinative but the quality and credibility of the expert testimony.

The Respondents’ expert attempted to discredit Trende’s analysis by claiming that a large percentage of Trende’s simulated maps are redundant in that the maps essentially show the same boundaries. It is claimed that as many as one half to three/fourths of the simulated maps are duplicative. Therefore, it was argued that Trende should have eliminated the duplicates as he did when addressing Maryland maps. Duplication or redundancy is claimed to be a common problem with this type of simulation. However, Trende ultimately did 10,000 simulated maps which could be reduced to 2,500 simulated maps if three quarters were redundant maps and were eliminated. Even under this analysis the enacted maps are the worst of 2,500 simulated maps, ie the worst of the worst.

What all the experts agreed upon was that the enacted congressional map would likely lead to the Republicans winning four Congressional seats. The Republicans currently hold 8 of the 27 congressional seats. A majority of the 5,000, 10,000 or 50,000 unbiased maps would have the Republicans winning less than four seats if you use 50.01% Democrats in a given district as the standard for which way a given district is likely to elect a Democrat or a Republican. Thus the Partisan Index used by the Respondents experts conclude the enacted maps favors Republicans because they are likely to receive four seats. However, both Trende and Respondents' expert, Jonathan Katz, testified that historically the Republicans win a district up to 52% Democrat and that incumbent Republicans enjoy an additional 3%, which means the districts would have to be at least 55% Democrats for the Democrats to actually win. The enacted maps gives the Democrats at least 55% in every district except the four that are Republican leaning. Obviously actual elections vary but as a general rule that is what the reliable historical data shows. What Trende's report shows is that the first four districts heavily lean toward the Republicans. See Trende's Gerrymandering Index (graphs pgs. 14 & 15 of the Expert Report dated February 14, 2021). However, in the enacted plans congressional seats 5 - 13 not only favor Democrats but show 55% or higher Democrats in those districts making them noncompetitive and virtually impossible for a Republican to win. However, in the "unbiased" sampling by Trende and Barber as few as 2 seats heavily favor Republicans, but in sample districts 3 - 13, while the Democrats were favored in those samples, their advantage was in most cases substantially less than 55% Democrat leaning and in many cases less than 52% Democrat leaning. That would mean these districts would be competitive and if historical data is accurate would likely result in several of those seats going to Republicans.

The Respondents' experts claim that the Gerrymandering Index should not be recognized by the court. The Petitioners cite Szeliga v. Lamone, C-02-CV-21-001816, a recent Maryland case (March 25, 2022) that recognized the Gerrymandering Index as proof that the maps were biased.

What is clear from the testimony of virtually every expert (Trende, Lavigna, Barber, and Katz) is that at least in the congressional redistricting maps the drawers packed Republicans into four districts thus cracking the Republican voters in neighboring districts and virtually guaranteeing Democrats winning 22 seats. In 5,000, 10,000 or 50,000 unbiased computer drawn maps there were several, and perhaps as many as 10 competitive districts. The enacted congressional map shows virtually zero competitive districts. Trende concludes and the court agrees that this shows political bias. Katz and Barber agree with Trende that creating districts with no competitive districts is a potential sign of political bias. However, both Katz and Barber conclude there is no bias since Republicans are likely to win four seats; and that four seats is higher than most of the projected wins assuming the Democrats win every district that is at least 50.01 % Democrat leaning which is what the Partisan Index is designed to depict.

The court finds that Trende's maps, and those drawn by Katz and by Barber, do not include every constitutional consideration. Katz and Barber testified they attempted to duplicate the maps drawn by Trende using the same variables used by Trende. However, none

of Respondents' experts attempted to draw computer generated maps using all the constitutionally required considerations. Katz said to do so would have significantly increased the time it would take to draw the maps. Both Katz and Barber thought that by including every constitutional consideration the maps would have been different, but they could not say how or by how much they would have differed. If they had done so and could thus demonstrate that the additional constitutional factors not considered in Trende's maps cause a representative sample that differed appreciably from Trende's sample then the court could have considered those maps against the enacted map to see whether or not the same political bias was shown. Since no such computer generated maps were provided to the court the court must use the evidence before it.

According to Rucho (*supra.*) the fundamental difficulty in formulating a standard to adjudicate whether or not partisan gerrymandering has occurred is for the court to determine what is "fair". Is fairness formulating a greater number of competitive districts? Whitford v. Gill, 218 F. Supp.3rd 837 (W.D. Wis 2016). Does fairness require as many safe seats for each party as possible? Davis v. Brademer, 478 U.S. 109 (1986). This court concludes that generating a map that significantly reduces the number of competitive seats is a clear sign of bias.

The court finds by clear evidence and beyond a reasonable doubt that the congressional map was unconstitutionally drawn with political bias in violation of Art. III §4(c)(5). One does not reach the worst of 2,500, 5,000, 10,000 or 50,000 maps by chance. Therefore, the court agrees with the Petitioners that the congressional map was unconstitutionally drawn with political bias in violation of Art. III §4(c)(5) of the New York Constitution.

The court will next consider the newly enacted senate map. The Petitioners presented credible evidence that this map also was gerrymandered. However, Todd Breitbart testified in-depth that many of the changes found between the 2012 enacted senate map and the 2022 enacted senate map were attempts by the legislature to correct malapportionment, and other constitutional deficiencies in the 2012 map. The court finds that testimony sufficiently credible. However, the court does not accept Breitbart's premise that the Republicans essentially gerrymandered the 2012 senate map since in 2012 the Assembly and Governorship were controlled by the Democrats and so the Republicans and Democrats had to work together to enact the maps. Therefore Petitioners could not show that the enacted 2022 senate map was drawn with political bias beyond a reasonable doubt. However, since this map was already struck down as void *ab initio* a new map will need to be drawn.

Having declared the recently enacted 2022 maps unconstitutional where do we go from here. It was clear from the testimony that not only is the 2012 congressional map not useable because New York State now only has 26 instead of 27 Congressional districts, but the 2012 senate map is also not useable because as a result of population shifts that map is now constitutionally malapportioned. Therefore, that leaves no maps. At this point in time, the candidates have been collecting signatures for over a month to get on the ballot for districts that

no longer exist. The end of the signature gathering process will occur within a few days. Yet Petitioners urge the court to have the parties quickly submit new maps and create new election time-lines so that the election can proceed on properly drawn redistricting maps that are free of partisan bias. The Respondents contend it is too late in the election cycle to try to draft new maps and then hold elections based on the new maps.

The Respondents point out that the U.S. Supreme Court has long ruled that Congressional elections can proceed even under defective lines. Merrill v. Milligan, 142 S. Ct. 879(2022); Abbott v. Perez, 138 S. Ct. 2305 (2018); Wells v. Rockefeller, 394 U.S. 542 (1969). In Wells v. Rockefeller the court faced a similar time deadline when on March 20, 1968 the primary election was three months away and yet the court permitted the election based on the redistricting maps that were constitutionally infirm, rather than delay the primaries and redraw the redistricting maps. Therefore, the Respondents urge this years election to proceed under the unconstitutional maps.

The Petitioners urge the court to strike down these constitutionally infirm maps and have new maps prepared. This of course will require revision of the election schedule since candidates would not even know what district he/she would run in before most of the current deadlines would have expired. The Petitioners urge moving the primary back to as late as August 23, 2022. The Petitioners cite other states that have recently moved their primaries to a later date because of challenges to the redistricting maps. See, Harper v. Hall, 865 S.E.2d 301, 302 (N.C. 2021); In re 2022 Legislative Districting of the State of Maryland, No. COA-MISC-0025-2021 (Md. Mar. 2022).

This court is well aware that this Decision and Order is only the beginning of the process and not the end of the process. There will likely be appeals to the Appellate Division and the Court of Appeals in addition to what ever time it takes to draw new maps. Then once the maps are drawn the County Boards of Election need time to apply the new redistricting maps to the precincts within their respective borders.

On March 3, 2022 when the court initially denied Petitioners application to stay the election process the court was not at all sure that the Petitioners could overcome the extremely high hurdle of demonstrating the maps violated the constitution. Thus, the court did not see a substantial likelihood for ultimate success by the Petitioners. Therefore the request for a temporary stay was denied. The court was also unaware of the prior courts ruling with regard to not permitting new elections in Congressional races in 2023 even when the maps were found to be unconstitutional. Having now determined that the various redistricting maps are unconstitutional the court is still concerned about the relatively brief time in which everything would need to happen to draw new maps, complete the appellate review process, revise the election process guidelines, and give the county election commissioners time to do their jobs.

However, this court's deadline of April 4, 2022 to make a decision was set by law (60 days to render a decision) in order to allow time for elections under newly drawn maps.

As the court sees it the drop dead date for sending out overseas military ballots is forty-five days before the November 8, 2022 general election. Thus, the ballots have to be finalized and mailed out no later than September 23, 2022. Between the primary election and that September 23rd date the votes have to be counted, the elections need to be certified, candidates need time to challenge election results, and the ballots need to be prepared. Thus, August 23, 2022 is the last possible date to hold a primary. An earlier August date would be preferred from the stand point of providing sufficient time from the holding of the primary to the completion of the November ballot. However, the same 45 day rule applies with regard to sending out overseas primary ballots. Thus, the primary ballots would have to be sent out no later than July 8, 2022. That only leaves about 100 days from today for the drawing of new maps, the candidates to gather signatures, the preparation of the primary ballots, the appellate review process, etc.

The court is mindful that in the Maryland case decided on March 25, 2022 that court threw out the recently enacted gerrymandered maps and ordered new maps to be drawn. This court finds that although it will be very difficult this court must require new maps to be drawn and the current maps are void and unusable. The court will leave it to the legislature and governor to develop new time frames for gathering signatures, how many signatures will be required to be on the ballot, whether signatures already gathered can be counted toward meeting the quota to appear of the ballot, etc.

N.Y. Constitution Art III §5 states as follows:

“In any judicial proceeding relating to redistricting of congressional or state legislative districts, any law establishing congressional or state legislative districts found to violate the provisions of this article shall be invalid in whole or in part. In the event that a court finds such a violation the legislature **shall** have a full and reasonable opportunity to correct the law’s legal infirmities.” (Emphasis added)

Therefore, the Constitution requires the Legislature to be given another chance to pass maps that do not violate the Constitution. Part of the problem is these maps were void *ab initio* for failure to follow the constitutional process of having bipartisan maps presented by the IRC. The second problem was the Congressional map that was presented was determined to be gerrymandered. The Legislature could correct the gerrymander issue, but they can not correct the constructional failure to have IRC present bipartisan maps for Congressional, State Senate, and State Assembly Districts. Therefore, the court will require any revised maps generated by the Legislature to receive bipartisan support among both Democrats and Republicans in both the senate and the assembly. The maps do not have to be unanimously approved, but they must enjoy a reasonable amount of bipartisan support to insure the constitutional process is protected. This they will need to do quickly. In Maryland the court gave their legislature 5 days in which to submit appropriate new maps for the court to review. The court will give the legislature until April 11, 2022 (which is slightly more time than they took to prepare the

enacted maps) to enact new bipartisan supported proposed maps that meet the constitutional requirements. This court will review those maps. If the maps do not receive bipartisan support or if no revised maps are submitted, then I will retain an expert at the States expense to draw new maps. Not only would the process be expensive it is possible that New York would not have a Congressional map in place that meets the Constitutional requirements in time for the primaries even with moving the primary date back to August 23, 2022.

NOW, therefore, upon consideration of all papers and proceedings heretofore had herein, and after due deliberation, it is

ORDERED, ADJUDGED, and DECREED the Petitioner are found to be in the zone of interest and therefore having standing to bring this action; and it is further

ORDERED, ADJUDGED, and DECREED that the Governor and Lt. Governor are necessary parties to this action; and it is further

ORDERED, ADJUDGED, and DECREED that the process used to enact the 2022 redistricting maps was unconstitutional and therefore void *ab initio*; and it is further

ORDERED, ADJUDGED, and DECREED that with regard to the enacted 2022 Congressional map the Petitioners were able to prove beyond a reasonable doubt that the map was enacted with political bias and thus in violation of the constitutional prohibition against gerrymandering under Article III Sections 4 and 5 of the Constitution; and it is further

ORDERED, ADJUDGED, and DECREED that the maps enacted by 2021-2022 N.Y. Reg. Sess. Leg. Bills S8196 and A.9039-A (as technically amended by A.9167) be, and are hereby found to be void and not usable; and it is further

ORDERED, ADJUDGED, and DECREED that the maps enacted by 2021-2022 N.Y. Reg. Sess. Leg. Bills S9040-A and A.9168 be, and are hereby found to be void and not usable; and it is further

ORDERED, ADJUDGED, and DECREED that congressional, state senate and state assembly maps that were enacted after the 2010 census are no longer valid due to unconstitutional malapportionment and therefore can not be used; and it is further

ORDERED, ADJUDGED, and DECREED that the legislation enacted in November, 2021 purporting to create a way to bypass the IRC is unconstitutional and in clear violation of the Peoples' express desire to not amend the Constitution to permit the Legislature to act in the event the IRC failed to submit maps; and it is further

ORDERED, ADJUDGED, and DECREED that the enacted legislation L. 2021 c. 633 §1 be and is hereby found to be void and not usable and shall be stricken from the books; and it

is further

ORDERED, ADJUDGED, and DECREED that the Petitioners and others have been injured as a result of the unconstitutional enacted maps; and it is further

ORDERED, ADJUDGED, and DECREED that in order to grant appropriate relief the court hereby grants to Petitioners a permanent injunction refraining and enjoining the Respondents, their agents, officers, and employees or others from using, applying, administering, enforcing or implementing any of the recently enacted 2022 maps for this or any other election in New York, included but not limited to the 2022 primary and general election for Congress, State Senate and State Assembly; and it is further

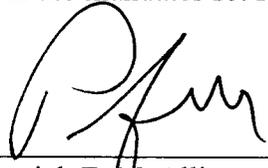
ORDERED, ADJUDGED, and DECREED that the Legislature shall have until April 11, 2022 to submit bipartisanly supported maps to this court for review of the Congressional District Maps, Senate District Maps, and Assembly District Maps that meet Constitutional requirements; and it is further

ORDERED, ADJUDGED, and DECREED that in the event the Legislature fails to submit maps that receive sufficient bipartisan support by April 11, 2022 the court will retain a neutral expert at State expense to prepare said maps; and it is further

ORDERED, ADJUDGED, and DECREED that any request for attorneys' fees and costs is denied; and it is further

ORDERED, ADJUDGED, and DECREED that this Court retains jurisdiction to issue any and all further orders which shall be necessary to comply with the mandates set forth herein.

Dated: March 31, 2022



Hon. Patrick F. McAllister
Acting Supreme Court Justice

ENTER

Exhibit B

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF STEUBEN

-----X

TIM HARKENRIDER, GUY C. BROUGHT,
LAWRENCE CANNING, PATRICIA CLARINO,
GEORGE DOOHER, JR., STEPHEN EVANS, LINDA
FANTON, JERRY FISHMAN, JAY FRANTZ,
LAWRENCE GARVEY, ALAN NEPHEW, SUSAN
ROWLEY, JOSEPHINE THOMAS, and MARIANNE
VOLANTE,

Index No. E2022-0116CV

Petitioners,

-against-

GOVERNOR KATHY HOCHUL, LIEUTENANT
GOVERNOR AND PRESIDENT OF THE SENATE
BRIAN A. BENJAMIN, SENATE MAJORITY LEADER
AND PRESIDENT PRO TEMPORE OF THE SENATE
ANDREA STEWART-COUSINS, SPEAKER OF THE
ASSEMBLY CARL HEASTIE, NEW YORK STATE
BOARD OF ELECTIONS, and THE NEW YORK STATE
LEGISLATIVE TASK FORCE ON DEMOGRAPHIC
RESEARCH AND REAPPORTIONMENT,

Respondents.

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**EXPERT REPORT
OF SEAN P. TRENDE
FEBRUARY 14, 2021**

Expert Report of Sean P. Trende

I. Qualifications

Professional Experience:

I joined RealClearPolitics in January of 2009 after practicing law for eight years. I assumed a full-time position with RealClearPolitics in March of 2010. My title is Senior Elections Analyst. RealClearPolitics is a company of around 50 employees, with offices in Washington D.C. It produces one of the most heavily trafficked political websites in the world, which serves as a one-stop shop for political analysis from all sides of the political spectrum and is recognized as a pioneer in the field of poll aggregation. It produces original content, including both data analysis and traditional reporting. It is routinely cited by the most influential voices in politics, including David Brooks of *The New York Times*, Brit Hume of *Fox News*, Michael Barone of *The Almanac of American Politics*, Paul Gigot of *The Wall Street Journal*, and Peter Beinart of *The Atlantic*.

My main responsibilities with RealClearPolitics consist of tracking, analyzing, and writing about elections. I collaborate in rating the competitiveness of Presidential, Senate, House, and gubernatorial races. As a part of carrying out these responsibilities, I have studied and written extensively about demographic trends in the country, exit poll data at the state and federal level, public opinion polling, and voter turnout and voting behavior. In particular, understanding the way that districts are drawn and how geography and demographics interact is crucial to predicting United States House of Representatives races, so much of my time is dedicated to that task.

Publications and Speaking Engagements:

I am currently a Visiting Scholar at the American Enterprise Institute, where my publications focus on the demographic and coalitional aspects of American Politics. There, I have written on the efficiency gap, a metric for measuring the fairness of redistricting plans.

I am the author of *The Lost Majority: Why the Future of Government Is Up for Grabs and Who Will Take It*. In this book, I explore realignment theory. It argues that realignments are a poor concept that should be abandoned. As part of this analysis, I conducted a thorough analysis of demographic and political trends beginning in the 1920s and continuing through the modern times, noting the fluidity and fragility of the coalitions built by the major political parties and their candidates.

I co-authored the 2014 *Almanac of American Politics*. The Almanac is considered the foundational text for understanding congressional districts and the representatives of those

districts, as well as the dynamics in play behind the elections. PBS's Judy Woodruff described the book as "the oxygen of the political world," while NBC's Chuck Todd noted that "[r]eal political junkies get two *Almanacs*: one for the home and one for the office." My focus was researching the history of and writing descriptions for many of the newly-drawn districts, including tracing the history of how and why they were drawn the way that they were drawn.

I have spoken on these subjects before audiences from across the political spectrum, including at the Heritage Foundation, the American Enterprise Institute, the CATO Institute, the Bipartisan Policy Center, and the Brookings Institution. In 2012, I was invited to Brussels to speak about American elections to the European External Action Service, which is the European Union's diplomatic corps. I was selected by the United States Embassy in Sweden to discuss the 2016 elections to a series of audiences there, and was selected by the United States Embassy in Spain to fulfil a similar mission in 2018. I was invited to present by the United States Embassy in Italy, but was unable to do so because of my teaching schedule.

In the winter of 2018, I taught American Politics and the Mass Media at Ohio Wesleyan University. I taught Introduction to American Politics at The Ohio State University for three semesters from Fall of 2018 to Fall of 2019, and again in Fall of 2021. In the Springs of 2020 and 2021, I taught Political Participation and Voting Behavior at The Ohio State University. This course spent several weeks covering all facets of redistricting: how maps are drawn, debates over what constitutes a fair map, measures of redistricting quality, and similar topics. I am teaching this course this semester as well.

It is my policy to appear on any major news outlet that invites me, barring scheduling conflicts. I have appeared on both Fox News and MSNBC to discuss electoral and demographic trends. I have been cited in major news publications, including *The New York Times*, *The Washington Post*, *The Los Angeles Times*, *The Wall Street Journal*, and *USA Today*.

I sit on the advisory panel for the "States of Change: Demographics and Democracy" project. This project is sponsored by the Hewlett Foundation and involves three premier think tanks: the Brookings Institution, the Bipartisan Policy Center, and the Center for American Progress. The group takes a detailed look at trends among eligible voters and the overall population, both nationally and in key states, to explain the impact of these changes on American politics, and to create population projections, which the Census Bureau abandoned in 1995. In 2018, I authored one of the lead papers for the project: "In the Long Run, We're All Wrong,"

available at <https://bipartisanpolicy.org/wp-content/uploads/2018/04/BPC-Democracy-States-of-Change-Demographics-April-2018.pdf>.

Education:

I received a Master's in Applied Statistics as part of my coursework. My coursework for my Ph.D. and M.A.S. included, among other things, classes on G.I.S. systems, spatial statistics, issues in contemporary redistricting, machine learning, non-parametric hypothesis tests and probability theory. I have completed my coursework and have passed comprehensive examinations in both methods and American Politics. I expect to receive my Ph.D. in May of 2022, and have filed my application to graduate. My dissertation focuses on applications of spatial statistics to political questions, including an article on redistricting simulations and the effect of communities of interest on partisan bias. I am currently a doctoral candidate in political science at The Ohio State University.

Prior Engagements as an Expert:

In 2021, I served as one of two special masters appointed by the Supreme Court of Virginia to redraw the districts that will elect the commonwealth's representatives to the House of Delegates, Senate of Virginia, and U.S. Congress in the following decades. The Supreme Court of Virginia accepted those maps and were praised by observers from across the political spectrum. "New Voting Maps, and a New Day, for Virginia," *The Washington Post* (Jan. 2, 2022), available at <https://www.washingtonpost.com/opinions/2022/01/02/virginia-redistricting-voting-maps-gerrymander/>; Henry Olsen, "Maryland Shows How to do Redistricting Wrong. Virginia Shows How to Do it Right," *The Washington Post* (Dec. 9, 2021), available at <https://www.washingtonpost.com/opinions/2021/12/09/maryland-virginia-redistricting/>; Richard Pildes, "Has VA Created a New Model for a Reasonably Non-Partisan Redistricting Process," *Election Law Blog* (Dec. 9, 2021), available at <https://electionlawblog.org/?p=126216>.

I previously authored an expert report in *Dickson v. Rucho*, No. 11-CVS-16896 (N.C. Super Ct., Wake County), which involved North Carolina's 2012 General Assembly and Senate maps. Although I was not called to testify, it is my understanding that my expert report was accepted without objection. I also authored an expert report in *Covington v. North Carolina*, Case No. 1:15-CV-00399 (M.D.N.C.), which involved almost identical challenges in a different forum. Due to what I understand to be a procedural quirk, where my largely identical report from *Dickson*

had been inadvertently accepted by the plaintiffs into the record when they incorporated parts of the *Dickson* record into the case, I was not called to testify.

I authored two expert reports in *NAACP v. McCrory*, No. 1:13CV658 (M.D.N.C.), which involved challenges to multiple changes to North Carolina's voter laws, including the elimination of a law allowing for the counting of ballots cast in the wrong precinct. I was admitted as an expert witness and testified at trial. My testimony discussed the "effect" prong of the Voting Rights Act claim. I did not examine the issues relating to intent.

I authored reports in *NAACP v. Husted*, No. 2:14-cv-404 (S.D. Ohio), and *Ohio Democratic Party v. Husted*, Case 15-cv-01802 (S.D. Ohio), which dealt with challenges to various Ohio voting laws. I was admitted and testified at trial in the latter case (the former case settled). The judge in the latter case ultimately refused to consider one opinion, where I used an internet map-drawing tool to show precinct locations in the state. Though no challenge to the accuracy of the data was raised, the judge believed I should have done more work to check that the data behind the application was accurate.

I served as a consulting expert in *Lee v. Virginia Board of Elections*, No. 3:15-cv-357 (E.D. Va. 2016), a voter identification case. Although I would not normally disclose consulting expert work, I was asked by defense counsel to sit in the courtroom during the case and review testimony. I would therefore consider my work *de facto* disclosed.

I filed an expert report in *Mecinas v. Hobbs*, No. CV-19-05547-PHX-DJH (D. Ariz. 2020). That case involved a challenge to Arizona's ballot order statute. Although the judge ultimately did not rule on a motion in limine in rendering her decision, I was allowed to testify at the hearing.

I authored two expert reports in *Feldman v. Arizona*, No. CV-16-1065-PHX-DLR (D. Ariz.). Plaintiffs in that case challenged an Arizona law prohibiting the collection of voted ballots by third parties that were not family members or caregivers and the practice of most of the state's counties to require voters to vote in their assigned precinct. My reports and testimony were admitted. Part of my trial testimony was struck in that case for reasons unrelated to the merits of the opinion; counsel for the state elicited it while I was on the witness stand and it was struck after Plaintiffs were not able to provide a rebuttal to the new evidence.

I authored expert reports in *A. Philip Randolph Institute v. Smith*, No. 1:18-cv-00357-TSB (S.D. Ohio), *Whitford v. Nichol*, No. 15-cv-421-bbc (W.D. Wisc.), and *Common Cause v. Rucho*,

NO. 1:16-CV-1026-WO-JEP (M.D.N.C.), which were efficiency gap-based redistricting cases filed in Ohio, Wisconsin and North Carolina.

I also authored an expert report in the cases of *Ohio Organizing Collaborative, et al v. Ohio Redistricting Commission, et al* (No. 2021-1210); *League of Women Voters of Ohio, et al v. Ohio Redistricting Commission, et al* (No. 2021-1192); *Bria Bennett, et al v. Ohio Redistricting Commission, et al* (No. 2021-1198). These cases were consolidated and are presently pending in original action before the Supreme Court of Ohio.¹

In 2019, I was appointed as the court's expert by the Supreme Court of Belize. In that case I was asked to identify international standards of democracy as they relate to malapportionment claims, to determine whether Belize's electoral divisions (similar to our congressional districts) conformed with those standards, and to draw alternative maps that would remedy any existing malapportionment.

I currently serve as the voting rights act expert to counsel for the Arizona Independent Redistricting Commission.

II. Scope of Engagement

I have been retained by Troutman Pepper Hamilton Sanders LLP on behalf of their clients, Petitioners in the above-titled action, to evaluate the 2022 state Senate and Congressional maps, 2021–2022 N.Y. Reg. Sess. Leg. Bills S.8196, A.9039-A, A.9040-A, and A.9168, enacted by the New York State Legislature and signed by Governor Kathy Hochul. I have been retained and am being compensated at a rate of \$400.00 per hour to provide my expert analysis of incumbent protection and partisan gerrymandering factors in the state Senate and Congressional maps and to determine if the maps violate the prohibitions against partisan and incumbent-favoring/disfavoring gerrymandering found in Article III, Section 4(c)(5) of the New York Constitution and New York Legislative Law § 93(2)(e). Using computerized simulations, I analyzed whether the 2022 Congressional and state Senate maps (respectively, “Enacted Congressional Map” and “Enacted Senate Map,” or collectively, “Enacted Maps”) were drawn with partisan intent. My analysis is based on my review of the Enacted Maps in light of New York's political geography.

¹ I have only been excluded as an expert once, in *Fair Fight v. Raffensperger*, 1:18-CV-5391-SCJ (N.D. Ga.). The judge concluded that I lacked sufficient credentials to testify as an expert in election administration, and that case did not deal with redistricting.

III. Summary of Opinions

Based on the work performed as addressed in the following sections of the report, I hold to the following opinions to a reasonable degree of professional certainty:

- The Enacted Congressional Map was clearly drawn to discourage competition and for the purpose of favoring the Democratic Party and disfavoring the Republican Party.
- The Enacted Senate Map was clearly drawn to discourage competition and for the purpose of favoring the Democratic Party and disfavoring the Republican Party.

IV. Exhibits

- Exhibit 1: Map of New York's 2022 Legislature-Enacted Congressional Districts
- Exhibit 2: Map of New York's 2022 Legislature-Enacted State Senate Districts
- Exhibit 3: *Curriculum vitae* of Sean P. Trende

V. Method

For this litigation, I have conducted a simulation analysis of the Enacted Maps. Simulation analysis is widespread in political science and is the subject of one of my dissertation papers. The simulation approach to redistricting has been accepted in multiple courts, including state courts in Ohio, North Carolina and Pennsylvania. *See League of Women Voters of Ohio v. Ohio Redistricting Commission* (2021); *Harper v. Hall* (2021); *Common Cause v. Lewis* (2019); *Harper v. Lewis* (2019); *League of Women Voters of Pennsylvania v. Com.* (2018). For this report, I have employed a broadly accepted “package” in R called “redist,” which generates a representative sample of districts. *See, e.g., Benjamin Fifeld, et. al, “Automated Redistricting Simulation using Markov Chain Monte Carlo,” 29 Jrnl. Computational and Graphical Statistics 715* (2020).

There are a variety of proposed simulation techniques, but they all proceed from the same basic principle: precincts are aggregated together in a random fashion, potentially subject to a variety of parameters, to form districts in hundreds or thousands of maps. This creates an “ensemble” of maps that reflect what we would expect in a state if maps were drawn without respect to partisan criteria. If the map is drawn without partisan intent, its partisan features should match those that appear in the ensemble. The more the map deviates from what we observed in the ensemble, the more likely it becomes that partisan considerations played a heavy role.

To better understand how this works, imagine the following cluster of seven hexagons as a cluster of precincts, with each hexagon representing an individual precinct. The precincts are

connected when they share adjacent sides. Those adjacencies are reflected in the image below by the lines that connect the hexagons. The top precinct therefore shares a border with the center, top right, and top left precincts; the top left hexagon shares a border with the top, center, and bottom left precincts; and so forth.

It is possible, however, to “break” adjacencies, using the computer, by removing one of these lines. One can continue to do so until there is only one path from any precinct to any other precinct. This is called a “spanning tree,” *e.g.*, Kruskal, J.B., “On the Shortest Spanning Tree of a Graph and the Traveling Salesman Problem,” 7 *Proc. Amer. Math Soc.* 48 (1956), and it lies at the heart of the redistricting algorithm.

For any set of more than two precincts, there will be multiple spanning trees, but the number of such trees is finite. I have illustrated two such trees for our cluster of seven hexagons.



Once you have reduced the number of connections between precincts to a minimum, removing one additional connection will create two distinct clusters of precincts. This is exactly what a district is: a collection of contiguous (adjacent) precincts that is separated from other precincts on the map. In the following illustration I have removed the connection between the center hexagon and the lower right hexagon, and then illustrated the two districts this creates in the right panel.



This, then, is a microcosm of the approach that the redist package takes. To simplify greatly, by sampling spanning trees of New York's precincts and then removing 25 connections, the software produces 26 randomly drawn districts. While the math is quite complicated, this approach produces a random sample of maps that mirrors the overall distribution of maps, much as a high-quality poll will produce a random sample of respondents that reflects the overall population. While the process is complicated, it can be run on a laptop computer. Indeed, these simulations were run at home on a Dell XPS 17 computer with an i9 processor and 64G of RAM, using a free, widely employed computer programming language (R version 4.1.2).

Importantly, these maps are drawn without providing the software with any political information. In other words, these maps help inform an analyst what maps would tend to look like in New York if they were drawn without respect politics.

Of course, other features, such as respect for county lines, compactness, or respect for geographic features could play a role in the drawing of district lines as well; these traditional redistricting criteria are almost always viewed as valid considerations by courts. To account for this, when removing the connections that create districts, the algorithm can be instructed to favor the removal of connections that will result in districts that remain within specified parameters when deciding which connections to remove. It can be instructed to remove connections in such a way that equally populated districts will be created, or to prefer breaks that will create compact districts, or will respect county boundaries, or any number of other factors.

Here, the simulation was instructed to follow federal and state law by drawing districts that will be largely equipopulous. The simulation allows a population tolerance of +/- 1%. This is because the simulations cannot split precincts, and because New York City in particular has

heavily populated precincts (the mean population of a precinct in New York County is 1,354 residents). Orange County has two precincts with populations in excess of 20,000 residents. This is a reasonable allowance not because we assume a court would accept this deviation, but rather because reducing the population deviations in these districts by splitting precincts at the block level can almost always be achieved, but cannot alter the political orientation of these districts substantially. In fact, in my experience drawing redistricting maps, this is exactly how mapmakers proceed: the general layout of the maps is agreed upon first, while the time-consuming process of ‘zeroing-out’ districts is saved until later. See Bernard Grofman, Ph.D. & Sean Trende, *Memorandum re Redistricting Maps*, Dec. 27, 2021, at 8, available at https://www.vacourts.gov/courts/scv/districting/2021_virginia_redistricting_memo.pdf. Political scientists have generally accepted this concept to the simulated approach as well. See Jowei Chen & Jonathan Rodden, *Unintentional Gerrymandering: Political Geography & Electoral Bias in Legislatures*, 8 *Quar. J. Pol. Sci.* 239, (2013) (accepting 5% deviations). Finally, courts have accepted this limitation in the simulations. See Expert Report of Kosuke Imai, Dec. 9, 2021, *League of Women Voters of Ohio v. Ohio Redistricting Commission*, No. 2021-1449 (Ohio 2021) (“For all simulations, I ensure districts fall within a 0.5% deviation from population parity. Although this deviation is greater than the population deviation used in the enacted plan, it only accounts for less than 4,000 people and hence has no impact on the conclusions of my analysis.”); Wesley Pegden, “Pennsylvania’s Congressional Districting is an Outlier: Expert Report,” Nov. 27, 2017, *League of Women Voters of Pennsylvania v. Wolf*, at 3-4 (Pa. 2018) (employing a 2% threshold and explaining that a 1% would be sufficient to replicate what we might expect from a 0% threshold).

The simulation was also instructed to draw reasonably compact districts and to avoid county splits, pursuant to the commands of the New York Constitution.

VI. Analysis of the 2022 Congressional Map

Gov. Kathy Hochul signed the drafted congressional maps into law on Feb. 3, 2022. The reaction was swift, negative, and largely focused on the partisan nature of the lines:

- After the Assembly passed the map, David Wasserman, U.S. House editor of the Cook Political Report, and one of the premier elections analysts in the country, called it a “[f]irst step towards NY Dems passing their 22D-4R gerrymander.” <https://twitter.com/Redistrict/status/1488940238177288195>. Upon its signature into law, he observed “New York becomes the 30th state to adopt a new

congressional map, and Dems' gerrymander could lead to the single biggest seat shift in the country (19D-8R to 22D-4R)." *See also* Grace Ashford & Nicholas Fandos, "N.Y. Democrats Could Gain 3 House Seats Under Proposed District Lines," N.Y. Times (Jan. 30, 2022), available at <https://www.nytimes.com/2022/01/30/nyregion/new-york-redistricting-congressional-map.html> (all websites last visited on Feb. 8, 2022).

- Nathaniel Rakich, Senior Elections Analyst at the nonpartisan elections analysis company FiveThirtyEight, called the map "skewed toward Democrats," "egregious," and "representing a failure for the new redistricting process." Nathaniel Rakich, *New York's Proposed Congressional Map Is Heavily Biased Toward Democrats. Will It Pass?*, FiveThirtyEight (Jan. 31, 2022), available at <https://fivethirtyeight.com/features/new-yorks-proposed-congressional-map-is-heavily-biased-toward-democrats-will-it-pass/>.
- Nick Reisman, an attorney for the Brennan Center for Justice, called the map "a master class in gerrymandering, . . . tak[ing] out a number of Republican incumbents very strategically." Nick Reisman, *How the Proposed Congressional Lines Could Alter New York's Politics*, Spectrum News 1 (Feb. 1 2022), available at <https://spectrumlocalnews.com/nys/central-ny/ny-state-of-politics/2022/02/01/how-the-proposed-congressional-lines-could-alter-ny-s-politics>.
- Duncan Hosie, an attorney for the American Civil Liberties Union who wants Democrats to win "as many seats as possible," called the maps "dangerous," and asked "what is a worse sin than weaponizing the machinery of government against political opponents?" Duncan Hosie, "New York's Gerrymander is an Affront to Democratic Principles," *The Wall Street Journal* (Feb. 6, 2022), available at <https://www.wsj.com/articles/new-yorks-gerrymander-is-an-affront-to-democratic-principles-republican-votes-disdistricts-maps-hypocrisy-11644176113>.
- *The Washington Post* titled its lead article on the maps "New York Lawmakers Draw Redistricting Map that Boosts Democrats." Colby Itkowitz & Adrian Blanco, available at <https://www.washingtonpost.com/politics/2022/01/30/redistricting-new-york/>.

It is not difficult to see why this was the reaction. The New York maps carefully take Republican voters and press them into a few Republican-leaning districts, while spreading Democratic voters as efficiently as possible.

To conduct the simulations, I gathered and joined publicly available data with political and demographic data at the census block and precinct levels. After unifying the data at the precinct level, I instructed the simulation to create 5,000 sets of 26 reasonably compact districts, which

respect county subdivisions. I was then able to compare the partisanship of the enacted districts to the ensemble of maps.²

We can think of this approach as answering the questions, “What would happen if we selected 5,000 individuals, gave them basic instructions to keep districts modestly compact and to keep populations equal, withheld political information from them, and then sent them out to draw maps? What sorts of maps would they produce?”

Once the simulation creates our 5,000 maps, it calculates the racial demography, compactness, and partisan lean of the districts. We can then compare the simulated districts to the Enacted Congressional Map to ensure that they perform comparably well on traditional redistricting criteria. That is to say, we ensure that the Legislature would not have to sacrifice traditional redistricting criteria in order to achieve more balanced maps.

To best illustrate the degree to which the Enacted Congressional Map reflects outliers when compared to maps drawn without partisan information, I employed the “gerrymandering index,” proposed by Bangia et al (2017) and endorsed by McCartan & Imai in their paper setting forth the algorithm used to generate the districts in this report. *See* Cory McCartan & Kosuke Imai, “Sequential Monte Carlo for Sampling Balanced and Compact Redistricting Plans,” at 25, available at <https://arxiv.org/pdf/2008.06131.pdf>.

It is conceptually similar to the idea of root mean squared error (used throughout statistics). To calculate the index, we take each of the 5,000 simulated maps and rank the districts from most heavily Democratic to least heavily Democratic. We then average Democratic vote shares across ranks. This tells us, generally speaking, what percentage Democratic vote share we would expect the most heavily Democratic district to have in a map drawn without respect to politics, what we would expect the second-most heavily District to have, and so forth.

Of course, some areas might be conducive to a wide range of partisan outcomes depending how the map is drawn. Other areas, like Manhattan, are so heavily Democratic that the districts that are drawn there are likely to vary very little from that average. Put differently, we might be very surprised, due to simple geography, if a map’s most Democratic district varies from that

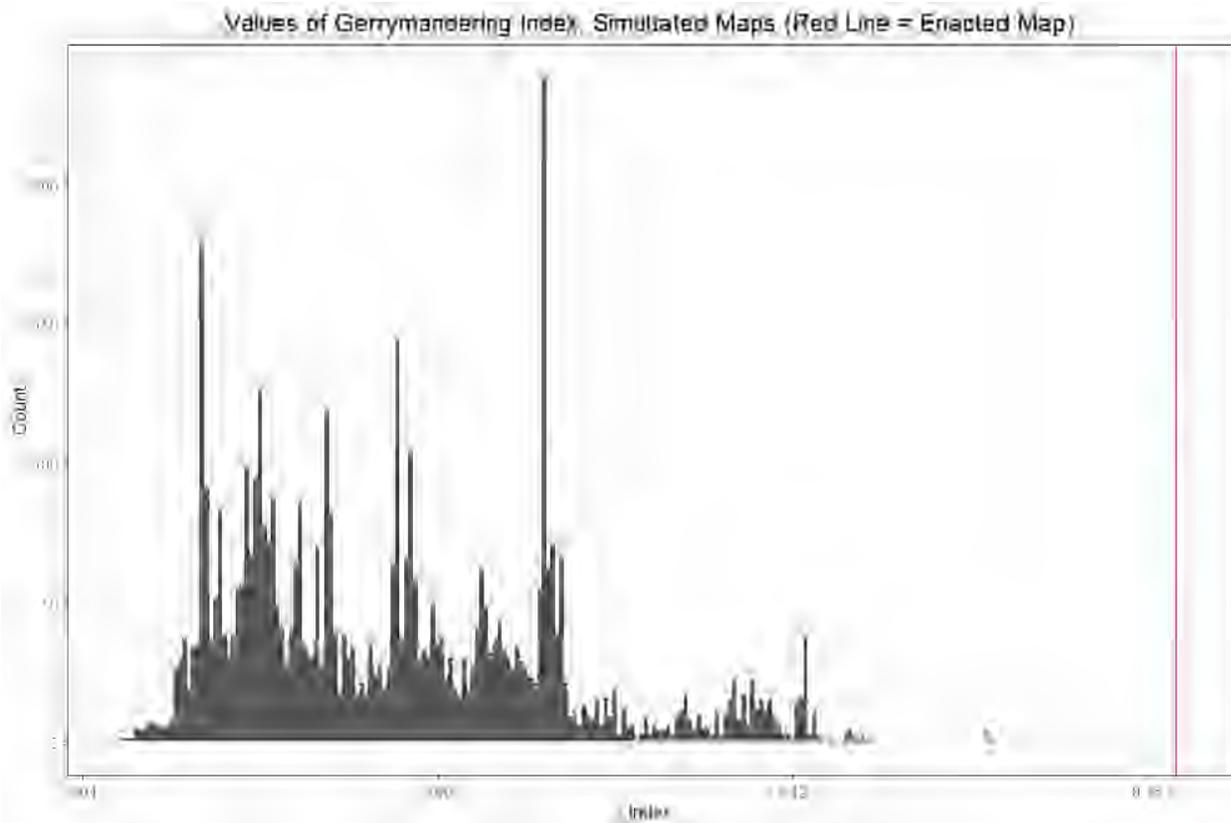
² There are any number of ways to calculate partisanship. The simulation approach tends not to be as sensitive to the choice of elections as other metrics, unless political coalitions in a state vary radically from election-to-election. Regardless, to remove my discretion, I have simply used the calculation of partisanship contained in the dataset that I downloaded from the ALARM project, which is an average of the performance in a precinct across the 2016 presidential election in New York, the 2016 New York senate election, the 2018 New York governor election, the 2018 New York attorney general election, and the 2020 presidential election in New York.

average by more than a few points; we might be less surprised if some districts in the middle of the distribution exhibited more variability.

To help account for this, we then calculate the deviations in each map in the ensemble from the mean for each “bin.” To make this less abstract: the most heavily Democratic district in the ensemble, on average, gives the Democrats 93.9% of the vote. A district in the ensemble whose most heavily Democratic district was 92% Democratic would have a deviation of 1.9% for that rank, while one whose most heavily Democratic district was 97% Democratic would have a deviation of 3.1%. The second most heavily Democratic district in maps in the ensemble is, on average, 92.2% Democratic. A map whose second most heavily Democratic district has a Democratic vote share of 87% would have a deviation of 5.2%, and so forth. To emphasize large deviations (and to make them all positively signed) these values are then squared and added together to give us a sense of how far maps drawn without respect to political data will tend to naturally vary from expectations.

In simplified terms, this gives us the total deviation from the ensemble for all the districts in the maps, while giving more weight to particularly large misses. The square root is then taken, which effectively puts everything back on a percentage scale. We then engage in the same exercise for the Enacted Congressional Map and compare these scores to those in the ensemble.

The utility of this exercise is that it looks at maps as a whole, rather than in isolation. The results here are particularly striking:



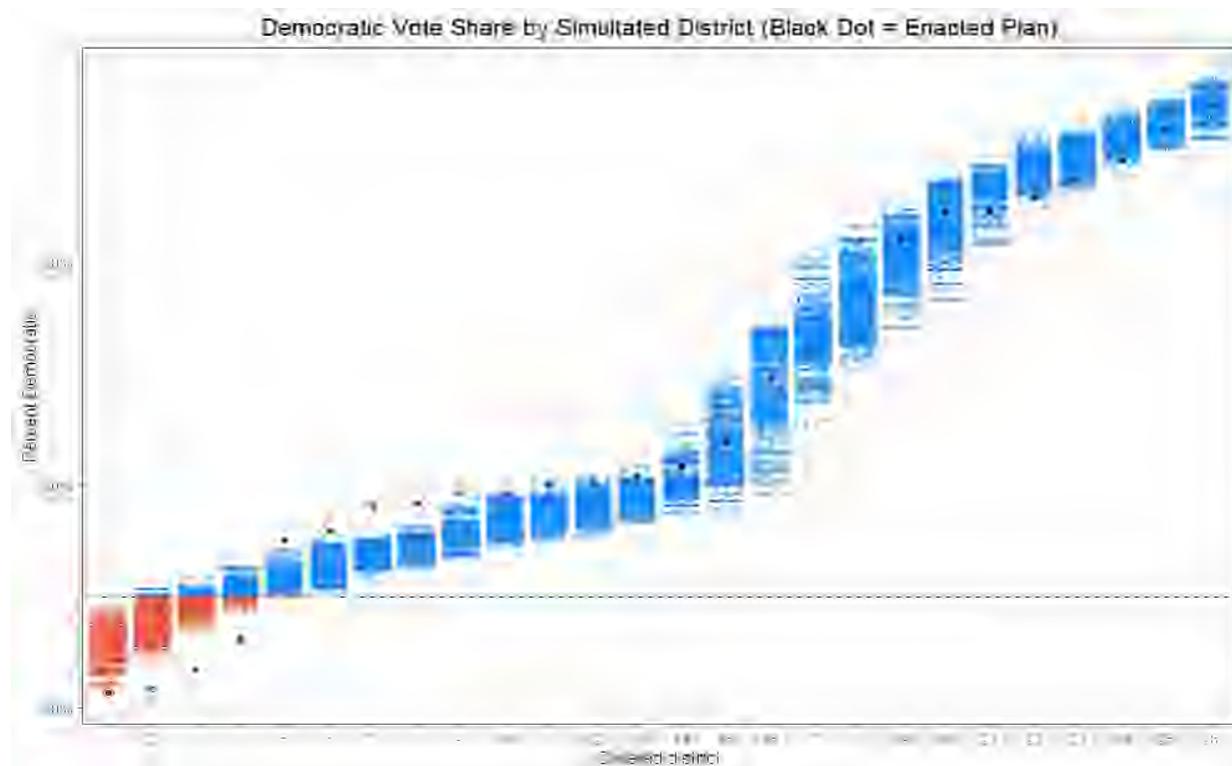
The ensemble maps have, on average, a Gerrymandering Index of around 7.5%. The Enacted Congressional Map, on the other hand, has a Gerrymandering Index of 17%, almost six standard deviations from the mean. The probability that the Enacted Congressional Map would be drawn by map drawers who cared only about the constitutional mandates for compactness and avoiding undue partisan influence is vanishingly small. Put simply, it is implausible, if not impossible, that this map was drawn without a heavy reliance upon political data and was likely drawn to favor or disfavor a political party. All of this means that the Enacted Congressional Map is obviously partisan gerrymandered, and that it favors Democratic interests more than any of these 5,000 computer-generated maps, all drawn without partisan considerations.

Interrogating the maps from a different angle makes clear that the party that the Legislature intended to favor was the Democratic Party, and the one that it intended to disfavor was the Republican Party. Moreover, the Legislature did so in a way to discourage the creation of what would otherwise be competitive districts.

To see this, consider the following dotplot. In this plot, all 26 districts in each of the 5,000 simulated maps were sorted from most Democratic to least Democratic. Each of these districts then received a dot in the plot. At the far right, above the number 26, you will notice a large cluster

of blue dots spread between 90% and 97%. That means in every plan, the most heavily Democratic district fell somewhere between 90% and 97% Democratic.

The next cluster to the left, hovering above the number 25, consists of blue dots ranging between 90% and 95%, with a few dots below 90%. This means that in all of the 5,000 simulated maps, the second-most Democratic district typically fell between 90% and 95% Democratic, although a handful of maps produced districts that fell below 90% Democratic.



If Democrats received less than 50% of the vote in a simulated district, I coded the dot as red. As you can see, in some areas there is quite a bit of variation in what the maps draw. In the 16th most Democratic district, for example, Democratic performance ranges from just below 60% to just below 80% Democratic. Other districts have a much tighter range; district 11 falls between around 55% to just above 60% Democratic. I have overlaid these dots from the simulated maps with dots from the Enacted Congressional Map. This allows us to compare the partisanship of the Enacted Congressional Map directly to that of the simulations. If the Enacted Congressional Map was not drawn to favor or disfavor a political party, or did so only moderately, it should hew closely to the results produced by the simulated maps (which were, of course, drawn blind to partisanship). On the other hand, if map drawers relied heavily upon politics when drawing the lines, we should expect significant deviations.

In fact, the pattern with which districts deviate from expectations plainly reveals how the Legislature disfavored Republicans and competitive districts here. The only place where the Enacted Congressional Map falls within expectations is in safely Democratic districts—those where Democrats would win over 60% of the vote. This 60% threshold, however, is significant, as political scientists and elections analysts will begin to classify elections as competitive below that threshold. *See* Gary C. Jacobson, "The Marginals Never Vanished: Incumbency & Competition in Elections to the U.S. House of Representatives," 31 *Am. J. Poli Sci.* 126 (1987). As is apparent from the chart, around district number 13, the simulation expects to see multiple districts that fall into the potentially competitive range. This is also the exact point at which the values of the Enacted Maps begin to fall outside of the expected ranges.

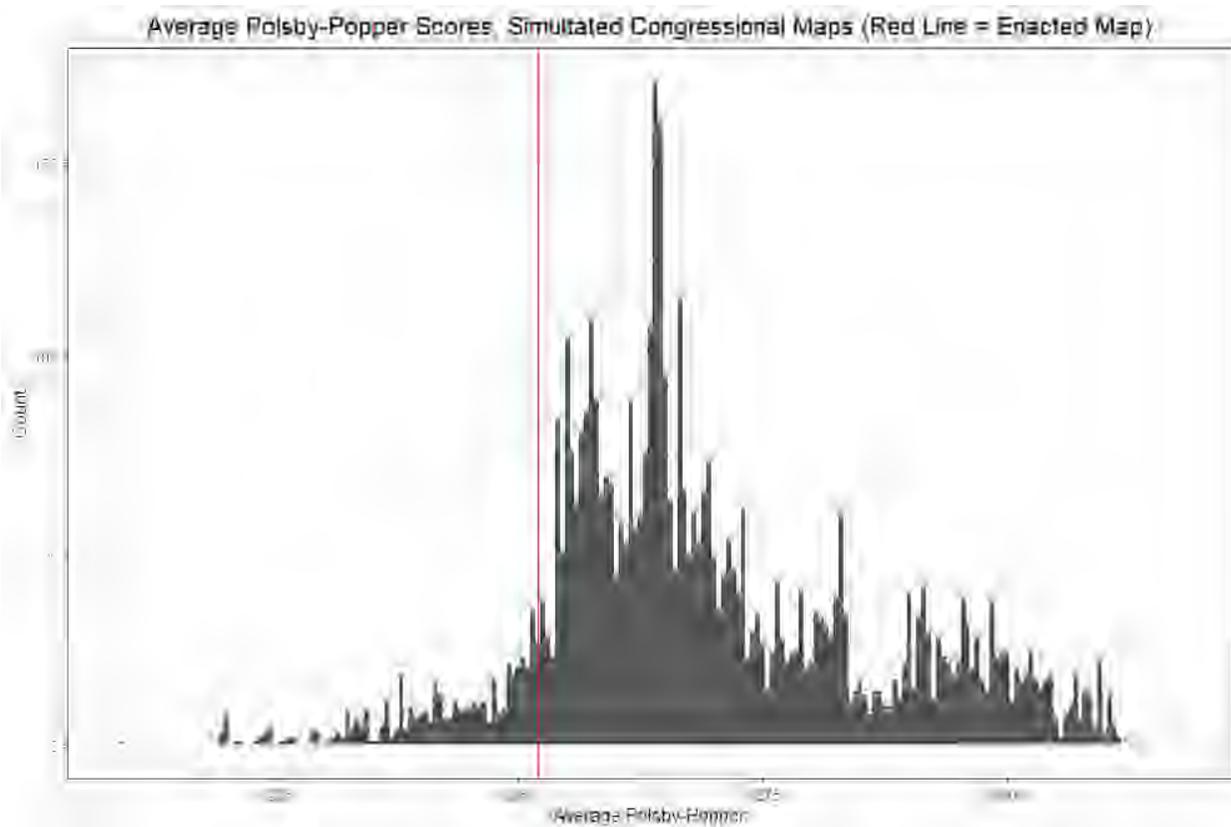
Around district number 11, the districts in the Enacted Congressional Map quickly begin to appear as outliers as the Enacted Congressional Map attempts to keep districts as close to the uncompetitive range as they possibly can. The 5th to the 9th most Republican districts are districts with higher Democratic vote shares than in *any* of the 5,000 simulated maps, often by substantial margins.

On the other hand, the first through fourth most heavily Republican districts are all drawn much more heavily Republican than we would expect from the simulations. The second and third most heavily Republican districts in particular are far more heavily Republican than we would expect to see from a politically naïve map drawing.

Overall, the most heavily Republican district in the Enacted Congressional Map is more heavily Republican than that found in any of the 5,000 simulated maps by about 0.4%. This is also true of the second (by 2.6%), third (by 3.1%) and fourth (by 2.4%) most Republican districts in the Enacted Congressional Map. At the same time, the 5th most Republican district in the Enacted Congressional Map is more heavily *Democratic* than the 5th most Republican district in any of the ensemble maps (by 0.8%). The same is true of the 6th (by 0.6%), 7th (by 2.7%), 8th (by 2.1%) and 9th (by 0.5%) most Republican districts in the Enacted Congressional Map versus their respective sets of ensemble districts.

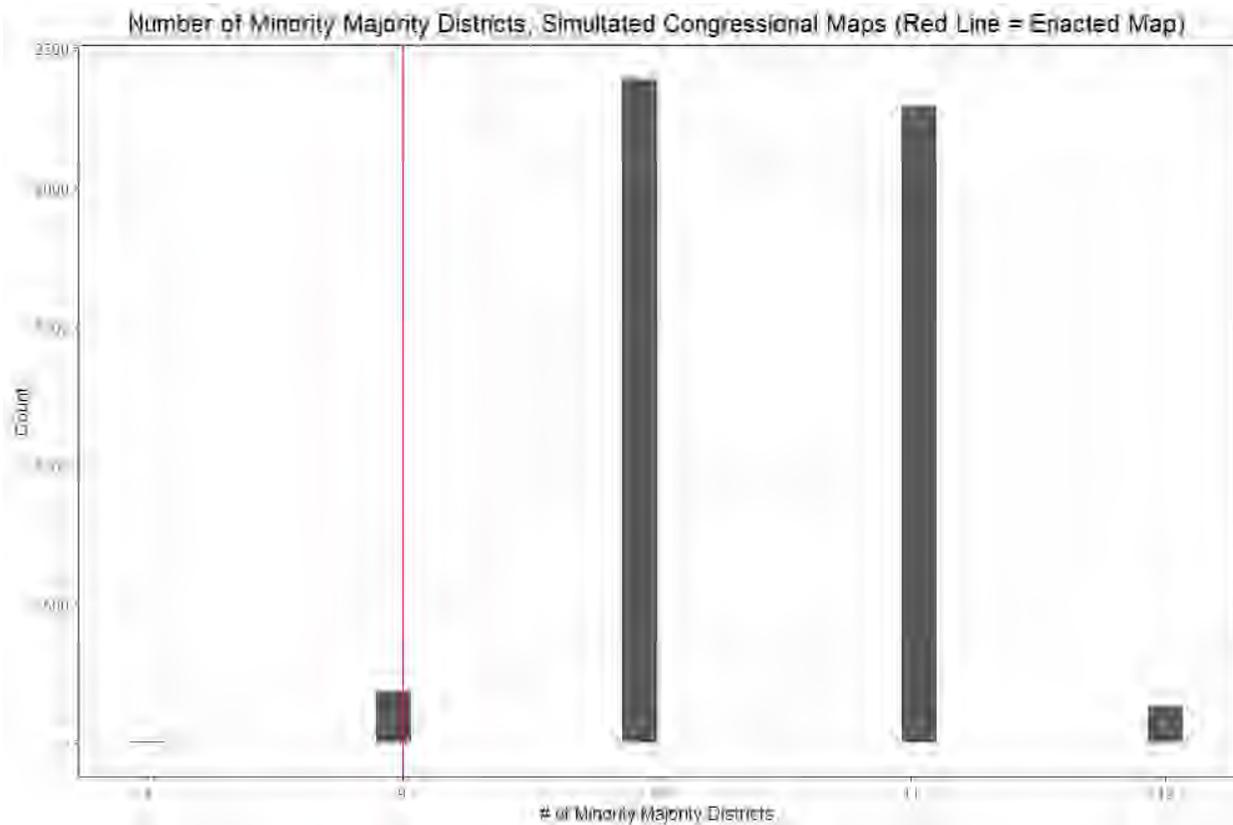
This is the DNA of a gerrymander: mapmakers pack votes from one party into as few districts as possible, and then spread the remainder of these voters over as many districts as possible to reduce their political effectiveness.

We can also check to make certain that the maps do not sacrifice traditional redistricting criteria. The following histogram examines the compactness of the 5,000 simulated maps, and compares the compactness of those maps to that of the Enacted Congressional Map. For measuring compactness, I have opted to examine the Polsby-Popper score. This score looks at the ratio of the area of a district to the area of a circle that has the same perimeter as the district. Daniel D. Polsby & Robert D. Popper, “The Third Criterion: Compactness as a Procedural Safeguard Against Partisan Gerrymandering,” 9 *Yale L. & Pol. Rev.* 301 (1991). To understand the motivation behind Polsby-Popper, sketch out a circle. Then erase some of the edge of the circle, and have a narrow tendril snake into the district toward the center. Other common redistricting metrics that are based on area, such as the Reock score would not change much. The Polsby-Popper score, however, would fall significantly, since the perimeter of the district would be greatly increased. A “perfect” Polsby-Popper score is 1, while a theoretical perfectly non-compact district would score a zero.

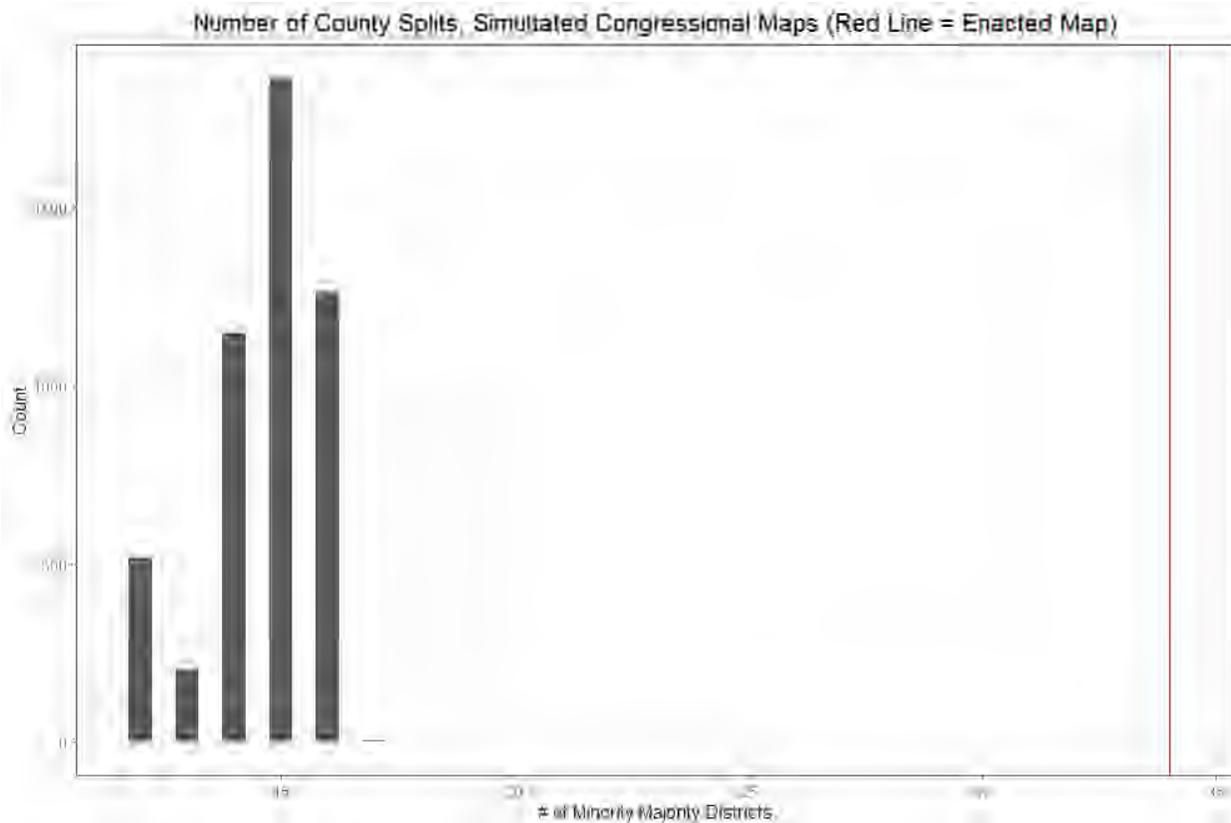


As you can see, the Polsby-Popper score for the simulated maps ranges between 0.2095 and 0.3177, with the largest cluster falling between 0.2579 and 0.2799. This is comparable to the Enacted Congressional Map, which has a Polsby-Popper score of 0.252.

Next, I ensured that the simulated maps did not eliminate minority-majority districts that are potentially protected by the Voting Rights Act. The Enacted Congressional Map has 9 such districts. The simulated maps range from 8 such districts to 12, with most boasting 10 or 11 minority-majority districts. To be clear, these simulated maps are not drawn with any racial data available to the simulation; these districts are naturally occurring minority-majority districts.



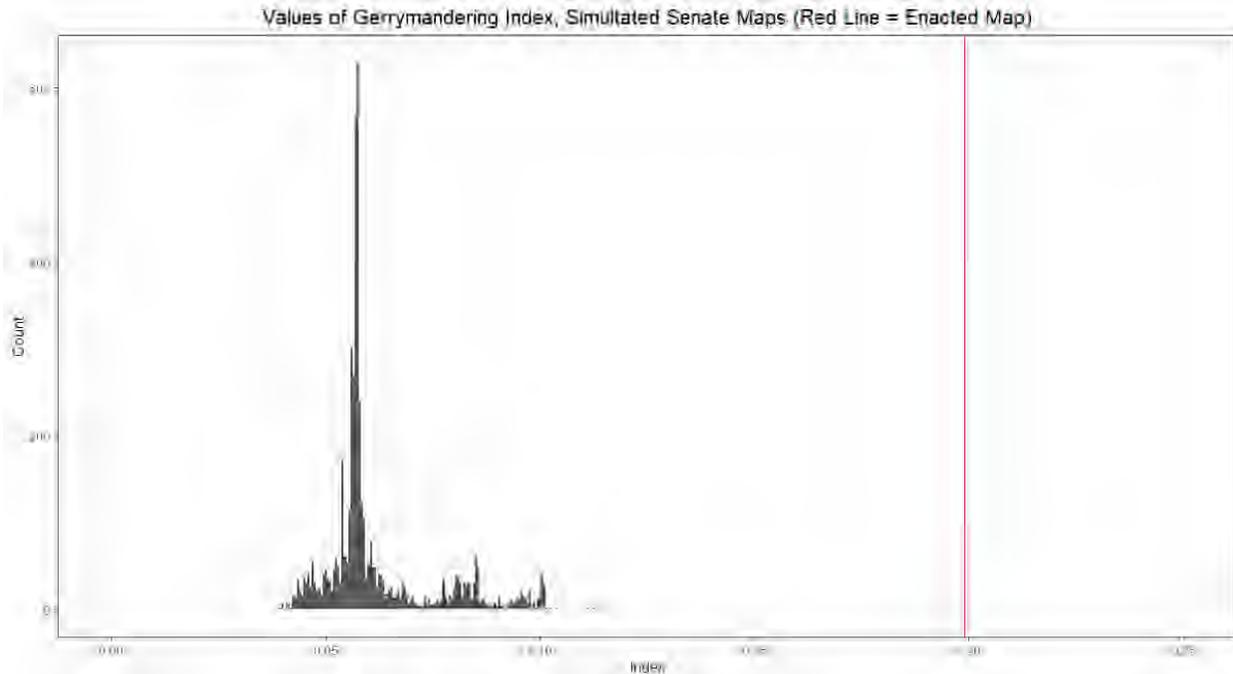
I then compared the number of county splits in the Enacted Congressional Map to the number of county splits in our ensemble. The Enacted Congressional Map features 34 split counties. The simulated maps split between 12 and 16 counties. In other words, it is implausible to claim the Enacted Congressional Map was drawn in a way that disfavors Republicans and competitive districts by chance, or out of a desire to respect county lines or other redistricting criteria. New York's geography does not demand such a tradeoff.



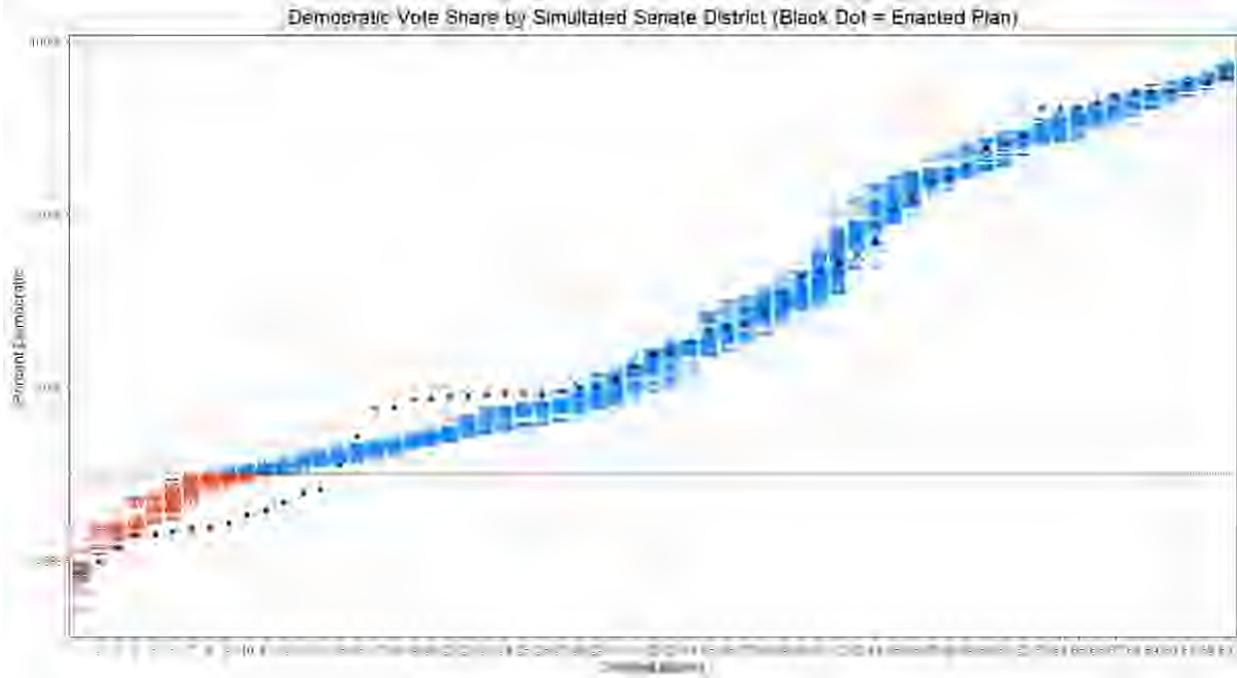
VII. Analysis of the 2022 State Senate Map

I was also asked to evaluate the Enacted Senate Map for New York. I engaged in a similar exercise: simulation software drew 5,000 maps with reasonably compact senate districts without reference to partisanship. These simulated maps were then compared to the Enacted Senate Map to help evaluate whether partisan aims dominated over the Enacted Senate Map.

The Enacted Senate Map is an extreme outlier when compared to what we would expect from a map drawn without respect to politics. Once again, it is implausible, if not impossible, that this map was drawn without a heavy reliance upon political data and was likely drawn to favor or disfavor a political party. Thus, here too, the Enacted Senate Map is obviously partisan gerrymandered, and it too favors Democratic interests more than any of these 5,000 computer-generated maps, all drawn without partisan considerations.

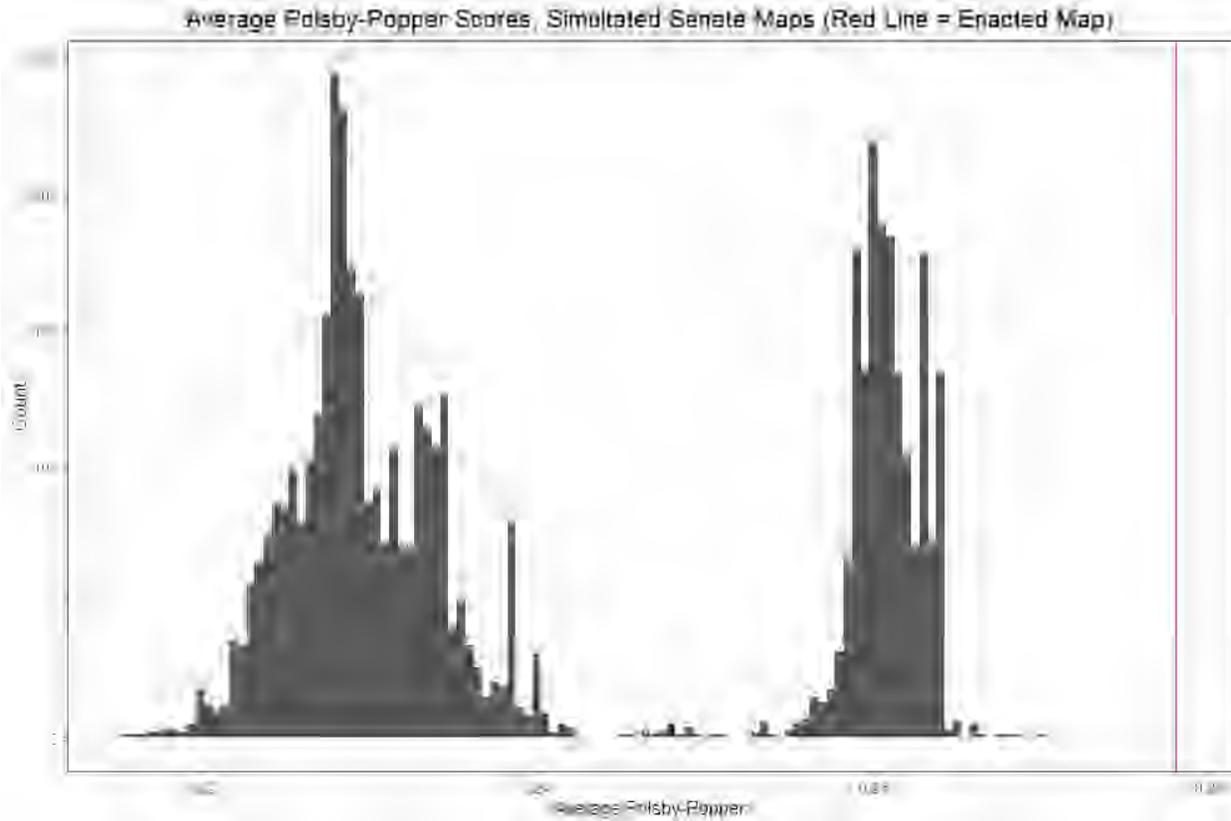


When we examine districts individually, we once again see the same pattern we saw with the Enacted Congressional Map. The districts track the simulations closely in heavily Democratic districts where partisanship is not as important. Where the map drawers could afford to avoid partisanship, they did. However, once we approach the 60% threshold, map drawers once again sought to ensure that Democratic performance in the districts remained as close to that threshold as possible. Democrats draw 42 districts up against that threshold. Perhaps not coincidentally, that is exactly two-thirds of the districts.

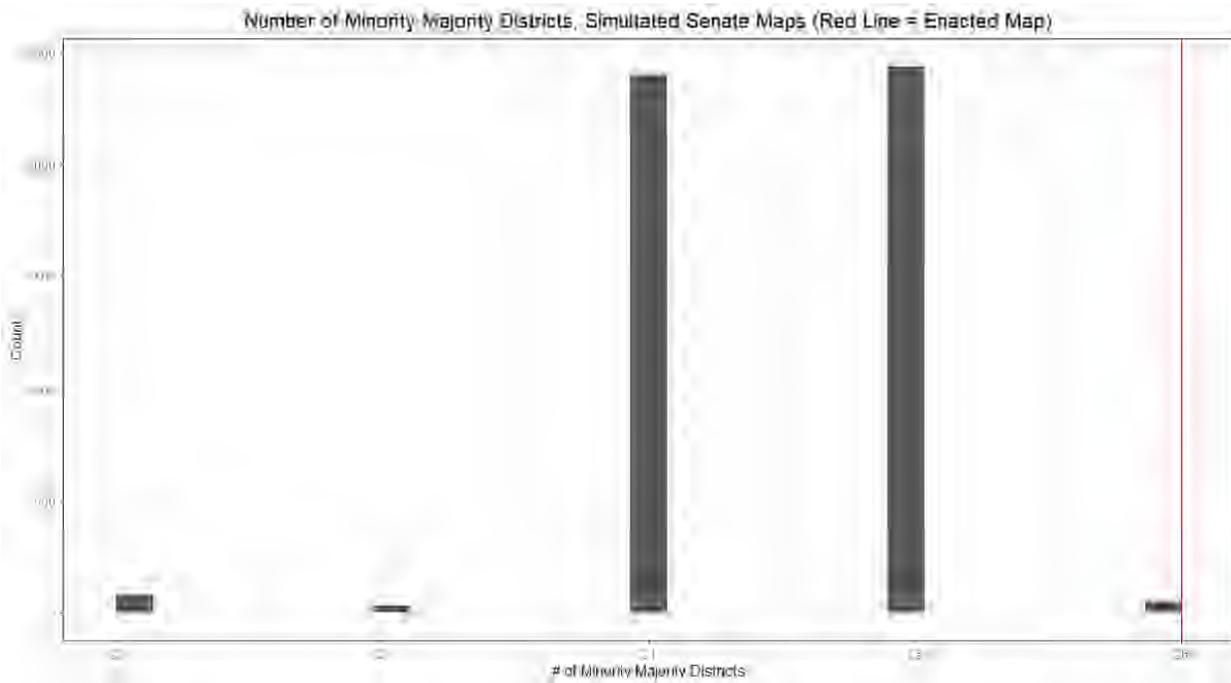


Democratic vote share begins to decline there, although a handful of districts still appear well above expectations. Democratic performance then drops precipitously, as districts become substantially more Republican than we see in the ensemble. The DNA of a gerrymander is very much alive in this map.

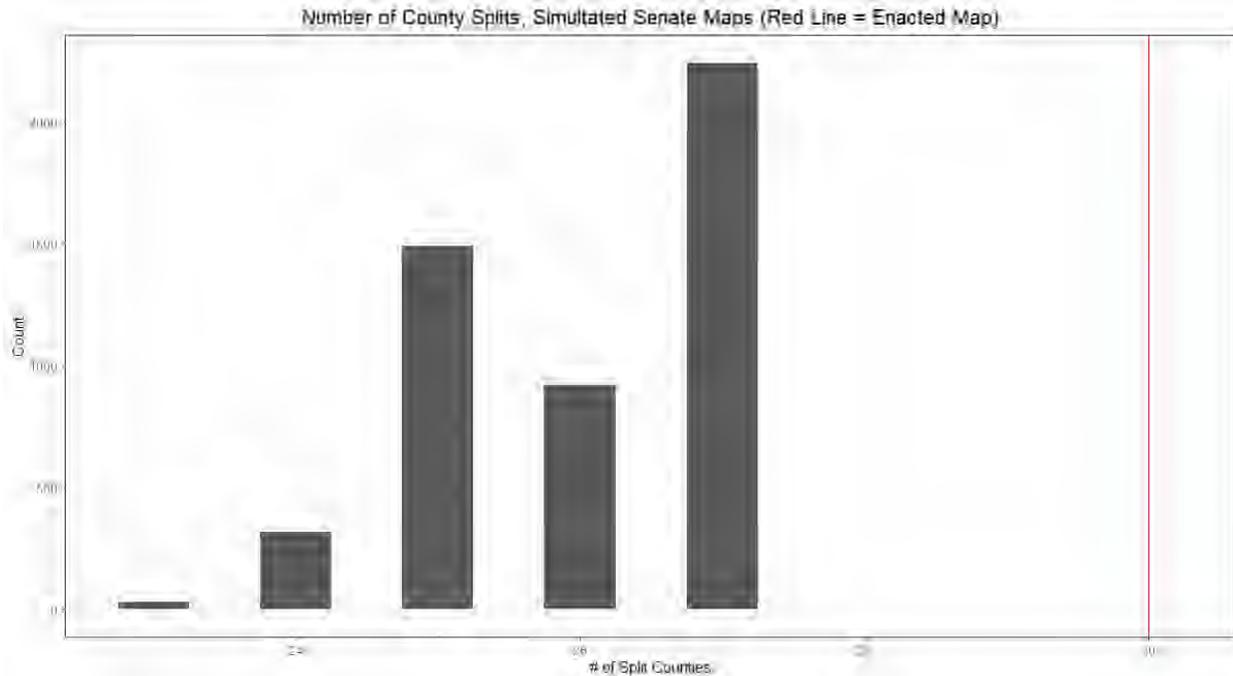
Once again, we can run a few diagnostics. The Polsby-Popper scores of the simulated maps are comparable to those of the Enacted Senate Map.



Similarly, the simulated maps involve approximately as many minority-majority districts as the Enacted Senate Map.



It has a similar number of county splits as well.



VIII. Analysis of Population Deviations in the Existing Maps

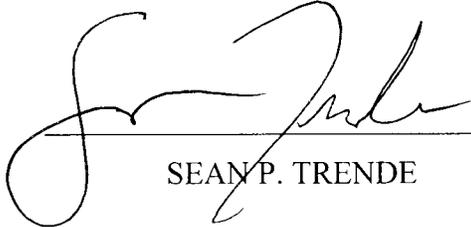
Finally, I was asked by counsel to review the 2012 maps and evaluate their population deviations. This information is directly available for Congress at the Redistricting Data Hub. *See* Redistricting Data Hub, New York, available at <https://redistrictingdatahub.org/state/new-york>. For the State Senate, the shapefiles are available at the same source and can be quickly aggregated in R. *See id.*

The 2012 Congressional districts have substantial population deviations today, with some of them entering double-digit percentages.

District	Population	% of Total	District	Population	% of Total
1	108,870	11.1%	11	99,866	10.2%
2	108,915	11.1%	16	107,970	11.0%
3	107,775	11.0%	17	113,120	11.6%
4	102,338	10.5%	18	118,528	12.1%
5	108,888	11.1%	19	108,108	11.1%
6	107,028	10.9%	20	110,681	11.3%
7	104,138	10.7%	21	117,910	12.0%
8	107,328	10.9%	22	130,361	13.4%
9	111,020	11.3%	23	103,461	10.6%
10	108,801	11.1%	24	108,884	11.1%
11	110,735	11.3%	25	109,910	11.2%
12	114,717	11.7%	26	108,520	11.1%
13	110,822	11.3%	27	109,178	11.2%
14	106,946	10.9%			

Likewise, the 2012 Senate districts are badly malapportioned:

Case No.	Amount	Rate	Case No.	Amount	Rate
1	20,448	5.0%	33	10,088	3.0%
2	-7,510	-1.0%	34	18,408	5.0%
3	-3,830	-1.0%	35	8,894	3.0%
4	-5,830	-1.0%	36	17,407	5.0%
5	325	0.0%	37	5,257	1.0%
6	3,254	1.0%	38	3,849	1.0%
7	10,403	3.0%	39	-2,709	-0.8%
8	365	0.1%	40	-13,027	-4.0%
9	15,812	4.0%	41	-12,871	-3.8%
10	25,843	8.0%	42	-17,510	-5.0%
11	22,873	7.0%	43	-19,665	-6.0%
12	34,107	10.0%	44	-18,130	-6.0%
13	10,000	3.0%	45	-25,008	-8.0%
14	25,847	7.0%	46	-22,822	-7.0%
15	22,184	7.0%	47	-28,638	-8.0%
16	21,801	5.0%	48	-10,036	-3.0%
17	25,494	7.0%	49	-22,811	-7.0%
18	20,443	5.0%	50	-20,041	-6.0%
19	26,103	8.0%	51	-42,831	-13.0%
20	15,842	4.0%	52	-32,422	-11.0%
21	4,018	1.0%	53	-13,000	-10.0%
22	20,746	5.0%	54	-28,000	-8.0%
23	19,168	6.0%	55	-24,816	-7.0%
24	15,822	4.0%	56	-14,610	-7.0%
25	5,741	1.0%	57	-22,510	-13.0%
26	41,822	13.0%	58	-12,892	-10.0%
27	38,892	12.0%	59	-16,488	-5.0%
28	21,707	5.0%	60	-11,370	-6.0%
29	13,718	3.0%	61	-20,403	-6.0%
30	17,171	3.0%	62	-24,132	-10.0%
31	-7,449	-1.0%	63	-13,725	-4.0%
32	22,384	7.0%			



SEAN P. TRENDE

Dated: February 14, 2022

Exhibit 1

Congressional Districts
Upstate New York

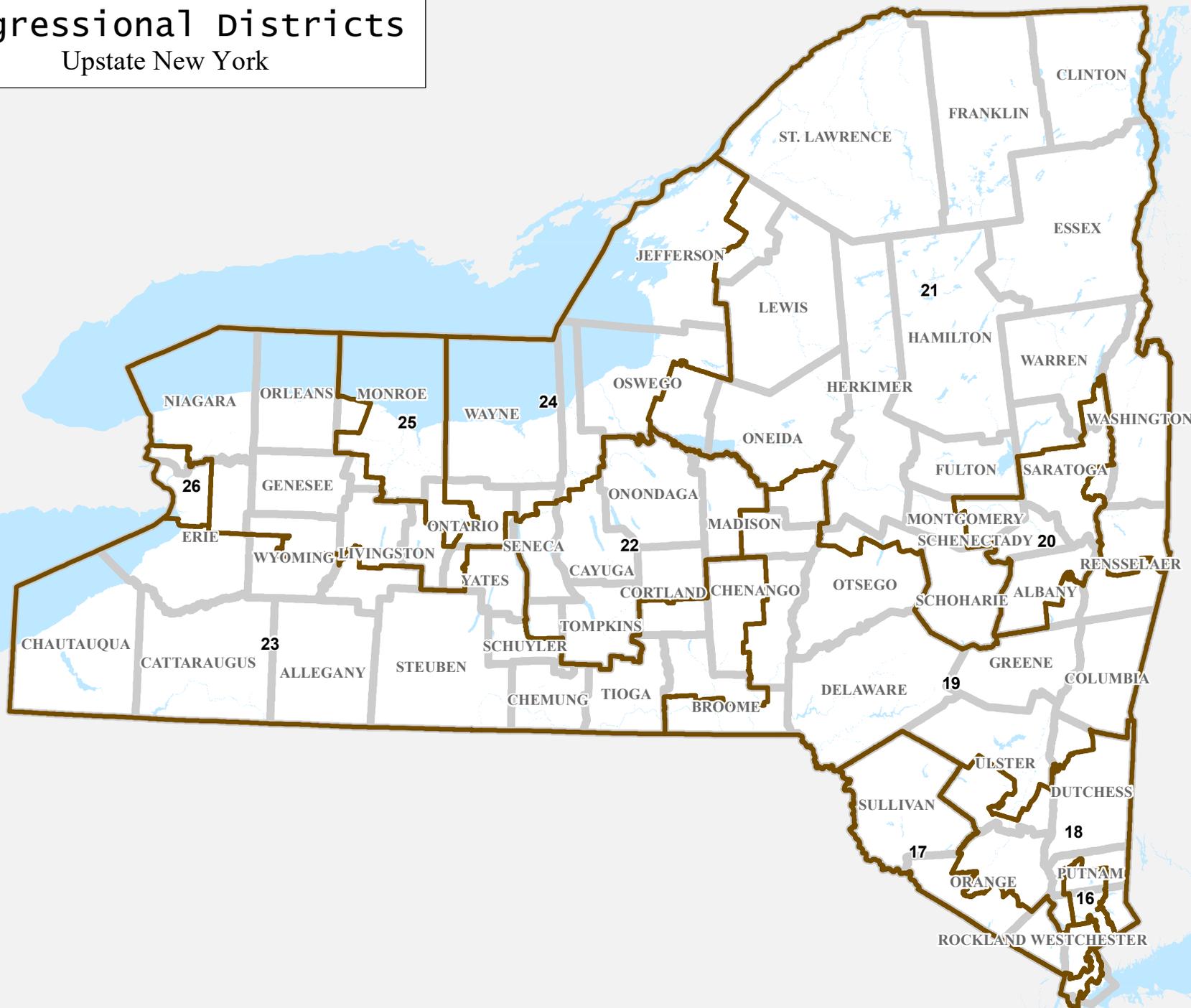


Exhibit 2

Senate Districts
Upstate New York

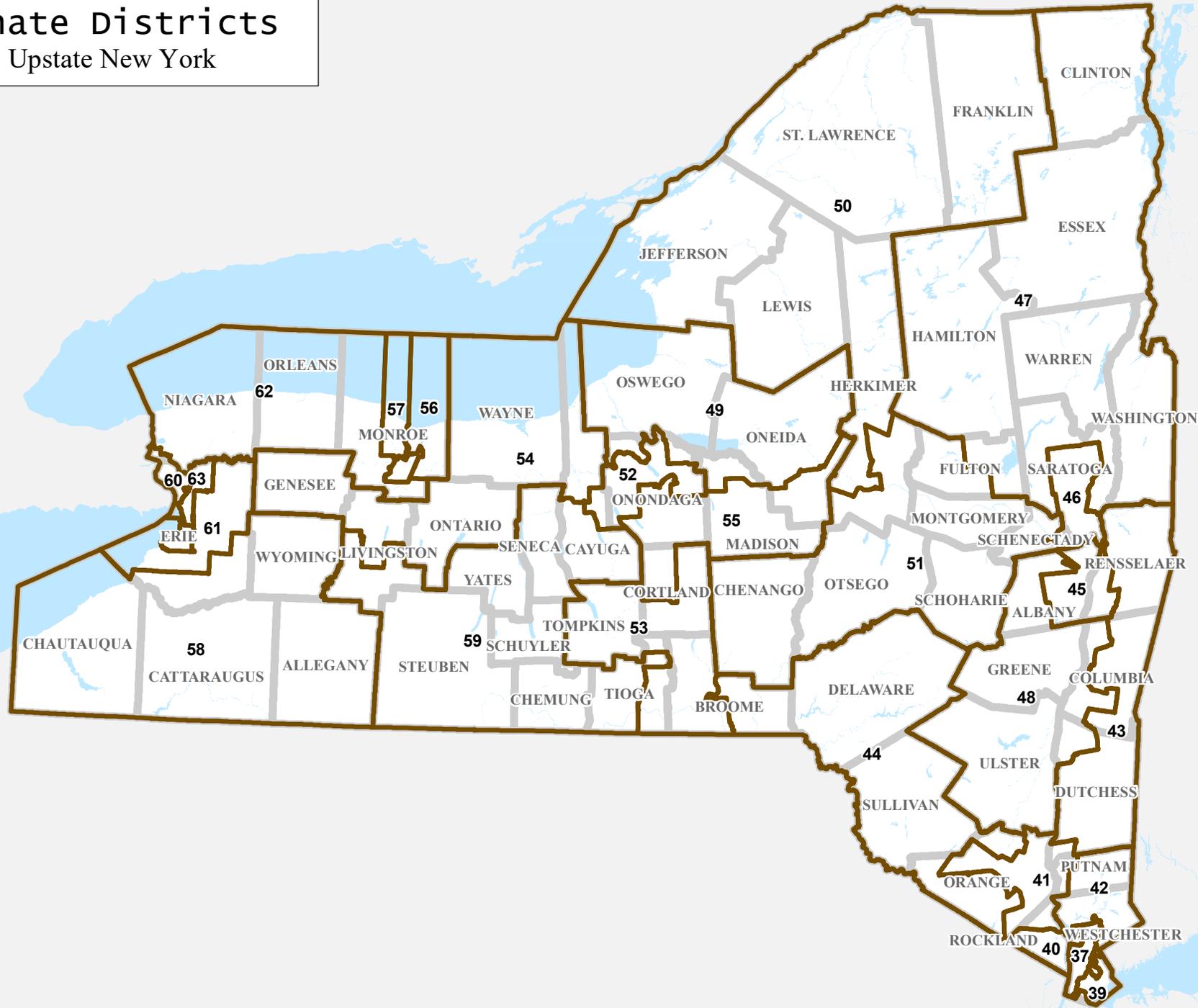


Exhibit 3

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EDUCATION

Ph.D., The Ohio State University, Political Science, expected 2022.

M.A.S. (Master of Applied Statistics), The Ohio State University, 2019.

J.D., Duke University School of Law, *cum laude*, 2001; Duke Law Journal, Research Editor.

M.A., Duke University, *cum laude*, Political Science, 2001. Thesis titled *The Making of an Ideological Court: Application of Non-parametric Scaling Techniques to Explain Supreme Court Voting Patterns from 1900-1941*, June 2001.

B.A., Yale University, with distinction, History and Political Science, 1995.

PROFESSIONAL EXPERIENCE

Law Clerk, Hon. Deanell R. Tacha, U.S. Court of Appeals for the Tenth Circuit, 2001-02.

Associate, Kirkland & Ellis, LLP, Washington, DC, 2002-05.

Associate, Hunton & Williams, LLP, Richmond, Virginia, 2005-09.

Associate, David, Kamp & Frank, P.C., Newport News, Virginia, 2009-10.

Senior Elections Analyst, RealClearPolitics, 2009-present.

Columnist, Center for Politics Crystal Ball, 2014-17.

Gerald R. Ford Visiting Scholar, American Enterprise Institute, 2018-present.

BOOKS

Larry J. Sabato, ed., *The Blue Wave*, Ch. 14 (2019).

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Barone, Kraushaar, McCutcheon & Trende, *The Almanac of American Politics 2014* (2013).

The Lost Majority: Why the Future of Government is up for Grabs – And Who Will Take It (2012).

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Covington v. North Carolina, No. 1:15-CV-00399 (M.D.N.C.) (racial gerrymandering).

NAACP v. McCrory, No. 1:13CV658 (M.D.N.C.) (early voting).

NAACP v. Husted, No. 2:14-cv-404 (S.D. Ohio) (early voting).

Ohio Democratic Party v. Husted, Case 15-cv-01802 (S.D. Ohio) (early voting).

Lee v. Virginia Bd. of Elections, No. 3:15-cv-357 (E.D. Va.) (early voting).

Feldman v. Arizona, No. CV-16-1065-PHX-DLR (D. Ariz.) (absentee voting).

A. Philip Randolph Institute v. Smith, No. 1:18-cv-00357-TSB (S.D. Ohio) (political gerrymandering).

Whitford v. Nichol, No. 15-cv-421-bbc (W.D. Wisc.) (political gerrymandering).

Common Cause v. Rucho, No. 1:16-CV-1026-WO-JEP (M.D.N.C.) (political gerrymandering).

Mecinas v. Hobbs, No. CV-19-05547-PHX-DJH (D. Ariz.) (ballot order effect).

Fair Fight Action v. Raffensperger, No. 1:18-cv-05391-SCJ (N.D. Ga.) (statistical analysis).

Pascua Yaqui Tribe v. Rodriguez, No. 4:20-CV-00432-TUC-JAS (D. Ariz.) (early voting).

Ohio Organizing Collaborative, et al v. Ohio Redistricting Commission, et al (No. 2021-1210) (Ohio) (political gerrymandering)

NCLCV v. Hall, (No. 21-CVS-15426) (N.C. Sup. Ct.)

COURT APPOINTMENTS

Appointed as Voting Rights Act expert by Arizona Independent Redistricting Commission (2020)

Appointed special Master by the Supreme Court of Virginia to redraw maps for the Virginia House of Delegates, the Senate of Virginia, and for Virginia's delegation to the United States Congress for the 2022 election cycle.

Appointed redistricting expert by the Supreme Court of Belize in *Smith v. Perrera*, No. 55 of 2019 (one-person-one-vote).

INTERNATIONAL PRESENTATIONS AND EXPERIENCE

Panel Discussion, European External Action Service, Brussels, Belgium, *Likely Outcomes of 2012 American Elections*.

Selected by U.S. Embassies in Sweden, Spain, and Italy to discuss 2016 and 2018 elections to think tanks and universities in area (declined Italy due to teaching responsibilities).

Selected by EEAS to discuss 2018 elections in private session with European Ambassadors.

TEACHING

American Democracy and Mass Media, Ohio Wesleyan University, Spring 2018.

Introduction to American Politics, The Ohio State University, Autumn 2018, 2019, 2020, Spring 2018.

Political Participation and Voting Behavior, Spring 2020, Spring 2021.

REAL CLEAR POLITICS COLUMNS

Full archives available at http://www.realclearpolitics.com/authors/sean_trende/

Exhibit C

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF STEUBEN

-----X

TIM HARKENRIDER, GUY C. BROUGHT,
LAWRENCE CANNING, PATRICIA CLARINO,
GEORGE DOOHER, JR., STEPHEN EVANS, LINDA
FANTON, JERRY FISHMAN, JAY FRANTZ,
LAWRENCE GARVEY, ALAN NEPHEW, SUSAN
ROWLEY, JOSEPHINE THOMAS, and MARIANNE
VOLANTE,

Index No. E2022-0116CV

Petitioners,

-against-

GOVERNOR KATHY HOCHUL, LIEUTENANT
GOVERNOR AND PRESIDENT OF THE SENATE
BRIAN A. BENJAMIN, SENATE MAJORITY LEADER
AND PRESIDENT PRO TEMPORE OF THE SENATE
ANDREA STEWART-COUSINS, SPEAKER OF THE
ASSEMBLY CARL HEASTIE, NEW YORK STATE
BOARD OF ELECTIONS, and THE NEW YORK STATE
LEGISLATIVE TASK FORCE ON DEMOGRAPHIC
RESEARCH AND REAPPORTIONMENT,

Respondents.

-----X

**EXPERT REPORT
OF CLAUDE A. LAVIGNA
FEBRUARY 14, 2021**

Expert Report of Claude A. LaVigna

I. Professional Experience

I am a political research and campaign strategist with over 30 years of experience and expertise. I am a national pollster who has conducted survey research for leading elected officials, corporations and public affairs initiatives for decades. I provide strategic guidance on political trends and have deep understanding of partisan influence in redistricting efforts and political campaigns. Through my experience as a political strategist, I have developed a deep understanding of New York's geographical and political landscape. My knowledge includes an understanding of New York's diverse local towns and communities, as well as the state's larger regions and media markets. I have a Bachelor of Arts degree from the State University of New York at Albany.

II. Scope of Engagement

I have been retained by Troutman Pepper Hamilton Sanders LLP on behalf of their clients, Petitioners in the above-titled action, to evaluate the 2022 state Senate and Congressional maps, 2021–2022 N.Y. Reg. Sess. Leg. Bills S.8196, A.9039-A, A.9040-A, and A.9168, enacted by the New York State Legislature and signed by Governor Kathy Hochul. I have been retained and am being compensated at \$300 per hour to provide my expert analysis of incumbent-protection and partisan-gerrymandering factors in the state Senate and Congressional maps and to determine if the maps violate the clear prohibitions against partisan and incumbent-favoring/disfavoring gerrymandering found in Article III, Section 4(c)(5) of the New York Constitution and New York Legislative Law § 93(2)(e). Specifically, I analyzed whether there is any coherent explanation for the new Congressional and state Senate district lines except for seeking partisan and incumbent-protection advantage, including by reducing competitiveness. My analysis is based on my review of the enacted 2022 Congressional and state Senate Maps in light of New York's political geography. I also compared the 2022 maps against the 2012 maps. 2011–2012 N.Y. Reg. Sess. Leg. Bills S.6696 and A.9525 (as technically amended by S.6755 and A.9584); *Favors v. Cuomo*, No. 11-CV-5632, 2012 WL 928223 (E.D.N.Y. Mar. 19, 2012).

III. Summary of Opinions

Based on the work performed as addressed in the following sections of the report, I hold the following opinions to a reasonable degree of professional certainty:

- Both the 2022 Congressional and state Senate Maps reveal clear evidence of districting with the purpose of seeking partisan and incumbent-protection advantage, including by reducing competitiveness.
- The 2022 Congressional Map splits up towns, counties, and communities of interest with no rational explanation apart from incumbent-protection and partisan gerrymandering.
- The 2022 state Senate Map similar splits up towns, counties, and communities of interest with no rational explanation apart from incumbent-protection and partisan gerrymandering.

IV. Exhibits

- Exhibit 1: Map of New York's 2012 Court-Drawn Congressional Districts
- Exhibit 2: Map of New York's 2012 Legislature-Enacted State Senate Districts
- Exhibit 3: Map of New York's 2022 Legislature Enacted Congressional Districts
- Exhibit 4: Map of New York's 2022 Legislature-Enacted State Senate Districts
- Exhibit 5: Resume of Claude A. LaVigna

V. Analysis of the 2022 Congressional Map

The 2022 Congressional map creates a partisan gerrymander with no coherent explanation except for seeking partisan and incumbent-protection advantage for the Democratic Party, including by reducing competitiveness. This includes “cracking” Republican communities by splitting them into multiple districts to dilute their political power and “packing” Republican voters into the same district, resulting in oddly shaped, stretched-out districts that waste Republican votes and strengthen Democrats’ power in the surrounding areas.

The following examples illustrate the Legislature’s intent to favor the Democratic party and protect Democratic incumbents and candidates, while disfavoring Republican incumbents and candidates and reducing competitiveness:

The Legislature entirely rearranged Congressional Districts 1 and 2 in the 2022 map, exchanging Republican voters for Democratic voters with no coherent explanation except for seeking partisan and incumbent protection advantage, including by reducing competitiveness. The new map moves areas with high populations of Republican voters into new Congressional District 2 while moving heavily Democratic communities into Congressional District 1. The Republican communities in Brookhaven on Long Island’s South Shore are now in District 2, whereas the strongly Democratic areas in the center of Long Island are now in District 1. This partisan revision

creates multiple new town splits and adds an additional county split where Congressional District 1 now extends into Nassau County between Oyster Bay and Huntington. The Legislature effectively shifted Congressional District 1 from a strong Republican district into a Democrat-leaning district by packing Republicans into Congressional District 2. In addition, this redrawing turned District 2 from a sure Republican district into an overwhelmingly Republican stronghold.

The Legislature completely transformed Congressional District 3 with no coherent explanation except for Democratic partisan and incumbent-protection advantage, including by reducing competitiveness. District 3 in the 2012 court-drawn map connected Suffolk and Nassau counties, with a slight reach into Queens County. The new District 3 extends from Suffolk County, through Nassau, Queens, and Bronx counties, all the way into Westchester County. It reaches across the Long Island Sound to capture Democrat strongholds along the shore, stretching in a thin strip up to the Town of Rye. The new District 3 can only be explained by seeking partisan and incumbent-protection advantage because this combination of counties and communities have no nexus and share no communities of interest. In drawing the Congressional District 3 in this way, the Legislature decreased competitiveness, transforming Congressional District 3 from a competitive district to a Democrat stronghold.

The new Congressional Districts 8, 9, 10, and 11 illustrate how the Legislature “cracked” established Republican-leaning communities of interest in Brooklyn to create a partisan advantage for Democrats. By breaking up concentrated Orthodox Jewish and Russian communities with strong social and cultural ties, the new map spreads conservative Republican-leaning voters across multiple districts. These new districts move large numbers from the Russian Jewish communities in Brooklyn into Congressional District 8 and divide the Orthodox Jewish communities between Congressional District 9 and Congressional District 10. The Legislature also divided an established Asian community in District 10 by moving half of it to District 11. Previously a Republican-leaning district covering Staten Island and adjacent communities in southern Brooklyn, the new District 11 combines Staten Island with unrelated and heavily liberal areas in Brooklyn—Sunset Park, Red Hook, Gowanus, Windsor Terrace, and Park Slope—which fundamentally alters the political composition of this district. These redrawn Brooklyn districts have no coherent explanation except seeking partisan and incumbent-protection advantage, with bizarre boundaries that break up communities of interest and combine unrelated communities for no logical reason.

Similarly, the new Congressional District 16 “cracks” Republican voters out of Congressional District 18 by connecting a section of the Bronx all the way up to Putnam County. This removes Republican voters from rural and suburban communities in Westchester County and combines them with the Democratic strongholds of Mount Vernon and Yonkers. District 16 in the 2012 map almost entirely consisted of parts of Westchester County, along with a small section of Bronx County for population purposes. The new District 16 has no coherent explanation except seeking Democratic partisan and incumbent-protection advantage, as it connects the heavily Republican towns of Putnam Valley, Carmel, Yorktown, and Somers to densely populated Democratic communities and neutralizes these Republican voters. District 16 is now comprised of geographically distant communities that have few to no commonalities.

The new Congressional District 18 has no coherent explanation except for seeking partisan and incumbent -protection advantage, including by reducing competitiveness. The packing of Republican voters into Congressional District 16 makes Congressional District 18 a safer Democratic district. The new District 18 is bizarrely shaped, extending into the Ulster County towns of Rochester and Wawarsing and reaching around into Peekskill, Cortlandt, North Salem, Lewisboro, Bedford, and Pound Ridge, with central portions of Putnam and Westchester counties carved out into Congressional District 16. As a result of this maneuvering, Congressional District 16 remains a safe Democratic district, while District 18 shifts from a Republican-leaning district to a Democratic district.

The new Congressional District 17 has no coherent explanation except for seeking partisan and incumbent-protection advantage, including by reducing competitiveness. It is contorted to combine strong Democratic areas with unrelated, rural Republican communities. Just as with the Legislature’s reconfiguration of Brooklyn, District 17 “cracks” conservative Jewish communities to neutralize their Republican votes. Congressional District 17 in the 2012 court-drawn map was compact and confined to just Rockland and Westchester counties. The new District 17 stretches from Sullivan County across Orange and Rockland counties into Westchester County, picking up strong Democrat communities including Greenburgh, Mount Kisco, and White Plains. The District separates Orthodox communities, incorporating communities in Sullivan and Rockland counties while excluding the Kiryas Joel Jewish community in Orange County. As a result, Congressional District 17 remains a reliable Democratic district.

The new Congressional District 19 has no coherent explanation except for seeking partisan and incumbent protection advantage, including by reducing competitiveness. It is drawn with each of its four corners reaching into the strongly Democratic areas. The new District 19 extends through Republican communities in Columbia and Greene counties to pick up the Democratic stronghold of Bethlehem in Albany County, adding a new county split. The District similarly reaches into Ulster County, targeting Democrat communities but circumventing areas with large numbers of Republican voters. The District stretches to pick up the Democratic-leaning city of Binghamton to the west. Finally, the District reaches up to encompass the Democratic city of Utica to the north. As a result of these targeted adjustment to the district lines, Congressional District 19 shifts from a Republican district to a Democrat-leaning district.

The new Congressional District 21 has no coherent explanation except for seeking partisan and incumbent protection advantage, including by reducing competitiveness. District 21 through “packs” Republican voters, adding Republican voters from large portions of Oneida County and Herkimer County, half of Montgomery County, and all of Schoharie County, increasing the concentration of Republican voters in the district and thus diminishing competitiveness in the surrounding districts.

The new Congressional District 22 has no coherent explanation except for seeking partisan and incumbent protection advantage, including by reducing competitiveness. The Legislature “cracked” Congressional District 22 by removing Republican areas and adding Tompkins County, including the heavily Democratic city of Ithaca. As a result, the new District 22 shifts from a competitive Republican district in the 2012 court-drawn map to a safe Democratic district in the new map.

The new Congressional District 23 has no coherent explanation except for seeking partisan and incumbent protection advantage, including by reducing competitiveness. The Legislature “packed” Republican voters into Congressional District 23. The new District 23 connects the suburbs of Buffalo and other towns in southern Erie County to distant rural areas around Binghamton. As a result, Congressional District 23 is now much less competitive and has become an overwhelmingly Republican district.

The new Congressional District 24 has no coherent explanation except for seeking partisan and incumbent protection advantage, including by reducing competitiveness. The Legislature similarly “packed” Republican voters into Congressional District 24. Previously, District 24 was

compact and encompassed related communities in Wayne, Cayuga, and Onondaga counties, as well as part of Oswego County. The new District stretches across four media markets, connecting numerous areas over more than 250 miles with little in common, extending all the way from Lewiston, in Niagara County eastward and northward into Jefferson County (all the way to the St. Lawrence County line), targeting Republican voters. As a result, Congressional District 24 is now overwhelmingly Republican.

VI. Analysis of the 2022 State Senate Map

My analysis of the 2022 state Senate map revealed a similar partisan design. Just as with the 2022 congressional districts, the state Senate map is drawn with the purpose of seeking partisan and incumbent protection advantage. The following examples illustrate the Legislature's intent to favor the Democratic party and protect Democratic incumbents and candidates, while disfavoring Republican incumbents or candidates and reducing competitiveness:

The new Senate Districts on Long Island have no coherent explanation except for seeking partisan and incumbent-protection advantage. Republican voters are "packed" into two districts, and the remaining seven districts are now much more favorable for Democratic candidates. Long Island's new Senate District 2 is overwhelmingly Republican, "packing" in Republican voters that were previously in Senate District 1. As a result, the new Senate District 1 is more favorable for a Democratic candidate than the 2012 legislature-enacted state Senate map. The Legislature similarly packed Senate District 4 with Republican voters, adding the Republican areas of Bayport, Oakdale, and east Islip, which were previously in state Senate District 3. In short, the Legislature combined the heavily Republican areas of Suffolk and Nassau counties into state Senate District 4.

Long Island's new state Senate Districts 5 and 6 have no coherent explanation except for seeking partisan and incumbent-protection advantage, including by reducing competitiveness. The Legislature reconfigured these former swing districts into strong Democratic districts by combining geographically distant and unrelated communities. In state Senate District 5, the Legislature removed the Town of Oyster Bay and added the Town of Babylon, picking up heavily Democratic communities to make the district more favorable to Democratic candidates. The Legislature placed Oyster Bay in new Senate District 6, adding Democratic strongholds in Uniondale and the Village of Hempstead to make District 6 a strong Democratic district.

The new state Senate Districts 7 and 9 have no coherent explanation except for seeking partisan and incumbent-protection advantage, including by reducing competitiveness. In the new Senate District 9, the Legislature removed the Five Towns, a conservative Orthodox Jewish community of interest, moving it to Senate District 10, a heavily Democratic district in Queens. The move adds a new county split along the Nassau-Queens border with no purpose except favoring of Democratic party and protecting Democratic incumbents and candidates, while disfavoring Republican incumbents and candidates.

The new state Senate District 22 has no coherent explanation except for seeking partisan and incumbent-protection advantage. Here, the Legislature redrew the district boundaries to remove portions of Republican communities in southern Brooklyn. The new District 22 also bizarrely extends into Democratic communities in northern Brooklyn. These new additions to District 22 have nothing in common with the remaining southern communities and neutralize their Republican votes. Further, the new district lines divide Brooklyn's Russian and Orthodox Jewish communities of interest between multiple state Senate districts.

The state Senate Districts north of New York City are similarly drawn with no purpose except favoring the Democratic party and protecting Democratic incumbents and candidates, while disfavoring Republican incumbents and candidates. The Legislature removed Republican communities in Dutchess County and politically competitive towns in Westchester County from what was Senate District 40 in the 2012 map to create a bizarrely shaped new Senate District 42. The new District 42 stretches in a thin finger to unite unrelated communities with no coherent explanation except for seeking partisan and incumbent protection advantage, combining the city of White Plains with rural and suburban areas in Putnam and Westchester counties. While District 40 in the 2012 map was competitive and consistently elected Republicans, the new District 42 is emphatically Democratic. This shift required the Legislature to split Putnam County between state Senate District 42 and state Senate District 41. Putnam County is now combined with Orange County, rather than with Dutchess County, with which it shares an established community of interest.

Further, the Legislature moved Philipstown in Putnam County and the communities of Beacon and Fishkill in Dutchess County from what was formerly Senate District 41 (located centrally in Dutchess and Putnam counties) to the new Senate District 41, which is primarily located in Orange County. Philipstown, Beacon, and Fishkill are Democratic-leaning

communities. By moving these communities to new District 41, the Legislature transformed the district from Republican to safely Democratic, with no coherent explanation except for seeking partisan and incumbent-protection advantage.

In order to accomplish this partisan-advantage-seeking shift in District 41, the Legislature moved the Republican-leaning towns of Montgomery, Crawford, Chester, and Monroe to the new Senate District 44. The Legislature drew the new state Senate District 44 with the purpose of disfavoring Republican incumbents and candidates and reducing competitiveness, by packing it with Republican voters from Orange, Delaware, and Broome counties, and removing Democratic-voting parts of Ulster County.

The Legislature also transformed the new state Senate District 48, which was previously Senate District 46, into a Democratic district from a Republican-leaning district with changes that have no coherent explanation except for seeking partisan and incumbent-protection advantage, including reducing competitiveness. The new Senate District 48 excludes the northern Republican-voting areas in Montgomery and Schenectady County, replacing them with Democratic-leaning areas in Ulster, Dutchess, and Columbia counties.

The Legislature drew the new state Senate District 46 with the purpose of favoring the Democratic party, while disfavoring Republican incumbents and candidates, by disconnecting the City of Albany and the Albany County river cities across the Hudson River to protect Democratic candidates and reduce competitiveness. The new District adds Republican areas in Saratoga County that have nothing in common with the rest of the District, creating a strong Democratic district.

The new state Senate District 51 is a large, central New York district. This new district is drawn to lump together two Senators, Republican James Tedisco of the 2012 Senate District 49 and Republican Peter Oberacker of the 2012 Senate District 51, into the same district. It appears highly likely that the Democratic leaders in the Legislature drew this district specifically to disfavor or remove one of these two incumbent Republican Senators.

The new state Senate District 52, which resembles state Senate District 50 in the 2012 Senate map, has no coherent explanation except for seeking partisan and incumbent-protection advantage. The Legislature transformed the district from a consistently Republican district to a Democratic district by adding more of the City of Syracuse to completely unrelated suburbs in Onondaga County.

The new state Senate District 53 has no coherent explanation except for seeking partisan and incumbent-protection advantage, including reducing competitiveness. Here, the Legislature created a strong Democratic district by combining Tompkins County with parts of Cortland, Tioga, and Broome counties, disconnecting communities in Tompkins County from surrounding areas with which they have historical connections.

The Legislature drew new state Senate District 54 with the purpose of reducing competitiveness. Here, the Legislature “packed” the district with Republican voters, adding Wayne County to other strongly Republican-performing areas in Genesee, Livingston, Ontario, and Cayuga counties. The new District 54 is overwhelmingly Republican and decreases competition in the surrounding districts.

The new state Senate Districts 56, 57, and 58 have no coherent explanation except favoring the Democratic party and protecting Democratic incumbents and candidates, while disfavoring Republican incumbents and candidates. In new state Senate District 56, which resembles Senate District 55 in the 2012 map, the Legislature added a large portion of the heavily Democratic City of Rochester, creating a safe Democratic district and reducing competitiveness. Similarly, the Legislature increased Democratic candidate protection in the new state Senate District 57, which also incorporates a substantial portion of the Democratic City of Rochester. In new state Senate District 58, the Legislature increased the number of Republican voters, neutralizing their voting power by removing them from surrounding districts and decreasing competitiveness in the other districts while enabling the Legislature to create the new Democratic district in Tompkins and Broome counties.

The Legislature drew the new state Senate District 60 with the purpose of favoring of Democratic party, while disfavoring Republican incumbents and candidates. The Legislature reduced competitiveness in the District by splitting the Erie-Niagara County border and adding the City of Niagara Falls. The Legislature also removed the towns of Orchard Park, Evans, and Brant from new District 60. District 60 in the 2012 map was a competitive swing district, but the Legislature transformed the District into a strong Democratic district by reaching into a new county and adding Niagara Falls. The Legislature achieved this by removing Niagara Falls from new state Senate District 62, which is now packed with Republicans due to the addition of reliably Republican towns to the east, which thereby removes all competition.

The Legislature also drew Senate District 63 with the purpose of favoring the Democratic party, while disfavoring Republican incumbents and candidates. Here, the Legislature reduced competitiveness in the District by combining several geographically distant and unrelated areas: the suburban swing Town of Amherst, the east side of Buffalo, and part of Lackawanna County. As a result, new state Senate District 63 is overwhelmingly Democratic, with no real risk of the Democrats losing that Senate seat.



CLAUDE A. LAVIGNA

Dated: February 14, 2022, New York

February 14, 2022

Exhibit 1

Congressional Districts
Upstate New York

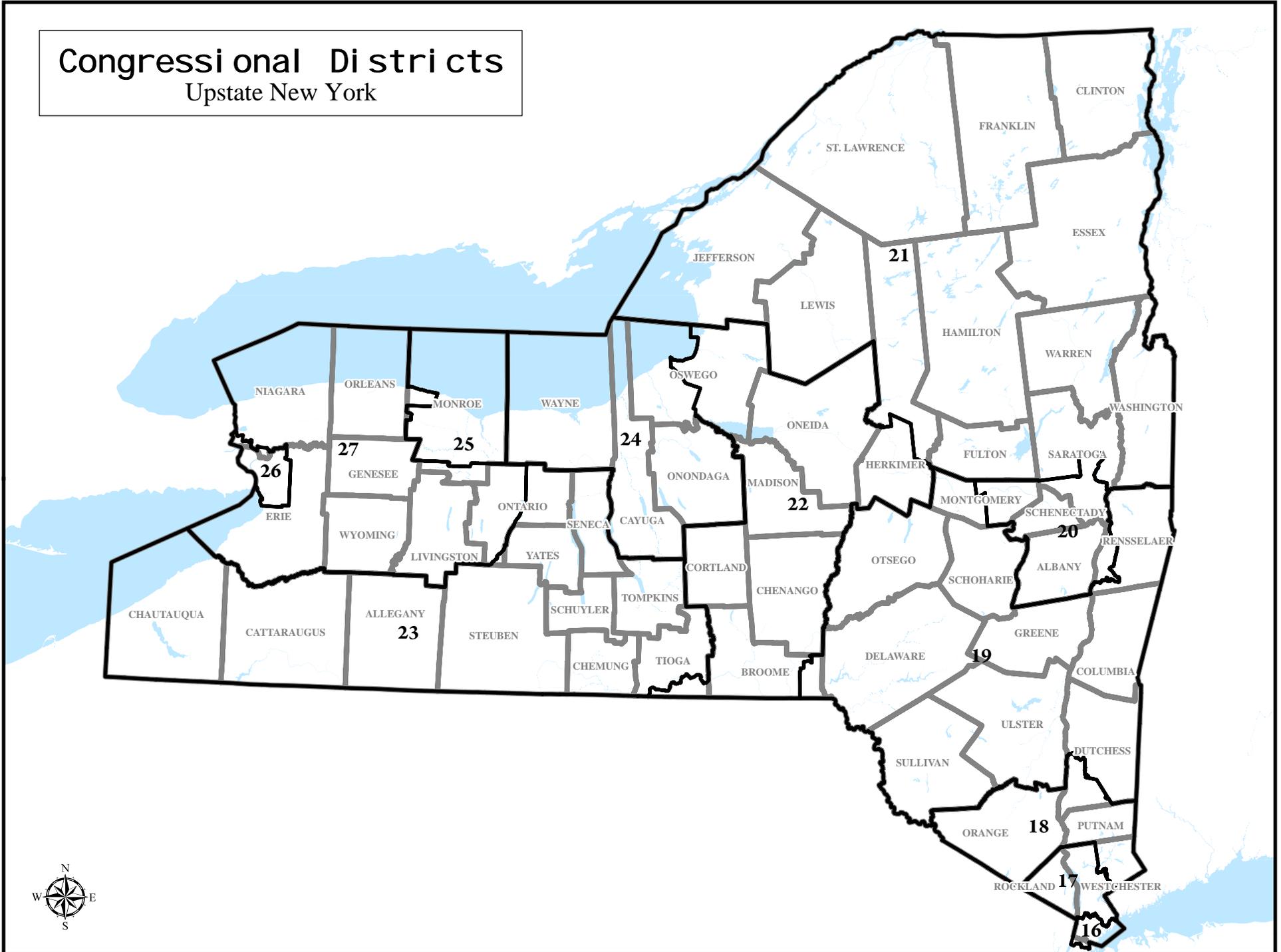


Exhibit 2

Senate Districts Upstate New York

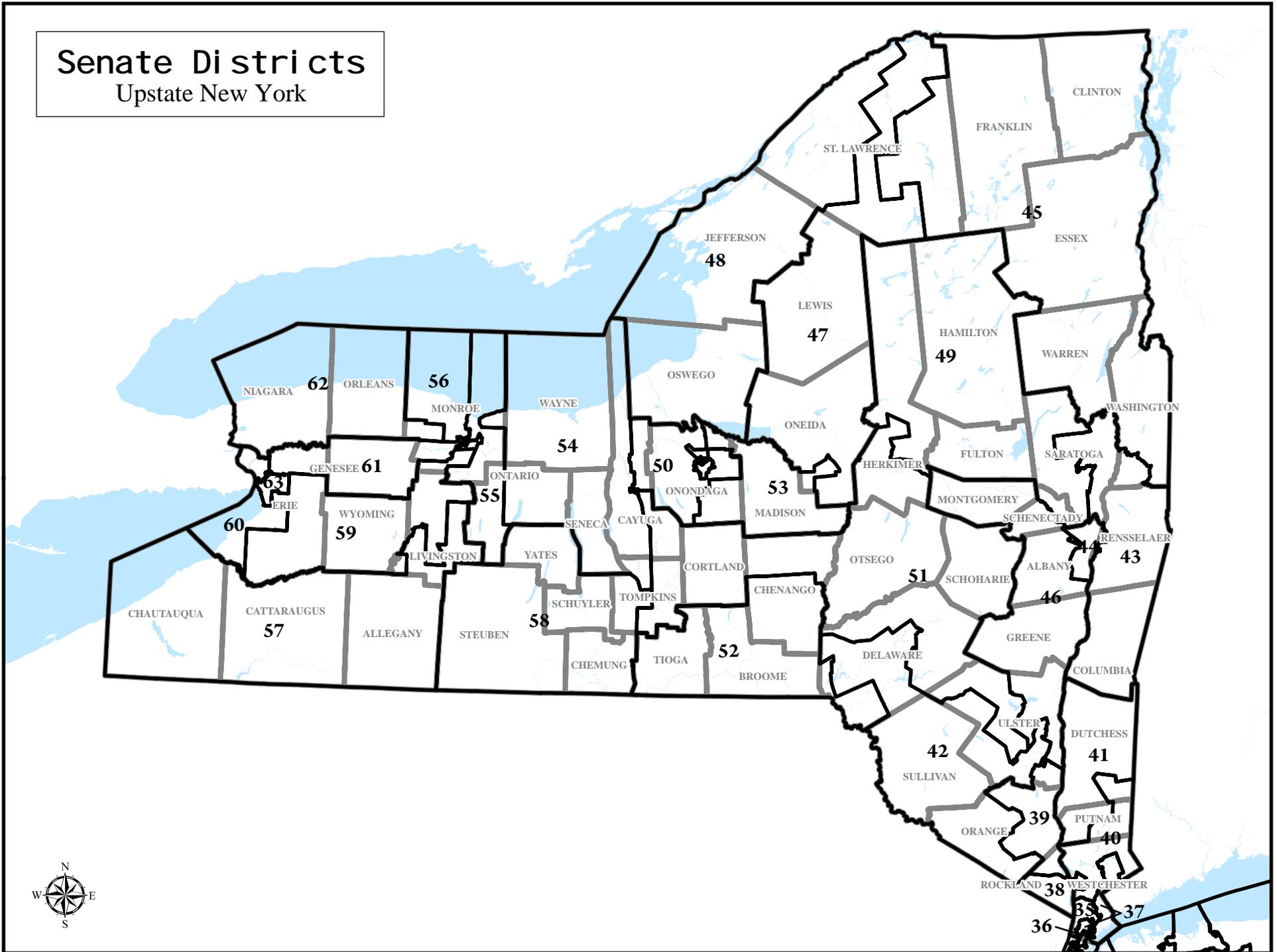


Exhibit 3

Congressional Districts Upstate New York

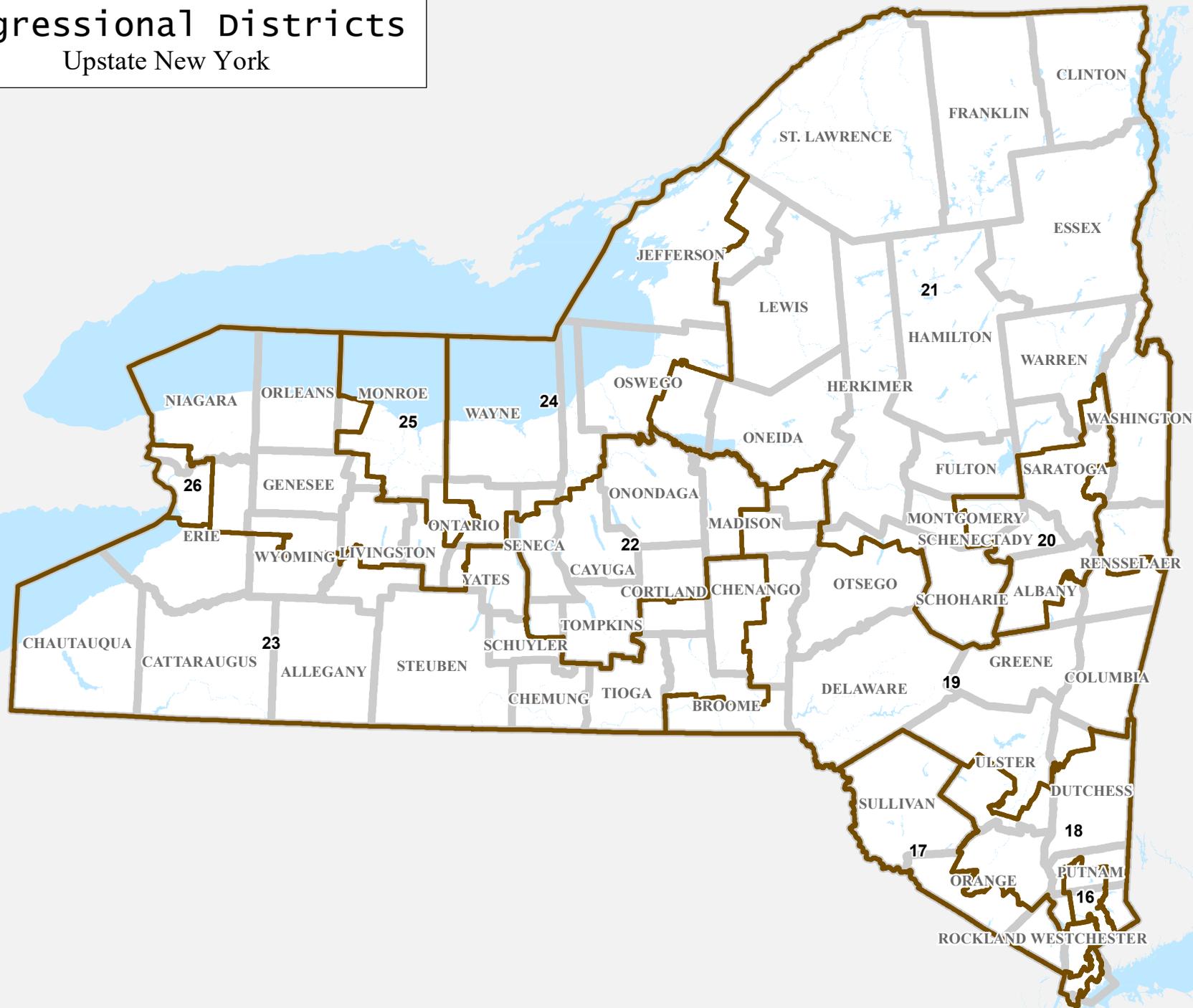


Exhibit 4

Senate Districts
Upstate New York

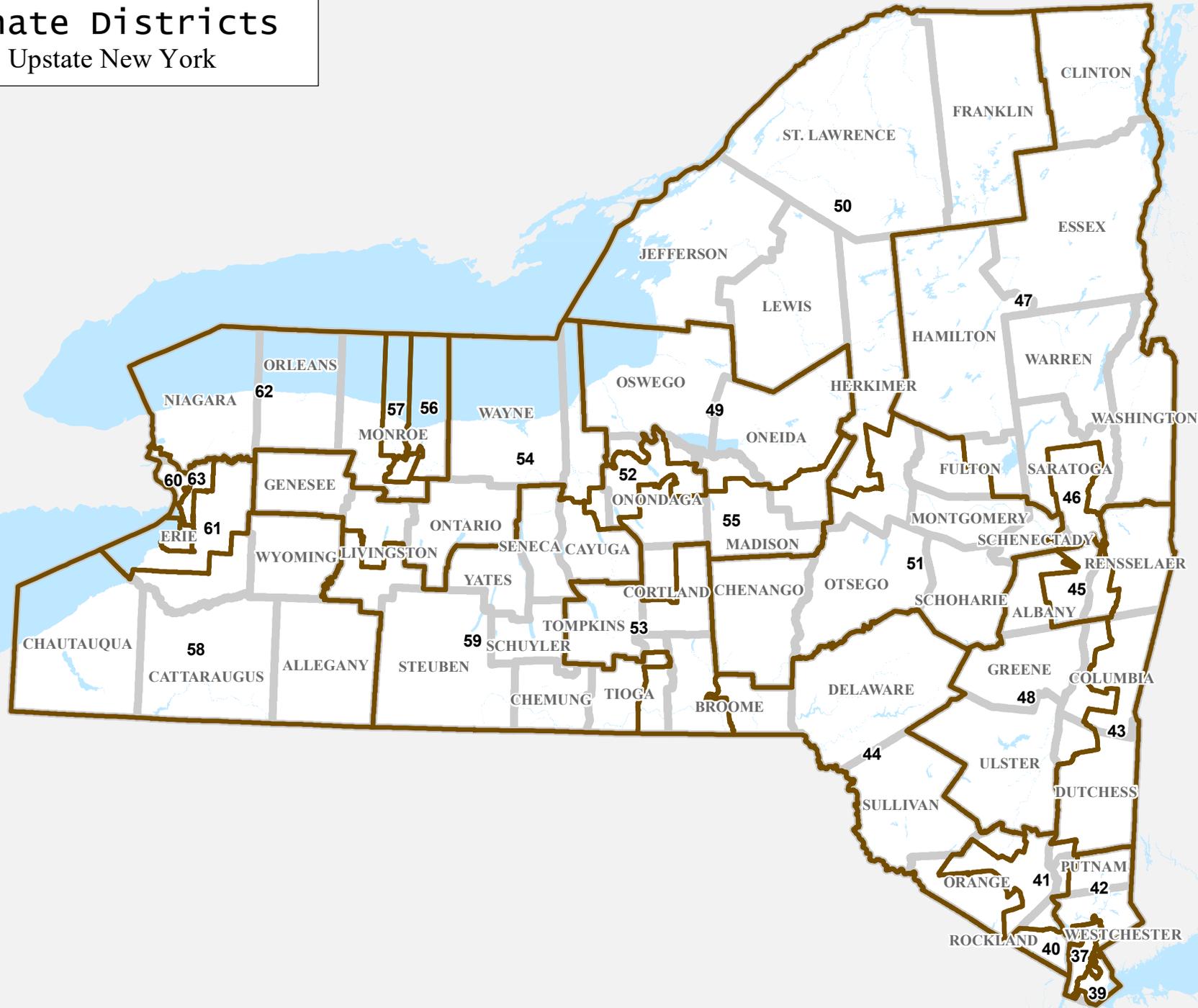


Exhibit 5

Claude A. LaVigna

E-Mail: claude@eaglepointstrategies.com

165 Kennewyck Circle
Slingerlands, NY 12159

Phone: (518) 281-3684

EXECUTIVE SUMMARY

A national pollster who has conducted survey research for leading elected officials, corporations and public affairs initiatives for nearly 30 years. He provides strategic guidance and knows how to work with clients to effectively persuade an electorate and sway public opinion. He also has a deep understanding and respect for how to integrate the grassroots, news media and other outside influencers into a political or corporate campaign.

PROFESSIONAL EXPERIENCE

May 2021 to Present

Vice President, Research and Analytics. Co/efficient, Kansas City, MO.
Co/efficient is a leading, nationwide survey research and analytics firm specializing in political, non-profit and corporate campaigns.

January 2014 to Present

Director. Balance New York.
Balance New York is an independent expenditure committee established in November 2013 and was responsible for executing successful efforts to keep the Republican Majority in the State Senate over the past two election cycles. Responsibilities included working with compliance counsel, filing all New York State Board of Elections periodic reports and developing and coordinating messaging between print, media and digital vendors.

May 2008 to Present

Owner and President. Eagle Point Strategies, Albany, NY
Eagle Point Strategies is a full service New York based public opinion survey and market research company, specializing in issue advocacy campaigns and candidates running for public office at all levels of government.

February 1989 – May 2008

Deputy Director. New York State Senate Republican Campaign Committee, Albany, NY
Database - Responsible for building first PC based standardized statewide voter data file. Oversaw 40 terminal volunteer phone bank. Produced targeted walk and

phone lists for all State Senate campaigns. Spearheaded direct mail fund raising campaigns. Survey Research - Conducted over 500 surveys for State Senate campaigns. Designed questionnaires, drew stratified random samples from voter file, and produced cross-tabulation results. Office Operations - Supervised staff of up to 10 people including setting office and campaign prioritization in a fast paced and ever changing environment.

January 1988 - January 1989

Production Manager. New York State Senate Republican Campaign Committee, Albany, NY
Coordinated and managed all campaign mailings on behalf of State Senate candidates and Senators. Served as the liaison between campaign field staff and central production facility. Managed over 7 million pieces of mail throughout New York State.

June 1985 - December 1987

Legislative Assistant. Civil Service Employees Association, Albany, NY
Legislative responsibilities included issue research, tracking legislation in the State Senate and State Assembly and assisting with the union's contracted lobbyist. Political Action responsibilities included union member political action training throughout New York State, developing comprehensive organizing plans for regular lobby days for union members coming to Albany. Campaign activities involved directly working on political campaigns throughout New York State on CSEA endorsed candidates. These activities included managing phone bank operations, door to door canvassing efforts and other direct voter contact.

EDUCATION

September 1977 - June 1981 Harrison High School, Harrison, New York
September 1981 - June 1983 Ohio University, Athens, Ohio
September 1983 - May 1985 State University of New York at Albany
B.A.- Communication

RELEVANT SKILLS

Professional Associations: American Association of Public Opinion Research (AAPOR)

REFERENCES

Available upon request

Exhibit D

**SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF STEUBEN**

-----X

**TIM HARKENRIDER, GUY C. BROUGHT,
LAWRENCE CANNING, PATRICIA CLARINO,
GEORGE DOOHER, JR., STEPHEN EVANS, LINDA
FANTON, JERRY FISHMAN, JAY FRANTZ,
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VOLANTE,**

Index No. E2022-0116CV

Petitioners,

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AND PRESIDENT PRO TEMPORE OF THE SENATE
ANDREA STEWART-COUSINS, SPEAKER OF THE
ASSEMBLY CARL HEASTIE, NEW YORK STATE
BOARD OF ELECTIONS, and THE NEW YORK STATE
LEGISLATIVE TASK FORCE ON DEMOGRAPHIC
RESEARCH AND REAPPORTIONMENT,**

Respondents.

-----X

REPLY OF SEAN P. TRENDE

MARCH 1, 2022

Reply of Sean P. Trende

I. Scope Of Engagement

I have been asked by counsel to respond to the Affidavit of Dr. Michael Barber, Ph.D. (“Barber Report”), the Affidavit of Dr. Kristopher R. Tapp, Ph.D. (“Tapp Report”), and the Expert Report of Dr. Stephen Ansolabehere (“Ansolabehere Report”) (collectively “Respondents’ Expert Reports”). I have been further asked to render such opinions relating to the 2022 state Senate and Congressional maps, 2021–2022 N.Y. Reg. Sess. Leg. Bills S.8196, A.9039-A, A.9040-A, and A.9168, enacted by the New York State Legislature and signed by Governor Kathy Hochul (respectively, “Enacted Senate Map” and “Enacted Congressional Map,” or collectively, “Enacted Maps”), as needed to evaluate these three reports. I have also been asked to re-evaluate, if necessary, the conclusions found in the Expert Report of Sean P. Trende (hereinafter “Trende Report”).

II. Introduction And Executive Summary

- Respondents’ Expert Reports all miss the mark, badly. In fact, taking their objections seriously only provides stronger evidence that the Enacted Maps were drawn with the purpose of disfavoring the Republican Party and reducing the number of competitive districts.
- The Respondents’ Experts’ claim that the Enacted Maps actually reveal that the Enacted Maps have a pro-*Republican* bias fails to understand the Trende Report, which does not rest on classifying districts as “Republican” or “Democratic.” Had it done so, it would not have used the selection of races in the naïve way that Respondents’ Experts use it.
- Proper classification of districts as “Republican” or “Democratic” yields even stronger evidence that the Enacted Maps were drawn with the purpose of disfavoring the Republican Party and reducing the number of competitive districts.
- Nor does Respondents’ Experts’ complaint that the ensemble does not respect municipal boundaries or ensure proper protection of minority voting rights help Respondents’ case. In fact, *even after essentially conceding* arguendo to Respondents that 35% of the districts in the Enacted Plan must be drawn exactly as the legislature drew them, that municipalities should be split or consolidated

according to the legislature's determinations, and that district cores should be considered, the map still presents as an outlier compared to the ensembles.

- The additional critiques found in the Tapp Report are baseless.
- In short, the Respondents' Expert Reports actually strengthen the conclusions of the Trende Report. These conclusions do not need to be altered or revisited.

III. The Enacted Map Was Plainly Enacted To Favor Democrats And Reduce Competition

Respondents' Expert Reports ultimately rest their analysis on a faulty interpretation of the data. To understand this, it is helpful to revisit the method and conclusions offered in the Trende Report. After producing an ensemble of 5,000 simulated maps, I calculated a Gerrymandering Index, which shows how far each district deviates from the average partisanship for a particular district across the maps (for a fuller explanation, see Trende Report at 12–13).

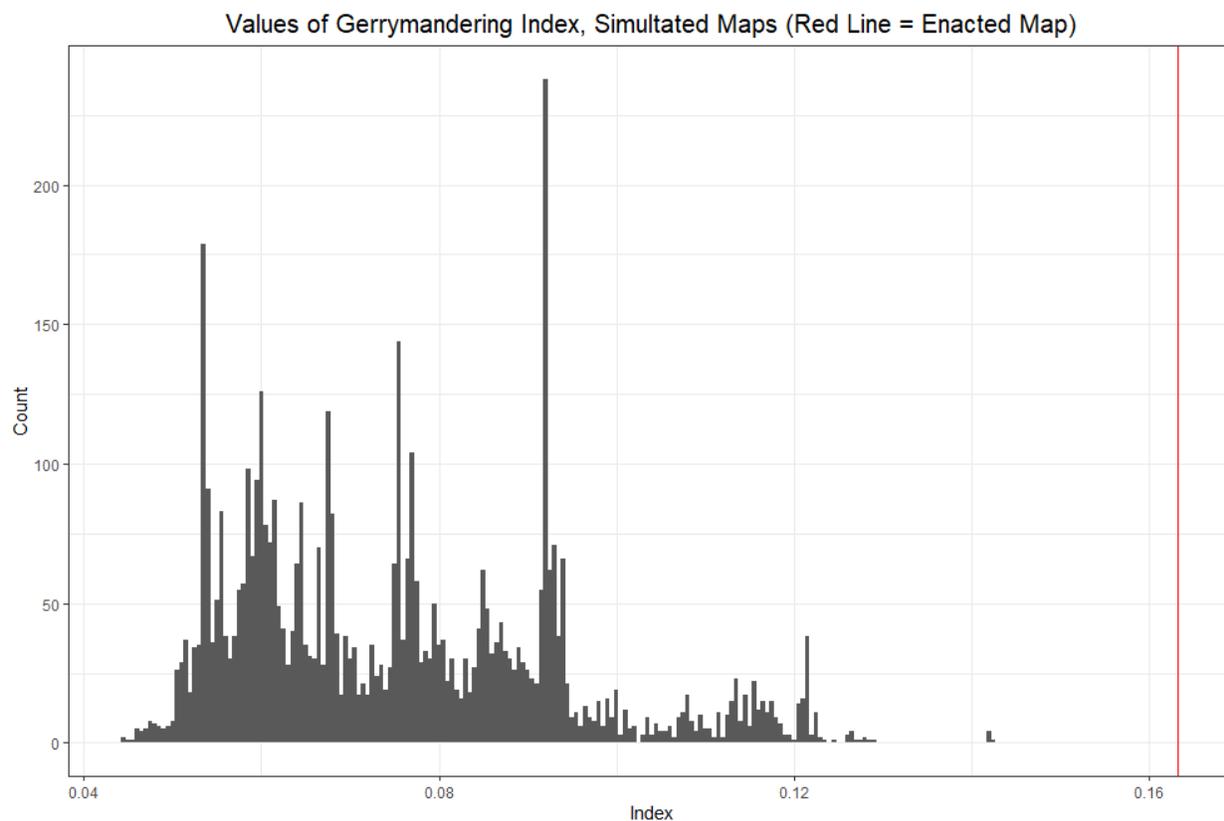
Partisanship is measured by averaging all races included in a widely available dataset. Those races are the 2016 presidential election in New York, the 2016 New York senate election, the 2018 New York gubernatorial election, the 2018 New York attorney general election, and the 2020 presidential election in New York. *See* Trende Report at 12 n.2. Crucially, however, the Trende Report makes clear that there are any number of ways to calculate district partisanship. Thus, the Trende Report employed these races *not* because they will precisely predict the outcome of congressional elections at a threshold of 50%. As shown below, interpreting them this way is a reasonably poor way to accomplish that task.

Rather, the Trende Report is express that it averages in every race in this dataset: (a) to foreclose an attack that that the races had been somehow cherry-picked in order to achieve a pre-ordained outcome, and (b) because “[t]he simulation approach tends not to be as sensitive to the choice of elections as other metrics, unless political coalitions in a state vary radically from election-to-election.” *Id.* The key to this analysis is not who wins or loses in a particular district. It is instead whether the map deviates from expected district partisanship in a way that is inexplicable except by heavy reliance on partisan data.

To begin an analogy to be revisited later, one would never want to use Massachusetts Governor Charlie Baker's performance in congressional districts in 2018 as a direct proxy for how a district would perform in congressional elections, given that his 2018 performance in Massachusetts is atypical for a Republican in that State (to say the least). At the same time, even

given his strong overall performance, we would expect districts drawn without respect to partisanship to still resemble those that an ensemble approach would create, and to exhibit no clear pattern of packing and cracking of his vote. In other words, while you cannot predict congressional elections based on Baker's vote share, you could still usefully examine the distribution of Baker's vote shares in districts in an ensemble and compare them to those in an enacted map to determine whether political data were used to draw the map.¹

After calculating the Gerrymandering Index for all 5,000 plans in the ensemble, which were all drawn blind to partisanship, I calculated the Gerrymandering Index for the Enacted Map. The Enacted Map appeared to be six standard deviations from the average Index produced by the ensemble, an enormously improbable outcome for a partisan-blind map drawing.



The Trende Report concludes that “[t]he probability that the Enacted Congressional Map would be drawn by map drawers who cared only about the constitutional mandates for compactness and avoiding undue partisan influence is vanishingly small. Put simply, it is

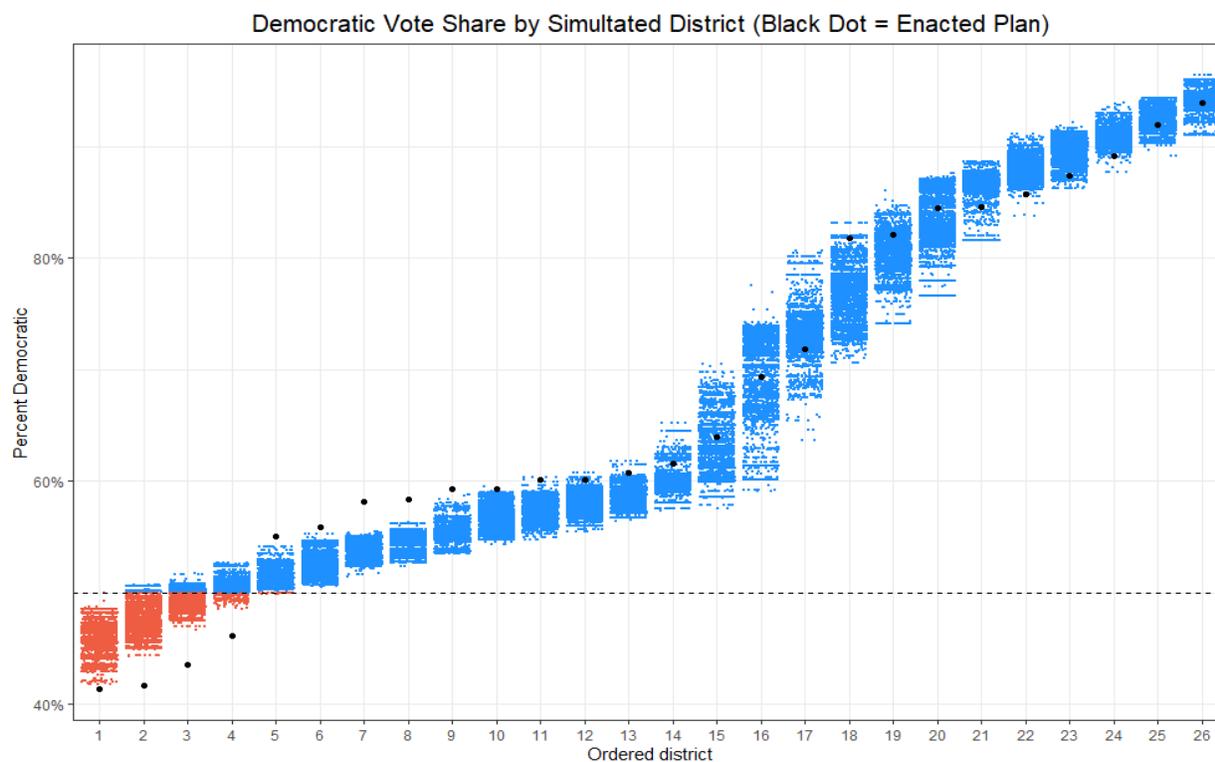
¹ To be clear, it would probably be *better* to use a more representative race or set of races. The point is simply that if Republicans are purposefully clustered in a few overwhelmingly Republican districts and improperly spread out over other districts, it should also show up in the Baker data.

implausible, if not impossible, that this map was drawn without a heavy reliance upon political data and was likely drawn to favor or disfavor a political party.” Trende Report at 14.

Respondents’ only rejoinder is to claim that the Gerrymandering Index, by itself, tells you nothing about the direction of the bias. The Gerrymandering Index can indeed detect gerrymanders for either party, but the idea that the overwhelmingly Democratic legislature set aside the map drawn by its redistricting commission and produced a map whose partisanship is an extreme outlier in order to favor of Republicans should be implausible on its face.

It is also belied by other evidence provided in the Trende Report. Contrary to the claims in the Respondents’ Expert Reports, *see, e.g.*, Tapp Report ¶ 26, the Trende Report does did not stop its analysis with the Gerrymandering Index, although it probably could have. Instead, the Trende Report is clear that establishing whether and which party is being disadvantaged is *best* accomplished by also “[i]nterrogating the maps from a different angle.” Trende Report at 14.

It does so by following McCartan and Imai and taking the ensemble maps, ordering each map’s districts from most-to-least Republican, and then examining how Republican or Democratic the district is, using the index of statewide races described above.



As the Trende Report notes, in the closest it comes to classifying districts directly, “[t]he only place where the Enacted Congressional Map falls within expectations is in safely Democratic

districts—those where Democrats would win over 60% of the vote. This 60% threshold, however, is significant, as political scientists and elections analysts will begin to classify elections as competitive below that threshold.” *Trende Report* at 15–16. Yet, “around district number 13, the simulation expects to see multiple districts that fall into the potentially competitive range. This is also the exact point at which the values of the Enacted Maps begin to fall outside of the expected ranges.” *Id.* at 16. We also see that the most Republican districts are made far more Republican than we would expect and note that, although the Democratic vote share in the ensemble maps rises gradually from the most Republican district to the 14th-most Republican district, Democratic vote share in the Enacted Map jumps suddenly around District 5. In other words, the map packs Republicans into a few overwhelmingly Republican districts, and then it cracks the remainder to create fewer competitive districts, which is prohibited by the New York Constitution. This is the “DNA of a gerrymander.” *Id.*; see also Gregory Herschlag *et al.*, “Quantifying Gerrymandering in North Carolina” 7 *Statistics & Pub. Pol’y* 2 (2018) (referring to this pattern as the “signature of gerrymandering”).²

IV. The Respondents’ Expert Reports Incorrectly And Needlessly (Mis)classify Districts As “Republican” Or “Democratic.” But A Proper Classification Scheme Leads To The Same Conclusions Found In The Trende Report

The Respondents’ experts’ main response to the conclusions found in the *Trende Report* appears to be that the Enacted Maps are actually biased against Democrats. The conclusion that independent analysts on the left, right, and center are all incorrect about the fairness of a map that would appear to limit Republicans to 15% of the seats (in a State where they routinely win around a third of the vote), is one that can only be reached through a misapplication of methods and a naïve interpretation of data.

Respondents’ experts embark upon an entirely different line of analysis, classifying all districts whose average Democratic performance is in excess of 50% as “likely to be won by Democrats,” *e.g.*, *Tapp Report* ¶¶ 28-34, and vice-versa. Tellingly, they cite nothing, either in the academic literature or from practitioners, suggesting that a simple average of statewide races is an accurate way to predict whether a district is “likely” to elect Republicans or Democrats to Congress. Nor do they conduct their own analysis, nor do they even *consider* actual congressional election results.

² https://www.researchgate.net/publication/322419073_Quantifying_Gerrymandering_in_North_Carolina.

The Tapp Report expends just two sentences analyzing what would constitute a Democratic district, concluding, erroneously, that any district that falls above the 50% Democratic *average* vote share in the provided index of elections would “likely” elect a Democrat. *Id.* ¶ 24. Respondents’ experts then count up the number of “Republican” districts predicted by the ensemble plans, note that the Enacted Plan creates four “Republican” districts (which is something of a best-case scenario under the ensembles), and conclude that this plan actually has a Republican bias to it. Dr. Ansolabehere employs a similar classification scheme throughout his report, both in response to my analyses and those of the other Petitioners’ experts.

This is a flawed way to classify these districts, for two reasons.

A. Classifying Districts As Simply “Republican” Or “Democratic” Is Misleading And Unwarranted.

First, such an approach converts what is, in truth, a probabilistic measure into a dichotomous one. Simply put, while methodologists and mathematicians sometimes use this as a heuristic to illustrate the functionality of redistricting algorithms, no elections analyst or elections scholar would look at a district where statewide Republicans would be expected, on average, to win 50.1% of the statewide vote and conclude it would elect Republicans to Congress, without further inquiry. Indeed, as illustrated by my first report, political scientists would, as a general matter, classify districts where parties win as much as 60% of the vote as “competitive.” Three examples help illustrate why this is the case.

First, there is no practical difference between a district where statewide Democratic candidates average 49.99% of the vote and a district that where statewide Democratic candidates average 50.01% of the vote. Both are, for all intents and purposes, equally likely to elect a Republican to Congress. But Respondents’ Expert Reports urge this Court to label the former district “Republican” and the latter district “Democratic.”

Second, this approach characterizes a district where statewide Democrats win, on average, 50.1% of the vote in the same way as it does a district where statewide Democrats win, on average, 90% of the vote: they are both simply “Democratic.” It would therefore have the Court refrain from distinguishing between a map that pairs one district where statewide Republicans average 100% of the vote with two districts where statewide Democratic candidates average 75% of the vote, on the one hand, and one that draws one district where statewide Republicans average 52% of the vote and two districts where statewide Democrats average 51% of the vote, on the other hand.

Third, the Respondents' Expert Reports would treat a map with nine districts where statewide Democratic candidates average 50.1% of the vote and one district where statewide Republican candidates average 49.9% of the vote as being fundamentally dissimilar from a map with three 50.3% Democratic districts, two 50.2% Democratic districts, and five 49.9% Democratic districts. They would call the first map a 9-1 Democratic map and the second map a 5-5 Democratic map. Assuming *arguendo* that 50% was, in fact, the threshold defining the boundary between races where Republicans were favored to win and Democrats were favored to win, any analysis should view both maps as simply containing ten tossup districts; they might further estimate that both maps would tend to elect five Republicans and five Democrats to Congress.

A final example ties this in directly with these maps: The ensembles expect a congressional plan's seventh-most Democratic district to be one where statewide Democrats win, on average, between 51% and 55% of the vote. The Enacted Plan creates a district where Democrats win, on average, 58% of the vote. It is obvious that there is a world of difference between a district where (statewide) Democrats win 51% of the vote on average and districts where those Democrats win 58% of the vote, on average. But Respondents' Experts urge this Court to be indifferent between those two districts and classify them both as simply "Democratic." That is an inaccurate way to approach election classification.

B. Using 50% Of A Party's Average Statewide Vote Share As A Threshold Misclassifies Elections

Second, even if Respondents' experts were correct that we should look at races through the dichotomous lens of "Republican" and "Democrat," the 50% threshold that they employ as their classification boundary is the wrong threshold to use. Remember, the index provided is not based on congressional elections, but rather is an average of statewide elections conducted over a span of election cycles.³ People who study elections for a living know that a district where Andrew Cuomo, or Hillary Clinton, or Joe Biden wins 51% of the vote is not *necessarily* likely to elect a Democrat to Congress. In fact, given that Biden won nationally by four points, we would probably conclude that a district where Biden won 51% of the vote has a slight Republican tilt to it overall.

³ We use statewide races because it helps to control for things like candidate quality, fundraising, and incumbency in a uniform way across the State.

Candidates can have unique appeal in a State, face an unusually weak opponent, or run in a particularly good year for Democrats (such as 2018) or a particularly bad year for Democrats (such as 2010). To revisit our example of Charlie Baker, while it would be useful to know whether a legislature draws an unusually large number of districts where he performed poorly, it would be a terrible error to classify the districts that he won as “Republican.” Baker carried all but one of the State’s districts, often by overwhelming margins, but Massachusetts has not elected a Republican to Congress since 1996.⁴ In other words, classifying districts he won as “Republican” would grossly overstate the likely Republican performance in those districts.

A careful examination of the data confirms that this is exactly what happens when using these data to try to classify districts as “Republican” or “Democratic” in New York by using 50% as our classification boundary. The following table provides the Democratic vote share in districts in every congressional election in New York over the past three election cycles, sorted by that district’s score in our index.⁵ Notably, Republican candidates have won every congressional election in seats where statewide Democratic candidates have averaged less than 50% of the vote, excepting a narrow loss in one district in the unusually good Democratic year of 2018. They have won more than half of the elections in districts where statewide Democratic candidates have averaged between 50% and 55% of the vote. While they do not win either of the seats in the mid-to-high 50s, they are occasionally competitive in them. Democrats run behind the average of their statewide candidates in 2/3 of all races where they faced opposition; most of the races where they ran ahead of that average fall in the very good Democratic year of 2018.

⁴ See <https://docs.google.com/spreadsheets/d/17yr9mcAtuUdNjI9NEPYKxXsEldzzQ2ZaDwEAbnPRyS4/edit#gid=46011824>.

⁵ We examine the last three cycles because those are the years that have statewide races included in our index. But the trend continues back to the beginning of the decade: Republicans almost always win in districts up to roughly a 53% threshold in our index, and are competitive/capable of winning in districts up to roughly a 55.5% threshold.

Table 1 Democratic Vote Share in Districts, By Index
2012-2020 Data

District	Index	Democratic Share 2020	Democratic Share 2018	Democratic Share 2016
17	41.80%	59.30%	49.81%	55.90%
11	46.80%	41.61%	45.76%	42.40%
21	46.80%	41.10%	43.05%	51.55%
27	47.32%	50.00%	50.89%	46.86%
1	48.00%	55.18%	47.93%	41.01%
19	51.44%	55.91%	53.68%	45.75%
3	51.50%	46.51%	46.89%	57.54%
11	52.03%	46.86%	53.23%	57.57%
18	53.00%	56.06%	55.47%	55.00%
54	55.80%	44.72%	47.37%	59.44%
1	57.00%	56.30%	58.98%	52.80%
4	58.34%	56.63%	61.33%	53.56%
30	60.00%	61.17%	60.40%	67.00%
33	60.31%	60.24%	58.58%	56.10%
15	63.86%	67.72%	100.00%	100.00%
20	68.80%	70.00%	75.34%	54.00%
6	69.80%	67.00%	100.00%	75.00%
16	78.80%	100.00%	100.00%	100.00%
43	81.01%	72.02%	87.17%	85.00%
10	81.60%	78.00%	82.00%	78.00%
42	85.80%	83.00%	87.00%	83.00%
9	87.31%	83.00%	89.07%	100.00%
5	88.84%	100.00%	100.00%	86.00%
8	88.27%	84.00%	100.00%	100.00%
7	89.20%	85.00%	100.00%	90.00%
41	93.01%	90.00%	94.80%	92.00%
45	93.90%	88.00%	95.90%	96.45%

If we are somehow not yet convinced that classifying any seat where statewide Democratic candidates have averaged more than 50% of the vote as “Democratic” for purposes of congressional elections is mistaken, we can be more rigorous. A simple regression analysis of Democratic vote share in a district election on the index yields the following result, which suggests Republican vote share would be expected to remain above 50% up to the point where statewide Democratic candidates begin to average around 53% of the vote. Of course, this is simply a “break-even point,” as Republicans would remain competitive in districts with even higher indices.

Table 2: Regression of Partisan Index on Democratic Vote Share¹

Characteristic	Beta	95% CI ²	p-value
(Intercept)	-0.06	-0.11, -0.01	0.030
index	1.1	1.0, 1.1	<0.001

¹R² = 0.9133
²CI = Confidence Interval

We can, of course, build more complex models; given the near-perfect separation in the data, use of logistic regression analysis to classify districts directly as “Republican” or “Democratic” is unreliable, but perhaps utilization of a support vector machine would give slightly different answer. We could also incorporate variables such as incumbency to potentially improve the (already high) fit. There is a veritable rabbit hole of analysis we could go down classifying a district as “Republican” or “Democratic,” before even engaging in the question of what would constitute a “competitive” district in a quantitative sense. This subjectivity is part of why I avoid this approach. Regardless, there is no reason to believe any technique would reveal an answer other than what we can intuit from our naked eye: “Republican District” does not line up with a 50% cutpoint in our index.

Overall, a correct interpretation of the ensemble data—*if* we were to go down the “classification route”—would be to take 53% as the threshold at which Democratic wins become more likely than Republican wins, and 55.6% as the point at which Republicans have no chance at winning whatsoever. Using those points, the ensemble predicts that, overall, maps drawn without partisan intent would produce *on average* six districts where Republicans would be favorites to win and nine districts where they would at least be competitive. It predicts that, overall, maps drawn without partisan intent would produce *as many* as eight seats where Republicans would be favorites to win, and twelve where they would be competitive (although such results would be outliers).

This stands in stark contrast to the reality of the Enacted Plan, which creates just four districts where Republicans would be favored and five where they would have a chance at winning (the index in the fifth-most Republican district in the Enacted Plan is 54.9%, barely in the range of races where Republicans would have a chance). In other words, a proper system of classifying “Republican” and “Democratic” districts would actually confirm what our common sense should

tell us: That the outlying Gerrymandering Index score for the Enacted Plan is a result of the legislature aggressively targeting competitive and Republican-leaning seats.⁶

To drive home the point that these maps were clearly not drawn to favor Republicans, consider the following table. It shows the partisan index under the old lines, the partisan index under the new lines, and is sorted by the amount that index shifted to either the left or right. I have also included a metric for the Cook Partisan Voting Index (PVI), which elections analysts actually do employ to measure whether a district will send Republicans or Democrats to Congress, under both the new and the old lines.⁷ Finally, the table lists the 2020 congressional winner in each district and the amount of the old district core retained.

⁶ Again, these averages and maxima are estimated from a set of elections where, overall, Republicans fared quite poorly.

⁷ Cook PVI looks at how much more Republican or Democratic a district was than the country as a whole in the last two presidential elections. Donald Trump received 49% the popular vote (excluding third parties) in 2016 and 48% in 2020. Assume Donald Trump tied with the Democratic candidate in both years. PVI helps to correct for national forces by noting that the district was a point to the right of the country in 2016 and two points to the right in 2020, for a PVI of R+1.5. PVI is a reasonably strong classifier: Democrats currently hold every district with a Democratic-leaning PVI but six; Democrats hold 20 of the Republican-leaning PVIs (this Democratic bias reflects the fact that Democrats have had two good election cycles in a row). This is available on Cook's subscription-only website.

District	Old District Index	New District Index	Change	Old District Cook PVI	New District Cook PVI	2020 Winner	Cand. Reunion
10	52.05%	61.50%	9.45%	R-7	D-4	Stacie Malinowski (R)	74.78%
1	36.50%	58.10%	21.6%	R-6	D-2	Luc Zéhin (R)	54.27%
24	55.60%	60.2%	4.60%	D-2	D-6	John Kadis (R)	69.10%
19	51.44%	55.80%	4.36%	R-3	D-2	Antonio Delgado (D)	47.52%
4	57.68%	59.10%	1.42%	D-4	D-3	Thomas Suarez (D)	71.20%
16	53.60%	53.80%	0.20%	R-1	D-1	Sean Patrick Maloney (D)	70.84%
14	51.01%	52.05%	1.04%	D-25	D-25	AOC (D)	58.01%
10	41.60%	41.76%	0.17%	D-27	D-27	Jarrod Butler (D)	69.77%
18	40.73%	40.88%	0.15%	D-40	D-40	Antonio Espallero (D)	63.89%
12	44.60%	45.51%	0.92%	D-14	D-14	Candyn Maloney (D)	44.60%
4	50.24%	49.50%	-0.74%	D-4	D-4	Kamrese Rice (D)	56.68%
7	42.20%	41.1%	-0.18%	D-34	D-34	Nyia Velamuri (D)	66.00%
6	60.03%	60.37%	0.34%	D-11	D-11	Grace Sloan (D)	93.34%
23	46.21%	46.77%	0.56%	D-8	D-8	Joe Morillo (D)	92.76%
8	48.04%	47.44%	-0.71%	D-31	D-31	Gregory Meeks (D)	63.69%
26	64.50%	64.90%	0.40%	D-9	D-9	Brian Higgins (D)	94.50%
27	42.80%	41.51%	-1.29%	R-12	R-12	Chris Jacobs (R)	55.02%
20	49.05%	56.25%	7.20%	D-6	D-6	Paul Tonko (D)	44.60%
18	43.88%	41.94%	-1.94%	D-39	D-39	Robbie Torres (D)	71.00%
9	47.21%	44.37%	-2.84%	D-12	D-20	Vente Clark (D)	71.04%
11	46.85%	44.4%	-2.45%	R-8	R-12	Yusef Salaam (R)	62.20%
17	62.50%	60.54%	-1.96%	D-4	D-4	Alondra Jones (D)	74.00%
3	44.27%	44.47%	0.20%	D-11	D-26	Darius Johnson (D)	52.51%
23	46.60%	44.65%	-1.95%	R-9	R-11	Om Boon (R)	64.04%
2	51.76%	46.00%	-5.76%	R-5	R-10	Andrew Garbarino (R)	87.14%
16	58.06%	51.86%	-6.20%	D-25	D-18	Jamaal Bowman (D)	71.22%
22	47.1%	-	-	R-9	-	Claudia Tenney (R)	-

To accept the theory of the Respondents' Expert Reports, one must accept that it is merely a coincidence that all districts that shift leftward by more than a point are either held by Republicans or potentially vulnerable Democrats. One must accept that it is merely a coincidence that almost every district that shifts rightward is either very likely to elect a Republican already or is overwhelmingly Democratic. Respondents' Expert Reports require a conclusion that it is just a coincidence that every district whose PVI shifts its basic underlying orientation flips from Republican to Democrat (this occurs in Districts 1, 11, 18 and 19).

One must also accept that close to every district with less than 70% core retention is a district where Democrats pack Republicans (Districts 2, 23, 21, 27) or a previously competitive district that they move sharply leftward (Districts 19, 24, 1). The only exception is Rep. Nydia Velazquez's district, which gives up a substantial number of Democratic voters to the Republican-held Eleventh District, while remaining heavily Democratic. Simply put: An independent fact-finder would have to struggle mightily to miss what is hiding in plain sight here.

V. Addressing The “Missing Constitutional Requirements” Does Not Change The Analysis

All three of Respondents' Expert Reports observe that the ensemble maps are not explicitly constrained by every constitutional requirement in New York. This all misses the mark.

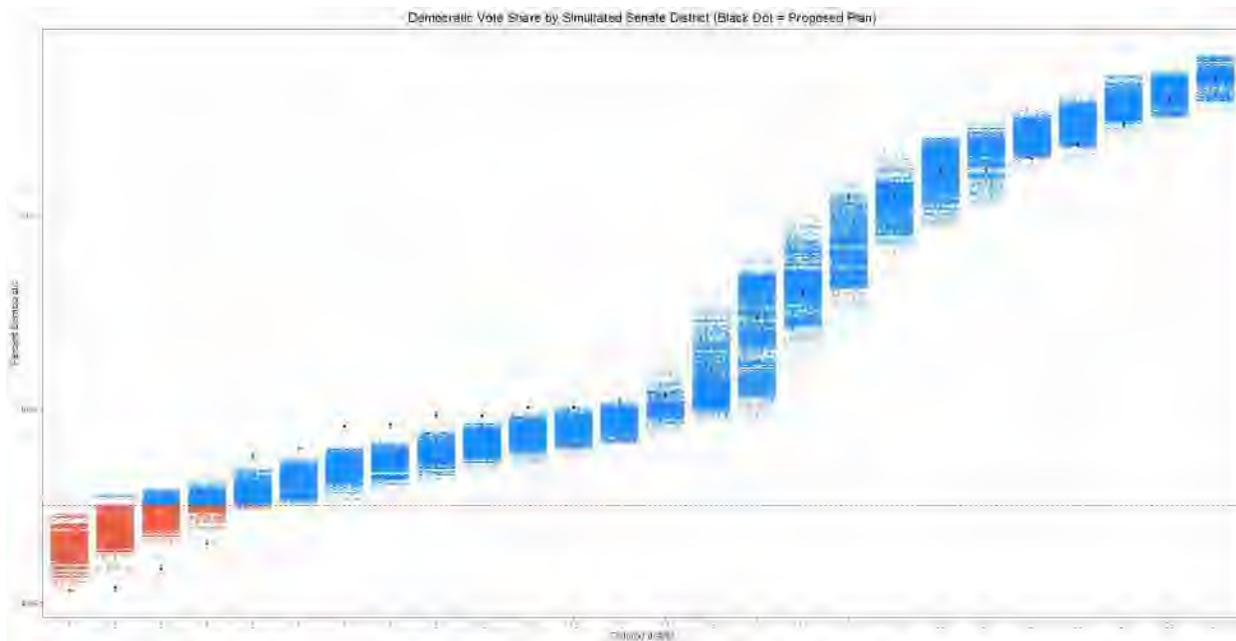
A. Respondents' Expert Reports Offer No Counter-Maps

Every one of Respondents' experts is more than capable of either re-running the relevant simulation algorithm that I employed or executing a competing algorithm; one of the authors does just that. Thus, while every one of Respondents' experts could readily demonstrate that changing these assumptions or fixing the purported omissions might lead this Court to arrive at different conclusions about the gross partisan bias animating the Enacted Maps, none does so. The silence is deafening. As it turns out, if you include the constraints about which Respondents complain to the simulations, it makes no difference.

B. Controlling For Municipal And Town Lines Makes No Difference

The New York Constitution demands that maps “consider” municipalities and town lines, although, unlike other constitutional provisions such as compactness or contiguity, it does not make respect for them mandatory. N.Y. Const. art. III §4(c)(5). It is also unclear whether the simulations really need to give deference to this as the Enacted Plan does not seem to either, splitting, as it does, six of the ten towns in Suffolk County and all three towns in Nassau County (it does keep the two cities intact). Regardless, any of Respondents' experts could have run simulations to see what impact respecting municipalities or town lines might have had.

As it turns out, that answer is “none.” It is possible to “freeze” portions of the map together so that they cannot be split. To enable this, an additional set of 10,000 simulations were run that favors keeping intact every municipality that the Enacted Map keeps intact. As you can see, the results do not change appreciably.



C. The Simulation Ensemble Sufficiently Protects Minority Voting Rights

Dr. Ansolabehere offers additional criticisms of the ensembles with respect to the protection of “ability-to-elect” districts, though they too fall short.⁸ It is worth stepping back to take a simplified view of the confusing and seemingly ever-changing rules of what is required by the Voting Rights Act (“VRA”). The VRA requires the creation of districts that can elect the candidates of choice of a minority group when such a group: (a) is “sufficiently large and geographically compact to form a majority in a single-member district;” (b) is “politically cohesive” (that is, its members tend to vote the same way); and (c) the majority votes as a bloc to defeat the group’s candidate of choice. *Thornburg v. Gingles*, 478 U.S. 30 (1986). It is unclear (a) whether the VRA requires the creation of districts where multiple minority groups can form a cohesive majority (though the majority rule among circuits is that it does); (b) what precisely a “geographically compact” minority group means; and (c) whether the remedial district must comply with the first *Gingles* prong, *but see Cooper v. Harris*, 137 S. Ct. 1455 (2017) (suggesting that it possibly does not). Layered on top of that are two additional considerations: The New York Constitution requires that maps not abridge minority groups’ voting rights, which may or may not

⁸ Dr. Tapp muses that it is his “understanding that counting minority-majority districts is a crude and incomplete proxy for the ability of minority voters to elect their candidates of choice,” Tapp Report ¶ 46, even though Dr. Tapp outright concedes that he is “not an expert on the Voting Rights Act,” (which likely should have ended his analysis). Indeed, it is unclear to me how Dr. Tapp, who is a math professor and not a social scientist, would have expertise to opine on any of these “missing requirements.”

be evaluated under a different test than *Gingles*, while the Fourteenth Amendment to the U.S. Constitution prohibits States from drawing districts with race as a predominate factor, unless they satisfy strict scrutiny (compliance with the VRA presumably does so). *Shaw v. Reno*, 560 U.S. 630 (1993).

Against this backdrop, Dr. Ansolabehere's criticism that I offer no evidence that the majority-minority districts drawn by the maps are required by the VRA, Ansolabehere Report ¶¶ 17, 63, fails to connect. Since these maps are, by definition, drawn without respect to race, there are no Fourteenth Amendment concerns raised here, as there is, to my understanding, no prohibition against creating majority-minority districts where the VRA does not require them if it is done without using race as the predominate factor (or, in this case, without using race at all).

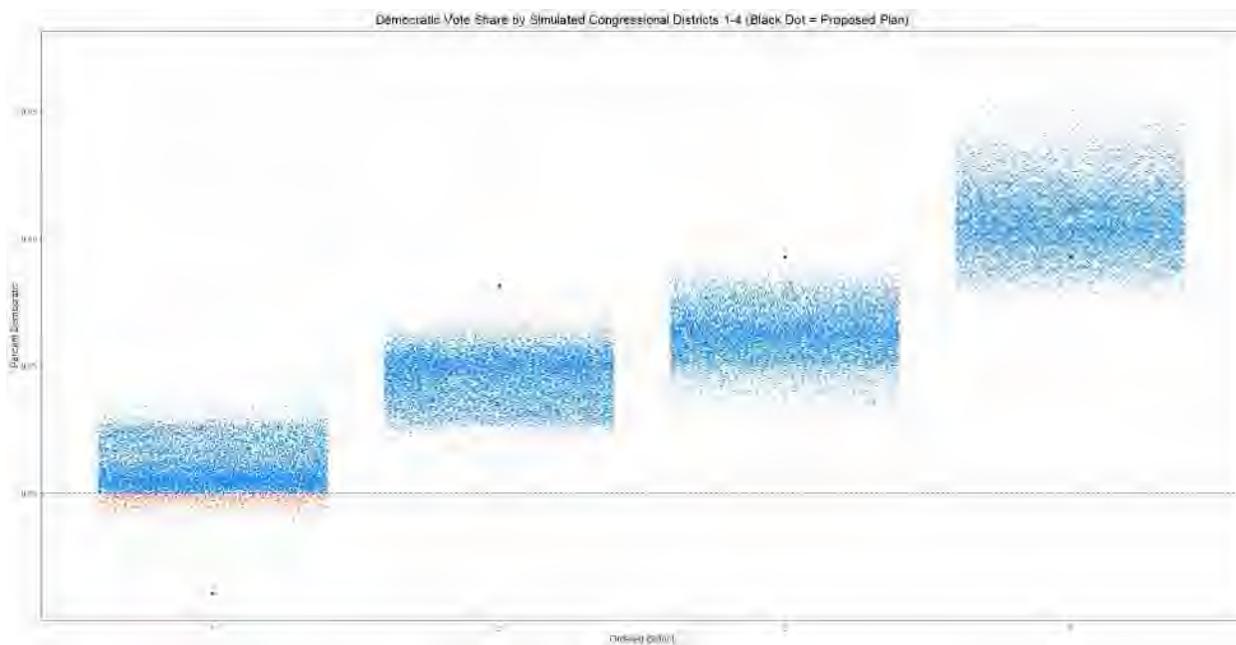
Dr. Ansolabehere's suggestion in paragraph 64 of his report that there is no analysis of whether districts in the simulation will, in fact, perform must be viewed in the context of the record here: there is no evidence proffered by any party of racially polarized voting in New York City or in particularized boroughs, nor is there evidence that any single minority group can form a reasonably compact majority in a district. In other words, on this record, we likely could have simply ignored the VRA altogether. Instead, I utilized majority-minority status as a stand-in for ability-to-elect, since only two districts under the 2012–2020 lines where white New Yorkers are a majority—one of which is the 82% non-Hispanic white New Yorkers Nineteenth District—send a Person of Color to Congress. Of course, if Respondents or their experts believed that there were districts or groups that needed to be protected, they could have identified them or, better yet, identified them and run the simulations to see what would happen if ability-to-elect districts were preserved.

To that end, I have produced additional simulations that, following the lead of Dr. Imai (see reports linked below), freeze certain districts in place in the same manner as the current map, thus removing them from the discussion. At the instruction of counsel, these simulations freeze the districts in the Enacted Plan that are plausible candidates for protection under the VRA or the State Constitution. To be more direct, they remove all of the census blocks from the maps that are contained in Districts 5, 6, 7, 8, 9, 13, 14, 15 and 16. These nine districts are the plausible ability-to-elect districts, where non-Hispanic white New Yorkers are a minority; where a single minority group is either a majority, plurality, or near-plurality of the Voting Age Population (the Sixteenth District is the only one in the former category); and where a Person of Color is currently elected

to Congress. If they are not VRA-protected, no harm is done by freezing them, except for possibly making Petitioners' case more difficult. All of the remaining non-frozen districts are non-Hispanic White Voting Age Population majority districts, and in all but one (the Tenth District), a single minority group never constitutes even a quarter of the Voting Age Population.

In short, the following simulations protect minority voting rights at least as well as do the current maps. Notably, they also concede a fair amount of ground to the Legislature, as each map in the following simulations accepts the Legislature's decision to pair Yorktown with Yonkers in the Sixteenth District, and to crack Republican-leaning areas in Midwood and Sheepshead Bay between the Ninth and Eighth Districts. If anything, this is a "worst-case" scenario for Petitioners.

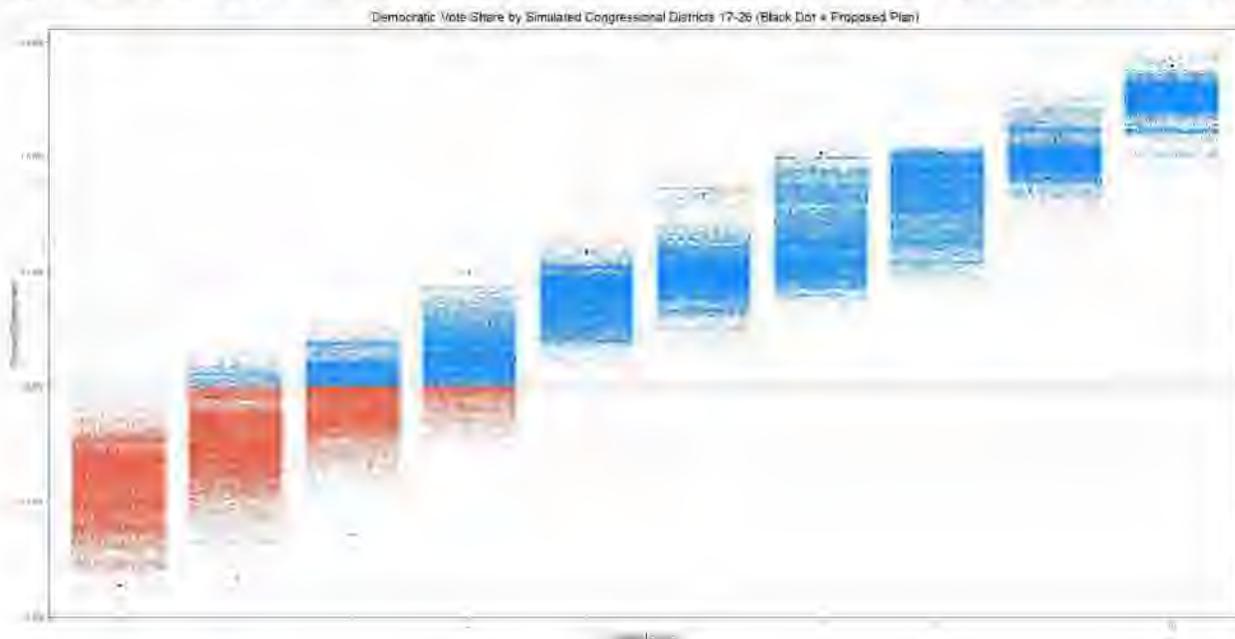
Because the remaining precincts are non-contiguous, the simulations were run in three batches (this follows the approach of Dr. Imai in his recent South Carolina report, and Dr. Barber's approach in his North Carolina report). All other constraints are the same as in the original simulations, except that we now run 10,000 simulations, and municipalities are protected at least as well as in the Enacted Plan (*i.e.*, intact municipalities in the Enacted Plan are "frozen" together in the ensemble). The first batch simulates four districts in the precincts that currently make up the First, Second, Third, and Fourth Districts. As one can easily see, there is strong evidence of gerrymandering within this grouping, with the most Republican district made significantly more Republican than we would expect, allowing the two remaining districts to be pushed substantially to the left of our expectations, and eliminating two competitive districts in the process:



Likewise, in the grouping of Districts 10, 11 and 12 we can see how the two safely Democratic districts are made more Republican than expected (but are still safely Democratic) while the remaining district is pushed well out of expectations into safe Democratic territory.



Upstate New York (Districts 17 through 26) shows the same pattern described in the initial report:



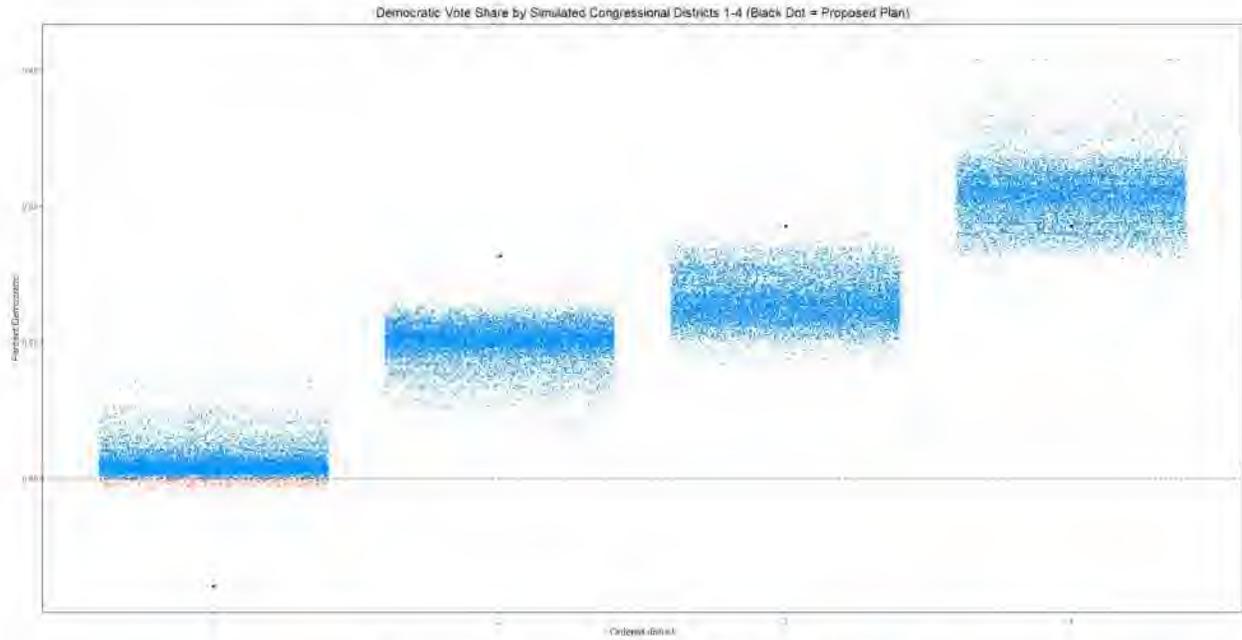
D. Respondents' Experts Offer No Evidence That "Considering" Communities Of Interest Or Core Retention Would Alter The Partisan Balance In The Simulations

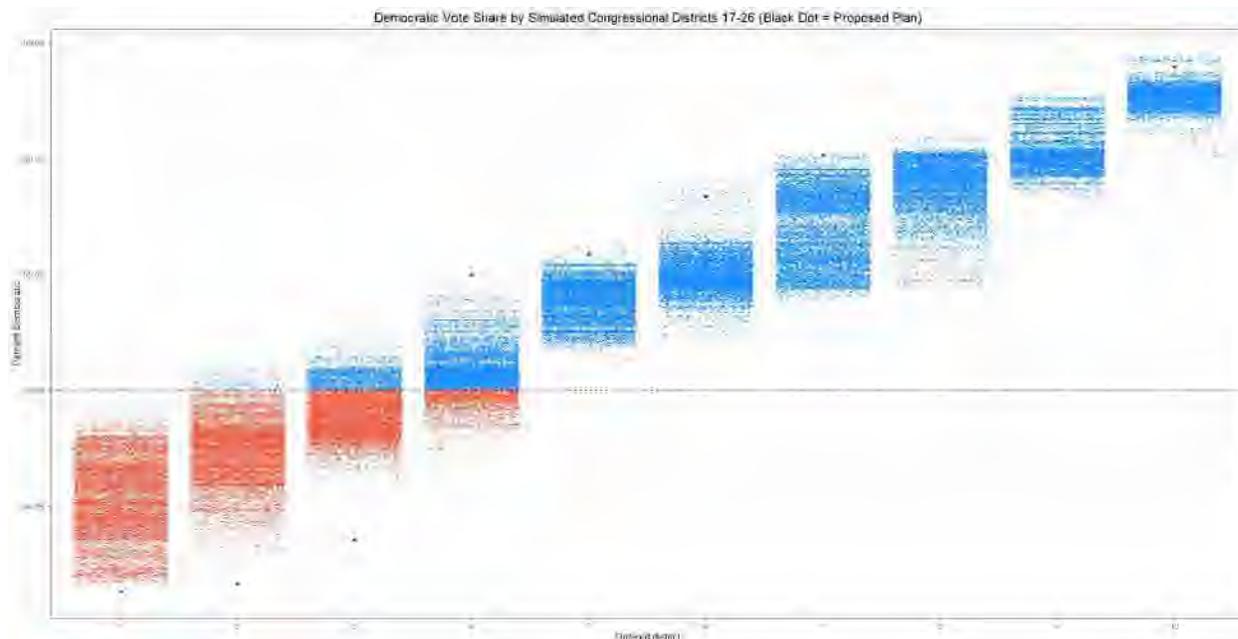
Communities of interest are a notoriously difficult concept to nail down, as they typically have a vague definition such as "[s]ocial, cultural, racial, ethnic, and economic interests common to the population of the area, which are probable subjects of legislation." *See, e.g., Kan. Office of Revisor of Statutes, Proposed Guidelines and Criteria for 2022 Kansas Congressional and State Legislative Redistricting* (May 20, 2021).⁹ That makes them vulnerable to *ad hoc* reasoning ("this is the district we want, find a community of interest to justify it") and difficult to encode, since they lack formal definition.

In any event, I was not asked to look at communities of interest by counsel. I presume this is because there are disputes about the degree to which the Enacted Maps consider communities of interest and other constitutional requirements. If there are indeed important communities of interest to be protected, however, any of Respondents' experts could program a simulation that respected those communities of interest and potentially harm Petitioners' case. At the very least, they have not provided any analysis suggesting a different result would be reached.

While Dr. Ansolabehere may be correct that the Enacted Congressional Map overall exhibits a high degree of core retention, Ansolabehere Report ¶ 38, a more accurate statement, as shown above, would be that the map offers a high degree of core retention in heavily Democratic districts, but pulls apart Republican districts, when possible, Trende Report at 12. That is not something we would wish to replicate. In any event, the redistricting simulation that I used does allow researchers to direct the ensemble to prefer maps with stronger core retention. In addition to the constraints above, I have instructed the simulations to draw maps that consider district core retention. The analysis once again does not change.

⁹ <https://redistricting.ils.edu/wp-content/uploads/KS-Proposed-redistricting-guidelines.pdf>.





A map drawn without respect to partisanship would tend to draw between six and twelve districts in our competitive-to-Republican range of less than 55% in the index. The Enacted Plans draw four. This is because they are obvious and aggressive partisan gerrymanders that target Republicans and competitive districts.

E. Conclusion

Contrary to the suggestion of Respondents' Expert Reports, the initial ensemble was not biased because it failed to expressly consider race, city or municipal boundaries, or other factors. Even after conceding, for sake of argument, that 35% of the districts in the map must be drawn exactly as they were drawn by the Legislature to protect minority voting rights, and after conceding that municipalities should be split or kept intact in the same way as the Legislature suggests, and after conceding that previous district cores should be strongly considered, the map still appears to be a gross outlier whose boundaries are inexplicable save through a desire to disadvantage the Republican Party and reduce the number of competitive districts.

VI. Further Response To The Tapp Report

The Barber and Ansolabehere Reports restrict their analyses to the two issues raised above. The Tapp Report continues with a number of similarly meritless attacks.

The Tapp Report's Critique Of My Credentials Misunderstands The Role Of The Expert

It is ironic that Dr. Tapp embarks upon an attack on my expert credentials, given that such analysis is typically reserved for lawyers and the Court, and given that he is not a lawyer (unlike

myself).¹⁰ I believe my c.v. and previous expert work speaks for itself but will, of course, leave that determination to the Court and the attorneys.

The only criticism that Dr. Tapp levies that is relevant to his actual area of expertise is his suggestion that I do not display a sufficiently deep understanding of the underlying algorithm, because the Trende Report suggests that spanning trees are constructed by breaking adjacencies, that more than two precincts will always have multiple spanning trees, and that algorithms are “potentially subject to a variety of parameters.” Tapp Report ¶ 38 (quoting Trende Report at 7). In general, Dr. Tapp seems to think that the Trende Report simplifies things because its author does not understand the material.

Had Dr. Tapp read the Trende Report with sufficient care, he would have noticed the phrase “[t]o simplify greatly” and the admonishment that “the math is quite complicated.” Trende Report at 9. He should have noticed the use of scare quotations around the term “break” before talking about adjacencies, which typically alert a reader that a word is not being used in an exact way. *Id.* at 8.

There is a reason for these simplifications. The role of the expert in New York is to “help to clarify an issue calling for professional or technical knowledge, possessed by the expert and beyond the ken of the typical [finder of fact].” *De Long v. County of Erie*, 60 N.Y.2d 296, 307 (1983). Reasonable minds can disagree on how to approach this, but my view—shared by at least some of Respondents’ experts—is that detailed discussions of methodologies, using the precise jargon typical of an academic conference, is neither helpful nor clarifying of any issue. There is nothing wrong with including an exposition on McCartan & Imai’s utilization of Wilson’s Algorithm in a report, but I am unsure what that would accomplish. Nor is there anything wrong with explaining the gerrymandering index in terms of vector math, as the Tapp Report does, Tapp Report ¶¶ 19–22. But, in my experience, discussion of vectors, three-dimensional space, and

¹⁰ It is also ironic that Tapp criticizes my lack of a Ph.D. and peer-reviewed articles, Tapp Report ¶¶ 36–37, given that he is a math professor whose c.v. suggests that he, unlike me, lacks a graduate degree in political science (or any related field); has never taught a course on participation and turnout, or any course involving elections; has never advised, directly or indirectly, a redistricting commission or Court; has never studied or advised a body about the Voting Rights Act; has never drawn an actual enacted map; has never analyzed a district’s competitiveness to determine whether it is likely to elect a Republican or Democrat; has never testified as an expert; and has a c.v. that fails to display any professional or even hobbyist-level interest in political outcomes or gerrymandering until two years ago. He does appear to have participated as a plaintiff for a Democratic-aligned plaintiffs’ group in a case where I served as an expert for *amici*. See, e.g., <https://www.pacourts.us/Storage/media/pdfs/20220125/200409-jan.24,2022-amicusvotersofthecommonwealth.pdf>.

Euclidean distance—while precise—tends to be less illuminating for most observers than my simplified description. Trende Report at 12–13.

Moreover, other experts—including one of the authors of Respondents’ Expert Reports—have taken similar approaches in court-accepted reports. Dr. Imai frequently only mentions spanning trees in passing in an appendix, without attempting to explain what they are. Affidavit of Dr. Kosuke Imai, Ex. A at 30–31, *League of Women Voters of Ohio v. Ohio Redistricting Comm’n*, No. 2021-1193 (Oct. 22, 2021);¹¹ Expert Report of Kosuke Imai, Ph.D., at 26–27, *NAACP v. McMaster*, No. 3-21-cv-03302 (D.S.C. Jan. 24, 2022). Respondents’ expert, Dr. Barber, foregoes any discussion of spanning trees; indeed, his reports often opt to avoid discussion of the mechanics of Sequential Monte Carlo (“SMC”) altogether. Affidavit of Michael Barber at 20–24, *North Carolina League of Conservation Voters, et al.*, Nos. 21 CVS 015426, 21 CVS 500085, (Dec. 22, 2021).¹² This does not mean that they are ignorant of these mechanics. It means that they understand the role of the expert in litigation.

In any event, the Tapp Report is correct that spanning trees are not created by removing adjacencies; I could have more precisely used the language of graph theory and discussed removing edges, McCartan & Imai, *Sequential Monte Carlo for Sampling Balanced and Compact Redistricting Plans* at 6 (Aug. 17, 2021), though using the term “edges” to refer to the lines connecting the precincts (or, to be more precise, vertices) rather than the edges of the precincts themselves is confusing for most observers. Of course, that’s also not how spanning trees are constructed directly, and the Trende Report never claims as such. It seemed a useful way to help the Court conceptualize what a “spanning tree” is, in the event that it had not previously encountered the term. The Tapp Report is also technically correct that not all groups of more than two precincts would have more than one spanning tree. A sequence of precincts arranged in a line would only have one tree, although I doubt if such a situation exists in the “real world.” Finally, the Tapp Report is probably correct that the Trende Report uses the term “parameters” to refer to the values set in the algorithm imprecisely. I do not understand why this is a problem, however, given that the Tapp Report also refers to the algorithm’s parameters. See Tapp Report ¶ 52

¹¹ https://vhdshf2oms2wcnsvk7sdv3so.blob.core.windows.net/thearp-media/documents/Affidavit_of_Dr._Kosuke_Imai_10.22.21_2TeveP4.pdf.

¹² https://vhdshf2oms2wcnsvk7sdv3so.blob.core.windows.net/thearp-media/documents/Expert_Report_of_Michael_Barber_12.22.21.pdf.

(“Depending on how its parameters are set, the McCartan-Imai algorithm is capable of sampling from the uniform distribution.”).

The Amount Of Specificity About The Algorithmic Choices Employed In The Trende Report Is Typical Of Expert Reports, Including Reports Offered By Respondents’ Experts

The Tapp Report complains about the lack of reproducibility of the Trende Report, based on the description of choices made. This is odd, given that Dr. Barber manages to adequately replicate the findings of the Trende Report. Regardless, in constructing the report, I considered the level of detail typical of other reports that I have encountered in my experience as an expert in redistricting cases. Upon further review, the choices that I describe are provided at a level of detail similar to those provided in Dr. Barber’s previous reports (linked above).

The Tapp Report’s Methodological Complaints are Unfounded

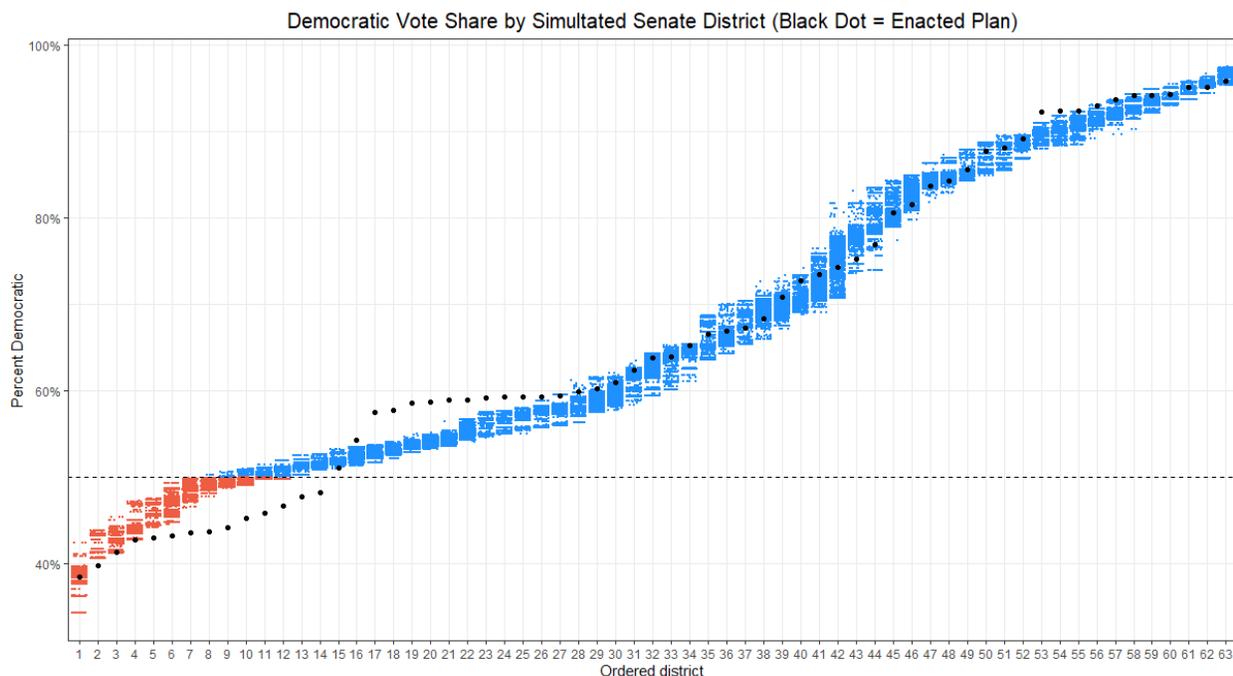
The Tapp Report complains that the Trende Report does not expressly state its target distribution. This is hand-waving. As with most of his other complaints, it misunderstands the nature of the endeavor. Dr. Imai’s reports (cited above) relegate any mention of target distributions to the appendices, and never spell out his target distribution; Dr. Barber’s reports don’t mention the idea of a target distribution whatsoever. Regardless, Dr. Tapp never suggests what difference, if any, utilizing a different target distribution might make. He of course would not have to reproduce my analysis exactly, or at all, to do so. He could simply have explored different sets of constraints and distributions and demonstrated that some reasonable set of constraints/distributional assumptions would result in an ensemble of maps that resemble the partisan distribution of the Enacted Maps. Again, all three of Respondents’ experts are more than capable of doing this. None has produced the results of any such analysis.

The Tapp Report concludes by suggesting that traditional Markov Chain Monte Carlo (“MCMC”) simulations are better established, that SMC is new, and that a larger sample size might be preferable. This is another hand-waving exercise. If Dr. Tapp truly believed that MCMC simulations would yield a different result, he could easily have performed them himself and potentially helped Respondents’ case considerably. He does not. While he might believe that 5,000 simulations are possibly insufficient (he does not go so far as to say that running 5,000 simulations is disqualifying), Dr. Imai clearly believes that number is sufficient, as that is the standard number of simulations that he has run and that courts have accepted when considering his analyses (see citations above). Regardless, in this report, all follow-up simulations are

performed with 10,000 simulations, rather than 5,000 simulations. Unsurprisingly, the results are unchanged.

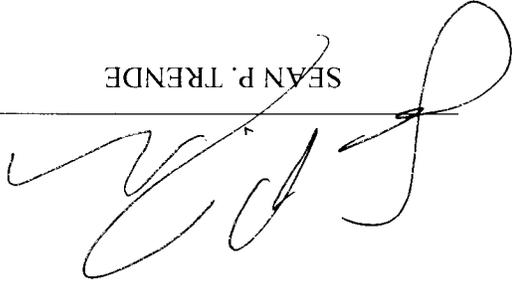
VII. The Same Analysis Holds True For The Senate Map

Respondents’ Experts ignore the Senate map, but the same analysis holds true there. The Enacted Senate map conforms closely to the expected distribution of vote shares in districts except where it matters most: in the 40% to 60% range, where the maps once again produce an unusually large number of districts where statewide Democrats have averaged around 60% of the vote. Remember, it would be a mistake to use a 50% threshold to classify the districts in the ensembles as either Republican or Democratic. Using our thresholds of 53% and 55.6%, we would expect there to be around 17 districts where Republicans would be favored to win and 21 districts where they would be competitive. Instead, the Enacted Senate Map packs Republicans into seats where they would be overwhelming favorites to win, providing just 15 seats where they would be favored overall and 16 where they would be competitive. This is consequential, as it effectively locks in a veto-proof Democratic majority in the Senate.



Dated: March 1, 2022

SEAN P. TRENDE



This is the rare instance where a respondent's expert work actually strengthens a petitioners' case. Even using Respondents' Experts' preferred set of constraints and preferred methodologies, the maps still clearly were primarily drawn to reduce the number of Republican and competitive districts. None of the conclusions in the Trende Report need to be adjusted or changed.

VIII. Conclusion

Exhibit E

**SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF STEUBEN**

-----X

**TIM HARKENRIDER, GUY C. BROUGHT,
LAWRENCE CANNING, PATRICIA CLARINO,
GEORGE DOOHER, JR., STEPHEN EVANS, LINDA
FANTON, JERRY FISHMAN, JAY FRANTZ,
LAWRENCE GARVEY, ALAN NEPHEW, SUSAN
ROWLEY, JOSEPHINE THOMAS, and MARIANNE
VIOLANTE,**

Index No. E2022-0116CV

Petitioners,

-against-

**GOVERNOR KATHY HOCHUL, LIEUTENANT
GOVERNOR AND PRESIDENT OF THE SENATE
BRIAN A. BENJAMIN, SENATE MAJORITY LEADER
AND PRESIDENT PRO TEMPORE OF THE SENATE
ANDREA STEWART-COUSINS, SPEAKER OF THE
ASSEMBLY CARL HEASTIE, NEW YORK STATE
BOARD OF ELECTIONS, and THE NEW YORK STATE
LEGISLATIVE TASK FORCE ON DEMOGRAPHIC
RESEARCH AND REAPPORTIONMENT,**

Respondents.

-----X

**REBUTTAL EXPERT REPORT
OF CLAUDE A. LAVIGNA
MARCH 1, 2022**

Rebuttal Expert Report of Claude A. LaVigna

I. Scope of Engagement

I have been asked by counsel to review Findings Sections C (Partisan Bias) and E (Communities of Interest) of the Expert Report of Stephen Ansolabehere (“Ansolabehere Report”). I have been further asked to render such opinions relating to the 2022 state Senate and Congressional maps, 2021–2022 N.Y. Reg. Sess. Leg. Bills S.8196, A.9039-A, A.9040-A, and A.9168, enacted by the New York State Legislature and signed by Governor Kathy Hochul (respectively, “2022 Senate Map” and “2022 Congressional Map”) as needed to evaluate the Ansolabehere Report. I have also been asked to re-evaluate, if necessary, the conclusions found in the Expert Report of Claude A. LaVigna (“LaVigna Report”).

II. Summary of Opinions

Respondents¹ expert, Dr. Stephen Ansolabehere, reaches conclusions about New York’s 2022 Congressional Map despite having no apparent knowledge of New York or New York’s political geography. Unsurprisingly, his analysis of New York’s political landscape ignores entirely the political realities of New York’s actual electorate. Dr. Ansolabehere also provides no analysis of the 2022 Senate Map.

I continue to find that the conclusions in the LaVigna Report are all correct and nothing in the Ansolabehere Report suggests otherwise.

III. Sources

- 1: Election Data from the New York Board of Elections
- 2: Public Comments Submitted to the Independent Redistricting Commission
- 3: 2012 Congressional Map – Attached as Exhibit 1 to the LaVigna Report
- 4: 2022 Congressional Map – Attached as Exhibit 3 to the LaVigna Report
- 5: Expert Report of Stephen Ansolabehere
- 6: Cook Partisan Voting Index

¹ Respondents are Governor Kathy Hochul, Lieutenant Governor and President of the Senate Brian A. Benjamin, Senate Majority Leader and President *Pro Tempore* of the Senate Andrea Stewart-Cousins, Speaker of the Assembly Carl E. Heastie, the New York State Board of Elections, and the New York State Legislative Task Force on Demographic Research and Reapportionment (together, “Respondents”).

IV. Rebuttal of the Expert Report of Stephen Ansolabehere

Qualification

It appears that Dr. Ansolabehere has no qualifications to render an expert opinion on New York's political geography or communities of interest. Neither his background nor the curriculum vitae attached to his report provides any indication of him having any knowledge about New York's political geography or New York communities of interest.

Methodology

Dr. Ansolabehere attacks the methodology I use to analyze the 2022 Congressional Map in my first report, arguing that my claims of partisanship are unsubstantiated. Ansolabehere Report ¶¶ 39–40. But my conclusions as to the partisanship of each congressional district are based upon that district's political makeup. To confirm this, I have compared these conclusions with the treatment given by the Cook Political Report, which provides a nationally accepted metric for measuring partisan lean in congressional districts, in particular. The Cook Partisan Voting Index (CPVI) is widely considered by courts, nonpartisan organizations, and redistricting experts to be a reliable measure of partisan lean in districting. *See, e.g., Benisek v. Lamone*, 348 F. Supp. 3d 493, 507 (D. Md. 2018), *vac'd on other grounds by Rucho v. Common Cause*, 139 S. Ct. 2484 (2019); *Ohio A. Philip Randolph Inst. v. Householder*, 367 F. Supp. 3d 697, 715–17 (S.D. Ohio 2019). Frequently used in partisan gerrymandering redistricting challenges, *see, e.g., Benisek*, 348 F. Supp. 3d at 507, CPVI is a particularly reliable measurement aid because it is universal for every district in the country. Accordingly, in this rebuttal report, I show that CPVI confirms all of the conclusions about the partisanship of the congressional districts in my first report.

Further, before concluding that the 2022 Congressional Map creates a partisan gerrymander with no coherent explanation except for seeking partisan and incumbent-protection advantage for the Democratic Party, I first examined whether the new district lines could be justified by valid considerations based on traditional redistricting principles, including compactness, contiguity, population shifts, and keeping counties, towns, and communities of interest together. In each district, I determined that the map drawers' choices could not reasonably be explained by reference to any consideration other than a desire to seek political advantage for Democrats. Based on my knowledge of New York's political geography and history, I concluded that numerous communities of interest were divided without valid justification—that is, divided in order to forward the political goal of favoring the Democratic Party. Many affected community

members described their historical ties and testified to their desire to be kept whole during the redistricting meetings over the last year, but the final lines do not reflect any consideration of the social landscape of the State. My knowledge of the State's unique political history and partisan trends enabled me to conclude that the 2022 Congressional Map cannot be justified by legitimate considerations, such as population shifts, keeping communities of interest whole, or the State's natural political landscape, and, thus, partisan bias is the only coherent explanation.

Instead of a standardized metric, Respondents' expert, Dr. Stephen Ansolabehere, used the data from certain statewide races in recent years and averaged these results out to produce skewed figures. Dr. Ansolabehere did not consider whether these races were representative of New York's actual turnout or candidate quality, including selecting races with strong incumbents and with under-funded challengers. This narrow approach excludes available and highly relevant data, particularly because the question at hand involves the degree of partisan bias in New York's congressional districts, as measured by the CPVI—or, indeed, as would be understood by anyone who has even a passing understanding of New York political geography.

Dr. Ansolabehere's report also reveals his utter ignorance of New York's social and political geography, as well as New York's communities of interest. Rather than analyze the many diverse and distinct communities of interest in the State, Dr. Ansolabehere divides the State into four regions and then looks at categories or "sorts of communities of interest" within each region. Ansolabehere Report ¶ 65. Unsurprisingly, this approach results in an utterly misleading and incorrect picture of New York's communities. Dr. Ansolabehere appears to lack any understanding of New York's unique political geography, and without this essential foundation, his report is not reliable.

Congressional Districts 1–3

In gerrymandering Congressional Districts 1–3, the Legislature split numerous towns, villages, and hamlets in historically connected conservative communities into multiple congressional districts with no coherent explanation except for seeking partisan and incumbent protection advantage, including by reducing competitiveness. LaVigna Report at 3–4. In particular, the Legislature placed strongly Republican areas from 2012 District 1 into the new Congressional District 2 while moving areas with high numbers of Democrats into the new District 1. *Id.* Further, the Legislature completely transformed Congressional District 3 with no coherent explanation except for Democratic partisan and incumbent-protection advantage. *Id.* at 4.

Refuting Dr. Ansolabehere’s contrary view, the CPVI strongly supports these conclusions. Congressional District 1 was a strong Republican district (Republican+6) under the 2012 Congressional Map. The CPVI metric shows that the district is now Democratic-leaning (Democratic+2) as a result of Respondents’ blatant gerrymandering under the 2022 Congressional Map. Further, District 2 also had a CPVI metric favoring Republicans under the 2012 map. By packing Republicans from District 1 into District 2, the Legislature turned District 2 from an already strong Republican district (Republican+5) into an overwhelmingly Republican stronghold (Republican+11). Finally, District 3 had a CPVI metric of Democratic+2 under the 2012 map, which reveals that the district was competitive despite Democrats ultimately winning elections. Due to the gerrymander, the Legislature transformed Congressional District 3 from a competitive district (Democratic+2) to a Democrat stronghold (Democratic+5).

	Congressional District 1	Congressional District 2	Congressional District 3
CPVI – 2012 Map	R+6	R+5	D+2
CPVI – 2022 Map	D+2	R+11	D+5
Representative	Lee Zeldin (R) (2015–present) Timothy H. Bishop (D) (2003–2015)	Andrew Garbarino (R) (2021–present) Peter T. King (R) (2013–2021)	Tom Suozzi (D) (2017–present) Steve Israel (D) (2013–2017)

Applying his flawed approach, Dr. Ansolabehere asserts that District 1 and District 2 were not Republican districts under the 2012 map but rather were Democratic-leaning. Ansolabehere Report ¶¶ 49–50. Dr. Ansolabehere also incorrectly states that the “2012 version of CD-3 was already a strong Democratic district; it was not a competitive seat.” Ansolabehere Report ¶ 52. These claims are directly contradicted by the vastly more reliable CPVI metric, as noted above. In addition, Dr. Ansolabehere’s analysis of Long Island focuses solely on political affiliation as the only commonality that can create a community of interest. Ansolabehere Report ¶¶ 72–74. But while these now-divided communities of interest are politically aligned, as the CPVI indicates, they have much more in common than political affiliation. Not only does Dr. Ansolabehere’s analysis ignore the reality that shared values and history, geography, and social and economic ties

contribute to a community of interest, he relies on incomplete political data to support his argument. He further supports his argument by describing the degree to which the Long Island districts changed from the 2012 Congressional Map, using percentages. Ansolabehere Report ¶ 72. This misleading and generalized approach entirely sidesteps any analyses of the distinct communities of interest on Long Island and ignores the important commonalities shared by neighboring towns and villages, resulting in a deeply flawed conclusion. And he apparently ignores that both Congressional District 1 and Congressional District 2 are presently represented by Republicans and have been for years.

In the 2012 Map, Brookhaven, East Islip, Manorville, South Manor, Upton, Lake Grove, Hauppauge, East Hauppauge, Southold, Shoreham, Riverhead, Smithtown, Head of the Harbor, and Nissequogue were united in District 1. These Republican-leaning communities share historical ties, industry and economic commonalities, and social values. After the Legislature's egregious gerrymander of Long Island, Brookhaven, East Islip, Manorville, South Manor, Lake Grove, East Hauppauge are broken off into District 2, shattering the shared bond of community, as well as weakening their voting power. Part of Smithtown and Nissequogue are now in District 3, splitting this once-united community of interest into three separate districts. To replace the towns and hamlets moved out of District 1, the Legislature broke up communities of interest in District 2. For example, Deer Park and Baywood were entirely shifted into District 1, while Babylon and Farmingdale were partially excised—breaking up these communities.

While some towns and hamlets with historical ties in 2012 District 3, like Dix Hills and parts of Smithtown were shifted to District 1 in the 2022 Map, the new District 3 adds back in communities in the Bronx and Westchester County that have nothing in common with the rest of District 3. In 2012 District 3, the areas of Queens joined with Nassau County had similar values and interests. Now, conservative blue-collar areas along the north shore of Long Island are connected with the affluent Democratic communities in Larchmont, Mamaroneck, Rye, New Rochelle, and part of Pelham.

Congressional Districts 7–11

In Brooklyn, the Legislature split up longstanding communities of interest in Congressional Districts 8, 9, 10, and 11 to create a partisan advantage for Democrats. The Legislature “cracked” established Orthodox Jewish and Russian communities with strong social and cultural ties, spreading these conservative Republican-leaning voters across multiple districts. The Legislature

also divided an established Asian community in District 10 by moving half of it to District 11. Previously a Republican-leaning district, the new District 11 combines Staten Island with unrelated and heavily liberal areas in Brooklyn, which fundamentally alters the political composition of this district. These redrawn Brooklyn districts have no coherent explanation except seeking partisan and incumbent-protection advantage, with bizarre boundaries that break up communities of interest and combine unrelated communities for no logical reason.

The CPVI strongly supports this characterization, illustrating how Republicans were spread across the districts in order to give Democrats a much better chance at winning District 11. The Democratic advantage in Districts 8, 9, 10 was maintained while Republicans were moved out of District 11. District 8 shifted from a Democratic+33 district to a Democratic+28 district, and District 9 shifted from a Democratic+32 district to a Democratic+28 district, while District 10 stayed a Democratic+27 district. The CPVI metric shows that District 11 shifted from a strong Republican district (Republican+7) to a Democratic district (Democratic+4).

	Congressional District 7	Congressional District 8	Congressional District 9	Congressional District 10	Congressional District 11
CPVI – 2012 Map	D+34	D+33	D+32	D+27	R+7
CPVI – 2022 Map	D+34	D+28	D+28	D+27	D+4
Representative	Nydia Velázquez (D) (2013–present)	Hakeem Jeffries (D) (2013–present)	Yvette D. Clarke (D) (2013–present)	Jerry Nadler (D) (2013–present)	Nicole Malliotakis (R) (2021–present) Max Rose (D) (2019–2021) Daniel M. Donovan (R) (2015–2019) Michael Grimm (R) (2013–2015)

In discussing Districts 7, 8, 9, 10, and 11, Dr. Ansolabehere fails to properly identify the communities of interest divided in the 2022 Map, nor does he discuss how the redrawn map broke up the Russian and Orthodox Jewish communities, Ansolabehere Report ¶¶ 75–77, despite a plethora of comments in the public hearing process that called for the unification of those

communities. *See, e.g.*, Public Comment of Nachman Mostofsky (July 28, 2021); Public Comment of Dr. Bernard Fryshman; Public Comment of Rabbi Avi Greenstein (July 29, 2021); Public Comment of David M. Pollock (July 30, 2021); Public Comment of Leon Goldenberg; Public Comment of Louis Jerome.² Dr. Ansolabehere attempts to justify this drastic partisan shift in District 11 by stating that Districts 7, 8, and 9 are majority-minority districts and “[t]heir configuration affects the configuration of [District] 10 and [District] 11.” Ansolabehere Report ¶ 54. Notably, he does not argue that the Voting Rights Act requires Districts 7, 8, and 9 to be majority-minority districts. In any event, keeping these districts as majority-minority districts does not require the Legislature to contort District 11 into its present configuration, which breaks up important communities of interest.

Dr. Ansolabehere’s description of Brooklyn belies his lack of knowledge of the history and social connections tying together communities of interest in the borough. He points to minority populations in Districts 7, 8, and 9, but fails to acknowledge the important Hispanic and Asian communities of interest in Districts 7, 10, and 11. Ansolabehere Report ¶ 76. Further, he discusses Brooklyn neighborhoods as discrete Jewish communities, failing to understand that the Jewish populations in Brooklyn share ties that stretch across connected neighborhoods. Ansolabehere Report ¶ 77. A close, New York-based examination of the 2022 Congressional Map’s effects on communities of interest in Brooklyn reveals a partisan and incumbent-protection gerrymander is the only available explanation for the new district lines. These districts illustrate why partisan data must be analyzed in the context of the local communities of interest and show how a surface analysis of past election results cannot provide a complete picture of the extent of partisan bias in redistricting maps. While District 11 is most obviously gerrymandered based on partisan data alone, the Legislature split numerous communities of interest with historical ties in Districts 8, 9, 10, and 11 in order to achieve the partisan result in District 11.

Brooklyn has one of the largest Orthodox Jewish populations in the world. Culturally, socially, spiritually, and politically, they form a community of interest. Instead of drawing district lines to reflect this, the Legislature spread this community into four separate districts, weakening their conservative votes. For example, Bensonhurst, which was previously united with Borough Park in District 10, is now split in two along 20th Avenue, dividing the community between

² Available at https://nyirc.gov/storage/archive/Kings_Richmond_Redacted.pdf.

Districts 9 and 10. In the 2012 Congressional Map, Jewish neighborhoods in Flatbush, Midwood, Park Slope, and Kensington were connected, wrapped around Prospect Park in District 9. Now, Park Slope is pulled into District 11, while Flatbush and Midwood are drawn in District 9. District 10 cuts through the center, taking Kensington and Prospect Park from the middle of this once-united community of interest.

The 2022 Congressional Map also severely divides historically united Hispanic and Asian populations in Brooklyn. Sunset Park, which has a well-established bond to Manhattan's Chinatown, was logically located in the same district in the 2012 Map—District 7. The 2022 Map cuts Sunset Park in two, placing half in District 10 and half in District 11. Further, instead of being united with Chinatown, a large portion of Sunset Park is instead linked to Staten Island—a community with which it has nothing in common.

Multiple community members expressed their desire to keep the Brooklyn's Jewish populations together, *see, e.g.*, Public Comment of Nachman Mostofsky (July 28, 2021); Public Comment of Dr. Bernard Fryshman; Public Comment of Rabbi Avi Greenstein (July 29, 2021); Public Comment of David M. Pollock (July 30, 2021); Public Comment of Leon Goldenberg; Public Comment of Louis Jerome, to keep Sunset Park whole to protect the Asian community of interest in Brooklyn, *see, e.g.*, Public Comment of Dr. Wah Lee (July 29, 2021), to keep Brooklyn's Hispanic populations together, Public Comment of Marco A. Carrión, and to keep Staten Island together with its community of interest in South Brooklyn, including the neighborhoods of Dyker Heights and Bay Ridge, *see, e.g.*, Public Comment of Brian Doherty Public; Public Comment of Barbara Slattery.³

Congressional Districts 16–19

Districts 16, 17, 18, and 19 in the 2022 Congressional Map have no coherent explanation except for seeking partisan and incumbent-protection advantage, including by reducing competitiveness. The new Congressional District 16 “cracks” Republican voters out of Congressional District 18, removing them from rural and suburban areas in northern Westchester County and Putnam County and combining them with highly urban Democratic strongholds in Mount Vernon, Yonkers, and the Bronx. The new District 16 can only be explained by seeking Democratic partisan and incumbent-protection advantage, as it connects the heavily Republican

³ Available at https://nyirc.gov/storage/archive/Kings_Richmond_Redacted.pdf.

towns of Putnam Valley, Carmel, Yorktown, and Somers to densely populated Democratic communities and neutralizes these Republican voters. As a result, the new District 18 is bizarrely shaped, but the Legislature achieves its partisan goal, keeping District 16 a safe Democratic district, while maneuvering District 18 from a Republican-leaning district to a Democratic district. The new Congressional District 17 is similarly contorted to combine strong Democratic areas with unrelated, rural Republican communities, neutralizing their votes. Despite extensive public testimony asking for the region’s conservative Jewish populations—which have grown extensively and become more integrated over the last decade—to be placed together, *see, e.g.*, Public Comment of Israel Weinstock; Public Comment of Israel Hirsch, the new Map separates the Orthodox communities in Sullivan and Rockland counties from the Kiryas Joel Jewish community in Orange County. As a result, Congressional District 17 remains a reliable Democratic district. The new Congressional District 19 is drawn with each of its four corners reaching into the strongly Democratic areas, shifting the district from Republican to Democrat-leaning and adding a new county split.

The CPVI confirms this characterization of partisan bias. The CPVI metric shows that while District 16 has always been a Democratic stronghold (shifting from Democratic+25 to Democratic+18), District 17 was previously a safe Democratic district (Democratic+9) that is now slightly more competitive (Democratic+5). It is clear that by packing Republican voters into an already Democrat-controlled District 16, the Legislature has ensured that District 18 would shift from a Republican-leaning district (Republican+1) to a Democratic-leaning district (Democratic+1). Specifically, the CPVI metric shows that District 19 was a Republican+3 and is now a Democratic+1.

	Congressional District 16	Congressional District 17	Congressional District 18	Congressional District 19
CPVI – 2012 Map	D+25	D+9	R+1	R+3
CPVI – 2022 Map	D+18	D+5	D+1	D+1
Representative	Jamaal Bowman (D) (2021–present) Eliot Engel (D) (2013–2021)	Mondaire Jones (D) (2021–present) Nita Lowrey (D) (2013–2021)	Sean Patrick Maloney (D) (2013–present)	Antonio Delgado (D) (2019–present) John Faso (R) (2017–2019) Chris Gibson (R) (2013–2017)

Relying on his flawed approach, Dr. Ansolabehere argues that none of these districts leaned Republican in their 2012 configurations. Ansolabehere Report ¶¶ 56–59. While Dr. Ansolabehere states that the four towns in District 18, towns of Putnam Valley, Carmel, Yorktown, and Somers, “are not ‘Republican towns,’” Ansolabehere Report ¶ 58, he fails to recognize that in each of the four towns, there is no elected Democrat holding office on any of the town boards. Indeed, all four towns have a 5-0 makeup of Republican town boards. Further, Republican locally elected officials represent the vast majority of District 19’s counties, with the exception of Ulster. In addition to the CPVI metric, historical election data supports my conclusion that District 19 has not always been a Democratic district.

Dr. Ansolabehere’s report does not address how the 2020 Congressional Map shatters established communities of interest, which is not surprising given his utter lack of qualification to discuss New York’s communities of interest. He focuses on electoral data from Kiryas Joel and the other Jewish communities, arguing that these communities are not electorally aligned. Ansolabehere Report ¶¶ 79–81. He ignores the many other commonalities that create a community of interest and further ignores the other broken communities in the Hudson Valley districts. Specifically, the 2012 Congressional District 16 compactly connected related communities in Westchester County and the Bronx, joining Mount Vernon and Yonkers to Larchmont, Mamaroneck, Rye, New Rochelle, and Pelham—the liberal coast communities that are now connected to unrelated communities on Long Island in Congressional District 3. The new District excludes these coastal towns with historical ties to the Mount Version and Yonkers and snakes north in a narrow strip through Westchester into rural and suburban parts of Putnam County, grabbing Republican towns and villages. These areas, including the towns of Putnam, Carmel, Yorktown, and Somers, are “cracked” out of Congressional District 18 and separated from neighboring areas that share the same values, industries, history, and political interests. These conservative towns are split from the established community of interest in Putnam County—the neighboring areas of Rochester, Wawarsing, Peekskill, Cortlandt, North Salem, Lewisboro, Bedford, and Pound Ridge are separated into District 18.

While 2012 Congressional District 17 was compactly located in Rockland and Westchester counties, connecting New Yorkers with geographical, cultural, and social ties, the 2022 District 17 stretches across four counties. The rural and small-town Sullivan County and Orange County

are connected with river communities in Rockland County and Westchester County. New Yorkers in Jeffersonville, Liberty, Monticello, Chester, and Warwick have no connection with those in Greenburgh, Mount Pleasant, and Mount Kisco. In order to connect these unrelated communities, the 2022 Map divides communities of interest. The Kiryas Joel Jewish community in Orange County is cut off from the Orthodox communities in Sullivan and Rockland counties. Monroe is separated from the closely related town of Woodbury. The 2022 Map cracks these conservative communities into pieces and dilutes their voting power without any rational justification.

Multiple community members expressed the desire to place the three Jewish strongholds in the same district, *see, e.g.*, Public Comment of Israel Weinstock; Public Comment of Israel Hirsch, as well as the desire to keep rural communities together and separate from the heavily urban Democratic strongholds in Westchester County, *see, e.g.*, Public Comment of Clay Boone; Public Comment of Bill Peck; Public Comment of Cynthia Gottlieb (July 23, 2021).⁴

Congressional Districts 21–24

The 2022 Congressional Map breaks up rural, agrarian communities of interest in Upstate New York, dividing conservative populations in established communities into new districts with dissimilar and distant communities, with no coherent explanation except for seeking partisan and incumbent protection advantage, including by reducing competitiveness. The new Congressional District 21 “packs” Republican voters, adding Republican voters from large portions of Oneida County and Herkimer County, half of Montgomery County, and all of Schoharie County, increasing the concentration of Republican voters in the district and thus diminishing competitiveness in the surrounding districts. The Legislature “cracked” the new Congressional District 22 by removing Republican areas and adding Tompkins County, including the heavily Democratic city of Ithaca. As a result, the new District 22 shifts from a strong Republican district (Republican+9) in the 2012 court-drawn map to a safe Democratic district (Democratic+6) in the new map. The Legislature “packed” Republican voters into the new Congressional District 23, connecting the suburbs of Buffalo and other towns in southern Erie County to distant rural areas around Binghamton. As a result, Congressional District 23 is now much less competitive and has become an overwhelmingly Republican district. The Legislature similarly “packed” Republican voters into the new Congressional District 24, which stretches across four media markets,

⁴ Available at https://nyirc.gov/storage/archive/Mid-Hudson_Capital_Region_Redacted.pdf; https://nyirc.gov/storage/archive/West_FL_CNY_ST_Redacted.pdf.

connecting numerous areas over more than 250 miles with little in common, extending all the way from Lewiston, in Niagara County eastward and northward into Jefferson County (all the way to the St. Lawrence County line), targeting Republican voters. As a result, Congressional District 24 is now overwhelmingly Republican.

Again, the CPVI metric supports the conclusion that partisan and incumbent protection are the only available justification for the new district lines. Congressional District 21 shifted from a Republican+8 district to a much less competitive Republican+12 district. The new District 22 has shifted from a strong Republican district (Republican+9) in the 2012 court-drawn map to a safe Democratic district (Democratic+6) in the new map. The new District 23 has shifted from a Republican+9 district to a Republican+14 district. Finally, the new District 24 transforms from a highly competitive Democratic+2 district into a Republican+14 district, designed to protect the neighboring districts from any serious Republican challenge.

	Congressional District 21	Congressional District 22	Congressional District 23	Congressional District 24
CPVI – 2012 Map	R+8	R+9	R+9	D+2
CPVI – 2022 Map	R+12	D+6	R+14	R+14
Representative	Elise Stefanik (R) (2015–present) Bill Owens (D) (2013–2015)	Claudia Tenney (R) (2021–present, 2017–2019) Anthony Brindisi (D) (2019–2021) Richard L. Hanna (R) (2013–2017)	Tom Reed (R) (2013–present)	John Katko (R) (2015–present) Dan Maffei (D) (2013–2015)

Again, Dr. Ansolabehere applies his flawed metric and focuses on percentages, stating that Districts 21, 22, 23, and 24 have changed very little. Ansolabehere Report ¶ 70. Again, this approach ignores the region’s political geography and the unique communities of interest that are shattered in the new Map. For example, while Dr. Ansolabehere claims that District 22 is a Democratic district when comparing it with the configuration of District 24 in 2012, Ansolabehere Report ¶¶ 60–61, he fails to consider that a Republican congresswoman was in office in this district for most of the past decade. Dr. Ansolabehere’s report fails to address Districts 21, 23, and 24 and ignores how the 2022 Congressional Map breaks up numerous communities of interest with

historical and industrial ties in the Upstate region, despite voluminous public testimony arguing against this.

Multiple community members expressed their desire to keep rural areas in the region together in their historical communities, with many emphatic comments stressing that the Southern Tier should not be joined with Buffalo and Erie County. *See, e.g.*, Public Comment of Ben Schenk; Public Comment of Ben Troché (Aug. 13, 2021); Brent Ellis (Aug. 13, 2021); Brian Abram (Aug. 13, 2021); Dalton Anthony (Aug. 13, 2021).⁵

Dated: SUKKOTSHLAND, New York
March 1, 2022



CLAUDE A. LAVIGNA

⁵ Available at https://nyirc.gov/storage/archive/West_FL_CNY_ST_Redacted.pdf.

Exhibit F

Bennet J. Moskowitz

bennet.moskowitz@troutman.com

April 1, 2022

VIA EMAIL

Brian Lee Quail, Esq.
Counsel for the New York State Board Of Elections
40 N. Pearl Street, Suite 5
Albany, NY 12207
(518) 474-2063
brian.quail@elections.ny.gov

Re: *Harkenrider, et al. v. Hochul, et al.*, Index No. E2022-0116CV (Sup. Ct. Steuben Cnty.)

Dear Mr. Quail:

Earlier today, your client—the New York State Board Of Elections—erroneously tweeted that the Supreme Court’s “March 31, 2022 order . . . which declared the 2022 Congressional, Senate and Assembly lines unconstitutional has been STAYED pending appeal.” N.Y. State Bd. of Elections (@NYSBOE), Twitter (Apr. 1, 2022, 10:25 AM).^{*} Your client’s erroneous tweets enjoyed wide circulation, causing many members of the public to conclude incorrectly that this Decision And Order has been stayed. In fact, *no portion of the Court’s March 31, 2022 Decision And Order has been stayed pending appeal.* The conclusion that the Court’s March 31, 2022, Decision And Order is not automatically stayed pending appeal, per CPLR § 5519(a), follows from CPLR § 5519(a)’s statutory text and unambiguous case law. Accordingly, we hereby demand that your client post a corrective tweet immediately.

A. CPLR § 5519(a)(1) is a narrow automatic-stay provision, applicable *only* to proceedings to enforce orders that mandate that the State take a specific action. Specifically, CPLR § 5519(a)(1) provides “a notice of appeal or an affidavit of intention to move for permission to appeal stays all proceedings to enforce the judgment or order appealed from pending the appeal or determination on the motion for permission to appeal” in cases where “the appellant or moving party is the state or any political subdivision of the state or any officer or agency of the state or of any political subdivision of the state.” CPLR § 5519(a)(1). Since, by its plain text, CPLR § 5519 applies only to “proceedings to *enforce* the judgment or order” against the State, *id.* (emphasis added), its automatic-stay provision necessarily extends only to court orders that *mandate* the

^{*} Available at <https://twitter.com/nysboe/status/1509899743396311059> (all websites last visited Apr. 1, 2022).

State to perform some action, rather than court orders that simply *prohibit* the State from taking some action or that *declare* legal conclusions.

Case law interpreting CPLR § 5519 is in accord with this understanding, holding that CPLR § 5519's automatic-stay provision does not apply to court orders that *prohibit* the State from taking some action or declaring legal conclusions. As Siegel's New York Practice explains, New York courts have held—consistent with the statutory text—“that when the appealed decision directs the [State] not to do something . . . the automatic stay is not operative to allow the [State] to do the prohibited thing during the pendency of the appeal.” Injunctions and Stays, Siegel, N.Y. Prac. § 535 (6th ed.). For example, *State v. Town of Haverstraw*, 219 A.D.2d 64 (2d Dep't 1996), held that “no automatic stay is available” under CPLR § 5519(a)(1) for an order that “prohibits certain conduct” of the State, since such “[p]rohibitory injunctions” that “*prohibit* future acts” are “self-executing and need no enforcement procedure to compel inaction on the part of the [State].” *Id.* at 65 (emphasis in original). And *Pokoik v. Department of Health Services County of Suffolk*, 220 A.D.2d 13 (2d Dep't 1996), held that CPLR § 5519(a)(1) “is restricted to the executory directions of the judgment or order appealed from which *command a person to do an act*,” thus, “the stay does not extend to matters which are not commanded but which are the sequelae of granting or denying relief”—including “the declaratory provisions of a judgment.” *Id.* at 15 (emphasis added); see also *Spillman v. City of Rochester*, 132 A.D.2d 1008, 1009 (4th Dep't 1987); David M. Cherubin & Peter A. Lauricella, *The "Automatic" Stay of CPLR 5519(a)(1): Can Differences in It Application Be Clarified?*, 71-Nov. N.Y. St. B.J. 24 (Nov. 1999).

Prior proceedings in this very case demonstrate the limited nature of CPLR § 5519(a)(1). After the Supreme Court issued its decision allowing Petitioners to seek expedited discovery in this case, certain Respondents appealed that decision to the Appellate Division, consistent with their contention that their filing a Notice Of Appeal would automatically stay the Supreme Court's discovery decision. Petitioners then moved the Appellate Division to vacate any automatic stay of the Supreme Court's discovery decision under CPLR § 5519(a)(1). Justice Lindley declined Petitioners' motion in part on the grounds that a “motion to vacate the supposed automatic stay is unnecessary . . . because *there is no automatic stay in effect*.” NYSCEF No.134, Ex.A at 1. (citations omitted; emphasis added). As Justice Lindley explained, “CPLR § 5519(a) does not stay all proceedings,” but rather “only ‘proceedings to enforce the judgment or order appealed from.’” *Id.* (quoting CPLR § 5519(a)). Further, “[w]hat constitutes a ‘proceeding to enforce’ is strictly construed,” *id.*, demonstrating the exceedingly limited scope of CPLR § 5519(a)'s automatic-stay provision. Specifically, and as relevant here, Justice Lindley explained that only proceedings to enforce court orders that contain “executory directions that *command a person to do an act* beyond what is required under the CPLR” fall within CPLR § 5519(a)'s automatic-stay provision. *Id.*, Ex.A at 2 (citations omitted; emphasis added). So, since the discovery decision at issue did “not command a person to do an act beyond what is required under CPLR,” Justice Lindley denied Petitioners' motion to vacate any automatic stay as unnecessary. *Id.*

B. In the present case, CPLR § 5519(a)(1) does not apply to the Supreme Court's March 31, 2022 Decision And Order, since that Order does not “command” Respondents “to do an act.”

Pokoik, 220 A.D.2d at 15. The Supreme Court issued its March 31, 2022 Decision And Order enjoining the unconstitutional 2022 congressional, state Senate, and state Assembly maps, as variously contravening both the procedural and substantive requirements of Article III, Sections 4 and 5 of the New York Constitution, as well as allowing the Legislature to submit bipartisan maps by April 11, if the Legislature chooses to do so. NYSCEF No.243 at 17–18. In particular, the Decision And Order provides the following relevant decretal language:

[1.] ORDERED, ADJUDGED, and DECREED that the process used to enact the 2022 redistricting maps was unconstitutional and therefore void *ab initio*; and it is further

[2.] ORDERED, ADJUDGED, and DECREED that with regard to the enacted 2022 Congressional map the Petitioners were able to prove beyond a reasonable doubt that the map was enacted with political bias and thus in violation of the constitutional prohibition against gerrymandering under Article III Sections 4 and 5 of the Constitution; and it is further

[3.] ORDERED, ADJUDGED, and DECREED that the maps enacted by 2021-2022 N.Y. Reg. Sess. Leg. Bills S8196 and A.9039-A (as technically amended by A.9167) be, and are hereby found to be void and not usable; and it is further

[4.] ORDERED, ADJUDGED, and DECREED that the maps enacted by 2021-2022 N.Y. Reg. Sess. Leg. Bills S9040-A and A.9168 be, and are hereby found to be void and not usable; and it is further

[5.] ORDERED, ADJUDGED, and DECREED that congressional, state senate and state assembly maps that were enacted after the 2010 census are no longer valid due to unconstitutional malapportionment and therefore can not be used; and it is further

* * *

[6.] ORDERED, ADJUDGED, and DECREED that in order to grant appropriate relief the court hereby grants to Petitioners a permanent injunction refraining and enjoining the Respondents, their agents, officers, and employees or others from using, applying, administering, enforcing or implementing any of the recently enacted 2022 maps for this or any other election in New York, included but not limited to the 2022 primary and general election for Congress, State Senate and State Assembly; and it is further

[7.] ORDERED, ADJUDGED, and DECREED that the Legislature shall have until April 11, 2022 to submit bipartisanly supported maps to this court for review of the Congressional District Maps, Senate District Maps, and Assembly District Maps that meet Constitutional requirements; and it is further

[8.] ORDERED, ADJUDGED, and DECREED that in the event the Legislature fails to submit maps that receive sufficient bipartisan support by April 11, 2022 the court will retain a neutral expert at State expense to prepare said maps[.]

Id. None of these provisions of the Supreme Court’s Decision And Order “command[]” any “affirmative act” of Respondents, *Town of Haverstraw*, 219 A.D.2d at 65; thus CPLR § 5519(a)(1)’s automatic-stay provision does not operate to stay any part of this Order.

Turning first to decretal paragraphs numbered 1–5 above, nothing in this language provides any “executory directions of the judgment or order appealed from which command a person to do an act.” *Pokoik*, 220 A.D.2d at 15. These provisions merely declare the 2022 maps unconstitutional and either “void *ab initio*” or “void and not usable,” and then declare the post-2010-census maps “no longer valid.” NYSCEF No.243 at 17. Such provisions are “self-executing and need no enforcement procedure to compel inaction” based upon the Court’s declaration that such maps are unconstitutional and void. *Town of Haverstraw*, 219 A.D.2d at 65. Thus, CPLR § 5519(a)(1) does not operate to automatically stay these provisions.

Next, decretal paragraph 6 of the Decision And Order also does not fall within CPLR § 5519(a)(1), as it only grants Petitioners a permanent injunction against the operation of the 2022 maps. Thus, this paragraph is an “order[] or judgment[] which prohibit[s] future acts,” and such “[p]rohibitory injunctions are self-executing and need no enforcement procedure to compel inaction on the part of the person or entity restrained.” *Town of Haverstraw*, 219 A.D.2d at 65. Unlike mandatory injunctions that “direct the performance of a future act,” prohibitory injunctions like paragraph 6 “operate[] to restrain the commission or continuance of an act and to prevent a threatened injury,” and “the automatic stay provision of CPLR 5519(a)(1) d[oes] not operate to relieve [Respondents] from the duty to obey the terms of a prohibitory injunction pending appeal therefrom.” *Id.* at 65–66; see also Siegel, N.Y. Prac. § 535.

Finally, above-numbered paragraphs 7 and 8 similarly do not “command” Respondents to do anything, and therefore CPLR § 5519(a)(1) does not stay their operation. *Pokoik*, 220 A.D.2d at 15. These decretal paragraphs merely provide the Legislature a reasonable period of time to draw new, bipartisan maps, and gives them the option to submit such constitutional maps to the Court, at their own discretion, on or before April 11, 2022, NYSCEF No.243 at 18, and so CPLR § 5519(a)(1) has no effect on Respondents’ “voluntary . . . compliance” with this provision of the Decision And Order pending appeal, *Pokoik*, 220 A.D.2d at 15. Thus, paragraph 7 merely notes “[f]uture acts which are not expressly directed by the order or judgment appealed,” and “no automatic stay is available” for such “[f]uture acts,” even though they “may nevertheless have the effect of changing the status quo and thereby defeating or impairing the efficacy of the order which will determine the appeal.” *Id.* at 15–16. Paragraph 8, moreover, orders nothing of Respondents, and merely notes the Supreme Court’s follow-up “matters which are not commanded but which are the sequelae of granting or denying relief.” *Id.* at 15. By analogy, the Appellate Division has explained that “where an order merely denies a motion for summary judgment or to strike the case from the calendar, an appeal from that order will not stay a trial which is a consequence of

the order but is not directed by it.” *Id.* Here, given that nothing in paragraphs 7 and 8 mandates executory directions of Respondents, which paragraphs instead only explain the sequelae of the Court’s decision holding the 2022 maps unconstitutional, the automatic stay provision in CPLR § 5519(a)(1) simply does not apply.[†]

Given that your client’s widely circulated tweets have misled the public, Petitioners demand that your client issue a corrective tweet immediately, explaining that no portion of Justice McAllister’s March 31, 2022 Decision And Order is currently stayed.

Sincerely,



Bennet J. Moskowitz



Misha Tseytlin

cc: All Counsel of Record (via electronic mail)

[†] CPLR § 5519(a)(1)’s automatic stay would only apply, for example, if the Supreme Court had granted Petitioners’ request that the Court order Respondents to move the primary election date to a specific date. See NYSCEF No.238 at 6–10. Had the Court issued this requested relief, that *particular* provision of the Decision And Order would constitute a specific “command” of Respondents “to do an act,” and would fall within CPLR § 5519(a)(1)’s strictures. *Pokoik*, 220 A.D.2d at 15. In that hypothetical circumstance, the filing of a notice of appeal would stay that specific aspect—and only that specific aspect—of the Supreme Court’s decision. But the Supreme Court did not grant that type of relief, and so CPLR § 5519(a)(1) does not operate to stay any of the *actual* provisions of the Decision And Order.

Exhibit G

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF STEUBEN

-----X

TIM HARKENRIDER, GUY C. BROUGHT,
LAWRENCE CANNING, PATRICIA CLARINO,
GEORGE DOOHER, JR., STEPHEN EVANS, LINDA
FANTON, JERRY FISHMAN, JAY FRANTZ,
LAWRENCE GARVEY, ALAN NEPHEW, SUSAN
ROWLEY, JOSEPHINE THOMAS, and MARIANNE
VOLANTE,

Index No. E2022-0116CV

**AFFIDAVIT OF SENATOR
ROBERT G. ORTT IN
SUPPORT OF PETITION**

Petitioners,

-against-

GOVERNOR KATHY HOCHUL, LIEUTENANT
GOVERNOR AND PRESIDENT OF THE SENATE
BRIAN A. BENJAMIN, SENATE MAJORITY LEADER
AND PRESIDENT PRO TEMPORE OF THE SENATE
ANDREA STEWART-COUSINS, SPEAKER OF THE
ASSEMBLY CARL HEASTIE, NEW YORK STATE
BOARD OF ELECTIONS, and THE NEW YORK STATE
LEGISLATIVE TASK FORCE ON DEMOGRAPHIC
RESEARCH AND REAPPORTIONMENT,

Respondents.

-----X

ROBERT G. ORTT, being duly sworn, says under penalty of perjury as follows:

1. I am a member of the New York State Senate elected to represent District 62.

2. I make this declaration based on my personal knowledge, and if called upon to

testify, I could and would testify to the following facts.

3. I have served as Senate Minority Leader since June 19, 2020.

4. Given my position as Senate Minority Leader, I have a leadership role within the Republican caucus in the New York State Senate on issues relating to redistricting, including playing a key role in determining the approach that Senate Republicans will follow.

5. In 2014, New Yorkers voted to implement a new, nonpartisan redistricting process and banned partisan gerrymandering.

6. On January 3, 2022, the New York Independent Redistricting Commission (IRC) sent two sets of redistricting maps (Plan A and Plan B) to the New York State Legislature (“Legislature”). The Democratic IRC members developed Plan A without input from the Republican members, while the full IRC worked on Plan B until negotiations broke down.

7. On January 10, 2022, the Senate voted on Plan A and Plan B without amendment. Both plans failed to pass. Plan A received no votes in favor of enactment. Seventeen senators voted in favor of Plan B’s Senate and Assembly maps, and forty-six voted against. Nineteen senators voted in favor of Plan B’s congressional map, with forty-four voting against. On the same day, the New York State Assembly voted against both plans.

8. Senate Republicans expected the IRC to send a revised redistricting plan to the Legislature for another round of voting without amendment by January 25, 2022.

9. However, on January 24, 2022, the IRC announced that it would not be submitting a new plan.

10. Instead, Democrats in Legislature, unilaterally, secretly, and without any public input, drafted new maps, in spite of the mandatory redistricting process in Article III, Section 4 of the New York State Constitution.

11. Democrats in the Senate and Assembly completed new maps in a matter of days, releasing the congressional map on January 30 and the state Senate map on February 1.

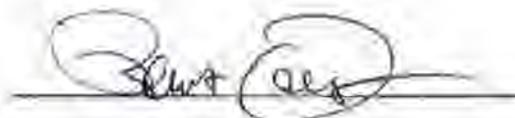
12. Legislative Democrats drafted the maps behind closed doors, without a single public hearing or any bipartisan cooperation.

13. In violation of the New York Constitution, the Legislature adopted the Democrats' partisan and incumbent favoring maps with all Senate Republicans voting against them. The congressional map passed on a vote of 103-45 in the Assembly and 43-20 in the Senate. The Senate map passed on a vote of 118-29 in the Assembly and 43-20 in the Senate.

14. Senate Republicans were not given any input or involvement in the drafting or creating of the congressional or state Senate maps that the Legislature adopted.

15. On February 3, 2022, Governor Hochul signed into law the Legislature's congressional and state Senate maps. 2021-2022 N.Y. Reg. Sess. Leg. Bills S.8196, A.9039-A, A.9040-A, and A.9168.

DATED: 2/14, 2022



Sworn to before me this the 14 day of February, 2022
Kristin L. Frank
Notary Public - State of New York

KRISTIN L FRANK
Notary Public, State of New York
Reg. No. 02FR6362781
Qualified in Steuben County
Commission Expires 11/27/2025

Exhibit H

**IN THE CIRCUIT COURT
FOR ANNE ARUNDEL COUNTY, MARYLAND**

KATHRYN SZELIGA, *et al.*

Plaintiffs,

v.

Case No. C-02-CV-21-001816

LINDA H. LAMONE, *et al.*

Defendants.

REPORT OF SEAN P. TRENDE

1. I am over the age of 18 and am competent to testify regarding the matters discussed below.

2. I currently reside at 1146 Elderberry Loop, Delaware, OH 43015. My e-mail is trende.3@buckeyemail.osu.edu.

3. I have been retained in this matter by Plaintiffs and am being compensated at a rate of \$400.00 per hour for my work in this case. My compensation in no way depends on the conclusions I reach in this matter. All opinions are rendered to a reasonable degree of scientific certainty typical of my field.

4. My *curriculum vitae* is attached to this report as Exhibit 1.

EXPERT CREDENTIALS

5. I am currently enrolled as a doctoral candidate in political science at The Ohio State University. I expect to receive my Ph.D. in May of 2022, and my application to graduate has been approved. I have completed all my coursework and have passed comprehensive examinations in both methods and American Politics. In pursuit of this degree I have also earned a Master's Degree in Applied Statistics. My coursework for my Ph.D. and M.A.S. included, among other things,

classes on G.I.S. systems, spatial statistics, issues in contemporary redistricting, machine learning, non-parametric hypothesis tests and probability theory. My dissertation focuses on applications of spatial statistics to political questions, including an article on redistricting simulations and the effect of communities of interest on partisan bias.

6. I also joined RealClearPolitics in January of 2009 after practicing law for eight years. I assumed a fulltime position with RealClearPolitics in March of 2010. My title is Senior Elections Analyst. RealClearPolitics is a company of around 40 employees, with offices in Washington D.C. It produces one of the most heavily trafficked political websites in the world, which serves as a one-stop shop for political analysis from all sides of the political spectrum and is recognized as a pioneer in the field of poll aggregation. It produces original content, including both data analysis and traditional reporting. It is routinely cited by the most influential voices in politics, including David Brooks of *The New York Times*, Brit Hume of *Fox News*, Michael Barone of *The Almanac of American Politics*, Paul Gigot of *The Wall Street Journal*, and Peter Beinart of *The Atlantic*.

7. My main responsibilities with RealClearPolitics consist of tracking, analyzing, and writing about elections. I collaborate in rating the competitiveness of Presidential, Senate, House, and gubernatorial races. As a part of carrying out these responsibilities, I have studied and written extensively about demographic trends in the country, exit poll data at the state and federal level, public opinion polling, and voter turnout and voting behavior.

8. In particular, understanding the way that districts are drawn and how geography and demographics interact is crucial to predicting United States House of Representatives races, so much of my time is dedicated to that task.

9. I am currently a Visiting Scholar at the American Enterprise Institute, where my publications focus on the demographic and coalitional aspects of American Politics. There I have written on the efficiency gap, a metric for measuring the fairness of redistricting plans.

10. I am the author of *The Lost Majority: Why the Future of Government is up For Grabs and Who Will Take It*. In this book, I explore realignment theory. It argues that realignments are a poor concept that should be abandoned. As part of this analysis, I conducted a thorough analysis of demographic and political trends beginning in the 1920s and continuing through the modern times, noting the fluidity and fragility of the coalitions built by the major political parties and their candidates.

11. I co-authored the 2014 *Almanac of American Politics*. The Almanac is considered the foundational text for understanding congressional districts and the representatives of those districts, as well as the dynamics in play behind the elections. PBS's Judy Woodruff described the book as "the oxygen of the political world," while NBC's Chuck Todd noted that "[r]eal political junkies get two *Almanacs*: one for the home and one for the office." My focus was researching the history of and writing descriptions for many of the newly-drawn districts, including tracing the history of how and why they were drawn the way that they were drawn.

12. I have spoken on these subjects before audiences from across the political spectrum, including at the Heritage Foundation, the American Enterprise Institute, the CATO Institute, the Bipartisan Policy Center, and the Brookings Institution. In 2012, I was invited to Brussels to speak about American elections to the European External Action Service, which is the European Union's diplomatic corps. I was selected by the United States Embassy in Sweden to discuss the 2016 elections to a series of audiences there, and was selected by the United States Embassy in Spain to

fulfill a similar mission in 2018. I was invited to present by the United States Embassy in Italy, but was unable to do so because of my teaching schedule.

13. In the winter of 2018, I taught American Politics and the Mass Media at Ohio Wesleyan University. I taught Introduction to American Politics at The Ohio State University for three semesters from Fall of 2018 to Fall of 2019, and again in Fall of 2021. In the Springs of 2020 and 2021, I taught Political Participation and Voting Behavior at The Ohio State University. This course spent several weeks covering all facets of redistricting: How maps are drawn, debates over what constitutes a fair map, measures of redistricting quality, and similar topics. I am teaching this course this semester as well.

14. It is my policy to appear on any major news outlet that invites me, barring scheduling conflicts. I have appeared on both Fox News and MSNBC to discuss electoral and demographic trends. I have been cited in major news publications, including *The New York Times*, *The Washington Post*, *The Los Angeles Times*, *The Wall Street Journal*, and *USA Today*.

15. I sit on the advisory panel for the “States of Change: Demographics and Democracy” project. This project is sponsored by the Hewlett Foundation and involves three premier think tanks: The Brookings Institution, the Bipartisan Policy Center, and the Center for American Progress. The group takes a detailed look at trends among eligible voters and the overall population, both nationally and in key states, to explain the impact of these changes on American politics, and to create population projections, which the Census Bureau abandoned in 1995. In 2018, I authored one of the lead papers for the project: “In the Long Run, We’re All Wrong,” available at <https://bipartisanpolicy.org/wp-content/uploads/2018/04/BPC-Democracy-States-of-Change-Demographics-April-2018.pdf>.

Prior Engagements as an Expert

16. In 2021, I served as one of two special masters appointed by the Supreme Court of Virginia to redraw the districts that will elect the commonwealth's representatives to the House of Delegates, state Senate, and U.S. Congress in the following decade. The Supreme Court of Virginia accepted those maps, which were praised by observers from across the political spectrum. "New Voting Maps, and a New Day, for Virginia," *The Washington Post* (Jan. 2, 2022), available at <https://www.washingtonpost.com/opinions/2022/01/02/virginia-redistricting-voting-maps-gerrymander/>; Henry Olsen, "Maryland Shows How to do Redistricting Wrong. Virginia Shows How to Do it Right," *The Washington Post* (Dec. 9, 2021), available at <https://www.washingtonpost.com/opinions/2021/12/09/maryland-virginia-redistricting/>; Richard Pildes, "Has VA Created a New Model for a Reasonably Non-Partisan Redistricting Process," *Election Law Blog* (Dec. 9, 2021), available at <https://electionlawblog.org/?p=126216>.

17. In 2019, I was appointed as the court's expert by the Supreme Court of Belize. In that case I was asked to identify international standards of democracy as they relate to malapportionment claims, to determine whether Belize's electoral divisions (similar to our congressional districts) conformed with those standards, and to draw alternative maps that would remedy any existing malapportionment.

18. I currently serve as a Voting Rights Act expert to counsel for the Arizona Independent Redistricting Commission.

19. I previously authored an expert report in *Dickson v. Rucho*, No. 11-CVS-16896 (N.C. Super Ct., Wake County), which involved North Carolina's 2012 General Assembly and Senate maps. Although I was not called to testify, it is my understanding that my expert report was accepted without objection. I also authored an expert report in *Covington v. North Carolina*, Case

No. 1:15-CV-00399 (M.D.N.C.), which involved almost identical challenges in a different forum. Due to what I understand to be a procedural quirk, where my largely identical report from *Dickson* had been inadvertently accepted by the plaintiffs into the record when they incorporated parts of the *Dickson* record into the case, I was not called to testify.

20. I authored two expert reports in *NAACP v. McCrory*, No. 1:13CV658 (M.D.N.C.), which involved challenges to multiple changes to North Carolina's voter laws, including the elimination of a law allowing for the counting of ballots cast in the wrong precinct. I was admitted as an expert witness and testified at trial. My testimony discussed the "effect" prong of the Voting Rights Act claim. I did not examine the issues relating to intent.

21. I authored reports in *NAACP v. Husted*, No. 2:14-cv-404 (S.D. Ohio), and *Ohio Democratic Party v. Husted*, Case 15-cv-01802 (S.D. Ohio), which dealt with challenges to various Ohio voting laws. I was admitted and testified at trial in the latter case (the former case settled). The judge in the latter case ultimately refused to consider one opinion, where I used an internet map-drawing tool to show precinct locations in the state. Though no challenge to the accuracy of the data was raised, the judge believed I should have done more work to check that the data behind the application was accurate.

22. I served as a consulting expert in *Lee v. Virginia Board of Elections*, No. 3:15-cv-357 (E.D. Va. 2016), a voter identification case. Although I would not normally disclose consulting expert work, I was asked by defense counsel to sit in the courtroom during the case and review testimony. I would therefore consider my work *de facto* disclosed.

23. I filed an expert report in *Mecinas v. Hobbs*, No. CV-19-05547-PHX-DJH (D. Ariz. 2020). That case involved a challenge to Arizona's ballot order statute. Although the judge

ultimately did not rule on a motion in limine in rendering her decision, I was allowed to testify at the hearing.

24. I authored two expert reports in *Feldman v. Arizona*, No. CV-16-1065-PHX-DLR (D. Ariz.). Plaintiffs in that case challenged an Arizona law prohibiting the collection of voted ballots by third parties that were not family members or caregivers and the practice of most of the state's counties to require voters to vote in their assigned precinct. My reports and testimony were admitted. Part of my trial testimony was struck in that case for reasons unrelated to the merits of the opinion; counsel for the state elicited it while I was on the witness stand and it was struck after Plaintiffs were not able to provide a rebuttal to the new evidence.

25. I authored an expert report in *Smith v. Perrera*, No. 55 of 2019 (Belize). In that case I was appointed as the court's expert by the Supreme Court of Belize. In that case I was asked to identify international standards of democracy as they relate to malapportionment claims, to determine whether Belize's electoral divisions (similar to our congressional districts) conformed with those standards, and to draw alternative maps that would remedy any existing malapportionment.

26. I authored expert reports in *A. Philip Randolph Institute v. Smith*, No. 1:18-cv-00357-TSB (S.D. Ohio), *Whitford v. Nichol*, No. 15-cv-421-bbc (W.D. Wisc.), and *Common Cause v. Rucho*, NO. 1:16-CV-1026-WO-JEP (M.D.N.C.), which were efficiency gap-based redistricting cases filed in Ohio, Wisconsin and North Carolina.

27. I have only been excluded as an expert once, in *Fair Fight v. Raffensperger*. The judge concluded that I lacked sufficient credentials to testify as an expert in election administration.

28. I authored an expert report in the cases of *Ohio Organizing Collaborative, et al v. Ohio Redistricting Commission, et al* (No. 2021-1210); *League of Women Voters of Ohio, et al v. Ohio Redistricting Commission, et al* (No. 2021-1192); *Bria Bennett, et al v. Ohio Redistricting Commission, et al* (No. 2021-1198). These cases are pending in original action before the Supreme Court of Ohio.

29. I authored two expert reports in the consolidated cases of *NCLCV v. Hall and Harper v. Hall* (21 CVS 15426; 21 CVS 500085), two political/racial gerrymandering cases pending before the Supreme Court of North Carolina.

30. I authored an expert report in the consolidated cases of *Montana Democratic Party v. Jacobson*, DV-56-2021-451 (Mont. Dist. Ct.). These cases involve the elimination of same-day registration, use of student identification to vote, and the restriction of ballot collection.

31. I authored an expert report on behalf of *amicus curiae* in the consolidated cases of *Carter v. Chapman* (No. 464 M.D. 2021) and *Gressman v. Chapman* (No. 465 M.D. 2021), which are redistricting cases before the Supreme Court of Pennsylvania.

32. I filed an expert report in *Harkenrider v. Hochul*, (No. E2022-0116CV), which is a partisan gerrymandering challenge to New York's enacted Congressional and state Senate maps.

SUMMARY OF WORK PERFORMED

33. I have been asked by counsel to evaluate HB 1, Maryland's newly enacted Congressional districts (hereinafter, "Enacted Plan"). I do so in two steps. First, I introduce a qualitative analysis that demonstrates that Maryland's Enacted Plan departs from the historical norm in terms of how it treats traditional redistricting criteria such as compactness and county splits. Second, using well-established techniques in the political science discipline, I examine whether the political configuration of Maryland's map is demanded by its geography. I conclude

that it is not and that it is possible to draw a map that better reflects Maryland's political orientation without abandoning other obligations such as compactness, contiguity, and compliance with the Voting Rights Act. In short, I conclude that the Enacted Plan was clearly drawn to discourage competition and for the purpose of favoring the Democratic Party and disfavoring the Republican Party.

34. To assist in my analysis here, I downloaded shapefiles for Congressional maps for the following congresses in which Maryland engaged in redistricting, as identified in Kenneth C. Martis, *Historical Atlas of United States Congressional Districts 234-235* (1982):

- a. 1st Congress (elections of 1789)
- b. 3rd Congress (elections of 1792)
- c. 8th Congress (elections of 1803)
- d. 23rd Congress (elections of 1833)
- e. 24th Congress (elections of 1835)
- f. 28th Congress (elections of 1844)
- g. 29th Congress (elections of 1845)
- h. 33rd Congress (elections of 1853)
- i. 38th Congress (elections of 1863)
- j. 43rd Congress (elections of 1872)
- k. 52nd Congress (elections of 1890)
- l. 55th Congress (elections of 1896)
- m. 56th Congress (elections of 1898)
- n. 58th Congress (elections of 1902)
- o. 68th Congress (elections of 1922)

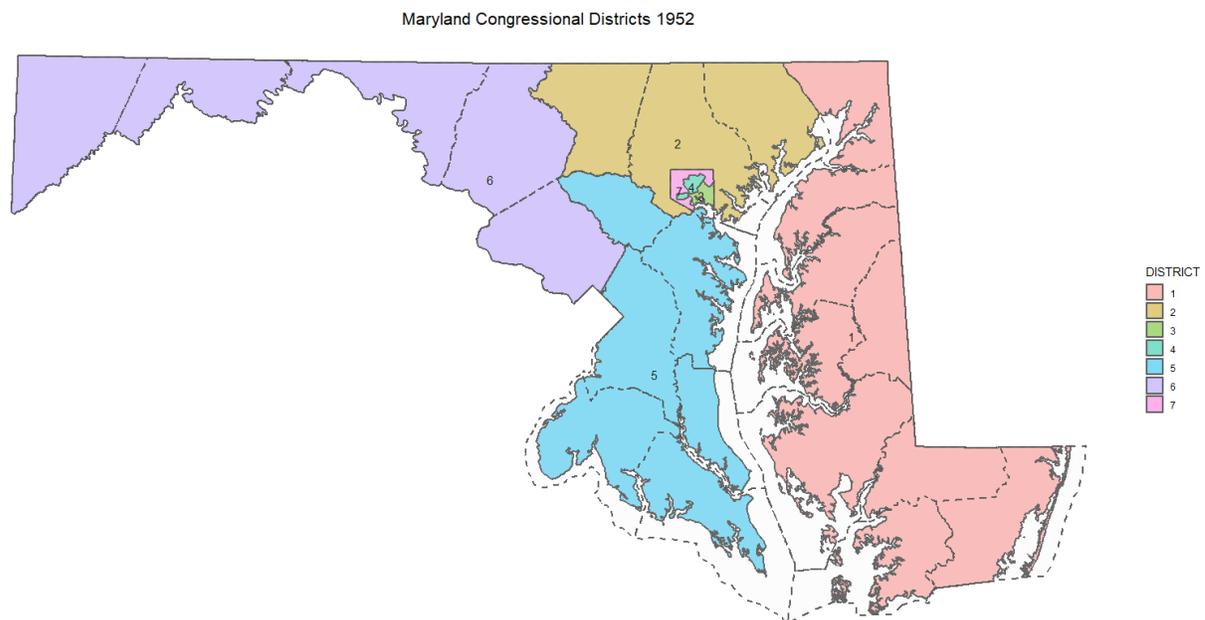
- p. 80th Congress (elections of 1946)
- q. 83rd Congress (elections of 1952)
- r. 90th Congress (elections of 1966)
- s. 93rd Congress (elections of 1972)
- t. 98th Congress (elections of 1982)
- u. 103rd Congress (elections of 1992)
- v. 108th Congress (elections of 2002)
- w. 113th Congress (elections of 2012)

35. Data were downloaded from a complete repository of shapefiles for congressional districts maintained by the political science department at the University of California, Los Angeles. See Jeffrey B. Lewis, Brandon DeVine, Lincoln Pitcher, & Kenneth C. Martis. (2013) *Digital Boundary Definitions of United States Congressional Districts, 1789-2012*. [Data file and code book]. Retrieved from <https://cdmaps.polisci.ucla.edu> on January 31, 2022. I also analyzed the appendix to Martis' printed volume, which contains copies of all of the redistricting laws for all 50 states from 1789 through 1972. These data were processed in R, a widely used statistical processing language.

36. County shapefiles were downloaded from the Redistricting Data Hub, along with shapefiles of precincts with political data, and census blocks with racial data. Blocks were matched to shapefiles in R and aggregated to the precinct level, providing racial data for precincts. Likewise, data from earlier iterations of precincts were apportioned to census blocks within the precinct, and then reaggregated to the most recent precinct level using widely available statistical packages contained within R.

ANALYSIS OF THE COMPACTNESS OF MARYLAND'S DISTRICTS

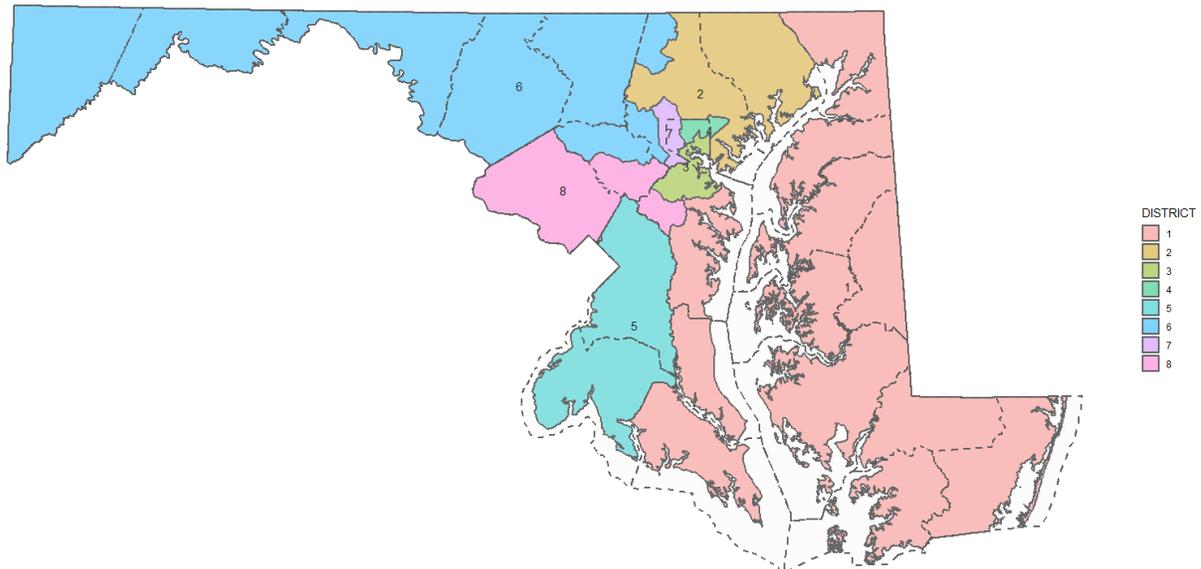
37. Before the Supreme Court's announcement of the one-person-one-vote standard in *Baker v. Carr* and its progeny, Maryland's maps were fairly compact, and avoided the unnecessary splitting of counties. Consider the map of Maryland's congressional districts for the 1952-1960 redistricting cycle. The only split constituency was the city of Baltimore, which received two full Congressional districts and portions of two other ones. Every other county remained intact:



38. This means that one county was divided. However, since the City of Baltimore was divided into four pieces, the map had three county splits.

39. Of course, many of these districts were malapportioned, something *Baker v. Carr* and its progeny put an end to. Like most states, Maryland redrew its congressional districts in 1966, which were kept in place through 1972.

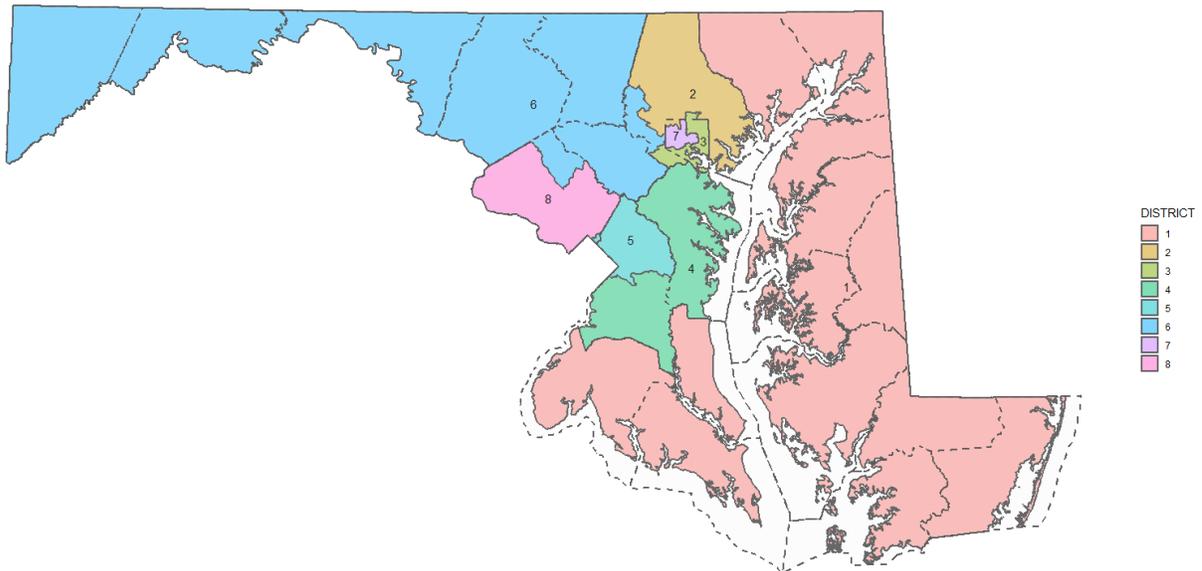
Maryland Congressional Districts 1970



40. This map contains nine splits. That is to say, if you were to use the county map as a “cookie cutter” and place it on the congressional map, you would end up with nine more pieces of districts than there are counties. That is two more splits than the theoretical minimum number of splits: seven (assuming that there is no freak occurrence where a group of counties adds up to precisely the number of residents needed for a district under the Supreme Court’s one-person-one-vote jurisprudence).

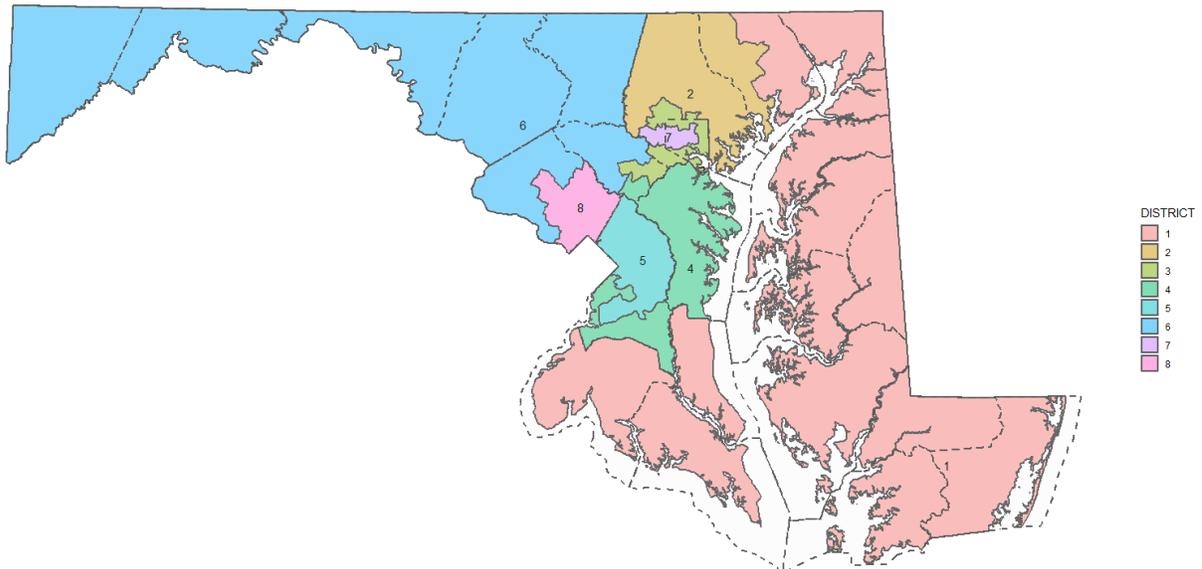
41. In 1972, Maryland updated its map. This map removed a county split, reducing the total number of splits to 8 (counting splits in the City of Baltimore is tricky, but as a general matter I counted pieces of districts separated only by Baltimore Harbor as a single piece).

Maryland Congressional Districts 1972

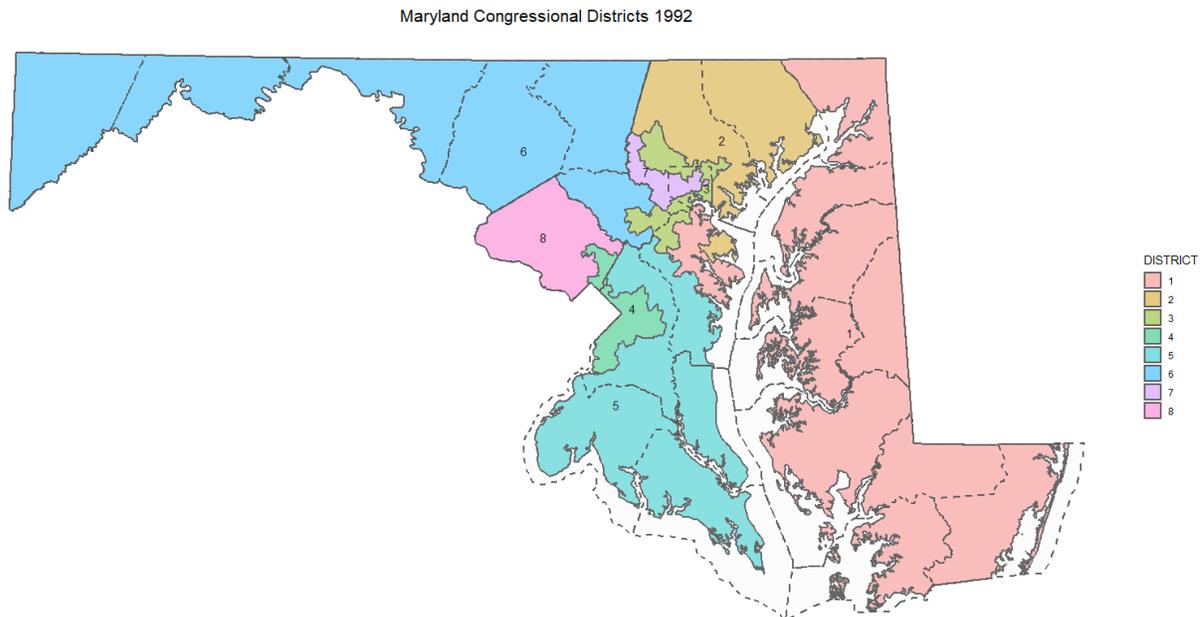


42. The 1982 map saw only modest changes to this map, which retained relatively compact districts. The number of county splits increased to 10.

Maryland Congressional Districts 1982



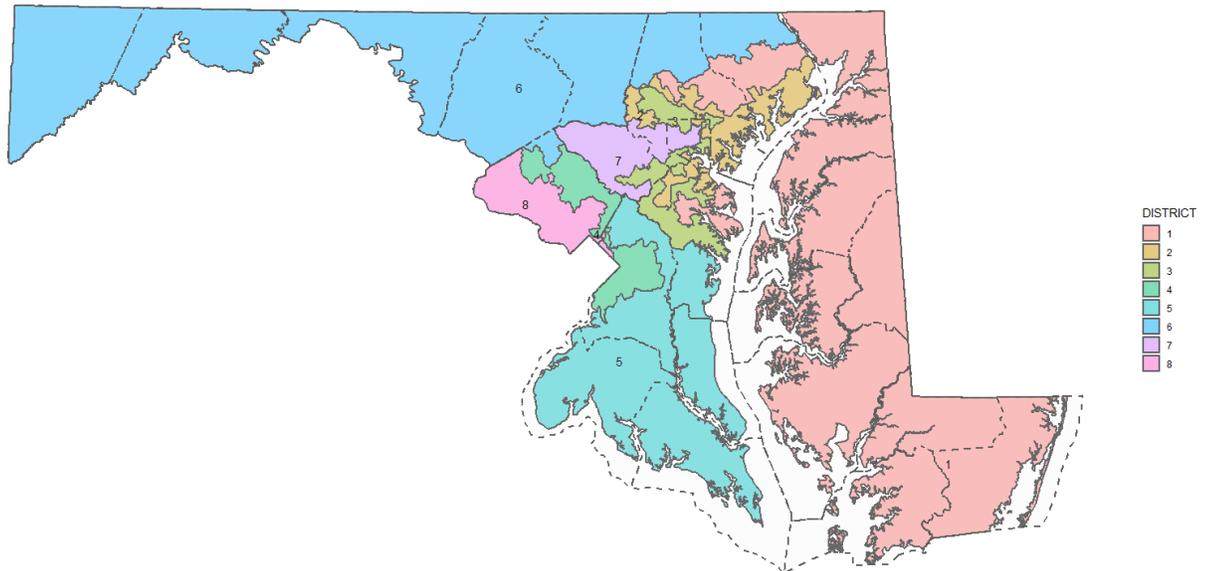
43. By 1992, the lines became increasingly convoluted, as the 3rd and 4th districts became increasingly serpentine in shape. This map contained 13 county splits.



44. In 2002 Maryland's congressional districts became significantly more distorted. *The Almanac of American Politics 2004*, which covers the 2002 redistricting and elections, explains the politicized process that gave rise to these lines:

Maryland was the scene of one of the Democrats' most successful partisan gerrymandering in the 2002 cycle. Gerrymandering is not too harsh a word: The convoluted shapes of the districts in the Baltimore area would have made Elbridge Gerry blush. The goal of the plan, largely concocted by Governor Parris Glendening, was to protect all four of [the Democratic] incumbents and to draw districts that would be impossible to win for 2d District Republican Bob Ehrlich and 8th District Republican Connie Morella. The Bush 2000 percentage in the 2d fell from 55% to 41% and in the 8th from 36% to 31% The two other districts, the 1st, based on the Eastern Shore and the 6th, based in Western Maryland, both snake into the Baltimore suburbs to take in heavily Republican precincts; they are safely Republican.

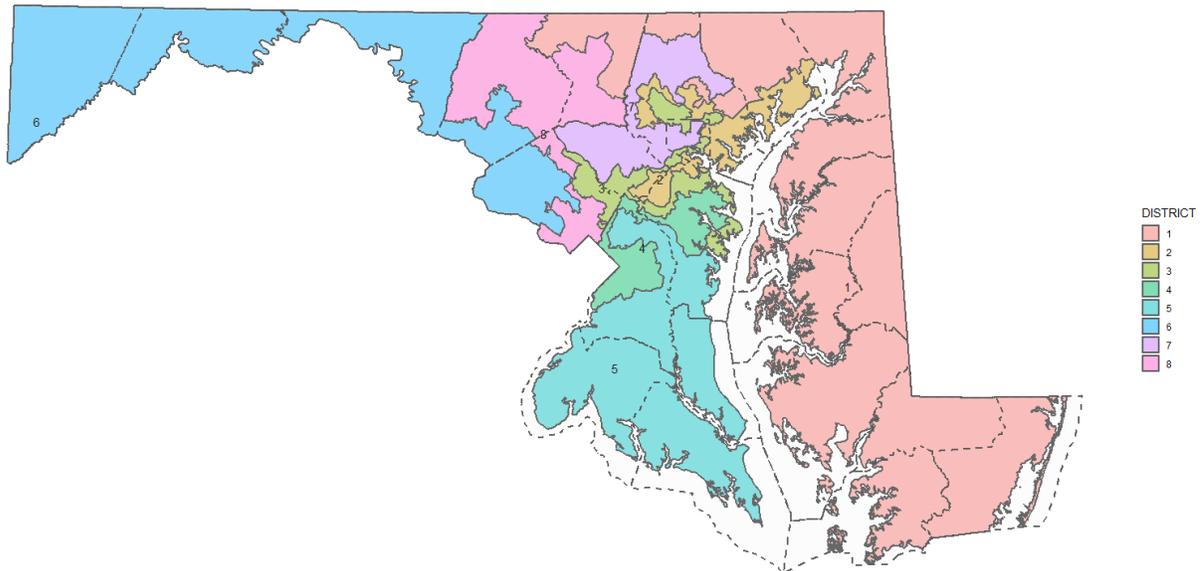
Maryland Congressional Districts 2002



45. This map forms the basis for the subsequent and current maps. The number of county splits increased dramatically as well, as districts increasingly weave in and out of counties; by my count there are 21 county splits.

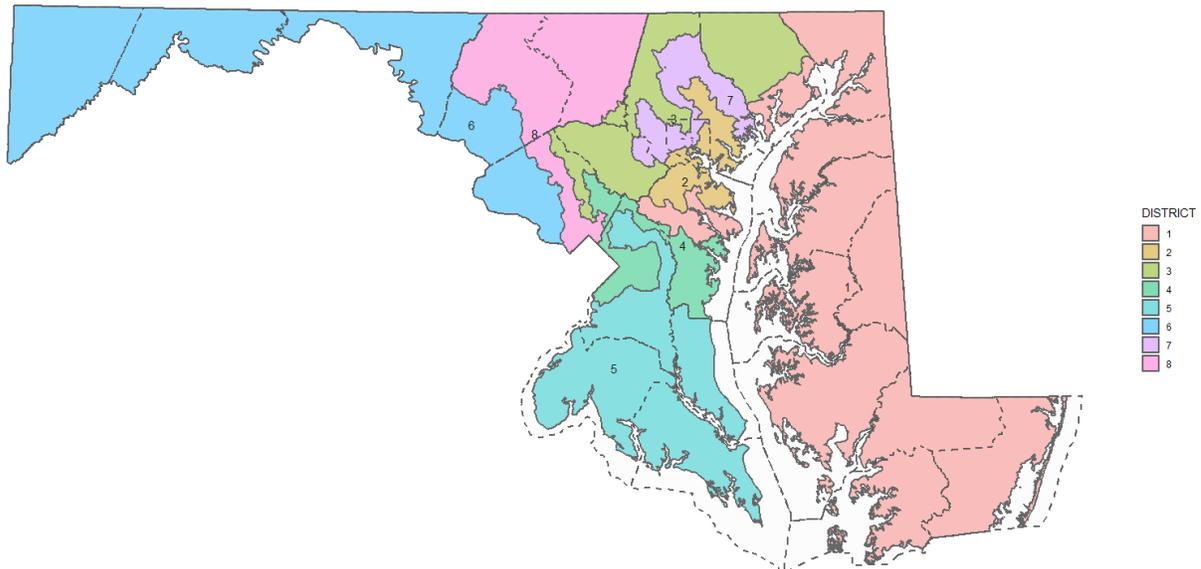
46. In 2012, Democrats opted to target 6th district Republican Roscoe Bartlett, sending the 6th south into Montgomery County instead of eastward into the more Republican northern reaches of Baltimore County, while retaining the bizarrely shaped districts that had characterized the previous map. As with the previous map, there are 21 county splits.

Maryland Congressional Districts 2012



47. The current map continues this trend, this time by taking the 1st District out of Republican-heavy northern Baltimore, Harford and Carroll counties, and into more Democratic portions of Harford County, while pushing deeply into Anne Arundel County. It slightly reduces the number of county splits to 17, which is still high by historical standards and more than double the theoretical minimum number of splits required (seven).

Maryland Congressional Districts 2022



48. The result of this sequence of increasingly convoluted map shapes is the production of a map which has produced some of the most distorted lines in recent U.S. history.

49. To evaluate the compactness of the districts, I employed four commonly used metrics: Reock, Polsby-Popper, Schwartzberg and Convex Hull.

50. The first three metrics are based on comparing the drawn district to a circle, which is the most compact shape. The Reock score looks at the ratio of the area of the district to the area of the smallest circle that would enclose the district (also known as a “minimum bounding circle”). Ernest Reock, “A Note: Measuring Compactness as a Requirement of Legislative Apportionment,” 1 *Midwest Jrnl. Pol. Sci.* 70 (1961). This ratio will fall as districts become distorted lengthwise; it therefore punishes long, bacon-like districts. A “perfect” Reock score is 1, while a zero is a theoretical perfectly non-compact district.

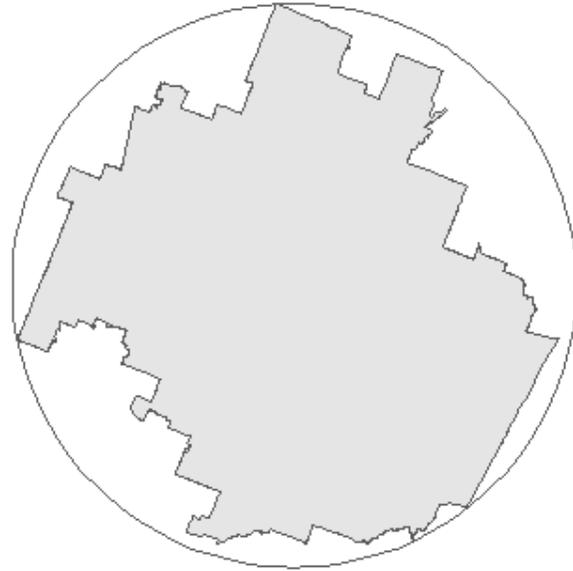
51. To make this less abstract, an illustration of the Enacted Plan’s District 3, with its minimum bounding circle, is provided beside a congressional district with a much higher Reock

score. As you can see, the latter district fills its minimum bounding circle to a much greater extent than Enacted Plan District 3.

Enacted Plan District 3, Reock = 0.27



Arizona 7th CD (2012-2020), Reock = 0.67



52. The Polsby-Popper score looks at the ratio of the area of a district to the area of a circle that has the same perimeter as the district. Daniel D. Polsby & Robert D. Popper, “The Third Criterion: Compactness as a Procedural Safeguard Against Partisan Gerrymandering,” 9 *Yale L. & Pol. Rev.* 301 (1991). To understand the motivation behind Polsby-Popper, sketch out a circle. Then erase some of the edge of the circle, and have a narrow tendril snake into the district toward the center. The Reock score would not change much, since the size of the minimum bounding circle remains the same and the area of the district does not change much, but the Polsby-Popper score would fall significantly, since the perimeter of the district would be greatly increased. A “perfect” Polsby-Popper score is 1, while a theoretical perfectly non-compact district would score

a zero. Note that, in a state like Maryland with jagged coastlines and inlets, the Polsby-Popper scores will naturally be lower than in other similarly situated states.

53. To make this less abstract, I have provided an illustration of the Enacted Plan's District 3, with a circle whose circumference is equal to the perimeter of District 3. I have provided a similar illustration for Minnesota's 4th District. As you can see, the area of the circle for Minnesota's 4th CD is much closer to that of the district than is true of Enacted Plan District 3.

Enacted Plan District 3, PP of .09



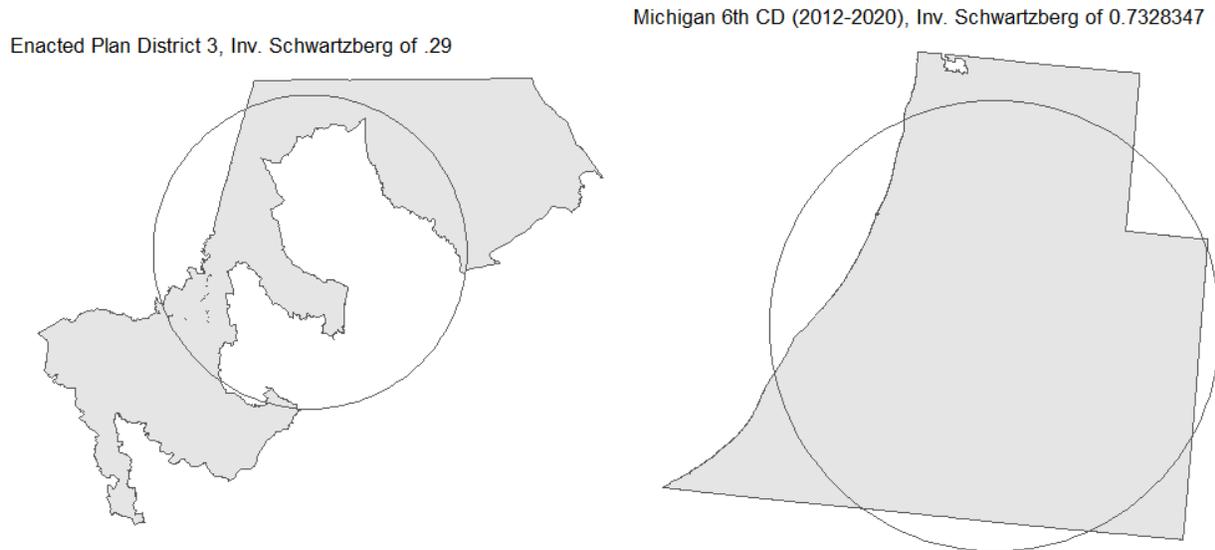
Minnesota 4th CD, PP of .56



54. I also computed the Inverse Schwartzberg score. The Inverse Schwartzberg score takes the perimeter of the district and compares it to the perimeter (circumference) of a circle that has the same area as the district. *See* Joseph E. Schwartzberg, "Reapportionment, Gerrymanders, and the Notion of Compactness," 50 *Minn. L. Rev.* 443 (1965). By taking the inverse (dividing the

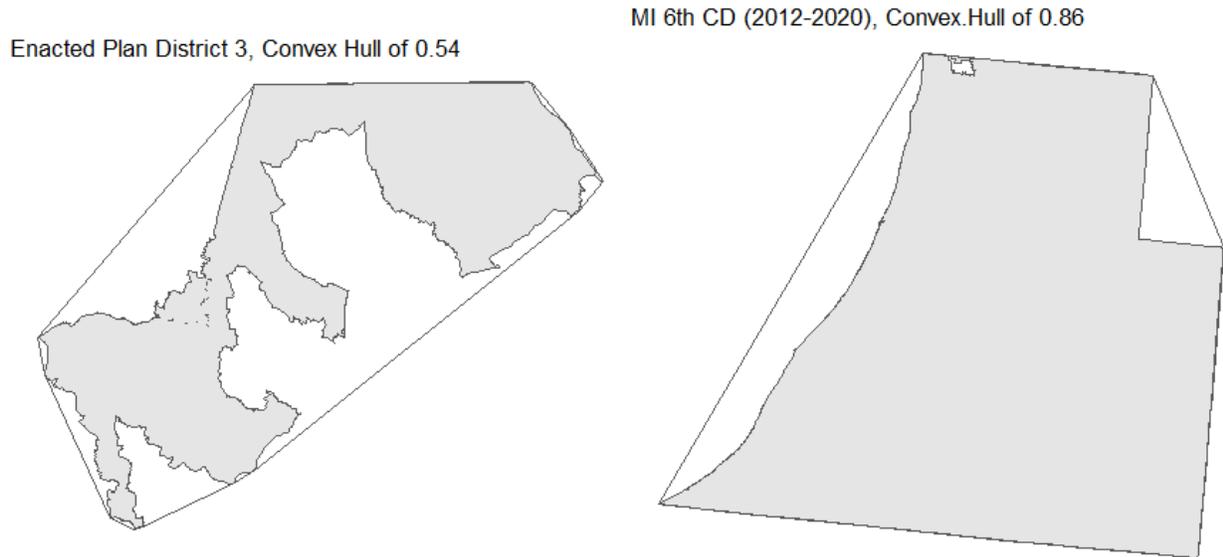
number “1” by this score), the scores are, like the above scores, scaled from 0 to 1, with 1 representing a perfectly compact district.

55. Once again, I illustrate this by comparing the Enacted Plan’s 3rd District to a district which a much higher (more compact) score. This is more difficult to see, but once can intuit that the perimeter (circumference) of the circle in the right-most district is closer to the perimeter of the corresponding district than the perimeter (circumference) of the circle for the Enacted Plan’s 3rd District is to that of the district itself.

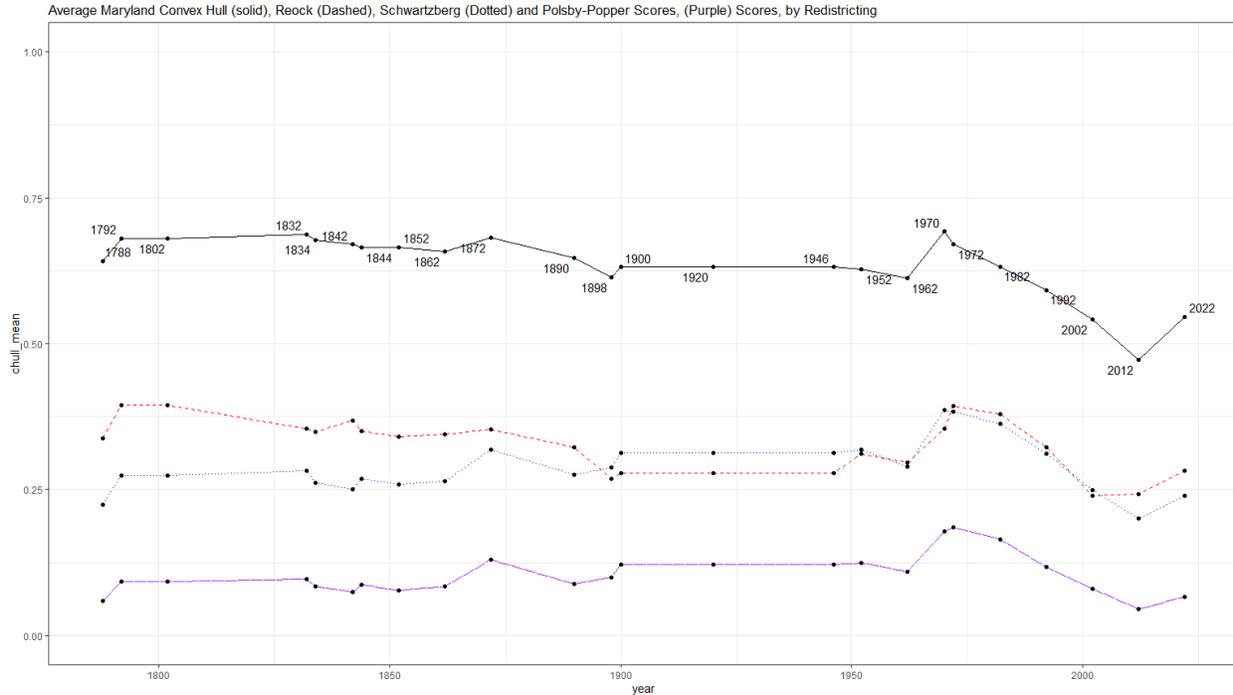


56. The final measure that I examine is the Convex Hull score. It is similar to the Reock score except that it uses the minimum bounding *polygon* instead of the minimum bounding circle. To understand this, consider that a perfect square – something that most people would consider a compact district – has a Reock score of 0.64. By allowing for shapes other than a circle to be the benchmark, the Convex Hull score recognizes that compactness can come in many forms. Like the other scores, a 1 is the most compact district and a zero is a theoretical non-compact district.

57. Once again, an illustration can be useful. Here we can see the 3rd District, compared to the polygon that bounds it. We see the same for Michigan's 6th CD. As you can see, the district in the latter district fills its polygon to a much greater extent than does District 3.



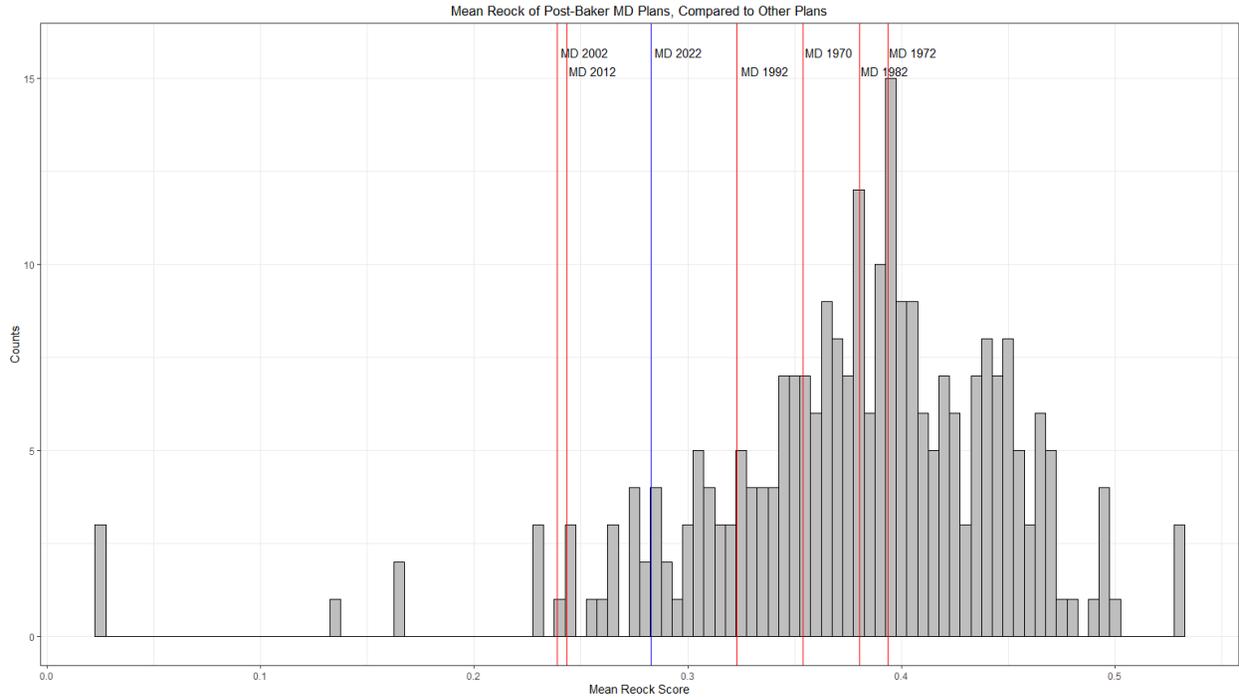
58. The following chart depicts the changes in the compactness of Maryland's congressional maps over the course of the past 234 years. As you can see, Maryland's mean Reock, Polsby-Popper, Schwartzberg and Convex Hull Scores decline markedly beginning in 1970, before creeping back up in 2022. The Enacted Plan sits below the historical average of the state regardless of the metric.



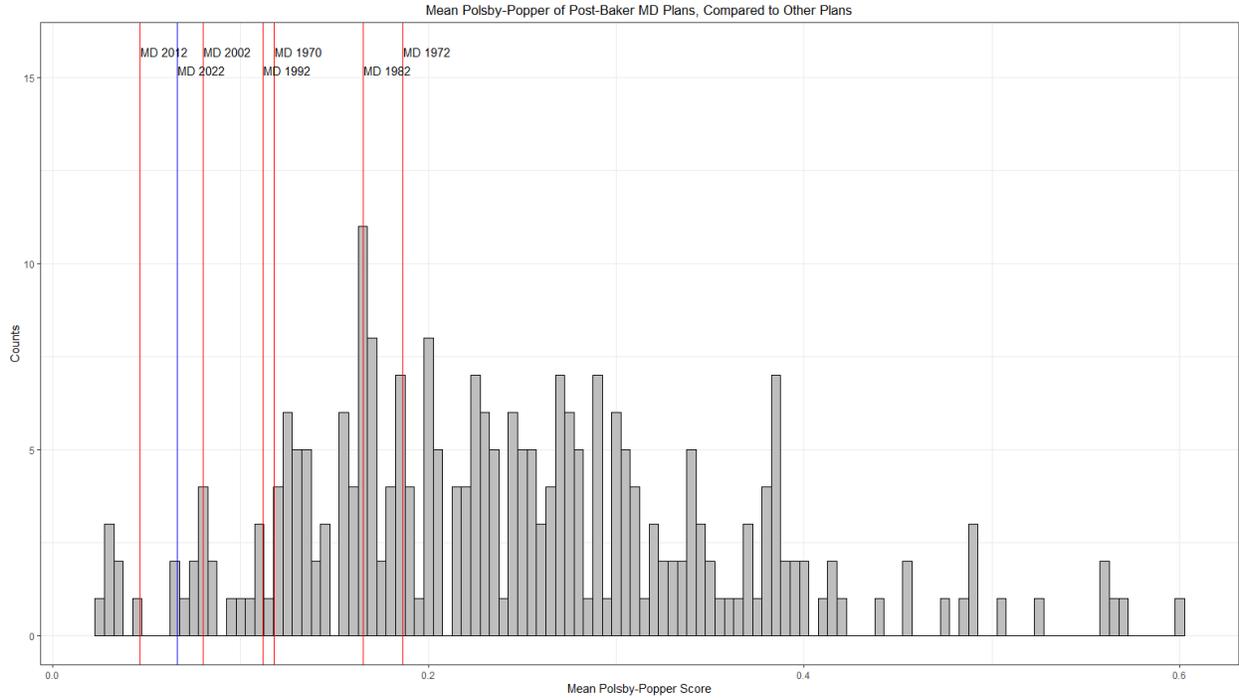
59. Indeed, Maryland stands out as having some of the least compact districts in the entire nation today, and indeed, over the course of the past 50 years. The following histograms collect every map drawn during the decennial redistricting since the mid-1960s, except for states with one district. Maryland’s various maps are reflected by vertical lines, with the current map denoted with a blue line.

60. Using Reock scores as a metric, Maryland stands out as having some of the least compact districts in the past 60 years, using both Maryland’s own historic maps as a reference point and the country as a whole. The only maps enacted anywhere in the United States that were less compact than the 2002 and 2012 maps were Hawaii’s (it being a series of islands, it has little say in the matter), and Rhode Island’s. The only other maps less compact than the Enacted Plan are Virginia’s 2002-2010 and 2012-2016 lines, Florida’s 2002-2010 lines, North Carolina’s 1992 lines, Tennessee’s 1972 lines, and New Hampshire’s lines.

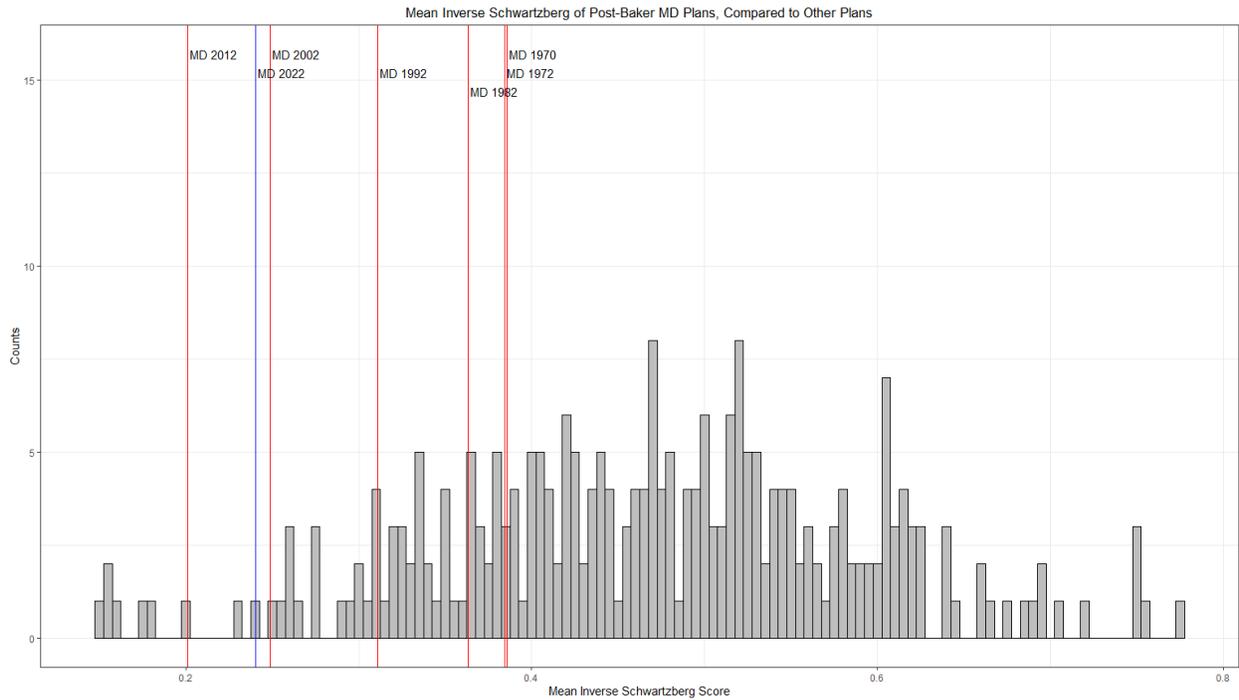
61. Notably, unlike New Hampshire, Rhode Island or Hawaii, Maryland’s non-compact lines cannot be considered an *inherent* function of its geography, as several enacted plans in Maryland have landed comfortably in the middle of the distribution of maps.



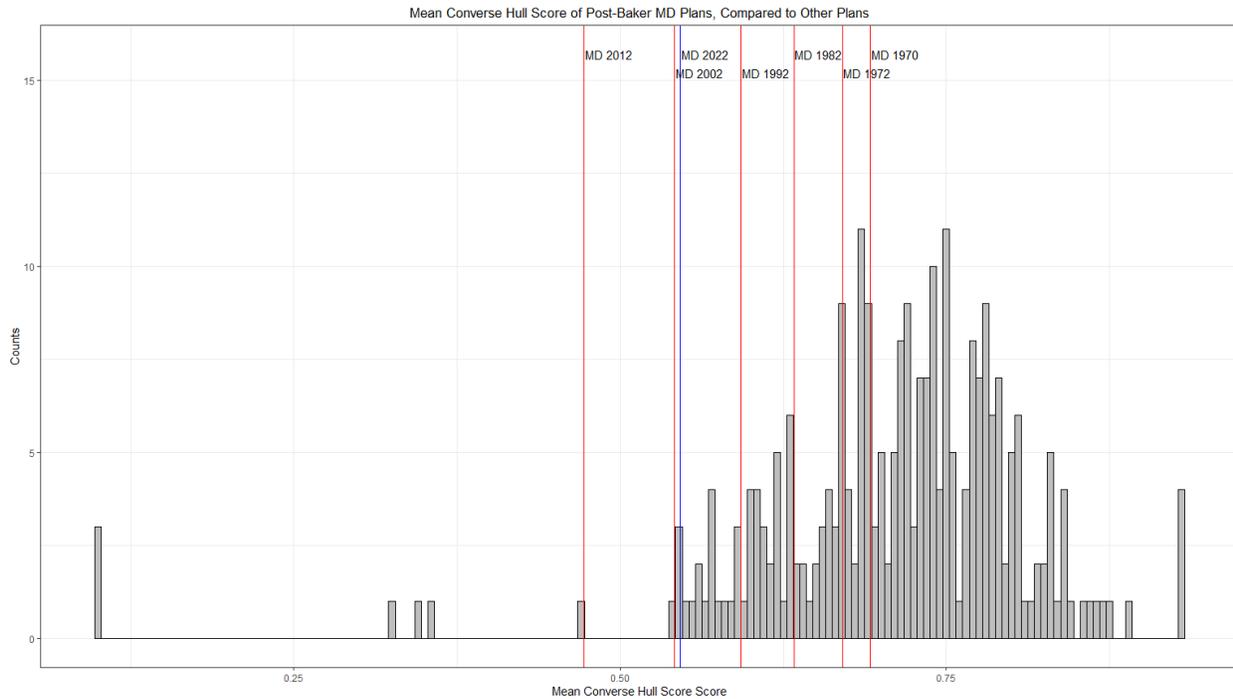
62. We see similar findings using Polsby-Popper scores. The only state that has drawn districts with worse average Polsby-Popper scores than Maryland’s 2012 map is Maine; Louisiana drew less compact lines than Maryland’s current map in 1992 (those lines contained the infamous district that snaked along the Louisiana border from Baton Rouge to Shreveport; it was later struck down as a racial gerrymander based on its distorted shape). Once again, this is not demanded by Maryland’s geography, as it has had more compact lines in the past.



63. Using the Inverse Schwartzberg metric creates similar results. Only Louisiana in 1992 and the state of Maine have drawn less compact lines than the Enacted Plan and other recent Maryland maps.



64. Finally, using the Convex Hull metric we see more of the same. Only the state of Hawaii has drawn less compact districts than Maryland did in 2002 and 2012; the state of Louisiana also drew less compact districts than the current Maryland map in 2012.



65. In short, over the course of the past 50 years, but particularly beginning in 2002, Maryland departed from historical precedent and began drawing districts that were not compact by any reasonable definition of compactness and that contained a substantially larger number of county splits than they needed to contain. It did so to achieve the political goal of reducing the number of Republicans representing the state in Congress. Perhaps most importantly, it did not have to do so. Maryland has previously drawn districts that were significantly more compact, while still complying with federal directives such as the one-person-one-vote standard.

QUALITATIVE EXAMINATION OF PARTISAN BIAS OF MARYLAND PLANS

66. To understand the partisan intent that lies behind Maryland’s plans, we must first understand the political geography of Maryland. Beyond a doubt, Maryland is a Democratic state.

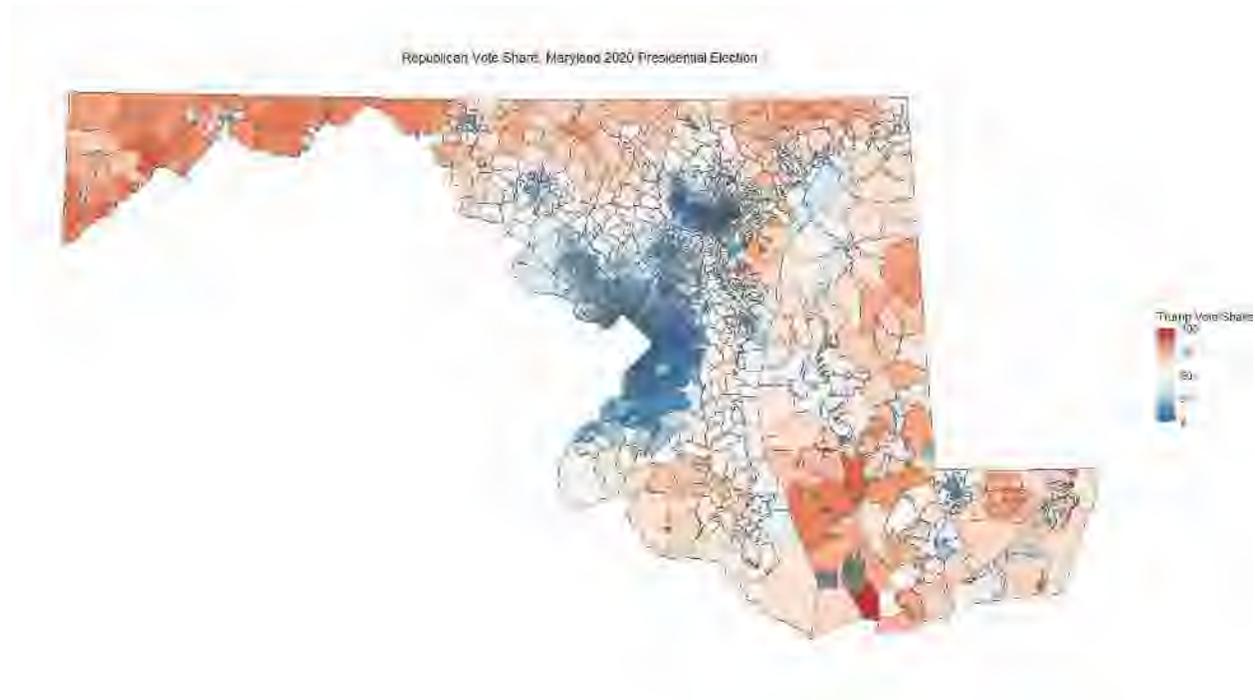
Democrats have routinely won every election in the state over the past decade – indeed over the past several decades – except for Governor. Republicans have not won a presidential election in Maryland since 1988, have not won a senate election since 1980, have not won an attorney general election since 1952, and have not won a Comptroller election since the 1800s.

67. At the same time, Republicans have been a substantial minority within the state. Over the course of the past decade they have won the gubernatorial election twice. Republican performance in the state has tended to fall between 32.5% of the vote and 38.4% of the vote.

Year	Office	Republican Share	Democratic Share	Two Party Vote Share
2012	President	35.9%	62.0%	36.7%
2016	President	33.9%	60.3%	36.0%
2020	President	32.1%	65.4%	33.0%
2012	Senate	26.3%	56.0%	32.0%
2018	Senate	30.3%	64.9%	31.8%
2016	Senate	35.7%	60.9%	37.0%
2014	Governor	51.0%	47.3%	51.9%
2018	Governor	55.4%	43.5%	56.0%
2014	Attorney General	40.7%	55.8%	42.2%
2018	Attorney General	35.1%	64.8%	35.1%
2014	Comptroller	37.2%	62.7%	37.2%
2018	Comptroller	27.9%	72.1%	27.9%

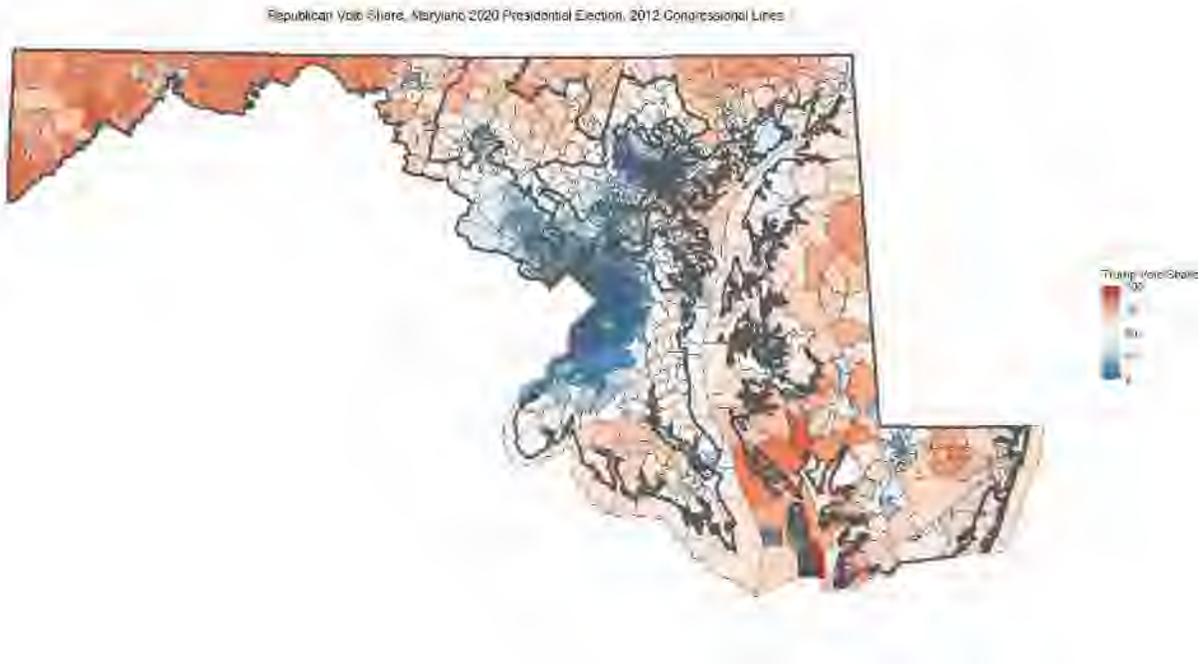
68. Republicans have also fared well in Congress, relatively speaking. Since the 1940s, they have typically had at least two members of the congressional delegation; the exceptions are the congresses that met in 1944 (one member, Edward Miller), 1958 (no members), 2008 (one member, Roscoe Bartlett) and the congresses from 2012 through 2020 (one member, Andy Harris).

69. Republican voting strength in Maryland is not so diffuse that we might expect Republican districts to be impossible to draw. Republican votes are concentrated on the Eastern Shore, in the panhandle, and along the northern edge of the state. Democrats, on the other hand, are heavily clustered in Baltimore City and in the D.C. suburbs.



70. This sets a useful background for exploring the redistricting plans. Maryland is not so heavily Democratic that we would never expect Republicans to be elected in it, and Republican political support is not so diffuse that we would not expect Republicans to be able to win an election in the state.

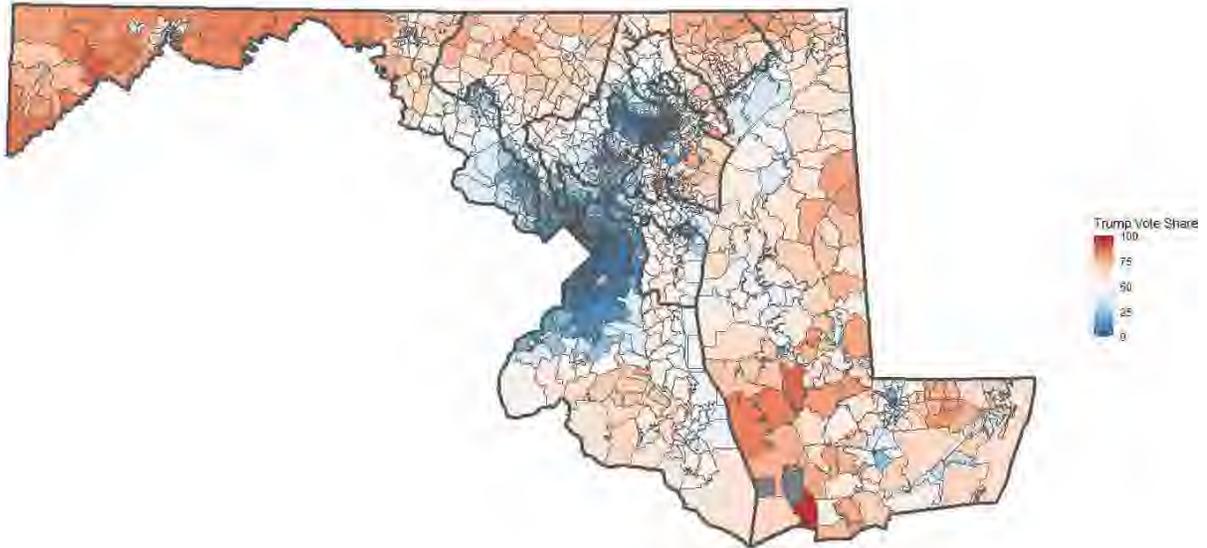
71. Against this backdrop, the convoluted shape of the existing lines begins to make sense.



72. In Maryland’s 2012 Congressional maps, the 6th and 8th districts functioned to break up Republican voting strength along the Pennsylvania/Maryland border. The 6th takes in Republican votes in the panhandle, but then floats down the Potomac River to take in heavily blue precincts in Montgomery County, with a peninsula jutting up to take in Frederick. The 8th district likewise ventures from inner Montgomery County up a narrow peninsula to take in heavily Republican precincts in Frederick and Carroll counties. The remaining Republican precincts are joined with the Eastern Shore to create a heavily Republican district. Thus, the 6th and 8th districts serve to “crack” Republican votes, while the 1st serves to “pack” them.

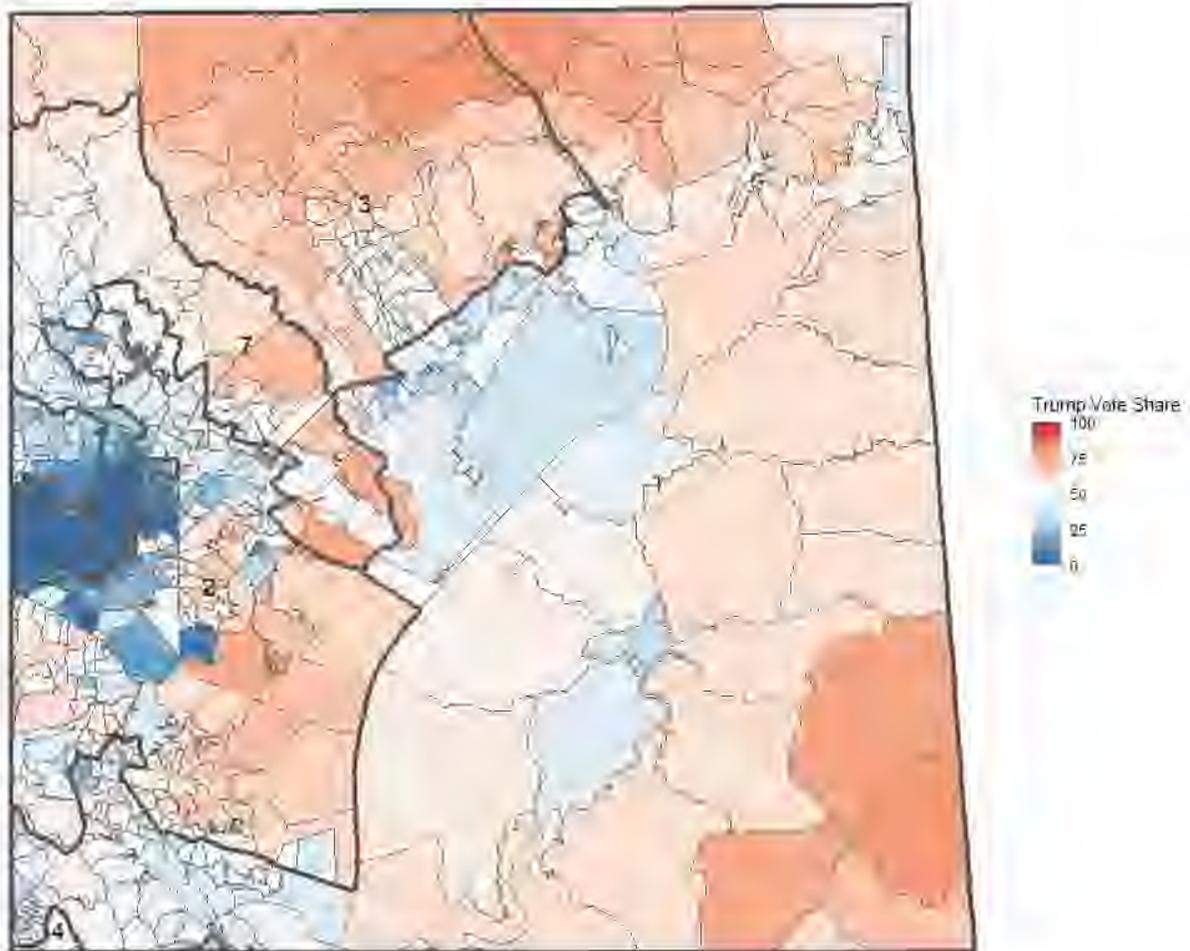
73. Now consider the Enacted Plan.

Republican Vote Share, Maryland 2020 Presidential Election, 2022 Congressional Lines



74. The 6th and 8th districts still serve their basic functions: Cracking the Republican vote in northern and western Maryland by pairing these voters with those in heavily Democratic Montgomery County. The votes are further cracked however, by wrapping the 3rd district around the Baltimore metropolitan area, stretching it from Montgomery County (which is now split four ways) and Howard County, into Republican areas of Baltimore and Harford counties. Other Republican-leaning voters are placed into the snake-like 7th Congressional District, which contains much of the population of Baltimore City. By contrast, the 1st is now assigned the most Democratic areas of Harford County.

75. We can see this better by zooming in on northeastern Maryland.



76. The 1st district now carefully carves out almost every Democratic precinct in Harford County, while avoiding the Republican precincts. Tables 2-5 illustrate this further by listing the precincts in Harford County from most-to-least Democratic, and showing the district to which those precincts are assigned.

Table 2: Most Democratic Precincts in Harford County, by District

Trump Share	District
22.3%	1
24.2%	1
28.1%	1
30.7%	1
32.7%	1
33.0%	1
34.0%	1
36.4%	3
37.2%	1
37.3%	1
38.6%	1
39.2%	1
40.0%	3
40.2%	1
40.4%	1
40.5%	1
41.6%	3
42.4%	1
43.2%	1
45.0%	1
45.5%	3
46.2%	3
46.8%	1
47.1%	3
48.0%	1

Table 3: Most Democratic Precincts in Harford County, by District

Trump Share	District
48.0%	1
48.8%	1
49.0%	1
50.0%	1
50.5%	3
51.1%	3
51.9%	3
52.6%	7
53.0%	3
53.4%	3
53.7%	3
54.2%	3
54.2%	3
55.2%	3
55.9%	3
56.2%	3
56.5%	3
57.0%	3
57.4%	3
57.5%	3
57.6%	1
58.2%	3
58.3%	3
58.9%	3
59.4%	3

Table 4: Most Democratic Precincts in Harford County, by District

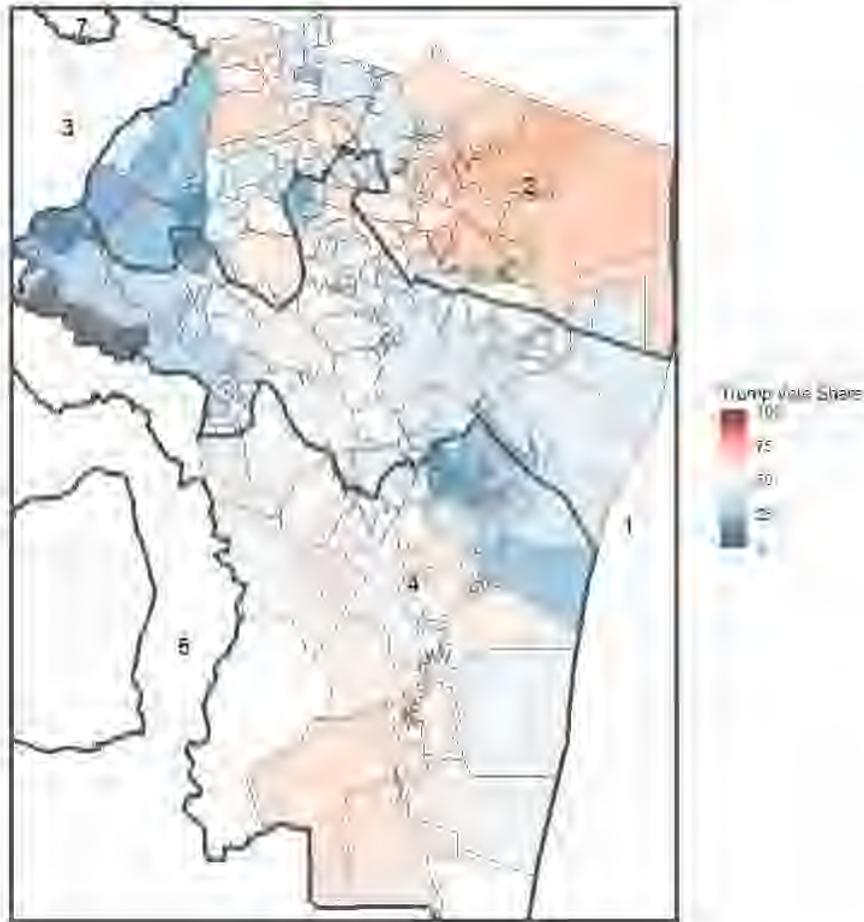
Trump Share	District
60.4%	3
60.6%	1
60.8%	1
60.9%	3
60.9%	3
61.3%	3
61.7%	3
62.0%	3
62.5%	1
62.6%	3
63.8%	3
64.8%	3
64.9%	3
65.5%	3
66.8%	3
67.2%	3
67.2%	3
67.7%	3
67.9%	3
68.1%	3
69.4%	3
69.8%	3
70.3%	3
70.5%	3
71.3%	3

Table 5: Most Democratic Precincts in Harford County, by District

Trump Share	District
71.5%	3
71.5%	3
71.9%	3
72.0%	1
72.8%	3
73.3%	3
75.2%	7
75.4%	3
75.6%	3
76.2%	3
76.7%	3
77.9%	3
79.1%	3
79.7%	1
80.3%	3
90.0%	3
NaN	3
NaN	3
NaN	3

77. Although former President Donald Trump carried almost 75% of the precincts in Harford County, only 7 are assigned to the 1st District. Likewise, of the 28 precincts that President Joe Biden carried, only all but six are assigned to the 1st.

78. The 1st also crosses over the Chesapeake Bay Bridge into Anne Arundel County. This extension performs a similar function, if less dramatically so.



79. Again, the arm avoids more Republican precincts to the south and particularly to the north of the as-drawn district. While it does not take in heavily Democratic Annapolis it does extend inward to take in even more heavily Democratic cities like Maryland City, Odenton, and the most Democratic precincts in Glen Burnie.

QUANTITATIVE EXAMINATION OF THE ENACTED PLAN'S BIAS

80. While a qualitative assessment of maps can be useful for understanding what is going on in a redistricting plan, it can be critiqued as an “I know it when I see it” standard. To avoid this, I have also conducted a simulation analysis of Maryland’s Enacted Plan; additional analyses and robustness checks are available in Appendix I.

81. Simulation analysis is widespread in political science, and is the subject of one of my dissertation papers. The simulation approach to redistricting has been accepted in multiple courts, including state courts in Ohio, North Carolina and Pennsylvania. *See League of Women Voters of Ohio v. Ohio Redistricting Commission* (2021); *Harper v. Hall* (2021); *Common Cause v. Lewis* (2019); *Harper v. Lewis* (2019); *League of Women Voters of Pennsylvania v. Com.* (2018). For this report, I have employed a broadly accepted “package” in R called “redist,” which generates a representative sample of maps. *See Benjamin Fifeld, et. al, “Automated redistricting simulation using Markov chain Monte Carlo,” 29 Jrnl. Computational and Graphical Statistics* 715 (2020).

82. There are a variety of simulation techniques, but they all proceed from the same basic principle: precincts are aggregated together in a random fashion to form districts in hundreds or thousands of maps, thus creating an “ensemble” of maps that reflect what we would expect in a state if maps were drawn without respect to partisan criteria. If the map is drawn without partisan intent, its partisan features should match those that appear in the ensemble. The more the map deviates from what we observed in the ensemble, the more likely it becomes that partisan considerations played a heavy role.

83. Of course, other features, such as respect for county lines, compactness, or respect for geographic features could play a role in the drawing of district lines as well; these traditional redistricting criteria are almost always viewed as valid considerations by courts. They also can interact with partisanship to explain map features. To account for this, the simulated maps can be made to conform to traditional redistricting criteria, by drawing compact maps, maps which reflect county boundaries, or even maps which keep incumbents separated.

84. For this analysis I have utilized the collection of Maryland precincts and vote returns described in the section “summary of work performed.” To account for the Chesapeake Bay, precincts that lie on the boundary between Anne Arundel, Baltimore, Calvert, Harford, and St. Mary’s counties on one side, and Dorchester, Kent, Queen Anne’s, Somerset, and Talbot counties on the other side, were set as non-adjacent, with the exception of the precincts that contain the Chesapeake Bay Bridge.

85. I forced the districts to be largely equipopulous. Because the simulations cannot split precincts, a tolerance of +/- 1000 residents was allowed. This reflects a population deviation of approximately +/- 0.1%. This is a reasonable allowance not because we assume a court would accept this deviation, but rather because reducing the population deviations in these districts by splitting precincts at the block level can almost always be achieved manually, but cannot alter the political orientation of these districts substantially. In fact, in my experience drawing redistricting maps, this is exactly how mapmakers proceed: the general layout of the maps is agreed upon first, while the time-consuming process of ‘zeroing-out’ districts is saved until later. *See* Bernard Grofman, Ph.D. & Sean Trende, *Memorandum re Redistricting Maps*, Dec. 27, 2021, at 8, available at https://www.vacourts.gov/courts/scv/districting/2021_virginia_redistricting_memo.pdf. Political scientists have generally accepted this concept to the simulated approach as well. *See* Jowei Chen & Jonathan Rodden, *Unintentional Gerrymandering: Political Geography & Electoral Bias in Legislatures*, 8 *Quar. J. Pol. Sci.* 239, (2013) (accepting 5% deviations). Finally, courts have accepted this limitation in the simulations. *See* Expert Report of Kosuke Imai, Dec. 9, 2021, *League of Women Voters of Ohio v. Ohio Redistricting Commission*, No. 2021-1449 (Ohio 2021) (“For all simulations, I ensure districts fall within a 0.5% deviation from population parity.

Although this deviation is greater than the population deviation used in the Enacted Plan, it only accounts for less than 4,000 people and hence has no impact on the conclusions of my analysis.”); Wesley Pegden, “Pennsylvania’s Congressional Districting is an Outlier: Expert Report,” Nov. 27, 2017, *League of Women Voters of Pennsylvania v. Wolf*, at 3-4 (Pa. 2018) (employing a 2% threshold and explaining that a 1% would be sufficient to replicate what we might expect from a 0% threshold).

86. The Voting Rights Act of 1965 requires that mapmakers draw districts that will elect a minority group’s candidate of choice, provided that certain criteria are met. *See Thornburg v. Gingles*, 478 U.S. 30 (1986). It is beyond the scope of this report to determine whether the *Gingles* preconditions are met, nor is it within the scope of this report to determine the minimum Black vote share required to meet the Voting Rights Act requirements. Instead, I take the current map as a rough proxy for what Maryland mapmakers considered. The current map retains two majority-Black districts, both of which have bizarre, serpentine shapes. The 7th District, based in the Baltimore Metropolitan area has a Black Voting Age Population (BVAP) of 52.6%. The 4th district, based in the Washington, D.C. suburbs, has a BVAP of 57.3%. The maps in effect from 2012 to 2020 had similar Black populations. While I could have used these thresholds for VRA-compliant districts, I allowed the maps a bit more freedom and accepted maps with two majority-Black districts.

87. I then ran three sets of a quarter million simulations, each under a different set of constraints. First, I effectively turned the compactness requirement off. The simulations are not well-behaved at this level, but the information can nevertheless be informative. Second, I required compact districts. Third, I required compact districts that respected county lines. I then discarded duplicate maps, as well as maps that did not contain two majority-Black districts. Finally, I

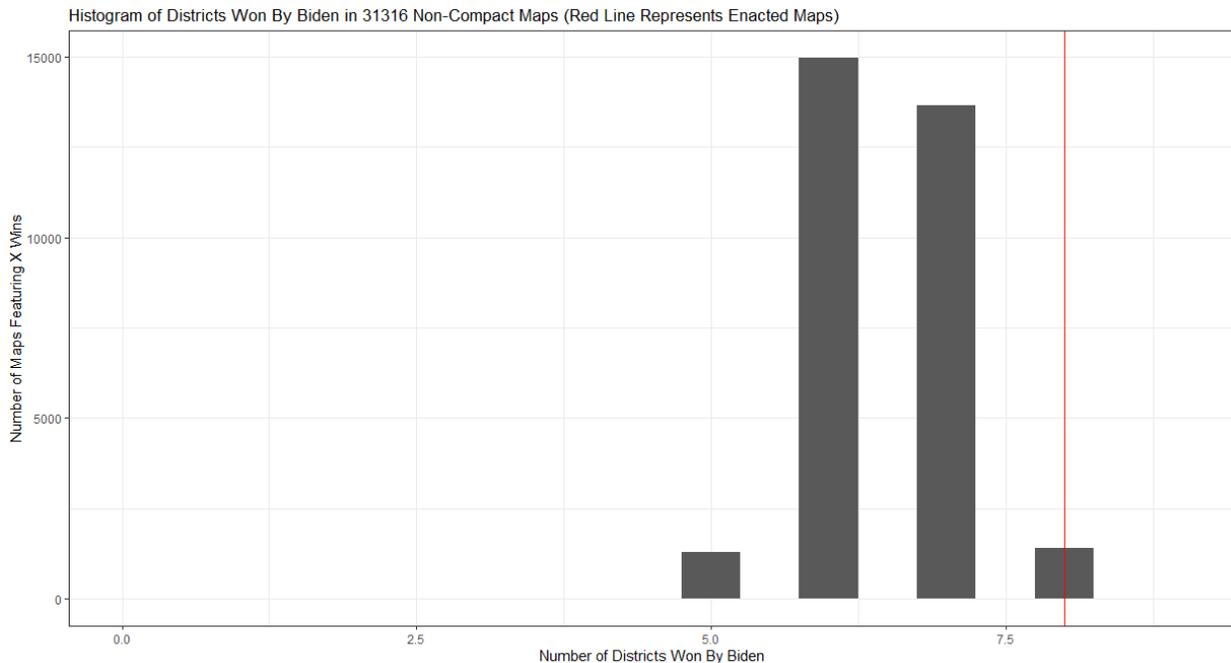
computed the partisanship of every district under the races that fell within the “normal” range of Republican performance described above in 2016, 2018, and 2020. That is, I did not consider the exceptionally strong Republican performance in the Maryland gubernatorial race in 2018, nor did I consider the exceptionally weak Republican performance in the Maryland Attorney General race in 2018.

88. Under all three sets of constraints, the Enacted Plan deviates significantly from the expectation of the ensemble plans. I consider each in turn:

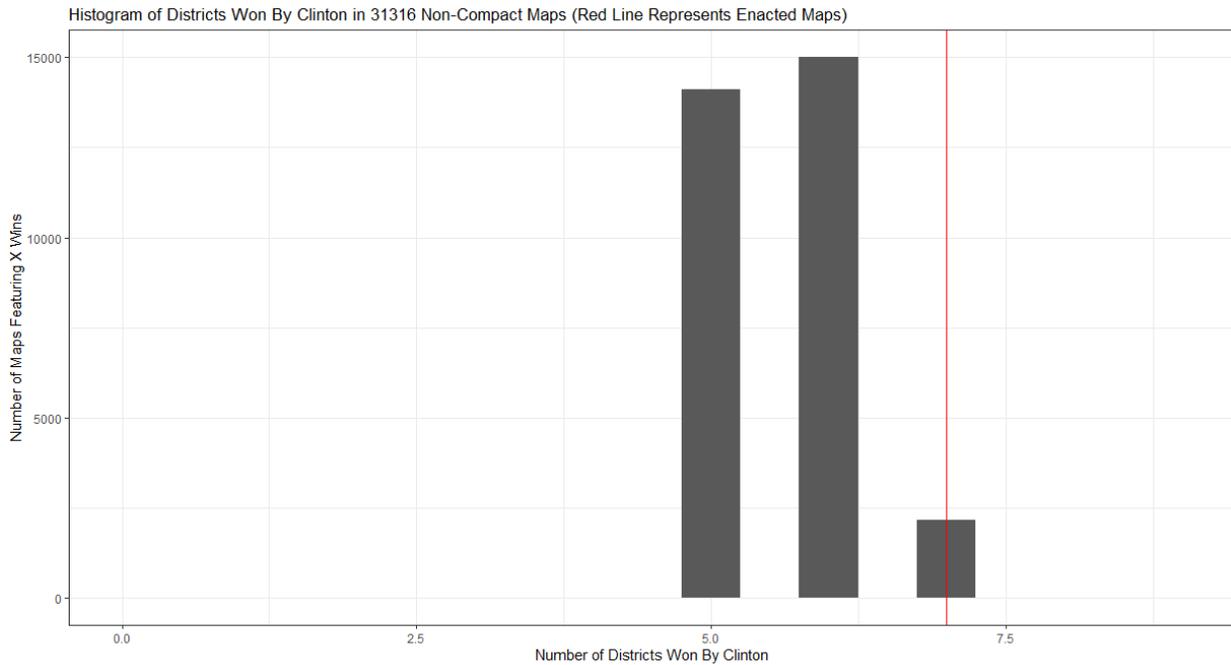
No Compactness, Indifferent to County Lines

89. The following histograms display the counts for the number of maps containing a certain number of Democratic districts in the ensemble. The red line reflects the current map.

90. Consider the “no compactness” constraint. Of the 31,316 unique, VRA-compliant maps that the simulations drew, only 1399, or 4.4%, contained eight districts carried by President Biden. It is therefore highly unlikely that one would not draw at least one district carried by former President Donald Trump, even when not paying attention to compactness or county boundaries.

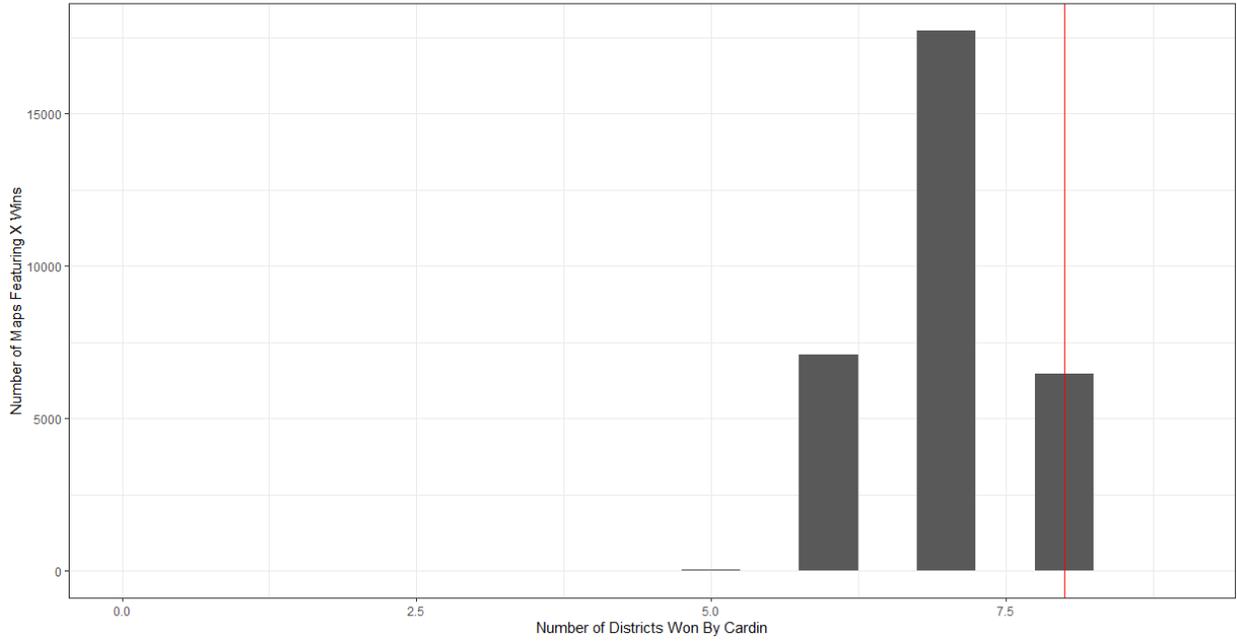


91. The Enacted Plan contains seven districts carried by former Secretary of State Hillary Clinton in 2016. This is more plausible than drawing a map with eight districts carried by President Biden, but even then it is highly unlikely; 2170, or about 6.9%, of the ensemble maps contain seven districts carried by Secretary of State Clinton.

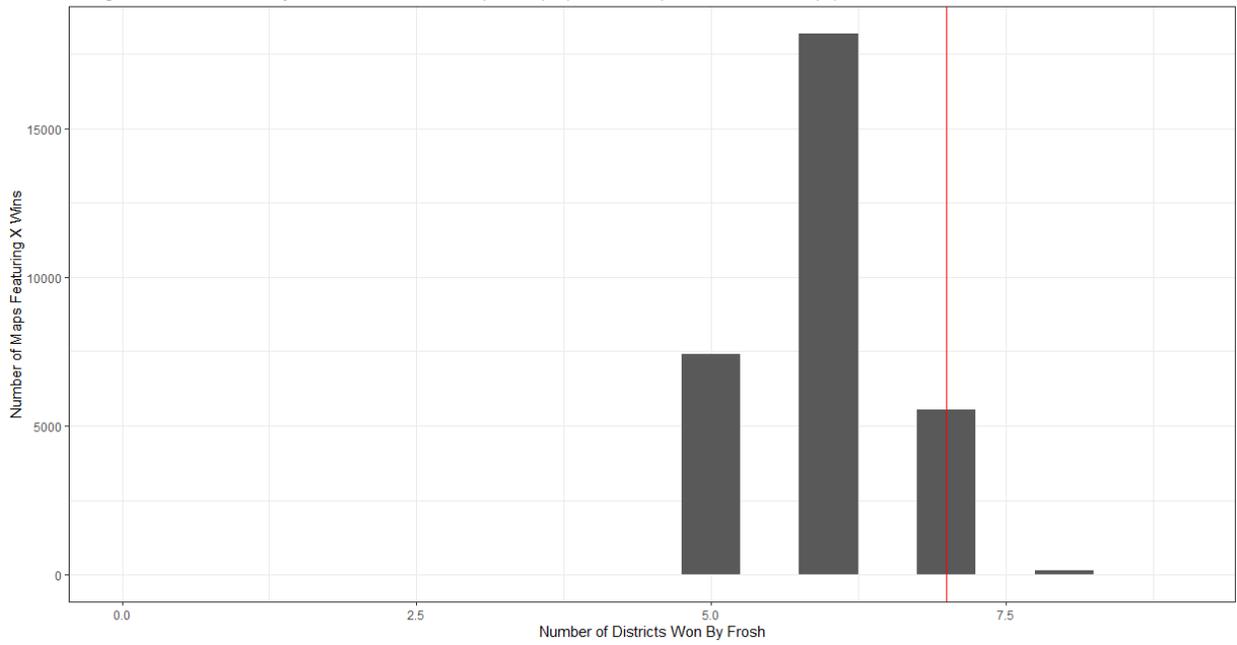


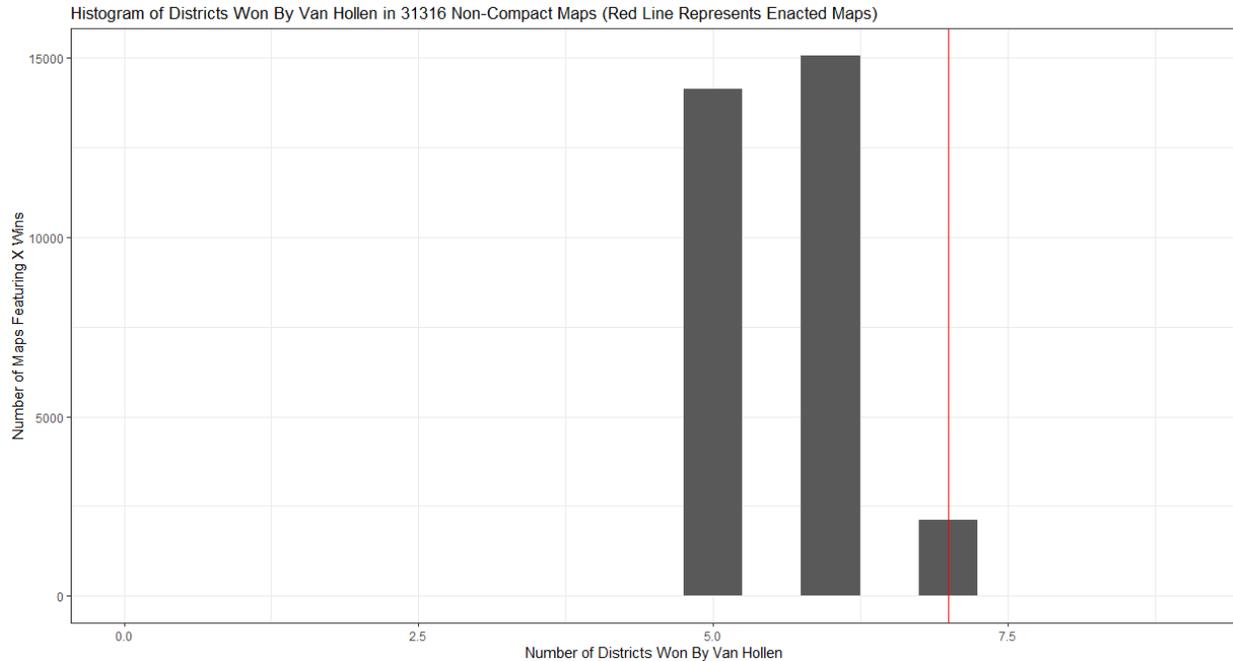
92. The partisan outcomes when looking at simulations using the 2016 and 2018 senate races, as well as the 2018 Attorney General race are likewise more plausible than those using President Biden’s electoral outcomes, but state races and senate races are also generally not considered as strongly as presidential races when predicting congressional race outcomes. Regardless, the distribution in each of these races results in maps that are more Democratic than our basic expectation would be.

Histogram of Districts Won By Cardin in 31316 Non-Compact Maps (Red Line Represents Enacted Maps)



Histogram of Districts Won By Frosh in 31316 Non-Compact Maps (Red Line Represents Enacted Maps)

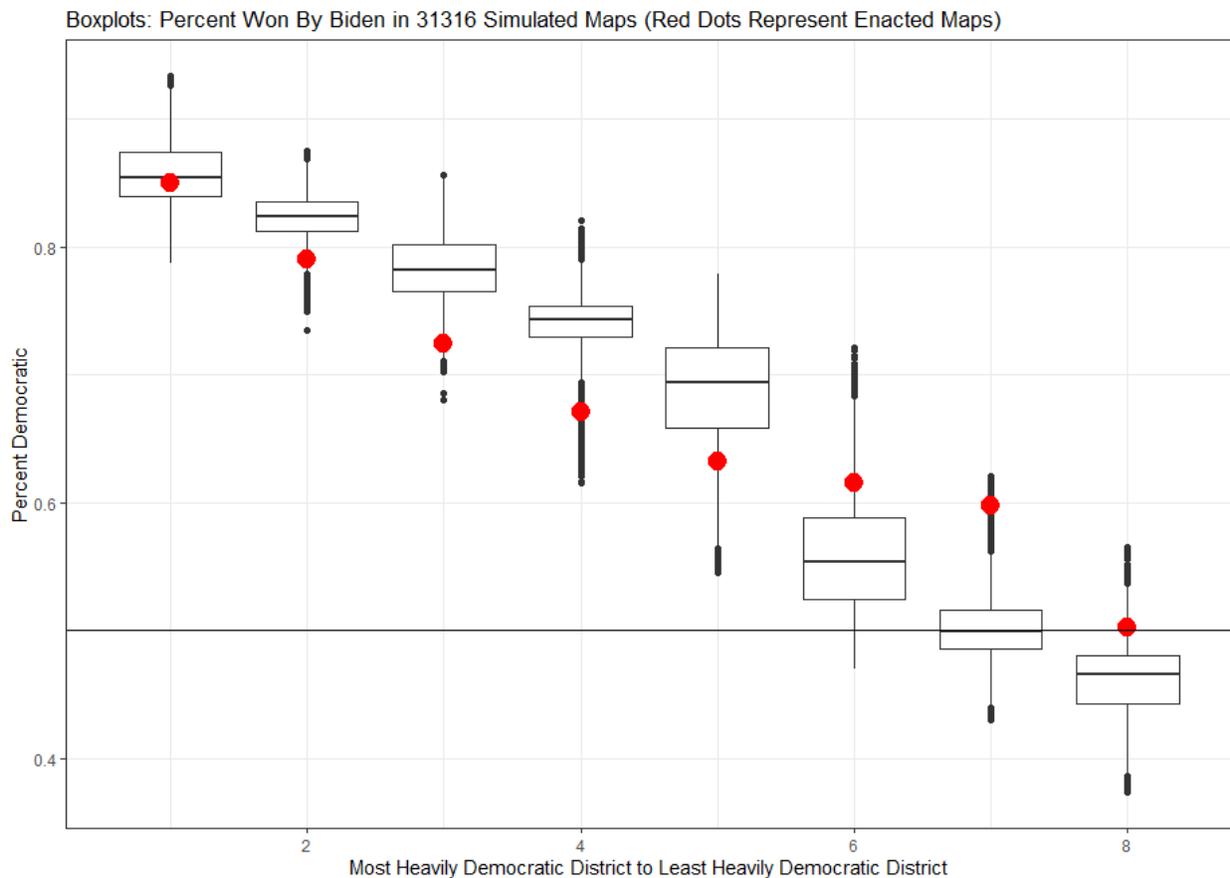




93. Of course, “Democratic seats” and “Republican Seats” are something of a misnomer. A seat that former President Trump won in 2016 by a fraction of a percent – which most would consider a swing district – may still reflect a weakening of Republican voting strength if the expectation would be for a district that former President Trump won by twenty – what most would consider a heavily Republican district.

94. To account for this possibility, I created “boxplots” of the generated districts. These charts are read as follows: I took all 31,316 maps and sorted the districts within each map from most Democratic to least Democratic. The boxplots then display the distribution of the districts across maps. The horizontal line represents the median district within each category. The box represents the partisanship of the middle half of districts (the inter-quartile range, or IQR), while the vertical lines, or “whiskers” represent non-outlier districts. The individual dots reflect statistical outliers that were generated through the random process. I have also superimposed the partisanship of the enacted districts, reflected by red dots.

95. I will explain further using the example of the boxplots generated using President Biden’s vote share. The leftmost “box” represents the most Democratic districts in all of the 31,316 maps. The box itself tells us that President Biden typically won between about 84% and 87% of the vote in the most Democratic district. The whiskers suggest that it wouldn’t be unusual for him to win between 79% and 95% of the vote in a map drawn without respect to partisanship. A few outlying maps created districts even more heavily Democratic than this. The red dot reflects the most Democratic district in the Enacted Plan. It falls squarely within the box, meaning that the most Democratic district in the Enacted Plan is about where we would expect it to be for a map drawn without respect to partisanship.



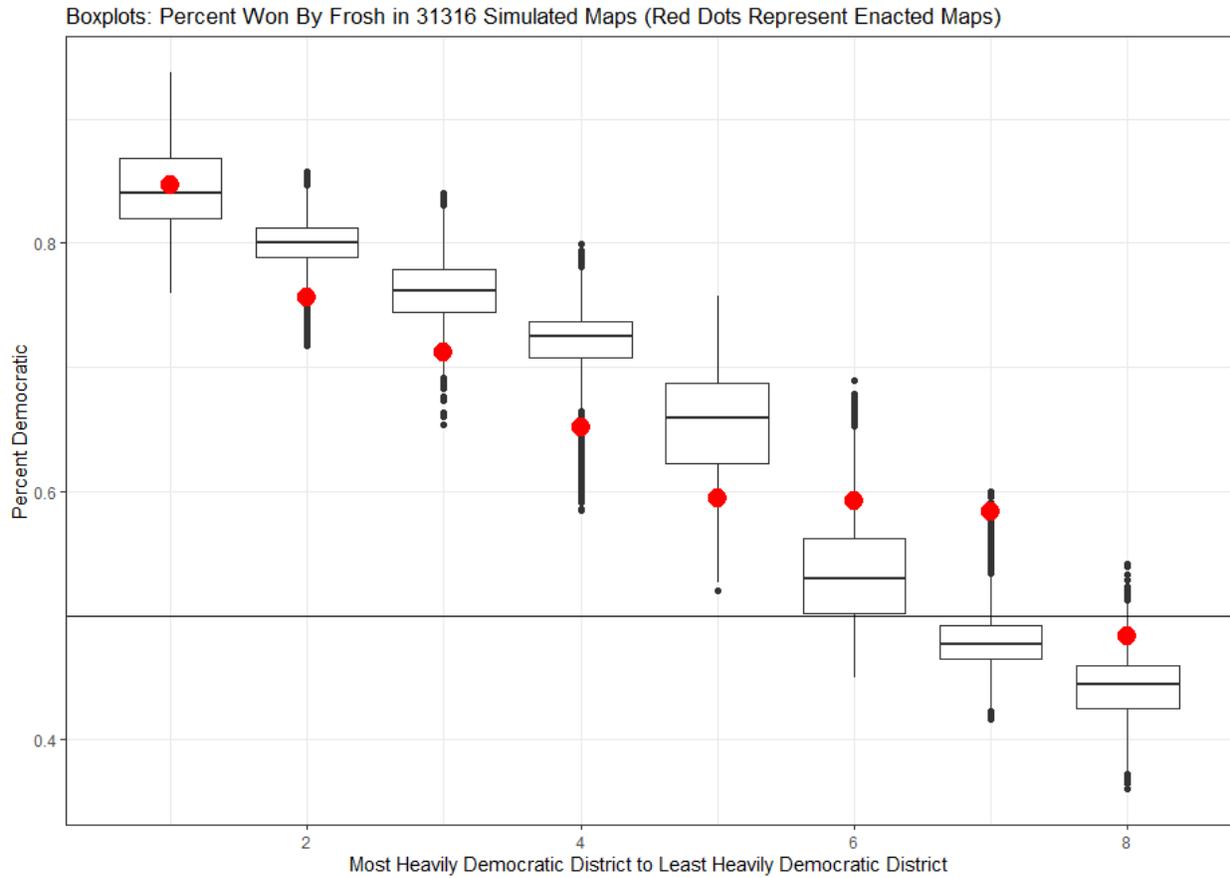
96. Of course, it does not matter much whether the most heavily Democratic district gives President Biden 80% or 90% of the vote; that district will elect Democrats regardless. We

are more interested in what happens in more competitive districts, where the president won less than 60% of the vote. Following McGhee, we can think of gerrymandering as an exercise in either packing or cracking opposing partisans into ineffective districts. *See* Eric McGhee, “Measuring Partisan Bias in Single-Member District Electoral Systems,” 39 *Legislative Studies Quarterly* 55 (2014). One way to accomplish this is by reducing the Democratic vote share in overwhelmingly Democratic districts, thus wasting fewer Democratic votes than would occur in a neutral process, while increasing the Democratic share in Republican districts, making it less likely that those districts would elect a Republican.

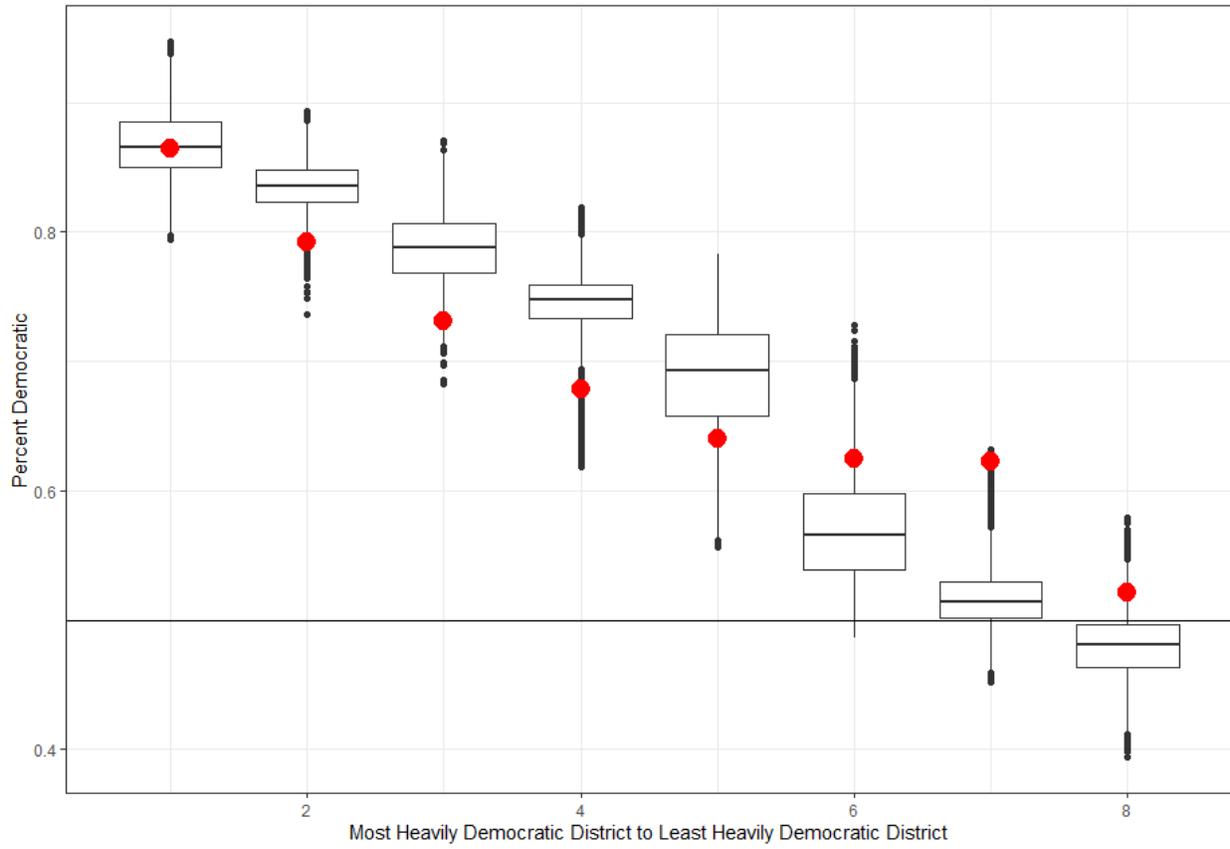
97. That is exactly what we see here. The 2nd-to-5th most Democratic districts under the Enacted Plan consistently fall on the low end of expectations, with the 4th most Democratic district reflecting an extreme outlier. These districts are still heavily Democratic, but are less Democratic than a neutral process would produce.

98. However, a neutral process would produce districts that, although winnable for Democrats, would also give Republicans a decent chance of winning. The sixth most Democratic district would give President Biden between 53% and 59% of the vote, while the seventh-most Democratic district would give President Biden between 49% and 51% of the vote most of the time. Instead, those districts give President Biden 63% and 60% of the two-party vote, respectively, with the latter representing an outlier. This is also a situation where the whole is greater than the sum of the parts. It would be one thing to see a district on the whiskers on one side of the box, and then on the other side on the next box, representing random errors. The pattern is what is key here, with the most heavily Democratic districts consistently “cheated” downwards, and the least Democratic districts “cheated” upwards.

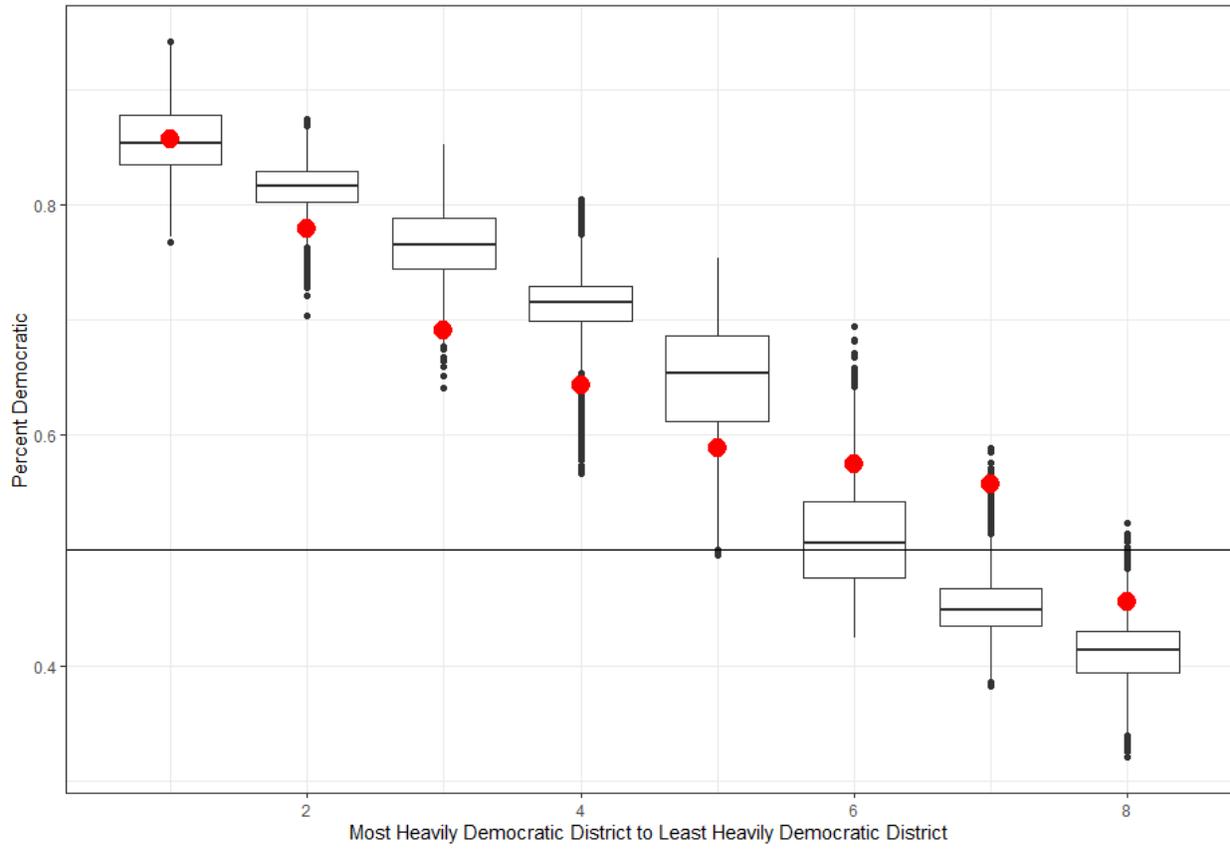
99. We see the same pattern repeat using other races. Mapmakers drew the districts less Democratic than expected in the second-through-fifth most Democratic district, then used those votes to make the sixth-through-eighth most Democratic districts more Democratic than expected. In the process, they generate statistical outliers in the 5th- and 7th-most Democratic districts:



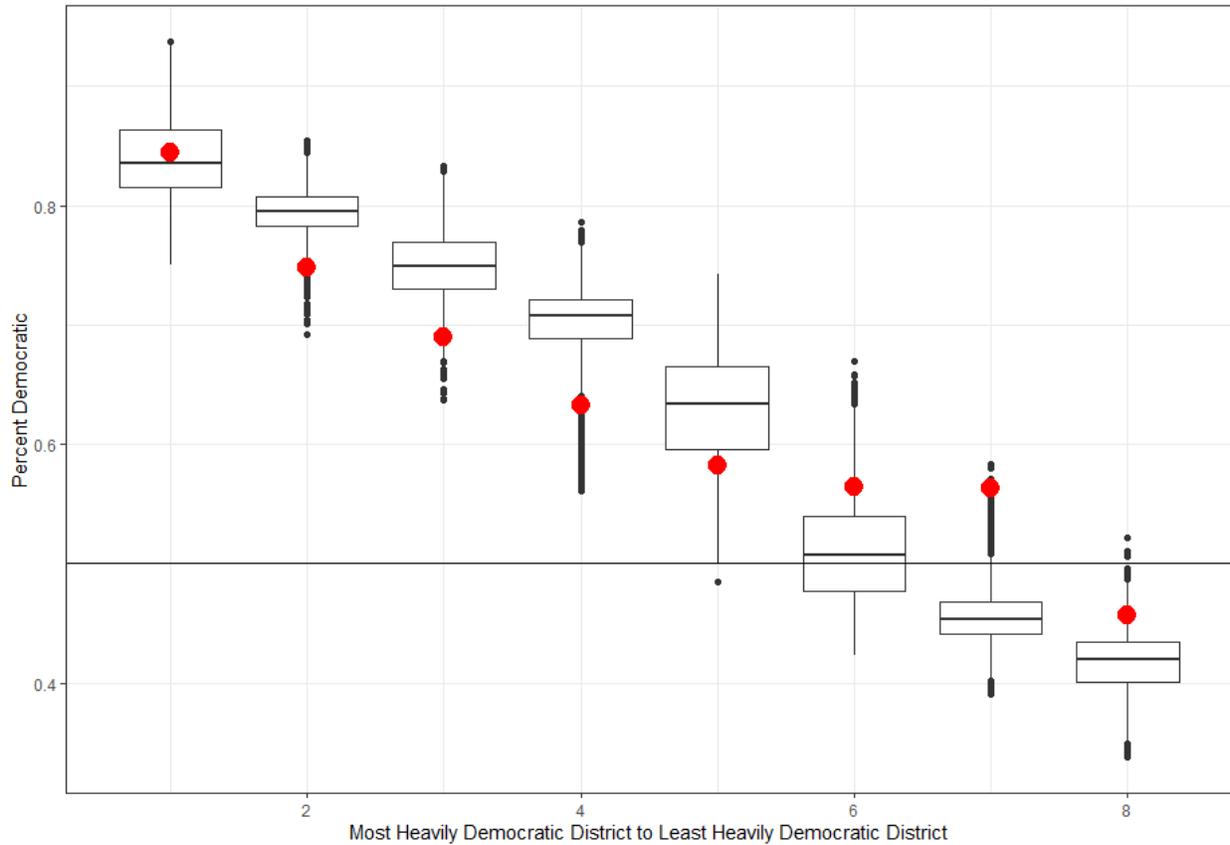
Boxplots: Percent Won By Cardin in 31316 Simulated Maps (Red Dots Represent Enacted Maps)



Boxplots: Percent Won By Clinton in 31316 Simulated Maps (Red Dots Represent Enacted Maps)



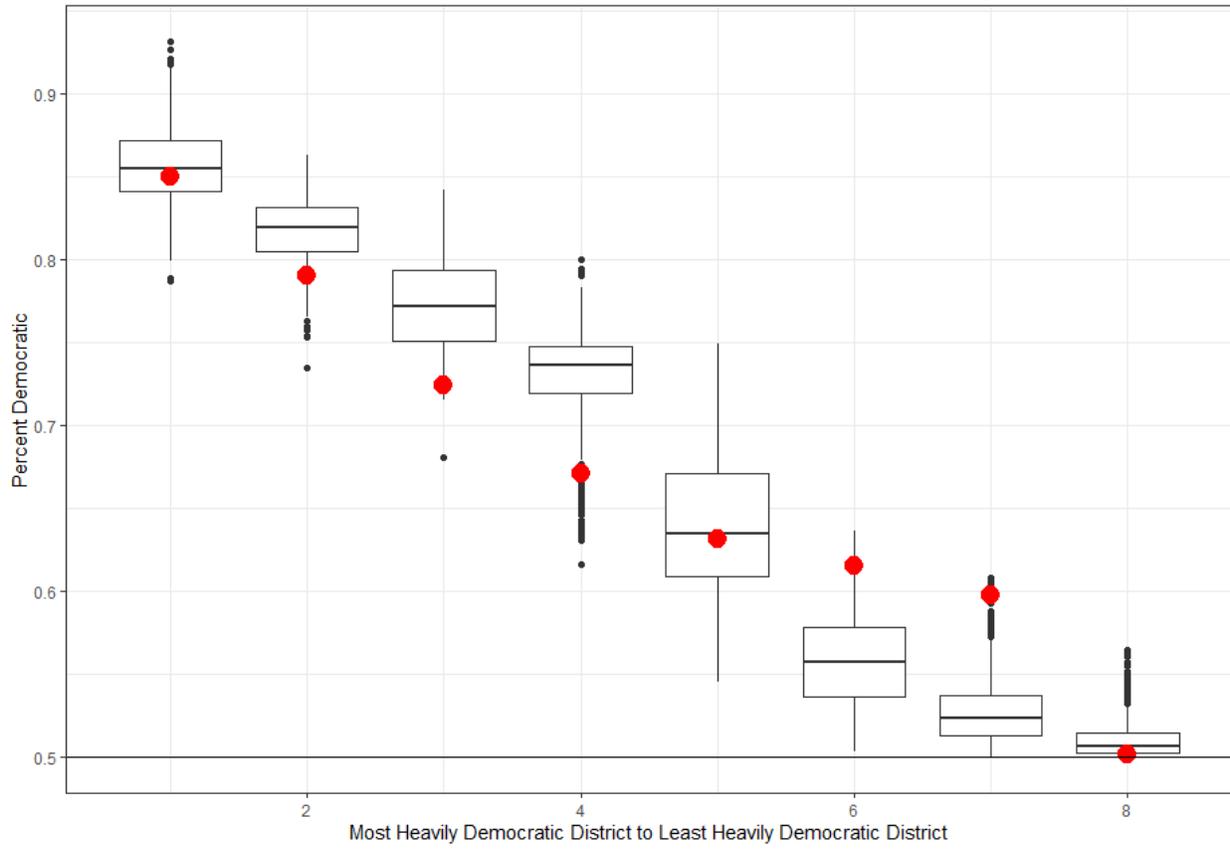
Boxplots: Percent Won By Van Hollen in 31316 Simulated Maps (Red Dots Represent Enacted Maps)



100. As a final exercise, I examine only those maps that generate the maximum number of Democratic districts possible. That is to say, assuming that it was a legitimate interest to draw eight districts that voted for President Joe Biden, or seven districts that voted for former Secretary of State Hillary Clinton, how would the current maps line up?

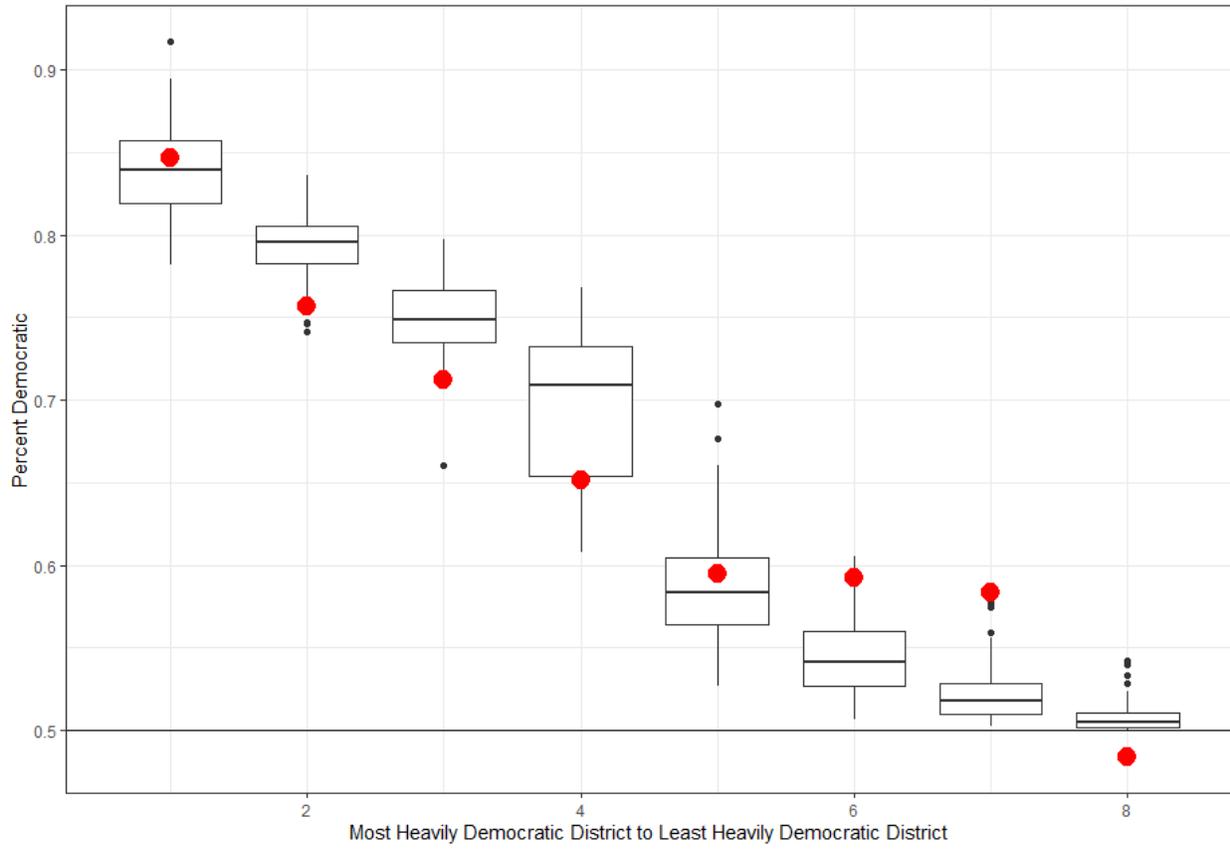
101. This analysis reveals that, even in the universe of maps that favor Democrats heavily, the Enacted Plan appears to be an outlier. The results follow the same pattern as seen above. Although it is possible (albeit unlikely) to draw maps where President Joe Biden won eight districts, those maps usually result in a number of marginally Democratic districts where Republicans would still have a chance to win. This is not surprising; to draw eight Democratic districts would usually result in Democrats spreading themselves a bit thin in other districts.

Boxplots: Percent Won By Biden in 1399 Maps w/ Eight D Wins (Red Dots Represent Enacted Maps)

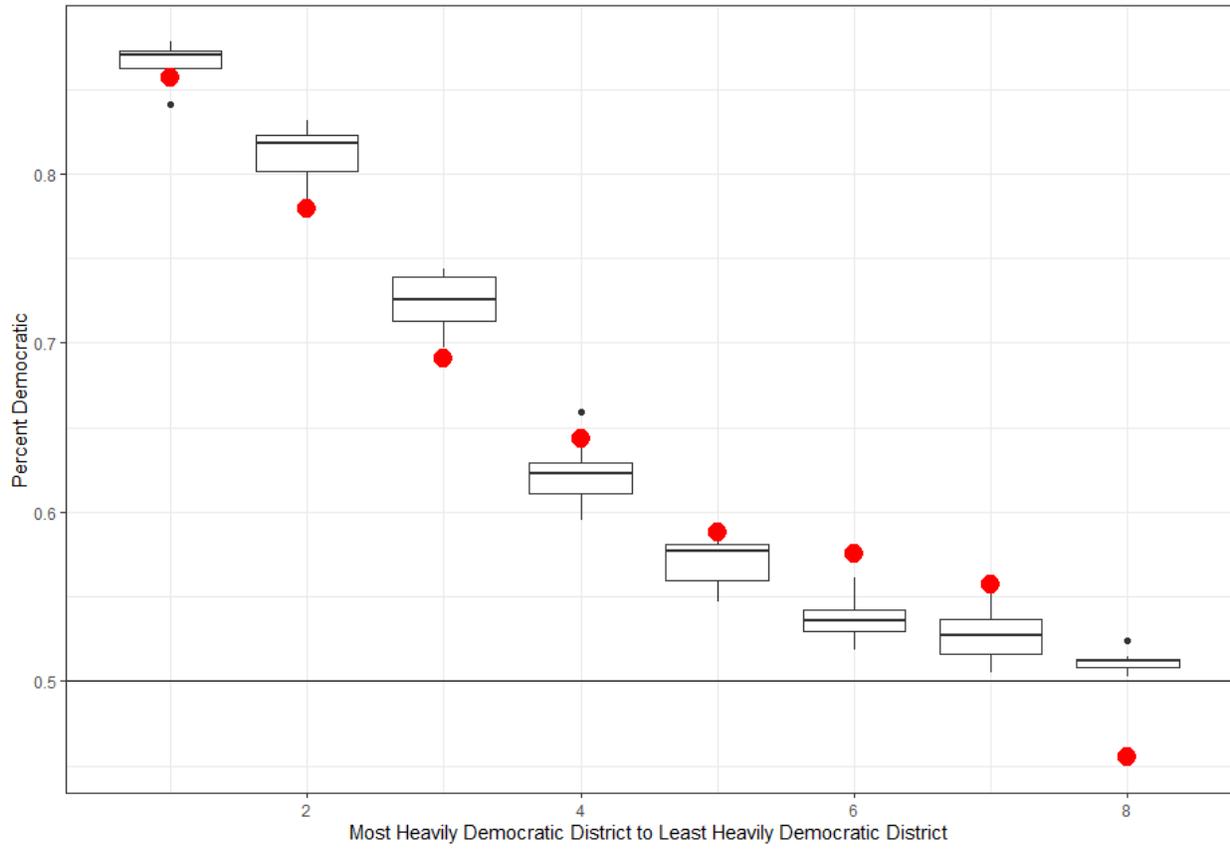


102. Again, the same pattern presents in other elections:

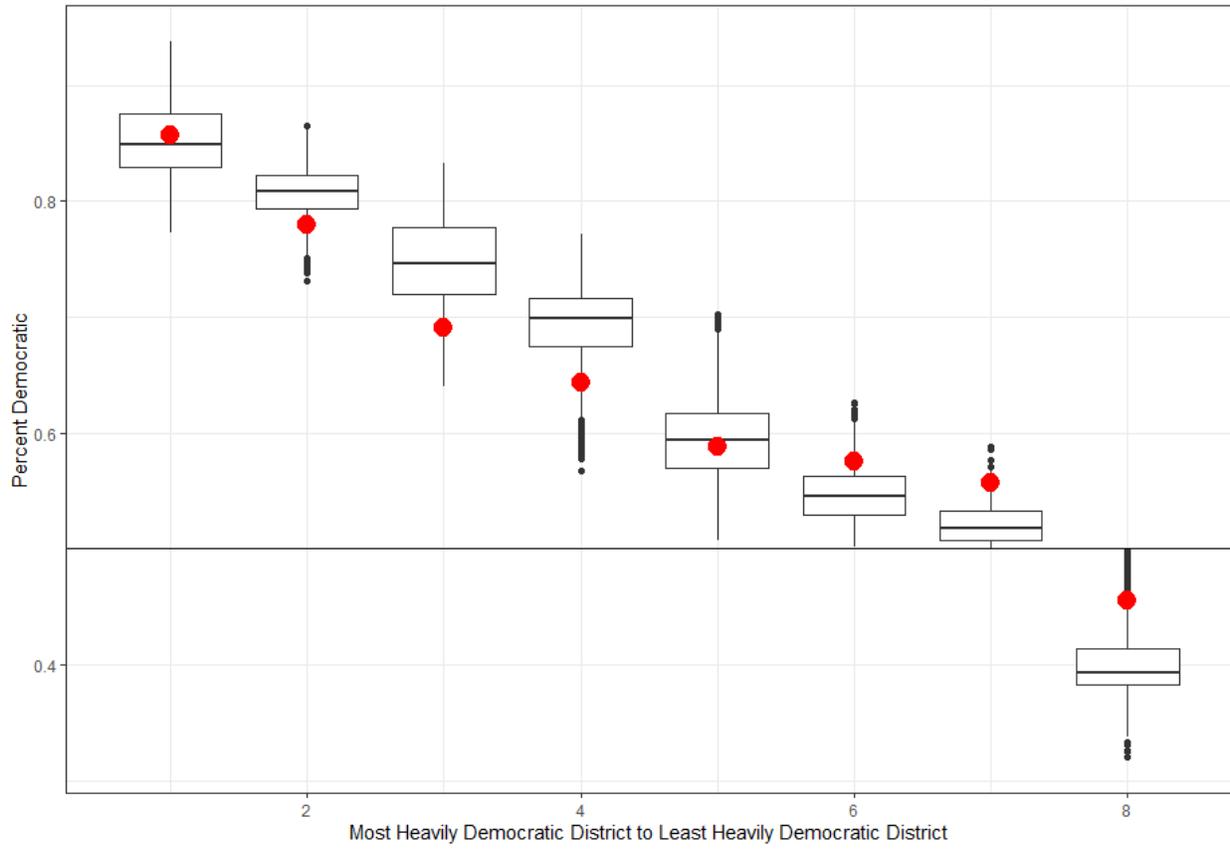
Boxplots: Percent Won By Frosh in 159 Maps w/ Eight D Wins (Red Dots Represent Enacted Maps)



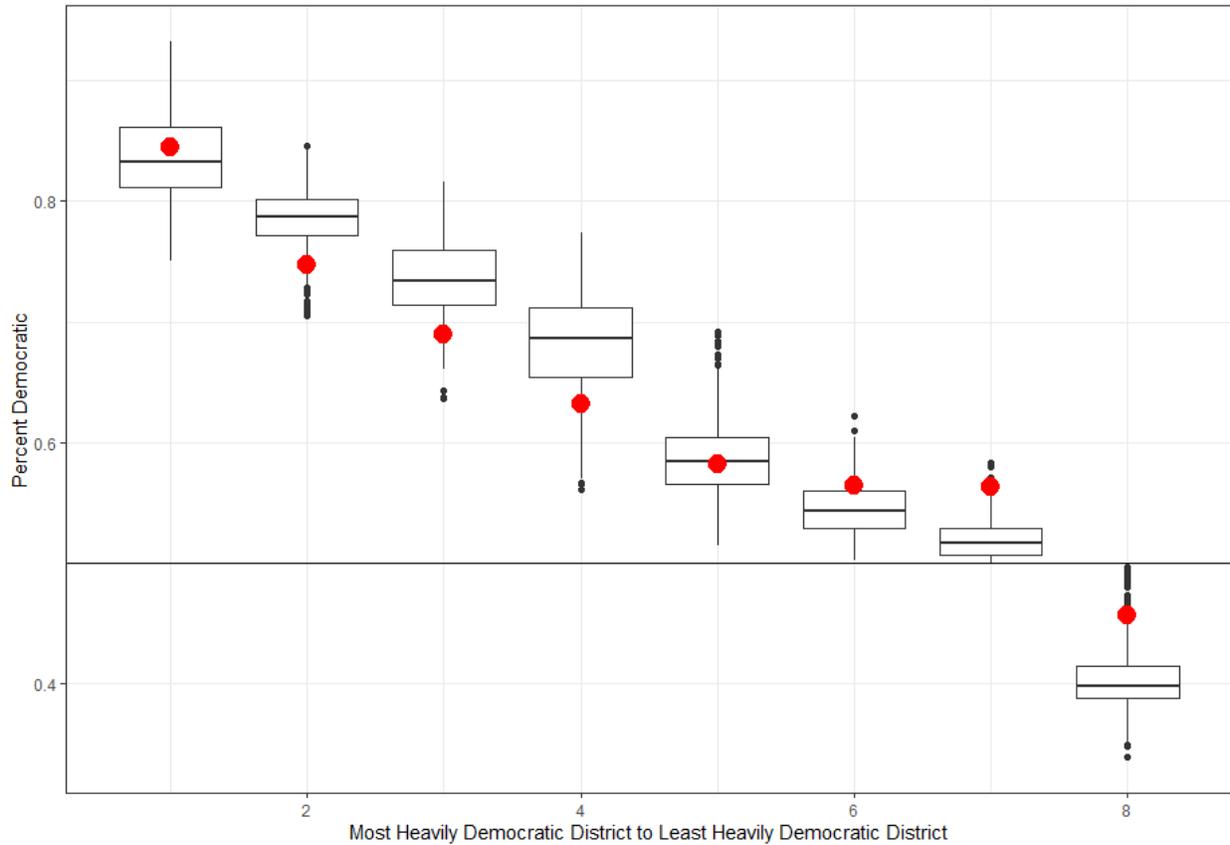
Boxplots: Percent Won By Clinton in 8 Maps w/ Eight D Wins (Red Dots Represent Enacted Maps)



Boxplots: Percent Won By Clinton in 2170 Maps w/ Seven D Wins (Red Dots Represent Enacted Maps)



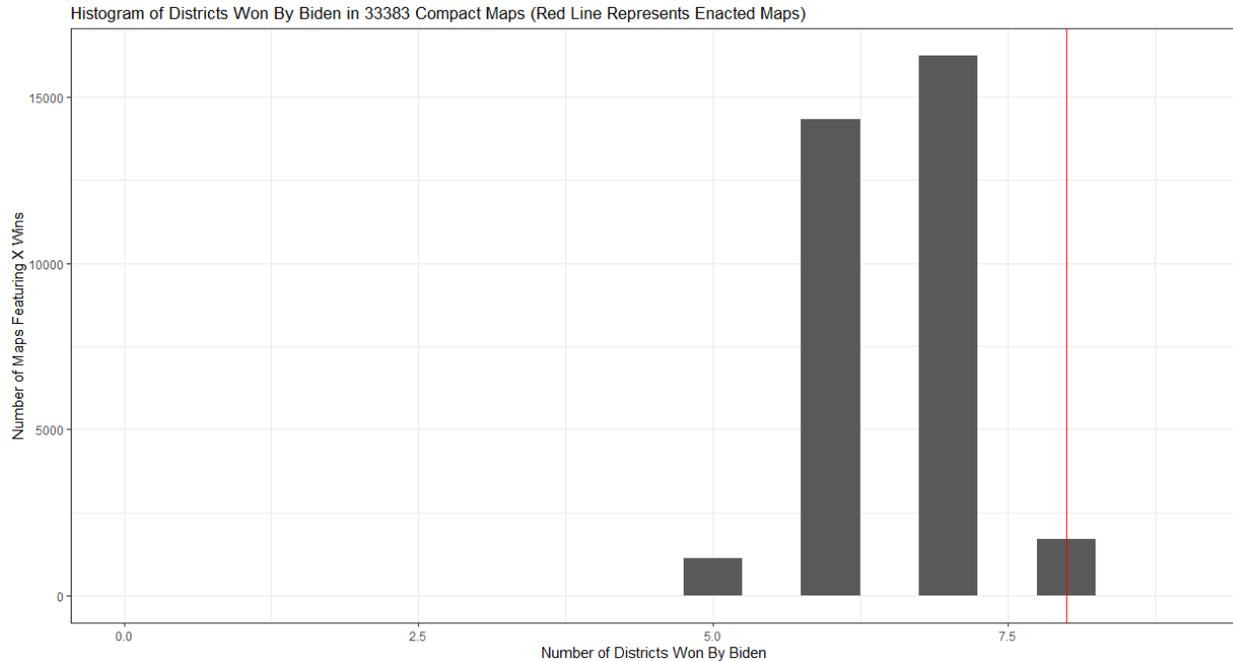
Boxplots: Percent Won By Van Hollen in 2105 Maps w/ Seven D Wins (Red Dots Represent Enacted Maps)



Compact Districts, Indifferent to Counties

103. The second and third sets of maps follow the same pattern as above. I will not reproduce every histogram and boxplot; instead they are collected in an Appendix. I will instead focus on President Biden’s 2020 vote share, as presidential vote shares are significantly probative of congressional election results.

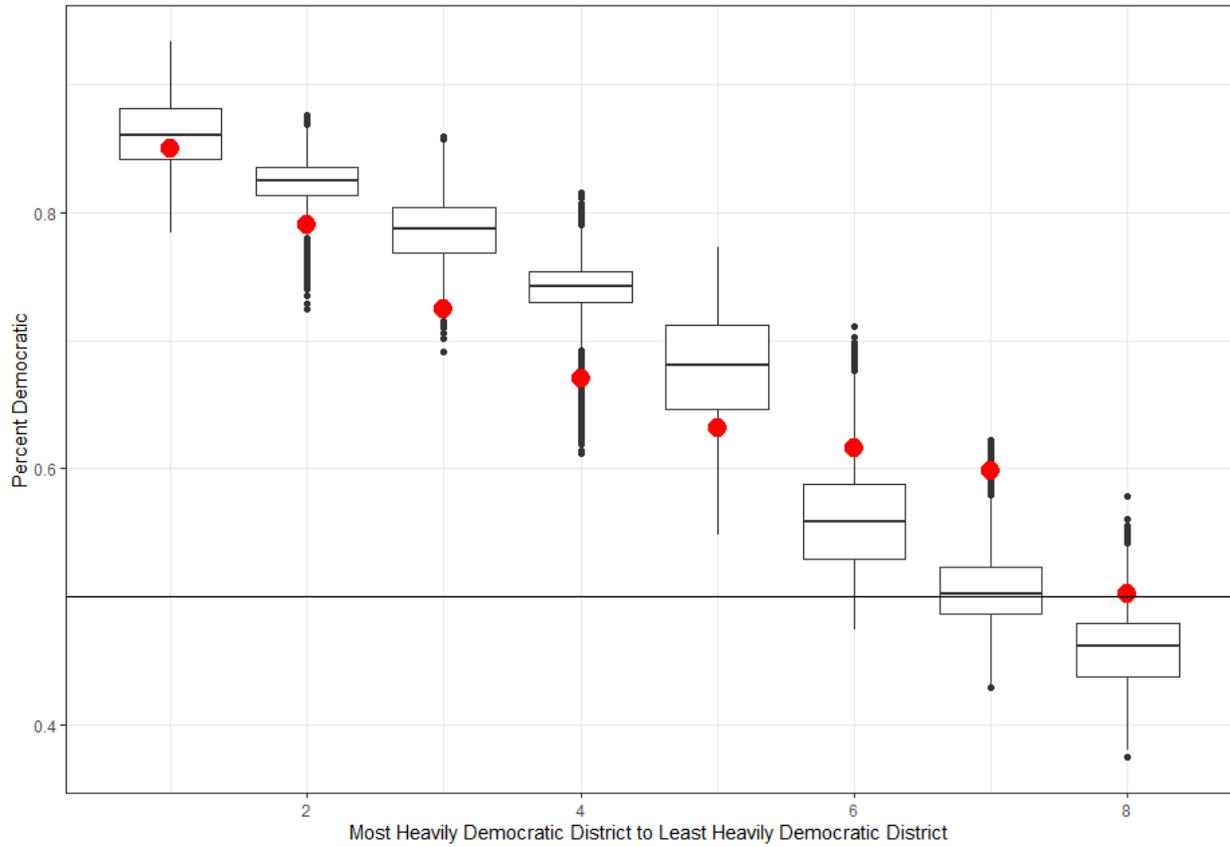
104. The second set of analyses looks at maps where districts were required to be compact. Once again, the ensemble produces very few maps where President Biden carried eight districts.



105. Looking at our boxplots produces a familiar pattern. The most heavily Democratic district is about what we would expect, but the succeeding Democratic districts are more Republican than we would expect, with several of them approaching outlier status. The most Republican districts are then made more Democratic than we would expect in a process that was intended primarily to produce compact, contiguous maps with two Black majority districts.

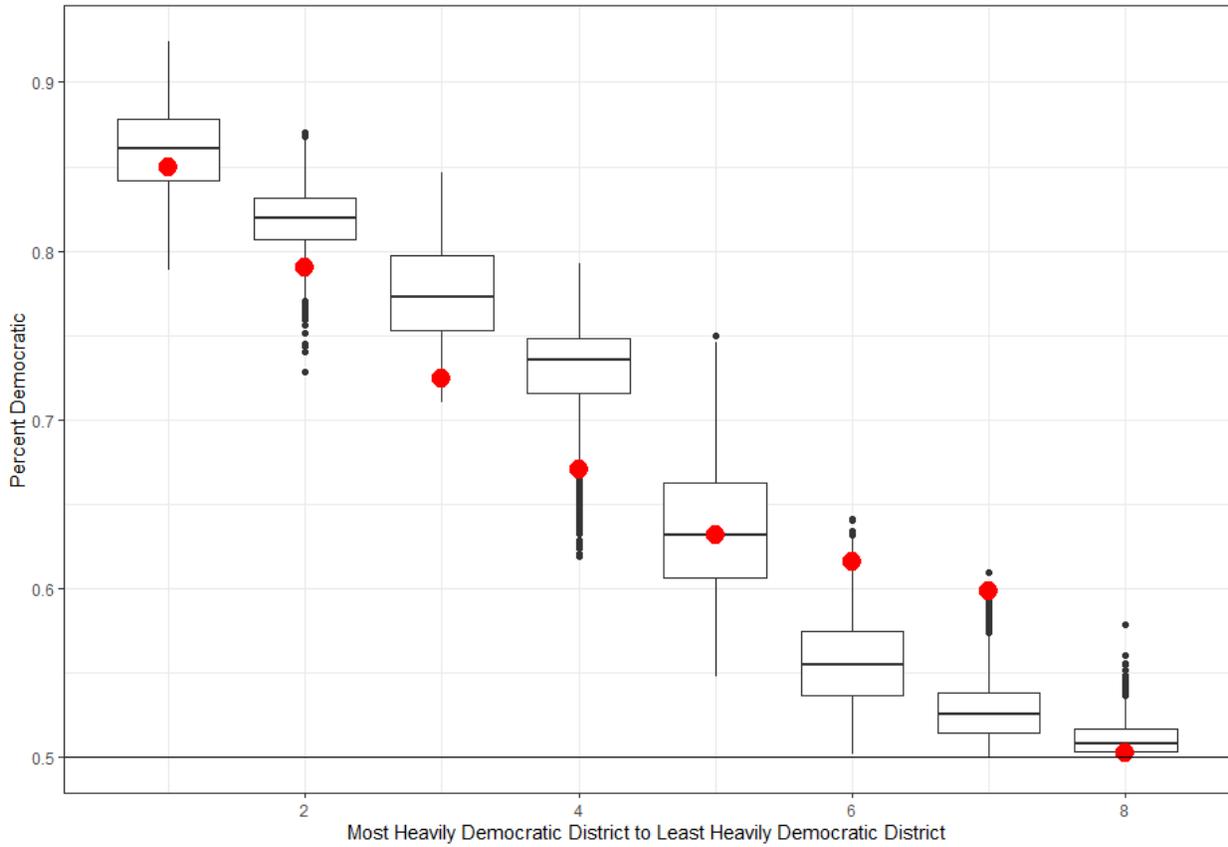
106. In fact, under these constraints, even the most Republican district is now more Democratic than we would expect, while the second-most Democratic district – which we would expect to have barely voted for President Joe Biden – is a pro-Democratic outlier.

Boxplots: Percent Won By Biden in 33383 Simulated Maps (Red Dots Represent Enacted Maps)



107. Finally, we can consider only those maps that produce eight Democratic districts in the ensemble. Even within this narrowed ensemble of maps, the produced maps produce a Democratic bias. While we might expect two-to-three competitive districts, this process has produced only one, with the sixth- and seventh-most Democratic districts retaining pronounced Democratic leans.

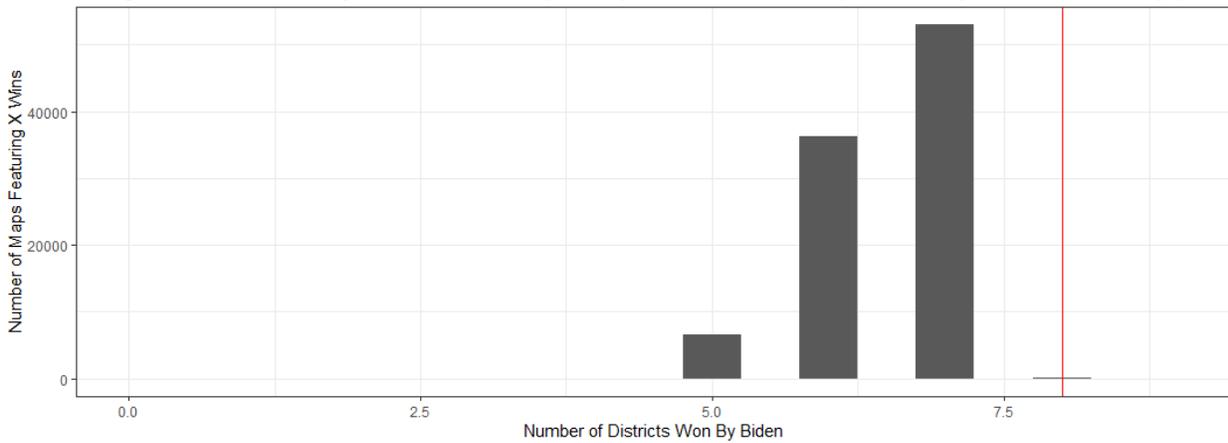
Boxplots: Percent Won By Biden in 1693 Maps w/ Eight D Wins (Red Dots Represent Enacted Maps)



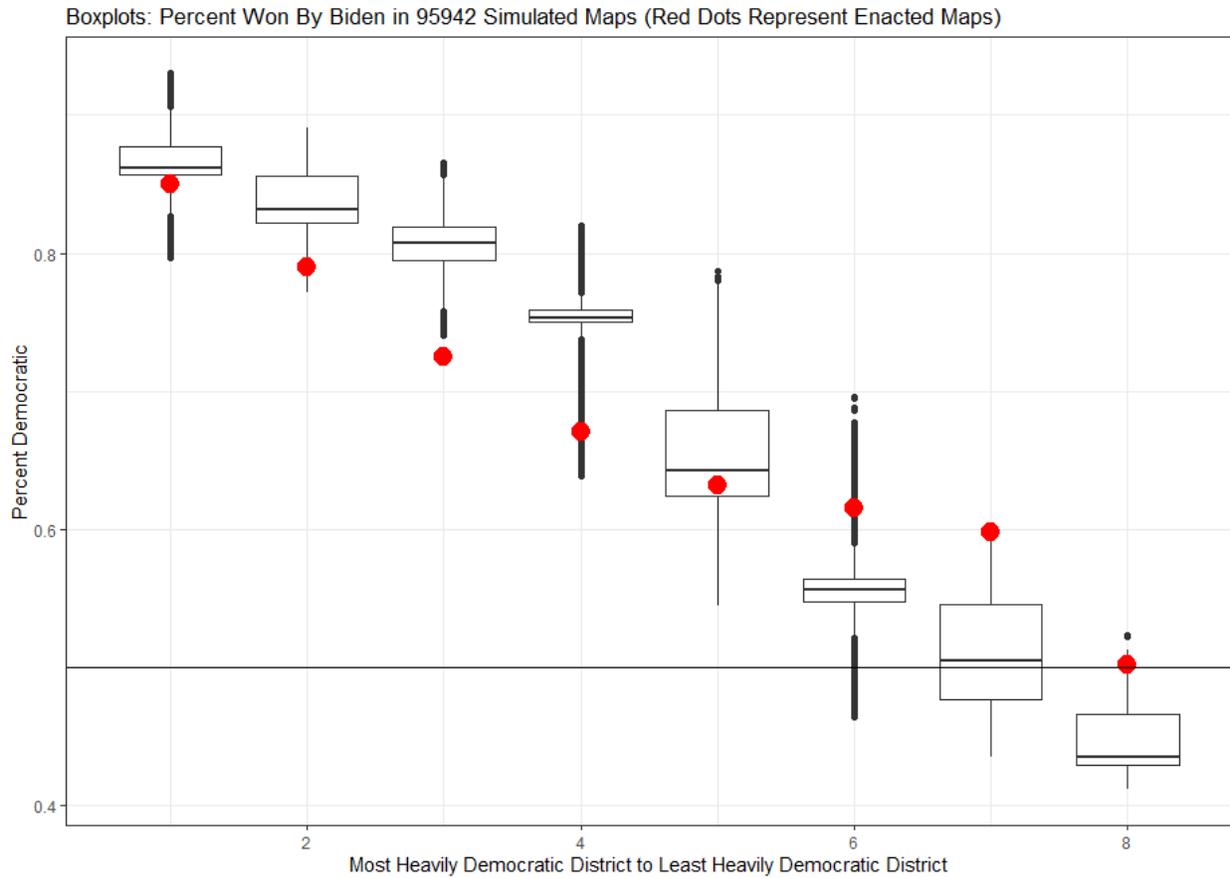
Compact Districts, Respecting County Lines

108. Finally, I produced a number of maps that sought to minimize county splits. Compared to maps drawn under these constraints, the maps produced for 2022 are true outliers.

Histogram of Districts Won By Biden in 95942 Compact Maps with Intact Counties (Red Line Represents Enacted Maps)



109. Of the 95,942 unique maps with two majority-Black districts produced, only 134 maps, or 0.14% produced eight districts that President Biden won. If due regard for county lines were a motivating concern animating the legislature, it is exceedingly unlikely that maps with this partisan tilt would emerge.



110. Examining our now-familiar boxplots illustrates this further. The safely Democratic districts are once again more Republican than we would expect, while the Republican districts are more Democratic than we would expect across the board. In fact, the seventh-most Democratic district is more Democratic than any similarly situated district produced in the ensemble, while the sixth-most Democratic map is a significant outlier.

111. Likewise, the third-most Democratic map is significantly more Republican than any produced in the 95,000 maps in our ensemble, while the fourth-most Democratic map is a significant outlier.

Interpretation

112. So what does all of this mean? Obviously many of the districts drawn in the Enacted Plan are very unlikely to occur as a result of a process that is merely attempting to conform to various traditional redistricting criteria. Districts that were simply motivated by a desire to draw contiguous, VRA-compliant districts, or by compactness, or by compactness and respect for county lines, would be very likely to produce more heavily Democratic districts and (relatedly) more competitive or even Republican-leaning districts.

113. But while we know a lot about how individual districts should look, we know fairly little about the Enacted Plan as a whole. How should we assess it vis-à-vis the plans in the ensemble?

114. For this report, I have used the “gerrymandering index,” proposed by Bangia et al (2017) and endorsed by McCartan & Imai in their paper setting forth the algorithm used to generate the districts in this report. *See* Cory McCartan & Kosuke Imai, “Sequential Monte Carlo for Sampling Balanced and Compact Redistricting Plans,” at 25, available at <https://arxiv.org/pdf/2008.06131.pdf>.

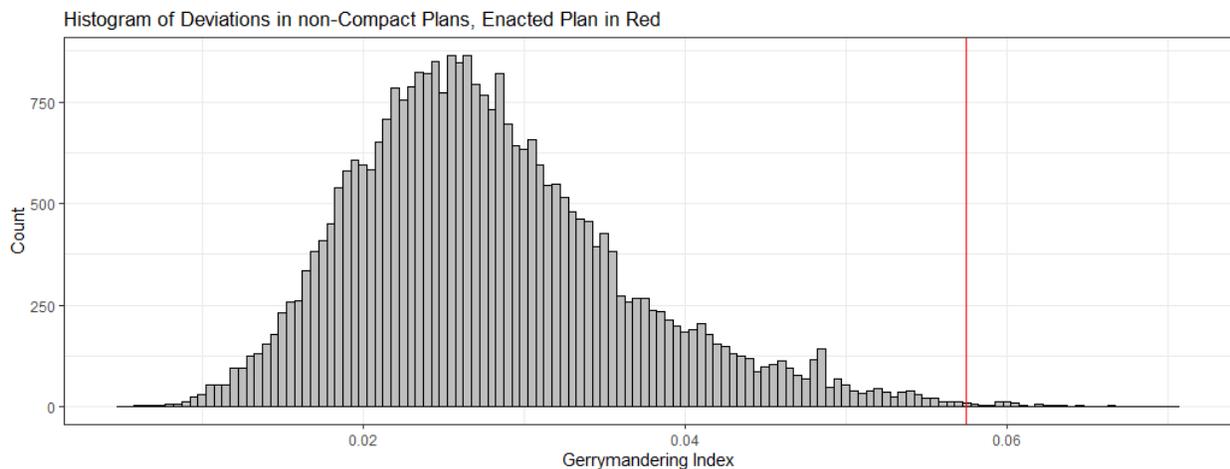
115. It is best thought of in terms of the boxplots above. For each rank, the average Democratic score is calculated. So, on average, we know that the most Democratic district under our first set of constraints gave President Biden 85% of the two-party vote. For every plan in the ensemble, we then calculate the distance from this mean. Therefore a plan whose most Democratic district gave President Biden 87% of the vote would have a deviation of two, a plan whose most

Democratic district gave President Biden 78% of the vote would have a deviation of seven, and so forth. These deviations are calculated across all 8 districts for each plan. To emphasize large deviations (and to make them all positively signed) these values are then squared, and added together.

116. In simplified terms, this gives us the total deviation from the ensemble for all the districts in the plan, while giving more weight to particularly large misses. This number is then divided by the number of districts, and the square root is then taken, which puts everything back on a percentage scale.

117. We then do the same exercise for the Enacted Plan, and compare it to the ensemble.

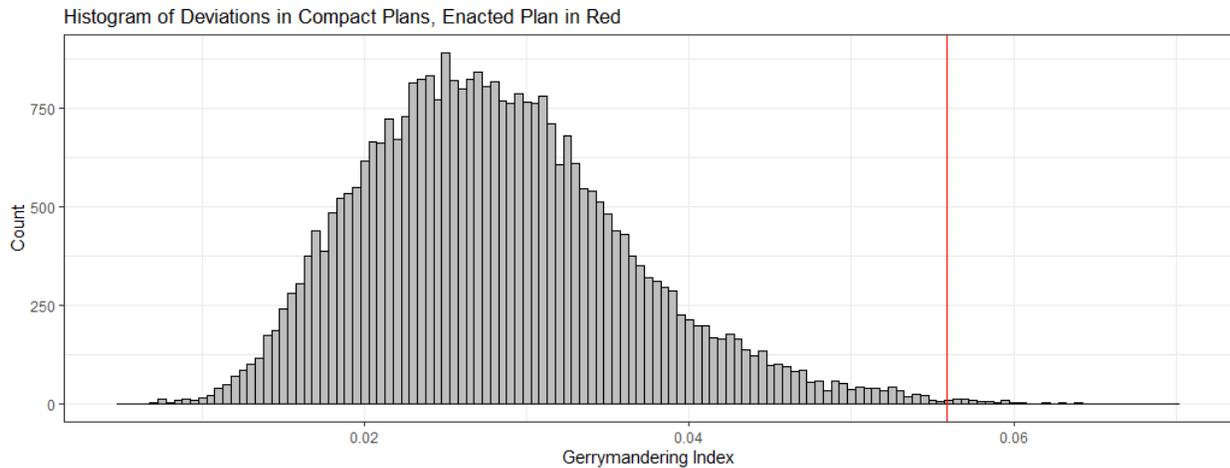
118. When we do this, we see just what an outlier the Enacted Plan is. The following histogram illustrates all of the plans in the ensemble, compared to the Enacted Plan (denoted by the red line).



119. Across the 31,316 maps in our ensemble that were drawn simply to be contiguous and to contain two Black majority districts, only 97 had larger deviations than the Enacted Plan. That is .3% of all maps. In other words, the Enacted Plan is an outlier, and would be highly

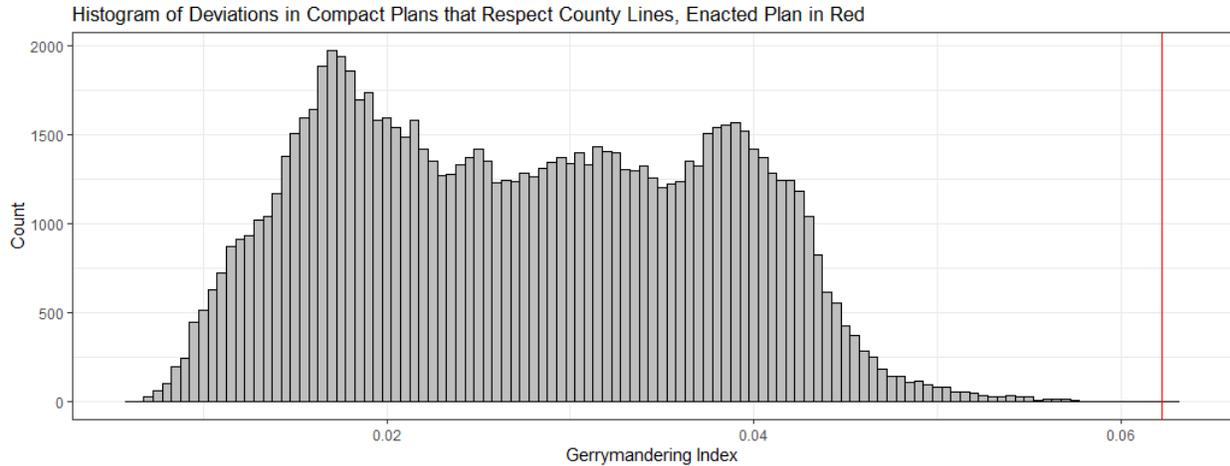
unlikely to be enacted if the legislature were only motivated by desires for drawing contiguous districts that would also contain two Black majority districts.

120. What about in our ensemble of maps drawn to be contiguous, compact, and to contain two Black majority districts?



121. It is much the same story. Of the 33,383 maps drawn with compact, contiguous districts that contain two Black majority districts, only 102 maps, or .3%, have gerrymandering indices larger than the Enacted Plan. In other words, the Enacted Plan is an outlier, and would be highly unlikely to be enacted if the legislature were only motivated by desires for drawing contiguous, compact districts that would also contain two Black majority districts.

122. Finally, consider our ensemble of compact, contiguous districts that respect county boundaries and contain two Black majority districts.



123. Here, the plan is an extreme outlier. Of the 95,942 maps in our ensemble, only one map, or 0.000104% of the sample, has a larger gerrymandering index than does the Enacted Plan.

CONCLUSION

124. The maps produced by the General Assembly are significantly less compact than Maryland’s geography demands. Even under the one-person-one-vote constraint, the legislature has previously produced valid maps that are significantly more compact than what we see today. Instead, these maps are among the least compact maps drawn in the United States in the past 60 years.

125. In addition, the maps effectuate a significant partisan bias. Under each of three possible redistricting constraints, and using information from a variety of elections, the maps consistently weaken heavily Democratic districts to shore up Democratic strength in what should be marginal districts, producing a map that reduces Republicans’ chances of winning. Overall, the maps are outliers that would almost certainly not have been produced had the legislature not been driven by a desire to substantially weaken Republican prospects in elections.

126. In short, the Enacted Plan was clearly drawn to discourage competition and for the purpose of favoring the Democratic Party and disfavoring the Republican Party. That desire

predominated over other legitimate state interests, such as drawing compact districts or respecting county lines.

Executed on February 28, 2022

/s Sean P. Trende
Sean P. Trende

APPENDIX I TO THE REPORT OF SEAN P. TRENDE

In addition to the data contained in my main report, I have performed additional analyses that the Court may find to be of interest.

Introduction to Simulation Analysis

For this litigation, I have conducted a simulation analysis of the Enacted Maps. Simulation analysis is widespread in political science and is the subject of one of my dissertation papers. The simulation approach to redistricting has been accepted in multiple courts, including state courts in Ohio, North Carolina and Pennsylvania. *See League of Women Voters of Ohio v. Ohio Redistricting Commission* (2021); *Harper v. Hall* (2021); *Common Cause v. Lewis* (2019); *Harper v. Lewis* (2019); *League of Women Voters of Pennsylvania v. Com.* (2018). For this report, I have employed a broadly accepted “package” in R called “redist,” which generates a representative sample of districts from a target distribution. *See, e.g., Benjamin Fifeld, et. al, “Automated Redistricting Simulation using Markov Chain Monte Carlo,” 29 Jrnl. Computational and Graphical Statistics 715 (2020).*

There are a variety of proposed simulation techniques, but they all proceed from the same basic principle: precincts are aggregated together in a random fashion, potentially subject to a variety of parameters, to form districts in hundreds or thousands of maps. This creates an “ensemble” of maps that reflect what we would expect in a state if maps were drawn without respect to partisan criteria. If the map is drawn without partisan intent, its partisan features should match those that appear in the ensemble. The more the map deviates from what we observed in the ensemble, the more likely it becomes that partisan considerations played a heavy role.

To better understand how this works, imagine the following cluster of seven hexagons as a cluster of precincts, with each hexagon representing an individual precinct. The precincts are

connected when they share adjacent sides. Those adjacencies are reflected in the image below by the lines that connect the hexagons. The top precinct therefore shares a border with the center, top right, and top left precincts; the top left hexagon shares a border with the top, center, and bottom left precincts; and so forth.

It is possible, however, to “break” adjacencies, using the computer, by removing one of these lines. One can continue to do so until there is only one path from any precinct to any other precinct. This is called a “spanning tree,” *e.g.*, Kruskal, J.B., “On the Shortest Spanning Tree of a Graph and the Traveling Salesman Problem,” *7 Proc. Amer. Math Soc.* 48 (1956), and it lies at the heart of the redistricting algorithm.

For almost any set of more than two precincts, there will be multiple spanning trees, but the number of such trees is finite. I have illustrated two such trees for our cluster of seven hexagons.



Once you have reduced the number of connections between precincts to a minimum, removing one additional connection will create two distinct clusters of precincts. This is exactly what a district is: a collection of contiguous (adjacent) precincts that is separated from other precincts on the map. In the following illustration I have removed the connection between the

center hexagon and the lower right hexagon, and then illustrated the two districts this creates in the right panel.



This, then, is a microcosm of the approach that the redist package takes. To simplify greatly, by sampling spanning trees of Maryland’s precincts and then removing 25 connections, the software produces 26 randomly drawn districts. While the math is quite complicated, this approach produces a random sample of maps that mirrors the overall distribution of maps, much as a high-quality poll will produce a random sample of respondents that reflects the overall population. While the process is complicated, it can be run on a laptop computer. Indeed, these simulations were run at home on a Dell XPS 17 computer with an i9 processor and 64G of RAM, using a free, widely employed computer programming language (R version 4.1.2).

Importantly, these maps are drawn without providing the software with any political information. In other words, these maps help inform an analyst what maps would tend to look like in Maryland if they were drawn without respect to politics.

Of course, other features, such as respect for county lines, compactness, or respect for geographic features could play a role in the drawing of district lines as well; these traditional redistricting criteria are almost always viewed as valid considerations by courts. To account for

this, when removing the connections that create districts, the algorithm can be instructed to favor the removal of connections that will result in districts that remain within specified parameters when deciding which connections to remove. It can be instructed to remove connections in such a way that equally populated districts will be created, or to prefer breaks that will create compact districts, or will respect county boundaries, or any number of other factors.

Additional Simulations

One potential problem with simulations is that the Voting Rights Act requires a careful, functional analysis of districts to determine if VRA districts are required and if the district can perform. Obviously that is difficult in a computer simulation. While the 50% threshold employed in the main report is a decent heuristic for this, the Court may require more.

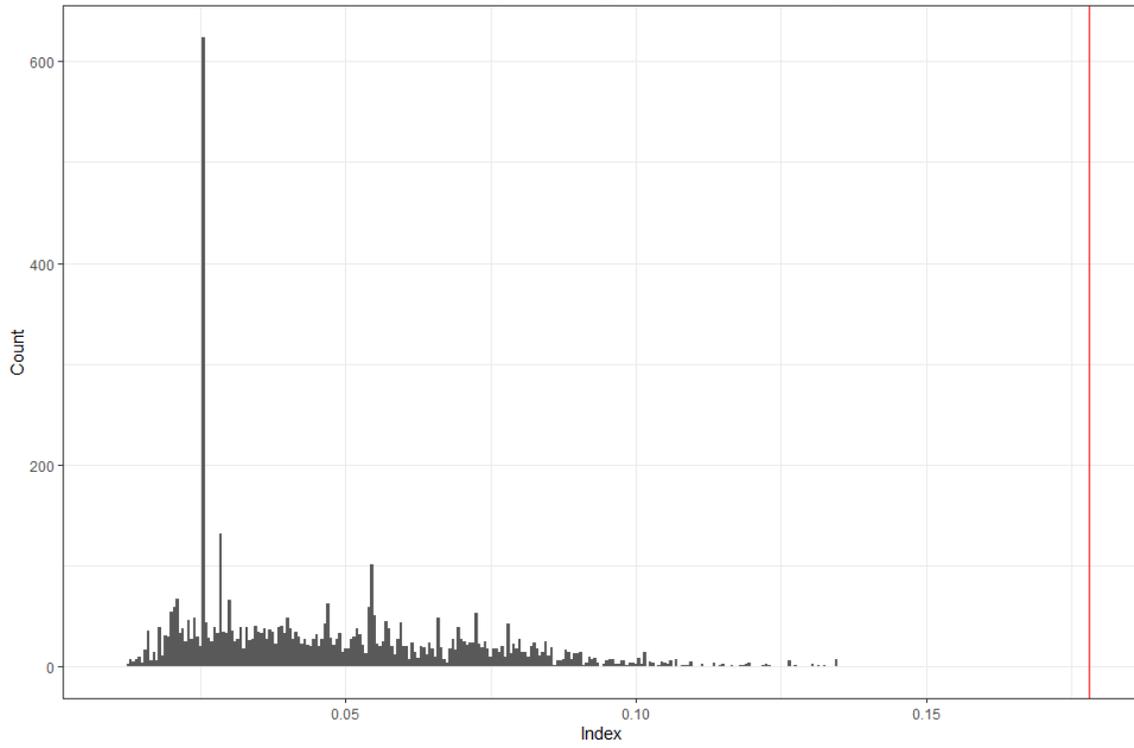
One way to be more precise it to simply accept the legislature's definition of VRA districts and freeze those districts in place. If the VRA doesn't require these districts, little harm is done, except to the plaintiffs' case. If the VRA does require them, the plan is guaranteed to be compliant.

Note that this is a very favorable assumption for the legislature. It effectively concedes that 3/8th of their districts are drawn as they should be. In particular, this blesses the movement of a number of heavily Republican precincts in northern Baltimore County into the Baltimore City-based 7th District, even though this is probably a part of the state's gerrymandering strategy. These simulations should be interpreted as a best-case scenario for Defendants.

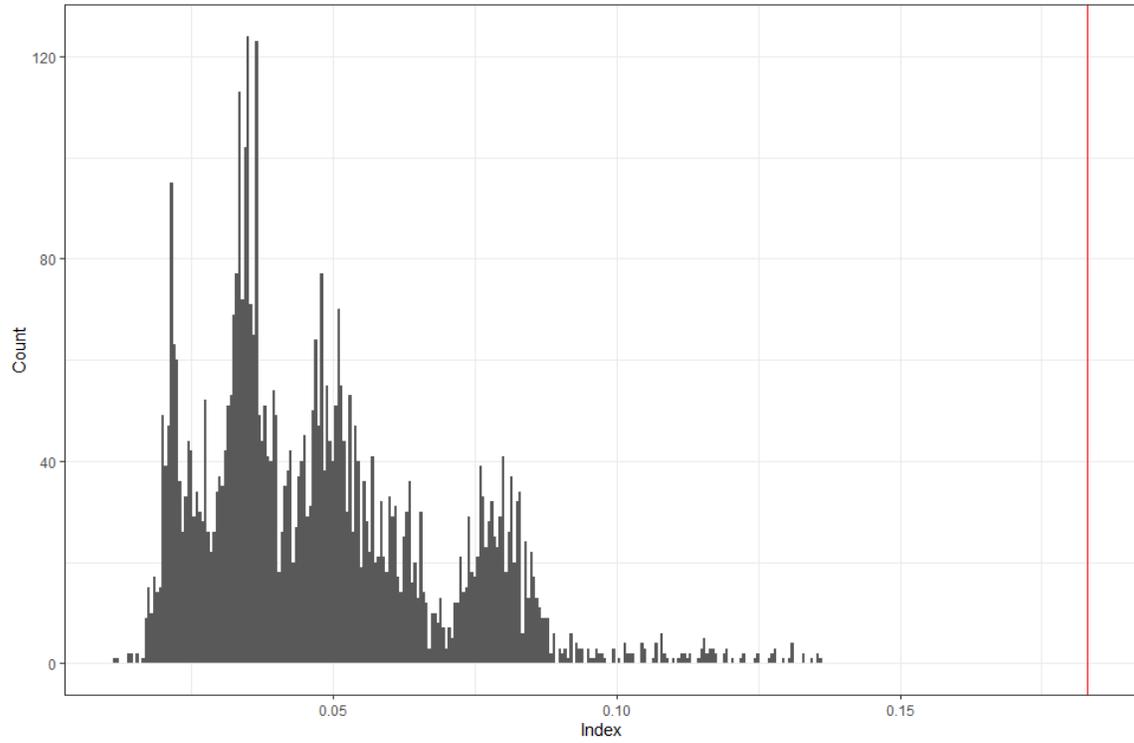
I have run 5,000 simulations for each of these maps, because I no longer have to worry about removing maps that do not contain two 50%+1 BVAP districts, since these districts are frozen in place. I have frozen Districts 7 and 4; this in effect freezes District 5 in place as well.

Even under these circumstances, it should be obvious that these are extreme pro-Democratic gerrymanders. The gerrymandering index for the compact maps that both respect and do not pay attention to county lines are far more extreme than anything in the ensemble:

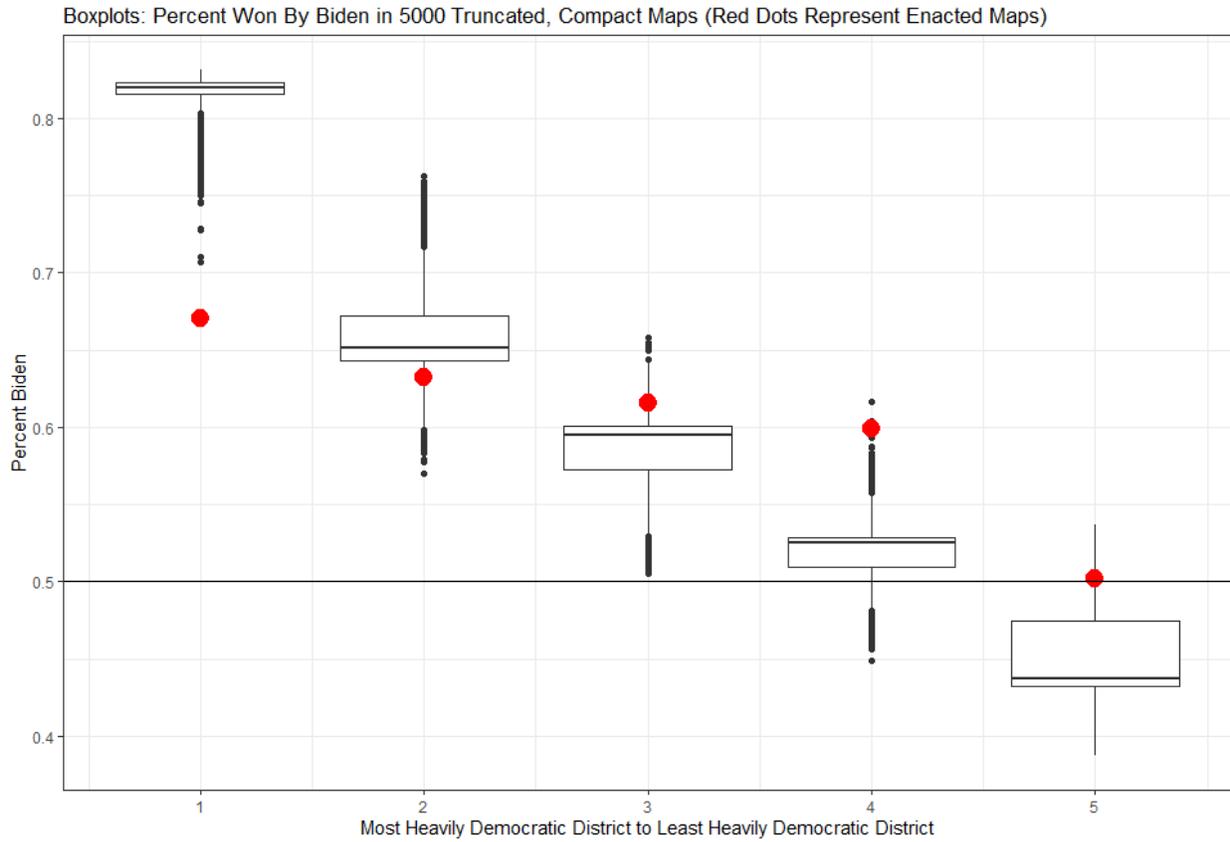
Values of Gerrymandering Index, Truncated Maps



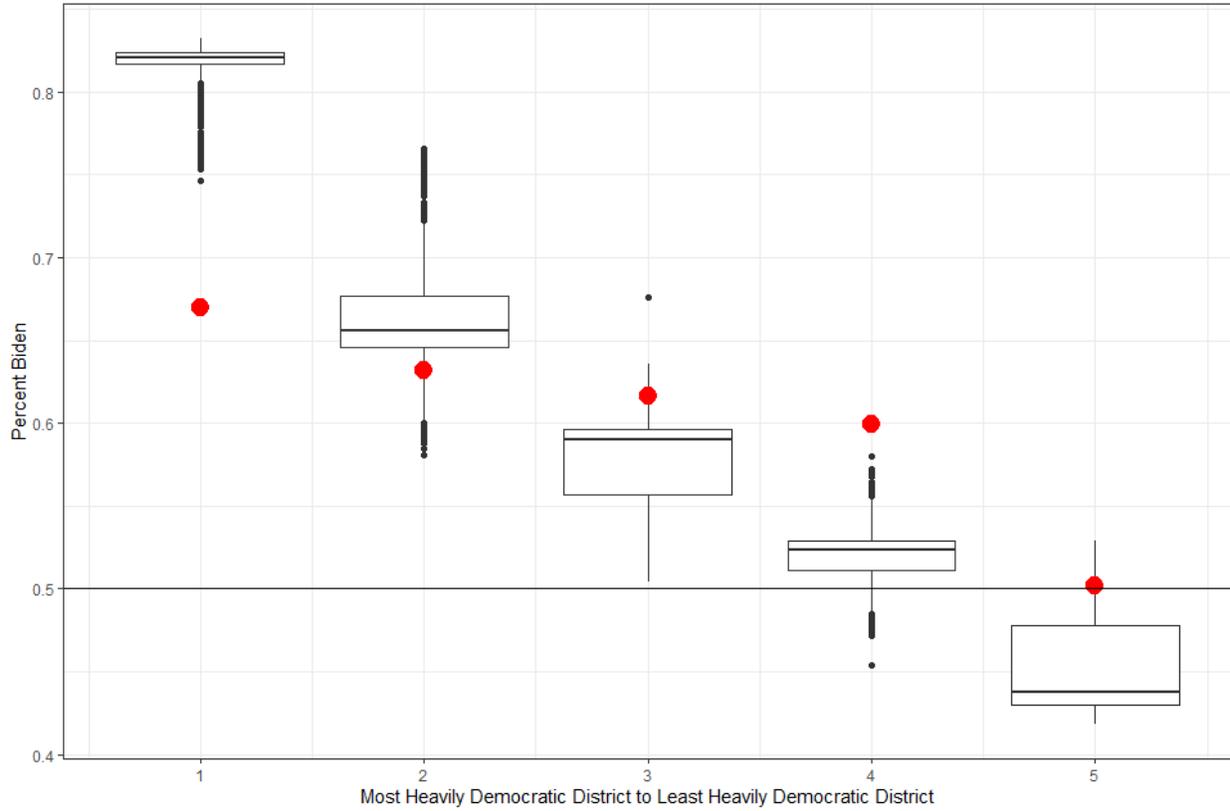
Values of Gerrymandering Index, Truncated Maps, Counties Respected



We also see the same pattern of “cheating,” where the most heavily Democratic districts are more Republican than we would expect, which allows the map-drawer to them make the more Republican districts more heavily Democratic than a map drawn without reference to politics would predict:



Boxplots: Percent Won By Biden in 5000 Truncated, Compact Maps Respecting Counties (Red Dots Represent Enacted Maps)



Thus, even under assumptions extremely favorable to the Defendants – that the 4th, 5th, and 7th districts should be drawn exactly as they were drawn, it is apparent that the Enacted Maps were clearly drawn with a strong intent to disfavor competitive districts and empower Democrats.

Exhibit I

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SUPREME COURT OF THE STATE OF NEW YORK

COUNTY OF STEUBEN : SUPREME CALENDAR

HARKENRIDER ET AL.,

Petitioners,

-versus-

HOCHUL ET AL.,

Respondents.

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Index No:
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E2022-0116CV
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:
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BENCH TRIAL
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Steuben County Courthouse
Bath, New York
March 14, 2022

P r e s i d i n g :

THE HONORABLE PATRICK F. McALLISTER
Judge

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Tara D. MacNaughton, CSR, RPR, NYACR
Official Court Reporter

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I N D E X T O W I T N E S S E S

<u>For the Petitioners:</u>	<u>D</u>	<u>X</u>	<u>RD</u>	<u>RX</u>
Sean P. Trende				
Claude A. Lavigna				

I N D E X T O E X H I B I T S

<u>For the Petitioners:</u>		<u>ID</u>	<u>EVD</u>
1 Trende's initial report		4	20
2 Trende's reply report		4	20
3 Lavigna's initial report		4	162
4 Lavigna's rebuttal report		4	162

<u>For the Respondent - Senate Majority Leader:</u>	<u>ID</u>	<u>EVD</u>
S-1 Sequential Monte Carlo paper	51	57
S-2 Redistricting maps	51	86
S-3 Enacted 2022 congressional plan	51	97
S-4 ALARM Project - sample plans	51	104
S-5 Westlaw printout - Constitution	51	162

<u>For the Respondent - Assembly:</u>	<u>ID</u>	<u>EVD</u>
A-1 Pollock statement	205	--

1 (Petitioner's Exhibits 1 and 2 and were
2 marked for identification.)

3 THE COURT: This is the matter of Timothy
4 Harkenrider et al. versus Governor Kathy Hochul et
5 al. I'm going to have counsel note their
6 appearances. We'll start with petitioners.

7 MR. MOSKOWITZ: Bennet Moskowitz, Troutman
8 Pepper.

9 THE COURT: Thank you, Mr. Moskowitz.

10 MR. WINNER: George Winner, Keyser,
11 Maloney & Winner.

12 THE COURT: Thank you, Mr. Winner.

13 MR. TSEYTLIN: Misha Tseytlin, Troutman
14 Pepper.

15 THE COURT: Thank you, Ms. Tseytlin.

16 All right. On behalf of Respondent
17 Governor Kathy Hochul and, I believe, Lieutenant
18 Governor Brian Benjamin?

19 MS. MCKAY: Yes, your Honor. Heather McKay
20 and Muditha Halliyadde from the New York State
21 Attorney General's Office.

22 THE COURT: All right. Thank you.

23 On behalf of the Senate Majority Leader,
24 Andrea Stewart-Cousins?

25 MR. HECKER: Good morning, your Honor.

1 Eric Hecker from Cuti Hecker Wang.

2 MR. CUTI: John Cuti from Cuti Hecker Wang.

3 THE COURT: Thank you, Mr. Cuti.

4 MR. GOLDENBERG: Alexander Goldenberg from
5 Cuti Hecker Wang.

6 THE COURT: One second. Okay.

7 MS. REITER: Alice Reiter from Cuti Hecker
8 Wang.

9 THE COURT: Thank you.

10 MR. MULLKOFF: Daniel Mullkoff, Cuti Hecker
11 Wang.

12 THE COURT: Thank you.

13 On behalf of the Speaker of the Assembly,
14 Carl Heastie?

15 MR. CHILL: Channing Daniel Chill from
16 Graubard Miller for the Speaker.

17 THE COURT: Thank you, Mr. Chill.

18 MS. REICH: Elaine Reich, Graubard Miller.

19 THE COURT: Is it Reich?

20 MS. REICH: Reich, R-e-i-c-h.

21 THE COURT: Reich. Thank you, Ms. Reich.

22 MR. BUCKI: Craig Bucki, B-u-c-k-i, from
23 Phillips Lytle in Buffalo.

24 THE COURT: Thank you, Mr. Bucki.

25 Is there any appearance on behalf of the

1 New York State Board of Elections?

2 (No response.)

3 THE COURT: Any appearance on behalf of the
4 New York State Legislative Task Force on Demographic
5 Research and Reapportionment?

6 (No response.)

7 THE COURT: All right. I think I'll begin
8 with the two orders to show cause filed by the
9 petitioners to admit two attorneys pro hoc vice.

10 Would you like to be heard on that,
11 Petitioners?

12 MR. MOSKOWITZ: Yes, your Honor. Bennet
13 Moskowitz. Barring any objections, given that my
14 colleagues who are here today, Robert Browne and
15 Molly DiRago have submitted all papers that are
16 necessary to their admission and their intention
17 subject to that admission to participate in these
18 hearings, we respectfully request that your Honor
19 enter those orders at the start now.

20 THE COURT: All right. Is there any
21 objection by any of the respondents?

22 MR. CUTI: Not from the Senate, your Honor.
23 No objection from the Senate.

24 THE COURT: On behalf of the Governor and
25 Lieutenant Governor?

1 MS. MCKAY: No objection, your Honor.

2 THE COURT: On behalf of the Assembly?

3 MR. CHILL: No objection.

4 THE COURT: All right. It's admitted.

5 Robert E. Browne, Mary "Molly" S. DiRago, both
6 admitted for purposes of this matter.

7 That brings us to -- and I think,
8 Ms. McKay, you had indicated in letter form that you
9 were renewing your motion to dismiss that was brought
10 previously but did not request oral argument. Is
11 that correct.

12 MS. MCKAY: That's correct, your Honor. We
13 will rely on our papers and our prior arguments.

14 THE COURT: I'm going to rule the same as
15 in the previous argument on that matter. The
16 motion's denied and on the same basis as previously
17 put on the record by the Court.

18 That brings us to three orders to show
19 cause that were just filed. To be frank with you, I
20 haven't hardly had time to go over them yet. One is
21 Petitioner's order to show cause to strike portions
22 of the expert reports of Professor Jonathan Katz and
23 Dr. Kristopher R. Tapp for late filing of the expert
24 reports, the second one is Petitioner's order to show
25 cause requesting an adverse inference in regards to

1 the respondents and their agents for failure to
2 appear for noticed depositions, and the third one is
3 Petitioner's order to show cause for leave to submit
4 supplemental briefing on the timing of the remedy in
5 this case. I did sign the orders to show cause, but
6 I put in there that the respondents have until 4:30
7 on -- on Tuesday, I'm sorry, this coming Tuesday,
8 tomorrow, to respond to those orders to show cause,
9 and we'll put it down for oral argument on Wednesday
10 morning at 9:30.

11 That brings us to witnesses for today.
12 Petitioners ready to proceed?

13 MR. MOSKOWITZ: Your Honor, if I may, my
14 colleague, Mr. Tseytlin, has just a couple of
15 preliminary matters that I think impact the
16 presentation of witnesses, so if I may turn it over
17 to him just for a moment.

18 THE COURT: Mr. Tseytlin?

19 MR. TSEYTLIN: Yes. Thank you, your Honor.
20 Just very briefly. One, Mr. Trende is going to be
21 our first witness called. He does have to be in
22 trial tomorrow in Maryland, where he's also a
23 witness, so we're going to hope to put him on first
24 today, and then he's going to have to go to his trial
25 tomorrow in Maryland. We hope -- we do not know if

1 your Honor intended to finish all the witnesses today
2 or not, but Mr. Trende will be going first, with your
3 indulgence, given that he has to be in Maryland
4 tomorrow.

5 THE COURT: I appreciate that. As you
6 know, we're under time constraints here.

7 MR. TSEYTLIN: Yes, your Honor.

8 THE COURT: I didn't anticipate -- and I
9 don't know how the testimony will go. I don't know
10 if Mr. Trende will be on all day or more than one day
11 or for two hours. I just don't know that. But it
12 brings up the point that we are under time
13 constraints here. I'm asking all counsel to make
14 your points and move on. Keep the matter moving.
15 That's important. So we'll start with that.

16 MR. TSEYTLIN: Absolutely, your Honor. The
17 second point is just to ask for clarification from
18 the Court, whether the experts that are not
19 testifying will be able to be in the room or whether
20 perhaps preferably they would be outside the room
21 during the testimony.

22 THE COURT: Well, how do you expect the
23 adverse experts to be able to answer your experts if
24 they're not listening to the testimony?

25 MR. TSEYTLIN: That's fair enough, your

1 Honor. They're going to be testifying based on the
2 expert reports that were submitted, and so -- but
3 obviously it's your Honor's discretion. We just
4 wanted to know how --

5 THE COURT: I will let the experts, if
6 they're going to be responding to the expert -- your
7 expert, to sit in the room. However, your experts --
8 the other experts should be outside the room.

9 MR. TSEYTLIN: I understand.

10 THE COURT: Do you understand what I mean?

11 MR. TSEYTLIN: Yes.

12 THE COURT: And it's the same for the
13 respondents. In other words, opposing experts --
14 opposing can sit in to listen to your experts if you
15 have more than one expert, which you do.

16 MR. GOLDENBERG: Understood, your Honor.

17 THE COURT: You understand?

18 MR. GOLDENBERG: Yes. Thank you.

19 THE COURT: All right. Very good.

20 Anything further, Mr. Tseytlin?

21 MR. TSEYTLIN: No, nothing your Honor.

22 Nothing further.

23 THE COURT: All right. Mr. Moskowitz?

24 MR. MOSKOWITZ: Thank you, your Honor.

25 Petitioners call Sean Trende.

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SEAN P. TRENDE,

called herein as a witness, having been first duly sworn,
was examined and testified as follows:

THE DEPUTY: State your name and spell it
for the Court, please.

THE WITNESS: It is Sean Patrick Trende,
S-e-a-n, P-a-t-r-i-c-k, T-r-e-n-d-e.

THE COURT: All right. Dr. Trende, have a
seat. I'm going to ask you to keep your voice up.
You seem to have a loud voice. I could hear you
plainly, but I am a little hard of hearing, so I'm
asking everyone to speak up when you talk. And you
have a microphone there, but I think I could hear you
even without that, so let's proceed.

Mr. Moskowitz?

MR. MOSKOWITZ: Thank you.

DIRECT EXAMINATION

BY MR. MOSKOWITZ:

Q. Good morning, Mr. Trende. Can you please tell
the Court what your educational background is?

A. I received a --

Q. Let me stop you right there.

MR. MOSKOWITZ: Your Honor, do you want him
to take his mask off?

THE COURT: You're allowed to take your

1 mask off when you're testifying, or the attorneys
2 that are standing at the podium.

3 MR. MOSKOWITZ: Thank you, your Honor.

4 Q. So let me just ask the question again.
5 Mr. Trende, can you please tell the Court what your
6 educational background is?

7 A. Yes. I received a bachelor's degree from Yale
8 University with a double major in history and political
9 science. A few years later I attended Duke University for
10 law school. And Duke had a joint degree program, so while
11 I was getting my JD, I also earned a master's degree in
12 political science with an emphasis on American politics.
13 I clerked for a federal judge on the Tenth Circuit for a
14 year, then practiced law for eight years before finding my
15 true calling as someone who writes about and analyzes
16 elections, which I've been doing for the past decade.

17 In 2016 I enrolled in a doctoral program in
18 political science at the Ohio State University, and while
19 I was there my advisors looked at my background in
20 statistics and urged me, rather than going through the
21 department's statistics program, to go over to the
22 department of statistics and earn a Master's in Applied
23 Statistics, which about 40 credit hours later I did. I
24 earned that. I finished the coursework and passed
25 comprehensive exams for my Master's in Applied Statistics

1 in March of 2019.

2 My dissertation I finished in -- past
3 comprehensive exams in political science with both
4 comprehensive exams in American Politics and methodology,
5 so all that is remaining is my dissertation. My
6 dissertation advisor has approved by application to
7 graduate, so hopefully this will all be over in a couple
8 months.

9 Q. So you have four degrees, is that correct, and
10 you're working on your fifth?

11 A. I'm actually unsure whether Ohio State gives you
12 a second master's degree when you finish your coursework
13 but certainly four.

14 Q. At least four degrees --

15 A. Yeah.

16 Q. -- working on your fifth, perhaps your sixth?

17 A. That's right.

18 Q. Thank you.

19 And, Mr. Trende, can you please tell the Court,
20 what do you do for a living?

21 A. I'm the senior elections analyst for
22 RealClearPolitics.

23 Q. What is RealClearPolitics?

24 A. So RealClearPolitics is a company of about 50
25 people mostly located in Washington, DC, that produces

1 original content, analyzing elections, and also
2 aggregating content on elections.

3 Q. So you said your title is senior elections
4 analyst. What is your role in connection with that title?

5 A. A lot of things: analyzing how districts are
6 drawn and how they unfold; getting a sense of how they're
7 likely to play out in elections; following polling;
8 following the candidates; basically all aspects of
9 elections.

10 Q. Is RealClearPolitics partisan?

11 A. It is not. We actually go to great lengths. If
12 you go to our front page, there will be a series of
13 articles that we aggregate. We go out of our way to try
14 to get an article -- if there's a conservative viewpoint
15 on an issue, pairing it with the left or center viewpoint
16 on an issue so the reader can decide.

17 Q. And does any of this work that you've been
18 describing concern redistricting?

19 A. It does. Following -- if you want to understand
20 how congressional elections are likely to play out, you
21 have to know how the districts are being drawn. So both
22 in the 2010 cycle and this cycle, a great degree of care
23 paid to -- and attention paid to how the districts are
24 drawn.

25 Q. And are you affiliating with any think tanks?

1 A. I'm a visiting scholar at the American
2 Enterprise Institute and have been for about four years.

3 Q. And have you authored any books?

4 A. Yes. So I wrote a book called The Lost
5 Majority: Why the Future of Government Is Up for Grabs
6 and Who Will Take it. I was a co-author for the 2014
7 American -- Almanac of American Politics, which my role
8 there was to examine the 2012 redistricting for a little
9 more than half of the states, including the State of
10 New York, learning the political economy and political
11 geography of the districts, how they were drawn, and then,
12 you know, there's a second section, which I did not write,
13 that was candidate specific describing who the candidates
14 were. I've also, every two years -- Larry Sabato's
15 political scientist at the University of Virginia who runs
16 a place called the Center for Politics. After every
17 election he puts out a book -- a compendium of articles in
18 book form from scholars explaining what happened in the
19 election, and I think I've done that going back to 2014.

20 Q. And have you ever spoken on the topic of
21 elections analysis?

22 A. I regularly speak on elections to trade groups.
23 I've been asked by the United States Embassies in Sweden,
24 Spain, and Italy, to travel and speak to university groups
25 and government groups, academic groups in those countries.

1 I've been asked multiple times by the ambassador to the
2 European Union to speak before the ambassadors for the
3 member countries on American elections and how they're
4 likely to play out.

5 Q. Have you ever taught?

6 A. I have. I taught a course at Ohio Wesleyan
7 University on Mass Media and American Democracy, and then
8 at Ohio State I've taught Intro to American Politics, I
9 think, four times. I also teach a class that's kind of my
10 own class on voter participation and turnout. I'm in my
11 third time teaching that, and we're getting ready to start
12 our section on gerrymandering after the students get back
13 from spring break.

14 Q. Have you ever appeared on television as an
15 elections expert?

16 A. I routinely appear on television sites across
17 the spectrum, Fox News, MSNBC, CNN.

18 Q. And have you ever appeared as an elections
19 expert on radio?

20 A. Yes. NPR, a variety of channels.

21 Q. Have any major news publications ever cited you
22 in your capacity as an elections expert?

23 A. Yes. I get cited in The New York Times, The
24 Washington Post, The Wall Street Journal pretty routinely.

25 Q. And do you sit on any advisory panels?

1 A. Yes. I sit on the advisory panel. It's called
2 States of Change. It started out as a joint product
3 between the American Enterprise Institute and the
4 Brookings Institution. It was later taken over solely by
5 the Bipartisan Policy Center, and it seeks to examine
6 demographic change in the United States and how it's
7 likely to impact elections going forward.

8 Q. Have you ever done any work in Arizona?

9 A. Yeah. So when I was appointed by the Arizona
10 Independent Redistricting Commission as Voting Rights Act
11 expert to counsel in those cases.

12 Q. And have any courts ever appointed you to act in
13 any special capacity?

14 A. So two actually. The Supreme Court of Belize
15 appointed me as their expert in their kind of version of
16 Baker v. Carr. They asked me to analyze their existing
17 plans to determine if they comported with existing
18 international standards of fairness and democracy and, if
19 not, to draw proposed remedial plans.

20 The second time and more recently, I was
21 appointed along with Bernie -- Dr. Bernie Grofman from UC
22 Irvine by the Supreme Court of Virginia. After their
23 Independent Redistricting Commission deadlocked, the two
24 of us were asked to redraw their congressional districts,
25 their state Senate districts, and their House of Delegates

1 districts for the upcoming decade.

2 Q. Have you ever previously served as an expert
3 witness on matters concerning redistricting?

4 A. I've testified in many cases, including both
5 cases that went to the Supreme Court of the United States.

6 Q. Which cases were those?

7 A. The captions changed, but it was the Gill v.
8 Whitford and Rucho -- it's the Rucho case. I can't
9 remember who the defendant was.

10 Q. Thank you.

11 MR. MOSKOWITZ: Your Honor, Petitions offer
12 Mr. Trende as an expert in elections analysis with
13 particular knowledge of redistricting.

14 MR. HECKER: Subject to cross-examination,
15 we have no objection.

16 THE COURT: I'm qualifying him as an
17 expert.

18 MR. MOSKOWITZ: Thank you.

19 BY MR. MOSKOWITZ:

20 Q. Mr. Trende, have you been retained as an expert
21 in this matter?

22 A. Yes, I have.

23 Q. And who retained you?

24 A. Your law firm. I believe it's now Troutman
25 Pepper.

1 Q. I believe so too.

2 Are you being paid for your services?

3 A. I am.

4 Q. And is any part of your compensation dependent
5 on the outcome of this case?

6 A. Absolutely not.

7 Q. And what were you asked to do?

8 A. I was asked to analyze the congressional maps
9 and state Senate maps passed by the New York State
10 Legislature and to write an expert report summarizing
11 conclusions.

12 Q. And did you render any written reports in
13 connection with this work?

14 A. I've written two expert reports.

15 MR. MOSKOWITZ: Your Honor, I'd like to
16 show the witness -- and I believe there are copies
17 for your Honor and some for opposing counsel, though
18 I'm sure they have them -- what's been marked -- and
19 I would just do both at once to be efficient here --
20 for identification as Petitioner's Exhibits 1 and 2.

21 THE COURT: Are they his reports and his
22 reply?

23 MR. MOSKOWITZ: Yes, your Honor.

24 MR. HECKER: No objection, your Honor.

25 THE COURT: Anyone else?

1 (No response.)

2 THE COURT: Admitted.

3 (Petitioner's Exhibits 1 and 2 were
4 received in evidence.)

5 MR. MOSKOWITZ: May I approach, your Honor?

6 THE COURT: You may.

7 BY MR. MOSKOWITZ:

8 Q. Mr. Trende, can you please look at what's been
9 marked and submitted into evidence as Petitioner's
10 Exhibit 1 and tell me, what is that document?

11 A. This doesn't have the markings on it, but I
12 believe it is the expert report that I filed, the initial
13 expert report.

14 Q. Okay. And can you please look at what's been
15 put into evidence as Petition's Exhibit 2 and tell us,
16 what is that document?

17 A. That would be the reply report.

18 Q. Great.

19 And what method did you use to perform the
20 analysis that you just described?

21 A. I used the redist package in R that's been used
22 in several of the cases in which I've been involved.

23 Q. Can you please explain to the Court, what is
24 that?

25 A. So R is a statistical programming language.

1 It's routinely used in political science and statistics
2 data analysis. And so one of the kind of nice things
3 about R is that responsible users can write their own
4 packages that can implement different statistical
5 techniques. And so this is a package of commands that can
6 generate sample redistricting plans that was authored by
7 an extremely well-respected professor at Harvard.

8 Q. So this is a computer program?

9 A. Yes.

10 Q. And what data do you actually use in connection
11 with that program?

12 A. So I downloaded what are called shapefiles of
13 the New York congressional districts and the precincts in
14 New York. So to understand a shapefile, you can just
15 think of an Excel spreadsheet. And the Excel spreadsheet
16 would have rows for each precinct and then columns for
17 data, so population data, racial data, political data,
18 would be the columns. So you would have cell entries for
19 every precinct, what the number of votes cast for governor
20 were, what the population of each precinct is.

21 What makes them different from just a regular
22 spreadsheet, though, is that the last column is a geometry
23 column that will contain a series of points that delineate
24 the boundaries of the precinct. So you can then tell R,
25 the programming software, to take the shapefiles and put

1 them in spacial form, to make maps of them, and it can
2 assess which of the precincts are contiguous to each
3 other, which congressional districts are contiguous to
4 each other. And so that's the building blocks of this
5 analysis.

6 Q. And do other experts in your field employ the
7 method that you just described?

8 A. Yes.

9 Q. And is the method you just described reliable?

10 A. It's been accepted by courts in Ohio and
11 North Carolina. A couple of other courts it's pending
12 before.

13 Q. Did you conduct your analysis in such a way as
14 to yield an accurate response?

15 A. Yes.

16 Q. And did you form any conclusions based on this
17 analysis?

18 A. Yes. The conclusions are summarized on Page 7
19 of the expert report, but it's -- the maps were clearly
20 drawn to discourage competitive districts to disfavor the
21 Republican Party at the expense of the -- disfavoring the
22 Republican Party and favoring the Democratic Party.

23 Q. Do you hold those opinions to a reasonable
24 degree of professional certainty?

25 A. Yes.

1 Q. Mr. Trende, I'd like to discuss with you some of
2 your specific findings that led to those opinions. If you
3 can, please turn to Page 14 of your initial report, which
4 is Petitioner's Exhibit 1. And I note, sir, that there's
5 a graphic there that's labeled Values of Gerrymandering
6 Index. Do you see that?

7 A. I do.

8 Q. And please explain to the Court, what is this
9 graphic?

10 A. So to understand this graphic, it's probably
11 more useful to understand the map on Page 15 -- or the
12 graph on Page 15 first.

13 Q. Okay. Let's turn to Page 15. Are you referring
14 to this graphic that's labeled Democratic Vote Share by
15 Simulated District?

16 A. That's right.

17 Q. Okay. And please explain to the Court, what is
18 this graphic?

19 A. Okay. So the way that the redist package works
20 is taking the shapefile and, understanding which precincts
21 are adjacent to each other, it will draw random maps of
22 the state. You can cause it to draw a variety of randomly
23 generated congressional districts, full maps subject to
24 certain constraints. So here the simulations were
25 instructed to draw reasonably compact districts, they were

1 instructed to be close to equipopulous, and they were
2 instructed to be contiguous. Note that it was not given
3 any political data. That's not included in our list of
4 information that's fed into the package. And so you then
5 ask it to do it several thousand times, in this case 5,000
6 times. It will draw a map each time that it's instructed
7 to do so.

8 What you can then do is take all 5,000 maps and
9 have the program calculate some measure of partisanship
10 for each one of those districts in every 5,000 maps. So
11 for this report I downloaded a compendium of elections
12 from a site called ALARM, which is a, again, commonly used
13 repository of elections. It has a bunch of statewide
14 elections from New York that are listed in the report over
15 the couple -- last couple cycles. Those elections were
16 averaged. And so if you look at the left side or the
17 y-axis in this report, this percent Democratic is the
18 average statewide Democratic vote share in each -- in the
19 districts.

20 So -- and this is where it gets a little bit
21 technical, but it's also important -- what you can then do
22 is say for each of those 5,000 maps, okay, I want to know,
23 using this index, what the most Republican district looks
24 like, pull those districts out. And for each of those
25 districts, it'll generate a plot. Where the column says 1

1 on the very far left side of the chart, each of those
2 little dots represents the most Republican district in
3 each of the 5,000 maps. And so as you can see, the most
4 Republican district typically spans from about 42 percent
5 Democratic in our index up to about 48 percent. Okay. So
6 if you're drawing without respect to politics, according
7 to the simulation software, you would expect most
8 Republican districts to be between 42 and 48 percent,
9 probably closer to 45 given how dense the plot gets around
10 there. Okay. What does the second most Republican
11 district look like? So it'll pull all the second most
12 Republican districts from each -- all 5,000 of the random
13 maps in the ensemble and plot their partisanship, and
14 so --

15 Q. Let me stop you right there.

16 A. Yes.

17 Q. What's an ensemble?

18 A. The ensemble is the collection of the maps that
19 are generated by the program. And so if you were drawing
20 without respect to politics, you'd expect the second most
21 Republican district to land somewhere between 45 percent
22 Republican -- or Democratic to 51 percent Democratic with,
23 you know, a kind of center of mass where it gets really
24 dense somewhere around 47 percent and so forth. So you do
25 that for the third most Republican district, fourth most

1 Republican district, and it gives you a sense of what
2 these maps would look like if you really were drawing
3 without respect to politics because political information
4 isn't fed into the program until after the maps are
5 finalized.

6 Q. So I note here, sir, that some of the colors are
7 a little scattershot looking and some are kind of packed
8 tight. What's the significance of that?

9 A. So some districts are just going to be drawn
10 about the same way no matter what. So you can see the
11 thirteenth most Republican district. It has a pretty
12 narrow band between about 57 and 60 percent Democratic.
13 And so to kind of understand what's going on there, you
14 can say, like the Staten Island district, about 500,000
15 people, if you're drawing compact districts that don't
16 want to split counties, about 500,000 people are going to
17 be drawn in Richmond County into a single district every
18 single time. It kind of has to be drawn that way. And
19 then it's going to cross over into Southwestern Brooklyn.
20 There just aren't that many ways, at least politically
21 speaking, to draw that district.

22 If you're drawing a district on Manhattan,
23 there's a lot of ways to draw it, but it's always going to
24 be heavily Democratic because there just aren't that many
25 Republicans on the Island of Manhattan. Other places,

1 like you'll note the sixteenth most Republican district,
2 there's a wide range in how that district could naturally
3 be drawn. There's a lot of political outcomes that you
4 could wind up with, with the sixteenth most Republican
5 district, anywhere from like -- anywhere from about 58
6 percent Democratic up to almost 80 percent Democratic. So
7 naturally speaking, with drawing districts without respect
8 to politics, that sixteenth most Democratic district just
9 naturally can have a wide range of political outcomes.

10 Q. Have you heard of the term packing?

11 A. I have.

12 Q. And what's packing?

13 A. So packing, it arises in the political
14 gerrymandering context, also in the racial gerrymandering
15 Shaw v. Reno cases, VRA cases. That's when you take a lot
16 of members of a group, whether it's a racial group or a
17 political group, and you place them all into as few
18 districts as possible.

19 Q. And have you heard of the term cracking?

20 A. So cracking is kind of the reverse side of
21 packing. Cracking is when you take members of a group and
22 you spread them out over a large number of districts so
23 that they'll be ineffective. They won't be able to impact
24 elections as much as you would expect.

25 Q. Sir, drawing your attention to the dots below

1 the line on the left-hand most side of the chart, what's
2 the significance of those on the low end?

3 A. So the dots represent the --

4 THE COURT: The black dots?

5 THE WITNESS: Yes, your Honor.

6 THE COURT: Okay.

7 A. The black dots represent the enacted plan.
8 These are the dots for the congressional district that was
9 passed by the Legislature and signed by the Governor. And
10 so what this shows us is that where you would expect that
11 second most Republican district to be somewhere around 47
12 percent Republican, the Legislature draws it down to 42
13 percent Democratic. I'm sorry. I got that backwards.
14 You would expect it to be about 48 percent Democratic.
15 They draw it down to 42 percent Democratic.

16 For the third most Republican district, where
17 the Legislature would expect it to be -- where you would
18 expect a map drawn without respect to politics, without
19 political information, to be about 49 percent Democratic,
20 the Legislature has drawn that down to 45 percent
21 Democratic. That is the packing. That is the DNA of a
22 gerrymander right there. What the Legislature did and
23 what this shows is they plainly used political information
24 to take as many Republicans as they could, for example, in
25 that 2nd District in Southern Long Island, takes as many

1 Republicans as they can, and puts them into as few
2 districts as they can to make those districts far more
3 Republican than you would expect them to be if they were
4 drawn without respect to politics.

5 Q. Thank you.

6 And does any information on this chart implicate
7 what you discussed as cracking?

8 A. Yes. So if you then shift over to
9 Districts 5 through 11, you can see there the dots from
10 the Legislature fall above the ensemble. That's the wages
11 of packing. By taking as many Republicans as you can --
12 again, I'll use the 2nd District as an example. By taking
13 as many Republicans as you can and putting them into that
14 Southern Long Island district, you've taken them out of
15 the adjoining districts and those districts become more
16 Democratic than you would expect. And so what ends up
17 happening is where we'd expect to have number of
18 Republican-leaning or competitive districts in that 5 to
19 10 range, the Legislature's just obliterated them, gotten
20 rid of the competitive districts you would expect to see
21 in New York and turn them into districts that will almost
22 always elect a Democrat. That's the gerrymandering.

23 And you can see, then, as you get into this
24 range where it really doesn't matter, where, you know, you
25 would expect to get heavily Democratic districts no matter

1 what, the Legislature's map falls right within the ranges
2 of what we'd would expect, and that makes sense because it
3 didn't -- they didn't have to use political information
4 for drawing those districts. They were going to get a
5 heavily Democratic district no matter what. The only
6 place they really deviate is in that key area where you'd
7 expect to get districts that lean Republican or are
8 competitive, that they push up to be more Democratic
9 because they packed the Republicans into these four
10 districts.

11 Q. So your chart here indicates four Republican
12 districts?

13 A. That's right. Well, it's four districts that
14 are 50 percent -- where statewide Democratic candidates
15 have averaged less than 50 percent of the vote. That
16 doesn't necessarily mean that when you get to 50.1 percent
17 Democratic in the index the district automatically starts
18 electing Republicans. The difference between a 49.9
19 percent Democratic district where statewide Democrats have
20 averaged 49.9 percent and a district where Democrats have
21 averaged 50.1 percent is really inconsequential. For all
22 intents and purposes, everyone who studies elections
23 understands that those districts have the same probability
24 of electing a Republican to Congress.

25 Q. So what is the import of the 50 percent

1 threshold to elections analysts?

2 A. It's a useful thing. I mean, it's an obvious
3 missing thing given the ranges that are plotted on the
4 districts. It plots naturally 40, 60, and 80 percent, so
5 we plotted 50 percent on it as just a reference point.

6 Q. What does the 50 percent threshold tell you in
7 terms of analyzing elections with regard to a particular
8 district?

9 A. Again, it's something you can look at and see,
10 okay, this is around 50 percent. Like I said, whether
11 it's 50 percent or 50.1 percent or 50.2 percent, those
12 districts all have about the same probability of electing
13 a Republican to Congress. Now, if you want to ask me the
14 difference between a district that is 50.1 percent
15 Democratic and 58 percent Democratic for statewide elected
16 Democrats, that's a huge difference. That people would
17 latch onto and say, yeah, that's significant.

18 Q. So going back to the four dots below the line,
19 is that good for Republicans if there are four?

20 A. You may look at this and think, well, that was
21 nice of Democrats to make these districts even safer for
22 Republicans, and that's why it's important to kind of look
23 at the graph in its totality. I mean, yes, they make
24 these districts way more Republican than they need to be.
25 Realistically in New York, once you're below 50 percent

1 statewide Democratic votes, the Districts almost always
2 elects Republicans no matter what, so dropping it down to
3 42 percent doesn't help Republicans. It just wastes a lot
4 of their votes, and it does so -- the key is it does so at
5 the expense of these districts that would otherwise be
6 highly competitive or favor to elect a Republican.

7 Q. I believe you said earlier when I asked you
8 about the first graphic that it would be helpful to turn
9 to the second one first. If I can, sir, please go back to
10 the first graphic labeled Values of Gerrymandering Index.
11 Now with all of that context from the second graph, can
12 you please explain to the Court what this gerrymandering
13 index represents?

14 A. That's right. So the gerrymandering index is a
15 summary of the deviations that you see. So what the
16 gerrymandering index does, it gets a little complicated in
17 the math, but basically for every one of these bins in the
18 plot on Page 15, the most Republican district, the 2nd, it
19 calculates the average for each of those ranks from our
20 ensemble and then measures within our ensemble how far
21 each district in each map falls from that average. It
22 gets back to that intuition that I was describing earlier,
23 that some districts are just naturally -- some places it's
24 naturally okay to wind up far away from the average
25 because a map drawn with respect to politics gives you a

1 really wide range of possible outcomes. In some areas
2 it's really not okay to get far away from the average
3 because a map drawn without respect to politics would give
4 you a very narrow range of outcomes.

5 So what we do, to summarize, is we sum up for
6 all the maps all the deviations that we see from the
7 average, and you summarize them in this gerrymandering
8 index. And so each one of these bars represents a count
9 of how much just kind of naturally occurring deviation
10 from the average you get. So on the far left you can see
11 that there is a map that like hardly deviates from the
12 average of what we would expect, about 4, maybe 5 points,
13 on the very far left of those bar graphs. It actually
14 looks like there's two maps that do that.

15 At the other extreme there are a handful of maps
16 that have pretty -- that naturally occur drawn without
17 with respect to politics that have some pretty large
18 deviations from the average expected value, something
19 around .15. You can see it's almost like a little L on
20 the far, a gray L. Okay. That's the range -- the overall
21 range of deviations you would expect for maps drawn
22 without respect to politics in our sample. Then that red
23 line -- I did the exact same thing for the enacted map.
24 How far does it deviate from the average expected value?
25 And as you can see, it's an extreme outlier. It has a

1 larger total expected -- it has a larger total deviation
2 than any of the 5,000 maps drawn without respect to
3 politics in our ensemble. It's about twice the average
4 and about 6 standard deviations out. And a standard
5 deviation is just kind of a measure of natural spread.

6 THE COURT: Which map is that? Is that the
7 congressional or the state Senate?

8 THE WITNESS: Oh, these are all
9 congressional, your Honor. I'm sorry.

10 THE COURT: Okay.

11 Q. And, Mr. Trende, I see on Page 17 of your report
12 there's another graphic. It's labeled Average
13 Polsby-Popper Scores. What is a Polsby-Popper score?

14 A. So the Polsby-Popper -- there are a variety --
15 so after you draw the maps, you want to kind of do sanity
16 checks to make sure that the ensemble is not doing
17 something just far off-kilter. So the following charts
18 represent those. We wanted to make sure that when we're
19 drawing compact districts that we're doing them about --
20 comparable to what the Legislature was doing, in other
21 words, this outcome isn't just an artifact of whatever
22 parameter you choose for compactness.

23 And so the Polsby -- there have been a variety
24 of proposed compactness metrics. There's probably 100 of
25 them. The Polsby-Popper is one of the most commonly

1 utilized ones. It runs on a range from 0 to 1, where 1
2 would be a perfectly round district and 0 would be a
3 perfectly non-compact district, which is kind of hard to
4 -- it'd be a district with a lot of --

5 THE COURT: Zigzags?

6 A. -- zigzags and for Polsby-Popper a lot of arms
7 sticking out of it, if you will. And so for all the 5,000
8 draws in the ensemble, we calculated the average
9 Polsby-Popper score. The red line reflects the enacted
10 plan, and so the ensemble is performing comparably to the
11 enacted plan in terms of compactness.

12 Q. And did you do any other sanity checks?

13 A. So yes. We wanted to make sure that we weren't,
14 you know, obliterating minority-majority districts
15 accidentally with our ensemble, and so we counted the
16 number of minority-majority districts in the ensemble, we
17 looked at the enacted plan, and kind of did the same
18 thing. And --

19 THE COURT: You're on Page 18 now?

20 THE WITNESS: Yes, your Honor.

21 THE COURT: Okay.

22 A. And as you can see, the ensemble draws 9, 10, 11
23 or 12 minority-majority districts. The enacted plan has
24 9. So, again, it's performing comparably.

25 Q. And did you examine county splits?

1 A. Yes, your Honor. If you turn to Page 19, we
2 wanted to make sure that the map doesn't wasn't just, you
3 know, splitting a whole bunch of county splits, the
4 ensemble wasn't, you know, getting the score it was
5 getting because we weren't paying sufficient attention to
6 county lines. It actually performs quite a bit better
7 than the simulated maps. But, again, it does at least as
8 well as the enacted plan when it comes to county splits.
9 We actually split very few counties.

10 Q. And his Honor understandably asked you to
11 confirm that everything we've been discussing concerns
12 congressional maps. Did you also analyze New York's 2022
13 state Senate map?

14 A. Yes, your Honor. We went on and did a separate
15 round of analyses for the state Senate maps and --

16 Q. And what did you -- sorry. Go ahead.

17 A. That begins on Page 19 of the initial report.

18 Q. And did you form any conclusions about the state
19 Senate map?

20 A. Yes. So I won't -- it's the same process. You
21 interpret these plots in the same way, which I won't
22 rehash. But on Page 20 you can see the gerrymandering
23 indexes for the enacted plan versus the gerrymandering
24 indexes for the ensemble that we draw. And, again, it's
25 just an extreme outlier. That red bar is far outside the

1 range you would expect from these maps withdrawn without
2 with respect to politics.

3 Q. Did you perform the same sanity checks that you
4 did for the congressional map analysis --

5 A. Yes.

6 Q. -- with respect to the Senate map analysis?

7 A. Yes. So if you turn to Page 21, you can see the
8 dot plots. And, again, it's the exact same pattern we see
9 in the congressional maps. The places where you'd expect
10 to get heavily Democratic districts naturally, the enacted
11 plans fall exactly within the ranges that our maps drawn
12 without political information expect because the mapmakers
13 wouldn't have to pay attention to political data to draw
14 heavily Democratic districts on -- you know, in Downtown
15 Rochester or in Manhattan. So they drew the districts
16 they wanted there.

17 It's when you get, again, down into this range
18 of competitive districts that the DNA of the gerrymander
19 shows up again. You get -- you expect to start getting
20 districts where statewide Democrats won 50 to 55 percent,
21 which is a range that Republicans can win districts in,
22 that they'll at least be competitive, and the Legislature
23 pushes those districts up towards the 59, 60 percent
24 range, where Republicans just don't win much in New York.
25 That's accomplished by packing these districts in the

1 ranges from 4 to 13. Those districts are heavily packed,
2 made much more heavily Republican than they need to be, so
3 the remaining Republicans can be spread out over a bunch
4 of districts and rendered ineffective.

5 For the sanity checks, you know, those are
6 included on the following pages. And, again, the test is
7 whether you're performing comparably to what the
8 Legislature did, and these maps have comparable
9 compactness, comparable minority-majority districts, and a
10 comparable number of county splits.

11 Q. Sir, were you also asked to analyze population
12 deviations for the 2012 New York congressional and Senate
13 maps?

14 A. I was.

15 Q. And what did you conclude, if anything?

16 A. So the -- this is the table on Page 24. And as
17 we would expect, because New York is losing a
18 congressional district, the congressional districts are
19 all badly -- all, with the exception of 5 and 8 -- well, I
20 guess 5, 8, 10 and 12, are all badly underpopulated, as
21 large as a 10 percent deviation from perfect population
22 equality.

23 Q. Have you heard of the term malapportioned?

24 A. Yes. That's what a large portion of my beliefs
25 were dedicated to.

1 Q. And is what you were just describing with
2 respect to the 2012 congressional and state Senate maps
3 considered malapportionment?

4 A. Yes. Under -- I mean under US law, without a
5 good reason, they have to be perfectly equipopulous. So
6 these 10 1/2 -- 10.7 percent deviations are gross
7 malapportionment.

8 Q. Are you aware, sir, that Respondents submitted
9 expert reports in this matter?

10 A. Yes. And, of course, on Page 25 I did the exact
11 same analysis for the state Senate, which doesn't lose --
12 which is just as badly malapportioned. At least under the
13 Supreme Court of the United States law, you're allowed to
14 be plus or minus 5 percent. And as you can see, like
15 District 52 is 11.4 percent off, so the existing Senate
16 districts in 2012 to 2020 as of today are badly
17 malapportioned as well.

18 Q. Thank you.

19 A. And, yes, I am aware that they filed responsive
20 memos.

21 Q. Thank you.

22 Did you read Dr. Barber's report?

23 A. I did.

24 Q. Do you know Dr. Barber?

25 A. I do.

1 Q. How do you know him?

2 A. Dr. Barber and I have worked together on a
3 couple cases.

4 Q. Did you read Dr. Tapp's report?

5 A. I did.

6 Q. Do you know Dr. Tapp?

7 A. I do not know Dr. Tapp. I think he appeared as
8 a plaintiff in a case I was an expert. But other than
9 that, no.

10 Q. And did you read Dr. Ansolabehere's report?

11 A. I did.

12 Q. And do you know Dr. Ansolabehere.

13 A. I do. We served together as advisors for the
14 Arizona Independent Redistricting Commission.

15 Q. Let's turn now, sir, to Petitioner's Exhibit 2,
16 your second report. Please tell us, what was the purpose
17 of this report?

18 A. So having read the response reports and the
19 criticisms that were raised in them, we had an opportunity
20 to address them, and so that's what the reply is focused
21 around.

22 Q. Okay. And if you go to Page 2, I see there's an
23 Introduction and Executive Summary. In the first bullet
24 you write, Respondents' experts reports all miss the mark
25 badly. What did you mean by that, sir?

1 A. I honestly thought, you know, when you looked at
2 the arguments made by the respondents' experts, when you
3 looked at them and analyze them, the analysis actually
4 made the Petitioners' case stronger, which doesn't happen
5 that often.

6 Q. And please explain, why do you have that
7 opinion?

8 A. Well, if you -- let's take, for example, they
9 have criticism, but there's other constitutional
10 considerations that were not drawn into the initial round
11 of maps. And my first reaction was, well, they're all
12 capable of running these simulations. They've all done
13 it, at least two of them -- well, at least two of them
14 have either written about it or done them in other cases.

15 THE COURT: And the same methodology?

16 THE WITNESS: I don't believe Dr. Tapp uses
17 redist, but Dr. Barber uses it in cases.

18 A. So why didn't they run the simulations with
19 those constraints and see what comes out of it? But
20 lacking that, I went ahead and reran the simulations,
21 including the various proposed constraints. It was
22 actually helpful because, even when you do it in a way
23 that's incredibly generous to Respondents, you end up with
24 the exact same results.

25 So, for example, there was a criticism that we

1 didn't make municipal splits sufficiently seriously, so
2 the most generous way I could think of was, okay, if the
3 enacted plans kept a municipality in tact, we will keep --
4 in all the draws will keep it intact. So the exact same
5 choices they make we'll replicate. Even keeping those
6 municipalities intact, you get the same. You can look on
7 Page 15 of the reply, and it's the exact same pattern. It
8 makes no difference. They had an objection -- it's
9 reasonable -- that Voting Rights Act isn't just a draw
10 majority -- minority-majority districts. It's a more
11 intensive analysis than that.

12 So the most generous way to do that that I could
13 think of was say, okay, the way the Legislature drew every
14 ability-to-elect district in New York, we're going to
15 freeze those districts in place. So in all 5,000 of the
16 ensembles we're going to have, you know, the district
17 drawn -- in the Bronx drawn the exact same way as the
18 Legislature, just concede that those districts have to be
19 drawn that way. That guarantees we're respecting ability
20 to elect at least as well as the elected plan does. It
21 also concedes a fair amount of ground because it concedes
22 that that district that goes from Yonkers to Yorktown has
23 to be drawn that way even though it takes in a lot of
24 Republicans up around Yorktown and it concedes that the
25 Republicans in Southeast Brooklyn should be split between

1 the two minority-majority districts there.

2 But even making that concession, you can see the
3 plots on Page 17 and 18, and they do the exact same thing.
4 So the plot -- these look different because the -- when
5 you freeze all those districts, it makes the map
6 noncontiguous, so you have to break the analysis into
7 chunks. So the map on Page 17 is the remaining chunk,
8 which is the four districts on Long Island, I guess, and
9 then looping around in part of Westchester County. But
10 you see the exact same pattern.

11 Even making this concession to Respondents, the
12 first -- the most Republican district, which would be the
13 2nd District, is made far more Republican than you would
14 expect it to be, and it comes at the expense of the
15 Districts -- the second and third most Republican
16 districts being pushed from a range in the mid to low 50s
17 up towards 60 percent. So it has the same packing and
18 cracking pattern even making these concessions to the
19 respondents.

20 If you look on Page 18, so this is the 10th,
21 11th, and 12th, so it's the Staten Island district,
22 Nadler's district -- representative of Nadler's district
23 and representative of Maloney's district, and here it's
24 really plain that that Staten Island district, you would
25 expect it to land somewhere between 50 and 55 percent

1 Democratic. Defining the Democratic as the average
2 statewide Democratic vote share, they've drawn it up to 62
3 percent, taking it out of a range that Republicans would
4 routinely be able to win, pushed it into something where
5 Republicans would have almost no chance of winning. It's
6 done so, if you look at the other two districts, by making
7 those two districts less Democratic than you would expect
8 from a map drawn without respect to politics.

9 And then, finally, on Page 18 you can see the
10 districts in Upstate New York. And, again, it's the same
11 basic pattern. Three districts are drawn more Democratic
12 than you would expect them to be, which then allows
13 Districts 4, 5, and 6 to be pushed either outside --
14 completely outside of what we would expect or towards the
15 far extreme of what we would expect, making them far more
16 Democratic than a map drawn without with respect to
17 politics, doing away with what we would expect to be a
18 Republican-leaning district or at the very least a very
19 competitive district.

20 So then, you know, there's another concern about
21 core retention, pay attention to the district core, so we
22 did the tame thing: froze the municipalities in place,
23 froze the ability to elect districts in place on the
24 respondents' terms, and then programmed in a constraint
25 for the redistricting simulation to take into account

1 existing district cores. And as you can see on Page -- I
2 won't rehash everything, but as you can see on Pages 19
3 and 20, it's the exact same pattern. Most Republican
4 districts made far more Republican than you would expect,
5 which turns around and makes the remaining districts more
6 Democratic at the expense of leaning Republican
7 competitive districts.

8 Q. Mr. Trende, do you recall that certain
9 respondents' experts criticize the number of simulations
10 you rely upon in your report?

11 A. Yes.

12 Q. And what's your response to that?

13 A. So for -- the assertion was that 5,000 draws
14 weren't enough. For this we did 10,000 draws. When
15 Dr. Barber wrote his report, he did 50,000 draws and got
16 similar results. So, you know, by doubling the number of
17 draws, I think we -- even without respect to Dr. Barber's
18 report, I think we answered that, but yeah.

19 Q. So running twice as many simulations didn't
20 change anything?

21 A. It did not change anything.

22 Q. And why did you rely upon 5,000 simulations in
23 your initial report?

24 A. So this program is written by a political
25 scientist at Harvard who does a fair amount of expert

1 testimony and, in cases where he has run his software and
2 courts have excepted it, he's used 5,000.

3 Q. Mr. Trende, do you recall that Respondents'
4 experts claim that the enacted maps actually have a
5 pro-Republican bias?

6 A. Yes.

7 Q. And what is your response to that?

8 A. I mean, I don't find that particularly credible.

9 Q. And why not, sir?

10 A. Well, they make two foundational mistakes. You
11 know, there's kind of a commonsense to me that this is
12 drawn by the Democratic Legislature probably not to help
13 Republicans. But when you look at the argument that they
14 make for why this is a pro-Republican map, what they're
15 doing is they're taking a district where the average
16 statewide Democrat won less than 50 percent of the vote
17 and just calling it Republican. They're taking districts
18 where the average statewide Democrat won more than 50
19 percent of the vote whatever -- whether it's 90 percent or
20 50.0001 percent and labeling it Democrat, and comparing
21 that to the ensemble. And that's just not a very good way
22 to think about elections. If the average statewide
23 Democrat, you know, runs one vote below 50 percent versus
24 if the average statewide Democrat runs one vote above 50
25 percent, that makes no difference in how likely it is that

1 that district is going to elect a Republican to Congress,
2 and that's part of the insight on why these simulation
3 interpretations are structured the way that they are.

4 These aren't -- the political index is not
5 expected congressional results. It's the statewide
6 Democrat's average run. So you can see how those votes,
7 which are the ones that are actually available to the
8 Legislature when they're drawing the districts, they --
9 you can see how they've been manipulating those partisan
10 vote shares.

11 Another way to think about it is that if you
12 look at -- if you go back -- I guess we have the reply
13 open, so we can turn to Page 15, and you can see that in
14 ordered District Number 5 --

15 THE COURT: Let me catch up.

16 THE WITNESS: I'm sorry, your Honor.

17 THE COURT: That's all right. Okay.

18 A. You can see in ordered District Number 5 that
19 there's a lot of districts that are drawn right around
20 that 50.1 percent Democratic, right? The big bulk is
21 really close to that 50/50 line. And, again, the reason I
22 put that dotted line there is so we could have this
23 conversation. Otherwise we'd really be swanking. It will
24 treat -- the respondents' experts' approach will treat
25 that district right at the line the same way as the

1 enacted district, which goes up to around 55 percent
2 Democratic, and that's just not a sensible way to think
3 about elections.

4 A district where statewide Democrats have won 55
5 percent or, as you get further out on this map, 60
6 percent, it's just fundamentally different from a district
7 where statewide Democrats have one 50.1 or 52 percent of
8 the votes. Republicans win in those districts around 50
9 or 51 or 52 percent. They don't win in districts where
10 statewide Democrats have won 58 or 59 percent of the
11 votes. Taken literally, the respondents' experts would
12 treat a district where statewide Democrats got 50.1
13 percent of the vote the exact same way that they would
14 treat a district where statewide Democrats averaged 90
15 percent of the vote. Again, that's just not a good way to
16 think about elections. So that's one reason.

17 The other reason -- and this is something I've
18 been alluding to as I've spoke. You know, I've been kind
19 of asserting that Republicans win in 50.1 percent
20 districts. So if you turn to Page 10 of my report. So
21 this is --

22 THE WITNESS: Sorry, your Honor.

23 THE COURT: One second. Okay.

24 A. So this is the existing congressional districts,
25 and the next column you can see is index which is, again,

1 our average statewide Democratic vote share in the
2 districts. The remaining three --

3 THE WITNESS: You're on the right page,
4 your Honor.

5 A. The remaining three columns are the
6 congressional results for those districts in 2020, 2018,
7 and 2016, the last three cycles. Those are actually
8 pretty good cycles for Democrats. Republicans won the
9 popular vote by a point in 2016. They lost by, I think, 8
10 points in 2018, and then they lost by 3 points in 2020.
11 So this doesn't include Republican waive years like 2014
12 or 2010. Regardless, if you look at this, in the four
13 districts that are drawn -- that have an index of less
14 than 50 percent, Antonio Delgado has managed to win in the
15 22nd District, but otherwise Republicans have won usually
16 handily in districts where the index falls below 50
17 percent.

18 Okay. When you go over into this 50.39 percent
19 district, things don't magically change and all of a
20 sudden Democrats start winning. As a matter of fact,
21 Republicans have won that 1st District sometimes by pretty
22 substantial margins even though the average statewide
23 Democrat has won 50.39 percent of the vote. The 19th
24 District -- actually, I'm sorry, the 22nd isn't Delgado.
25 That's Claudia Tenney's district that she lost in the

1 waive year of 2018. The 19th is Delgato, which is 50.44,
2 and the Republicans won it in 2016, and then he won it the
3 last two cycles.

4 Then you get to the 2nd District, which has an
5 index of 50.176, and Republicans have won it all three
6 cycles, including an open race after Peter King retired.
7 The 11th District, which is the Staten Island district,
8 has -- the existing Staten Island district has an index of
9 52.05. And, again, it doesn't magically become
10 Democratic. Republicans win their regularly. Up until
11 about 55, 56 percent, Republicans are able to win those
12 districts or at the very least are competitive in them,
13 and then the districts become increasingly reliably
14 Democratic.

15 Again, this is -- and that's the range that the
16 Democrats are pushing the districts into, this 57, 58, 59
17 percent average Democratic statewide vote share. They
18 know this. And so that is why you don't want to use the
19 50 percent -- if you were to try to boil things down to
20 Republican or Democratic, the 50 percent threshold would
21 not be the threshold a serious elections analyst would use
22 to try to categorize these.

23 MR. MOSKOWITZ: No further questions, your
24 Honor.

25 THE COURT: All right. On behalf of the

1 Governor, questions?

2 MS. MCKAY: The respondents have conferred,
3 and in interest of efficiency, if we can switch the
4 order in which we will conduct cross-examinations, I
5 think that it will limit it and prevent repetition.

6 THE COURT: Who would like to go first?

7 MR. HECKER: Your Honor, I would. And if
8 the Court will permit, can we just take a very short
9 recess so we can mark a couple of exhibits and use
10 the restroom?

11 THE COURT: Yes, we can. It's about time
12 anyway. It's almost 11:00 o'clock. We'll 10
13 minutes, 15 minutes, and we'll start again at about a
14 quarter after. Thank you.

15 MR. HECKER: Thank you, your Honor.

16 MS. MCKAY: Thank you, your Honor.

17 (A recess was taken.)

18 (Exhibits S-1 through S-5 were marked for
19 identification.)

20 THE COURT: All right. Let's proceed with
21 cross-examination, Mr. Cuti -- Cuti?

22 MR. HECKER: Hecker.

23 THE COURT: I'm sorry. Mr. Hecker.

24 MR. HECKER: Good morning, your Honor.

25 CROSS-EXAMINATION

1 BY MR. HECKER:

2 Q. I'm Eric Hecker from Cuti Hecker Wang, and with
3 my colleagues I represent the Senate Majority.

4 Mr. Trende, in your report you refer to a few
5 cases from Ohio, North Carolina, and Pennsylvania in which
6 redistricting simulation analysis has been used, correct?

7 A. I think that's right, yes.

8 Q. And you alluded to -- but I don't believe you
9 mentioned his name in your direct testimony -- Dr. Kosuke,
10 K-o-s-u-k-e, Imai, I-m-a-i, right?

11 A. Right.

12 Q. And he's the Harvard guy you mentioned, right?

13 A. That's right.

14 Q. And he's one of the leading experts in
15 redistricting simulations, correct?

16 A. That's correct.

17 Q. And there's another gentleman named Jonathan
18 Mattingly at Duke, who's another person who testified in
19 some of the cases that you've alluded to, right?

20 A. Dr. Mattingly's testified, yes.

21 Q. And Dr. Maddingly, likewise, is one of the
22 leading experts in redistricting simulations, correct?

23 A. He shows up in a lot of these papers. Yes.

24 Q. He's one of the leading experts, right?

25 A. I suppose.

1 Q. And, sir, I don't doubt your credentials as an
2 expert in election law or in redistricting. Would it be
3 fair to say that you don't consider yourself to be at the
4 same level professionally as Dr. Imai with respect to
5 simulations?

6 A. When it comes to writing simulations, certainly
7 not.

8 Q. Dr. Imai writes his own algorithm code, correct?

9 A. That's correct.

10 Q. And you don't, right?

11 A. That's right.

12 Q. And you've never testified in any case before
13 about redistricting simulations, have you?

14 A. I think the Rucho case involved simulations,
15 Dr. Chen's simulations.

16 Q. Did you testify in the Rucho case about
17 redistricting simulations as an expert, sir?

18 A. On the remand is when they did most of the
19 simulations. I'd have to see my report, but I think it
20 was in -- mostly in response to Dr. Chen.

21 Q. Did you run any simulations in the Rucho case?

22 A. No. No, I did not do that.

23 Q. Have you ever testified in a case before in
24 which you've run redistricting simulations?

25 A. I don't think so.

1 Q. You didn't write the code for the algorithm that
2 was used in the redistricting simulations that you did in
3 this case, did you?

4 A. For the algorithm, no.

5 Q. You relied on algorithm code that Dr. Imai and
6 some of his colleagues developed?

7 A. Anyone who uses R is relying on packages -- not
8 anyone. Almost everyone who uses R is relying on packages
9 that other people have written, just like someone using
10 Excel is relying upon the back end of that program. But
11 that is correct.

12 Q. You didn't write the algorithm code in this
13 case, did you?

14 A. Not the algorithm code. That is correct.

15 Q. You relied on Dr. Imai's algorithm code; right?

16 A. That's right.

17 Q. Until relatively recently the state-of-the-art
18 algorithm for redistricting simulations was called Markov
19 chain Monte Carlo, right?

20 A. That's correct.

21 Q. Is that still the state of the art?

22 A. I think Dr. Imai's redist Sequential Monte Carlo
23 approach, at least in these cases, is becoming state of
24 the art because it's the one that consistently shows up in
25 court cases. I can't speak to how mathematicians view it.

1 Q. You mentions sequential Monte Carlo. That's a
2 different algorithm than Markov chain Monte Carlo,
3 correct?

4 A. It is.

5 Q. And Sequential Monte Carlo is the algorithm you
6 chose to use in this case to run your simulations, right?

7 A. Right.

8 Q. You could have used Markov chain Monte Carlo,
9 but you chose to use sequential Monte Carlo, correct?

10 A. Just like Dr. Barber, yes.

11 Q. And Sequential Monte Carlo is a new algorithm,
12 right?

13 A. That's right.

14 Q. It's a proposed algorithm, isn't it?

15 A. It's a proposed algorithm that's been accepted
16 repeatedly by courts. Yes.

17 Q. But you do agree it's a proposed algorithm,
18 right?

19 A. It's a proposed algorithm that's been accepted
20 repeatedly by courts. Yes.

21 Q. You refer in your expert report to a paper in
22 which Dr. Imai and his co-author announce and discuss
23 their proposed Sequential Monte Carlo algorithm, correct?

24 A. Correct.

25 Q. And that's a draft paper, right?

1 A. It has not been published yet. That's correct.

2 Q. It's a draft paper, right?

3 A. It has not been published. That's correct.

4 Q. Is it a draft, or is it not a draft?

5 A. It has not yet been published. That's correct.

6 My understanding is it's been submitted.

7 MR. HECKER: Your Honor, I've pre-marked as
8 Exhibit S-1 a copy of this paper and, with the
9 Court's permission, would like to give the witness
10 and the Court a copy.

11 Q. Mr. Trende, the document that's been pre-marked
12 marked as S-1 is a 26-page document that's entitled
13 Sequential Monte Carlo for Sampling Balanced and Compact
14 Redistricting Plans, right?

15 A. That's right.

16 Q. You've read this paper, right?

17 A. Yes.

18 Q. And this is the paper that you cite in your
19 report, correct?

20 A. Yes.

21 MR. HECKER: Your Honor, I offer this into
22 the record.

23 THE COURT: Petitioners?

24 MR. MOSKOWITZ: No objection, your Honor.

25 THE COURT: It's admitted without

1 objection.

2 (Exhibit S-1 was received in evidence.)

3 BY MR. HECKER:

4 Q. Mr. Trende, I direct your attention to the third
5 sentence of the abstract on the first page.

6 MR. HECKER: Your Honor, you have a copy,
7 right?

8 THE COURT: I do.

9 Q. The sentence reads: For successful application,
10 sampling methods must scale to large maps with many
11 districts, incorporate realistic legal constraints, and
12 accurately and efficiently sample from a selected target
13 distribution. Did I read that correctly?

14 A. You did.

15 Q. Do you agree with that statement?

16 A. Yes.

17 Q. And then the next sentence reads: Unfortunately
18 most existing methods struggle in at least one of these
19 areas. Do you see that?

20 A. Yes.

21 Q. Do you agree with that statement?

22 A. I don't really have a strong opinion one way or
23 the other on that.

24 Q. You don't have a strong opinion on whether the
25 Markov chain Monte Carlo algorithm struggles in that

1 regard? You don't have an opinion about that?

2 A. I don't.

3 Q. Okay. And you see that the next sentence
4 begins: We present a new Sequential Monte Carlo algorithm
5 with parentheses SMC, correct?

6 A. That's right.

7 Q. And we're on the same page that this is a new
8 algorithm, right?

9 A. That's right.

10 Q. And the first date of this draft towards the top
11 is July 2020, right?

12 A. Correct.

13 Q. And then the second date of the draft is
14 August 10, 2021, right?

15 A. That's right.

16 Q. And the authors use that word draft, don't they?

17 A. Yes.

18 Q. Can you take a look at Page 14 of this draft
19 paper. Do you see Section 6.2?

20 THE COURT: One second.

21 MR. HECKER: Take your time, your Honor.

22 THE COURT: Go ahead.

23 Q. Section 6.2 is a section of this draft paper in
24 which the authors have used the section heading Comparison
25 with a State-of-the-Art MCMC Algorithm. Do you see that?

1 A. Yes.

2 Q. And that's a reference to the Monte -- the
3 Markov chain Monte Carlo algorithm, correct?

4 A. Yes.

5 Q. And the authors refer to that as state of the
6 art, right?

7 A. It's the state-of-the-art MCMC algorithm. I
8 think state of the art is probably modifying MCMC.

9 Q. And if you could just go back a few pages to
10 Page 6. Do you recognize that the authors of this draft
11 paper refer to their algorithm in the section heading of
12 Section 4 as The Proposed Algorithm?

13 A. That's right.

14 Q. And then if you just skip ahead to Section --
15 I'm sorry -- to Page 17, Section 7, Concluding Remarks,
16 I'd like to direct your attention to the last sentence of
17 the first paragraph in the Concluding Remarks section, and
18 that sentence reads: Unfortunately existing approaches --
19 and could you just read the whole sentence to yourself and
20 tell me if you agree that the words existing approaches
21 are a reference to redistricting simulation algorithms
22 prior to or other than the Sequential chain -- the
23 Sequential Monte Carlo algorithm. That's what existing
24 approaches is referring to, right?

25 A. Yeah. It's probably referring to both to the

1 MCMC and the constructive Monte Carlo -- or the
2 constructive, yeah, algorithms.

3 Q. And that sentence reads: Unfortunately existing
4 approaches often struggle when applied to real-world
5 problems, owing to the scale of the problems and the
6 number of the constraints involved. Do you agree with
7 that sentence?

8 A. Maybe from a mathematician's viewpoint. But,
9 again, some of those -- the constructive Monte Carlo
10 approaches still get accepted by courts, and the MCMC,
11 Pennsylvania used them. I can't remember if they relied
12 on them in North Carolina or not. But for mathematics'
13 purposes, I don't have any reason to disagree with it.

14 Q. So you agree that those algorithms struggle with
15 real-world approaches, right?

16 A. Again, from a mathematician standpoint, perhaps.
17 But they've performed well enough for courts to employ
18 them repeatedly in evaluating plans, which is what, as an
19 expert, you're looking at.

20 Q. Mr. Trende, do the algorithms struggle with
21 real-world approaches or not?

22 A. Again, from a mathematician's perspective,
23 perhaps. From actual employment, being actually employed
24 and deployed in the real world, they've been accepted.

25 Q. And this is your first time, though, in any case

1 employing these approaches to a redistricting simulation
2 method, right?

3 A. Oh, that's right.

4 Q. And then let's look at the last paragraph of
5 this section. The first sentence reads: Future research
6 should explore the possibility of improving several design
7 choices in the algorithm. That's a reference to the
8 Sequential Monte Carlo algorithm that you used in this
9 case, right?

10 A. That's right.

11 Q. Future research should explore the possibility
12 of improving several design choices in the algorithm to
13 further increase its efficiency. Do you agree with that?

14 A. You always want to do better, so yeah.

15 Q. And then in the last sentence it says: Further
16 improvements in either of these areas, which refers back
17 to some issues that were alluded to in the prior
18 sentences -- further improvements in either of these areas
19 should allow us to better sample and investigate
20 districting plans over large maps and with even more
21 complex sets of constraints. Do you agree with that
22 statement?

23 A. Again, I'm sure there are improvements that can
24 be made that make it do even better.

25 Q. Would you agree that it is more difficult to use

1 redistricting simulations to draw conclusions when you're
2 working with large maps than small maps?

3 A. Yes.

4 THE COURT: Are you talking about a large
5 number of maps?

6 MR. HECKER: Fair question, your Honor.

7 Let me clarify.

8 Q. Fundamentally, when you're engaging in the
9 redistricting simulation exercise, you're building a map
10 on a precinct-by-precinct basis, correct?

11 A. Yeah. I think when he's talking about large
12 maps, he's talking about the number of precincts involved.

13 Q. And the more precincts involved, the more
14 complicated things get in terms of accurately using
15 redistricting simulations to draw conclusions, right?

16 A. So as -- yes. I mean, certainly when he's
17 talking about efficiency, it gets much more cumbersome and
18 difficult to draw the districts because there's
19 exponentially more choices as you add precincts.

20 Q. Could you look at 12, Mr. Trende. You see
21 Section 5 is entitled An Empirical Validation Study in
22 this draft paper?

23 A. That's right.

24 Q. How many precincts did Dr. Imai and his
25 co-author use in this draft paper for their Empirical

1 Validation Study?

2 A. They use a 50-precinct map that was derived in
3 an earlier article that's been used to kind of test out
4 these maps because in the 50-precinct map they've been
5 able to identify all the possible combinations of the
6 districts, and so you actually know what the correct
7 answer is and you can test to see how well you actually
8 replicate those maps. So that's why they test it on a
9 50-precinct map.

10 Q. And New York has over 1,400 precincts, right?

11 A. That's probably written in my report, but I
12 don't have a reason to disagree with you on that.

13 Q. How many do you think there are in New York?

14 A. Off the top of my head, I honestly could not
15 tell you, but 1,400 is certainly a reasonable number.

16 Q. More than 1,400, right?

17 A. I told you I don't know.

18 Q. And then looking at the conclusion again on
19 Page 17, that last sentence talks about the complexity of
20 large maps, meaning maps with lots and lots of precincts,
21 right?

22 A. That's right. As you add precincts, it becomes
23 more complex.

24 Q. And then it says: and with even more complex
25 sets of constraints, right?

1 A. That's right.

2 Q. And that's a reference to the fact that if the
3 inputs that actual real-life redistrictors are using are
4 more complex, that makes it harder to use your or
5 Dr. Imai's redistricting simulation methodology to draw
6 conclusions about the process, right?

7 A. Right. That's one of the benefits for when
8 we're imposing constraints. You can hard code a
9 constraint for Voting Rights Act into the program, but if
10 you just kind of accept what the state has done and pull
11 those precincts out and freeze them, you're not adding a
12 constraint that way. If you just freeze the
13 municipalities that the state has done, you don't add the
14 constraint that way. So the way it was done in the report
15 minimizes the number of constraints placed upon it down to
16 kind of the fundamental constraints that the algorithm
17 imposes upon it, like compactness.

18 Q. Mr. Trende, when it comes to the criteria that
19 actual map drawers actually use in actually constructing a
20 redistricting plan in the State of New York, the set of
21 constraints is complex, wouldn't you agree?

22 A. It can be, which is part of why we just concede
23 a large number of those constraints to the state.

24 Q. The fundamental exercise that we're doing here
25 in trying to determine whether the redistricting

1 simulations do or do not enable us to draw reasonable
2 conclusions in this case is we're comparing, as best as we
3 can, the approach that the actual map drawers actually
4 took with the approach that you told the computer to take
5 with the simulations, right?

6 A. That's a really long question, but I think the
7 answer is yes.

8 Q. And if we are successful in controlling all of
9 the criteria that the actual map drawers actually did
10 other than alleged partisan considerations and we see
11 differences between what actually happened and what
12 happened in the computer simulations, we can infer
13 partisan intent, correct?

14 A. That statement is true, yes.

15 Q. And if we don't adequately control for all of
16 the constraints that the actual map drawers actually used,
17 other than alleged partisan intent, the methodology
18 becomes less reliable, doesn't it?

19 A. To a certain degree. I mean, I think at a
20 certain point you look at it and say, well, we wanted to
21 keep this one town together. It's not really going to
22 make an impact on the outcome -- the partisan outcome of
23 it. So I guess less reliable, sure. But what we mean by
24 less is going to depend a lot upon the supposed constraint
25 that was missed or not programed in.

1 Q. Mr. Trende, the more that you adequately control
2 all of the variables that the actual mapmakers actually
3 used, the more you can infer intent, and the less you
4 adequately control for those variables, the less you can
5 infer intent, right?

6 A. In an abstract sense, yeah, that's right.

7 Q. Well, in an actual sense, that's not abstract,
8 is it? That's actually what we're doing. We're trying to
9 control for those variables because if you don't, you
10 can't infer anything; isn't that right?

11 A. When I said "abstract," I was referring to your
12 less or more, because less and more can mean a lot of
13 things. You're right. If there's like a town that the
14 Legislature really cared about that we -- well, we would
15 have kept it intact because we told it to, but it's not
16 going to have a huge impact; it's not going to affect the
17 quality of our inferences, but I suppose it would make a
18 marginal decrease in it, decline in it, yeah.

19 MR. HECKER: Your Honor, I'd like to show
20 Mr. Trende what's been pre-marked, somewhat
21 confusingly, as S-5 because I forgot to pre-mark it
22 during the break at first. Your Honor, this is just
23 a demonstrative exhibit. It's a printout from
24 Westlaw of some of the relevant sections of the
25 Constitution.

1 THE COURT: Thank you.

2 MR. HECKER: I'm not going to offer it. I
3 just want Mr. Trende and the Court to have the
4 language in front of them.

5 Q. Mr. Trende, you're familiar with Article 3,
6 Section 4, of the New York Constitution, correct?

7 A. That's right.

8 Q. Your redistricting simulations are designed to
9 mimic exactly what actual redistrictors actually consider
10 when they draw actual maps except for alleged
11 partisanship, correct?

12 A. They attempt to do what the map drawers were
13 doing.

14 Q. And it's important, when trying to use
15 redistricting simulations to define intent, to control for
16 all of the constraints prescribed in the Constitution
17 other than partisanship, right?

18 A. As best you can, yes. For example, the
19 districts never say that they're going to be exactly
20 equipopulous because, using precinct-level data, you can't
21 draw exactly equipopulous districts. And real map
22 drawer -- when I sat down to draw maps, once you get your
23 precinct layout, you start looking for blocks that would
24 make it exactly equipopulous. The issue is if you get
25 within 1,000 inhabits, moving those 1,000 inhabits out of

1 a 750,000-person district isn't going to affect the
2 partisanship that much. So that's an example of where
3 failure to precisely mimic exactly what's in the
4 constitutional language really doesn't affect our
5 inferences whatsoever because moving 500 people around in
6 a 750,000-person district is not going to affect the
7 partisanship. So when I'm quibbling with him about some
8 of this stuff, I'm really not trying to be disagreeable.
9 There are instances where it really doesn't matter if you
10 don't get precisely what the Legislature is doing.

11 MR. HECKER: Your Honor, I'm not going to
12 formally move to strike the nonresponsive part of
13 that answer because this is a bench hearing and we're
14 doing expert testimony.

15 Q. But, Mr. Trende, we're trying to move this long.
16 I would appreciate it if you would do your best to
17 reasonably limit your responses to my questions. Let's --

18 MR. MOSKOWITZ: I would just like to lodge
19 an object to that. I mean, first of all, if there
20 was no motion, I don't know what the purpose of that
21 statement was, and I think the witness, for the
22 record, has been doing his best to answer the
23 questions asked.

24 THE COURT: Let's proceed.

25 Q. Mr. Trende, can we look at Section 4(c)(3) --

1 withdrawn. Can we look at Section 4(c)(4) of the
2 Constitution, which is on Page 3 of this demonstrative
3 exhibit? Do you see that?

4 A. That's right.

5 Q. It says: Each district shall be as compact in
6 form as practicable. Do you see that?

7 A. Yes.

8 Q. Would you agree with me that that is a mandatory
9 requirement?

10 A. Yeah.

11 Q. Because the Constitution uses the word shall,
12 right?

13 A. Yes.

14 Q. But the Constitution clearly gives map drawers,
15 actual map drawers, discretion in how to apply that
16 standard, right? It says --

17 A. As practicable.

18 Q. -- as practicable, right?

19 A. Right. So a perfectly compact district would be
20 a circle, and you obviously can't draw a bunch of circles
21 in New York. So, yeah, there has to be some wiggle room.

22 Q. So you have to draw reasonably compact districts
23 but map drawers who are actually drawing them have
24 significant wiggle room about how compact a district
25 should be, right?

1 A. They certainly have wiggle room. You know, you
2 don't want to make it so significant that the term gets
3 written out of the Constitution. But, yeah, they have
4 discretion there.

5 Q. And they have discretion and wiggle room because
6 the compactness requirement often competes with other
7 mandatory requirements, doesn't it, Mr. Trende?

8 A. Right, and so that's why we did the sanity
9 checks, to make sure that our algorithm was performing
10 comparably to the enacted plan when it came to
11 compactness.

12 Q. So let's just talk about what you did to address
13 compactness. There's nothing in either of your reports
14 that explains exactly how you told the computer to draw
15 districts as compactly as practicable, right?

16 A. I'll, for sake of argument, accept your
17 assertion. Yes.

18 Q. All right. So here we are. How'd you do it?

19 A. The SMC algorithm, as Dr. Barber and Dr. Tapp
20 intuited, runs the best with a compactness parameter of 1,
21 so I ran it with the compactness parameter of 1,
22 checked -- performed our sanity check to make sure that
23 that approximated what the Legislature was doing, which
24 happily it did, and ran it that way.

25 Q. What you mean, "it runs the best" when you set

1 it to 1?

2 A. It becomes inefficient the more you move off of
3 that 1, because I believe if you look at the target
4 distribution, the compactness parameters, the
5 Polsby-Popper 2 -- I mean, it's the Polsby-Popper 2, that
6 parameter, so 1 is just a repetition.

7 Q. So just so the Court understands what we're
8 talking about, to take a step back, you have an underlying
9 algorithm that someone else wrote; that you used to
10 redist, a package, to put parameters in that are designed
11 to approximate, as best as you can, the parameters the
12 actual map drawers use, right?

13 A. That's right.

14 Q. And then Dr. Imai's proposed algorithm from his
15 draft paper does the math, right?

16 A. That's right.

17 Q. And so we're now talking about one of several
18 ways in which you used the redist package to tell the
19 computer how to actually do these simulated
20 redistrictings, right?

21 A. That's right.

22 Q. And for compactness you had a range of choices
23 from 0 to 1. You could have picked .25, you could have
24 picked .5, you could have picked .75, and you could have
25 picked 1, right?

1 A. I think you can go beyond 1, but yeah.

2 Q. Okay. And you picked 1 because you were aware
3 that in the algorithm that Dr. Imai announced in his draft
4 paper there are performance issues with the algorithm if
5 you use any number other than 1, right?

6 A. That is the reason we started with that. And
7 then when we performed our sanity check, it
8 approximated --

9 Q. Mr. Trende --

10 A. I'm answering your question.

11 Q. -- I'm not talking about your --

12 MR. MOSKOWITZ: Objection, your Honor.

13 Q. I just want to ask you about how you picked your
14 number.

15 THE COURT: Answer the question.

16 Q. You picked under 1 because the other choices
17 don't work very well, right?

18 A. That's not right, your Honor. I picked number 1
19 because -- in part because the other choices don't work
20 well. That's where I started. Then I looked to see if it
21 approximated what the Legislature did. And as we saw on
22 the sanity check, it ends up in the exact same range, and
23 so it worked.

24 Q. Mr. Trende, I promise you we'll get to the
25 sanity checks. I'm talking about when you started

1 programming, telling the computer what constraints to use.
2 When you sat down and told the computer that you wanted to
3 use Compactness Level 1, that represented effectively a
4 value choice, didn't it?

5 A. So when I sat down and selected 1, yes, it's
6 because I know that's what has been used in a lot of these
7 cases in the past and that's where the program works the
8 best.

9 Q. So when actual redistrictors are sitting down to
10 actually draw an actual map, they have to make a series
11 of decisions, many, many decisions, across the map about
12 how to weigh and balance compactness with other criteria,
13 right?

14 A. That is certainly my experience.

15 Q. And actual map drawers who are doing that are
16 making value judgments about how to trade off compactness
17 with other competing concerns, right?

18 A. Again, that's my experience. Certainly.

19 Q. And when you picked 1, you caused the
20 simulations to come out a way that was different than if
21 you had picked .25 or 5 or 6 or 11 or .78, right?

22 A. That's right.

23 Q. Mr. Trende, on Page 22 of your report, where you
24 go through the Polsby-Popper scores --

25 THE COURT: His first report?

1 MR. HECKER: Yes, your Honor.

2 THE COURT: Page what?

3 MR. HECKER: Page 22.

4 BY MR. HECKER:

5 Q. You see that on the top of Page 22 of your
6 original report, you have the Polsby-Popper scores for all
7 of the simulated Senate maps?

8 A. That's correct. Yes.

9 Q. Does anything look weird to you about that
10 chart?

11 A. It's how the districts came out. No.

12 Q. Well, I know it's how they came out. Does how
13 they came out look weird to you? Doesn't it look like
14 there's two very significant clusters, one around the .23
15 range and the other about the .26 range?

16 A. It's a standard bimodal distribution, yes.

17 Q. What do you mean by "standard bimodal
18 distribution"?

19 A. There are two humps.

20 Q. Is it your testimony that there's nothing
21 noteworthy about that?

22 A. Not without going through the maps and looking
23 at them individually.

24 Q. Did you go through the maps and look at them
25 individually?

1 A. No.

2 Q. I want to direct your attention in the
3 Constitution to Subsection 5. The second sentence begins
4 that when you're actually drawing actual districts, you
5 shall consider the maintenance of cores of existing
6 districts, right?

7 A. That's correct.

8 Q. Would you agree with me that it's really
9 important when you're doing redistricting simulations to
10 adequately account for that variable? Right?

11 A. You do it as well as the existing maps do.

12 Q. I was asking you if it's important. Is it
13 important or unimportant?

14 A. It's important to do it about as well as the
15 enacted maps did.

16 Q. Okay. And how did you do it? You told me that
17 with respect to compactness, you type 1 into Dr. Imai's
18 package. How did you do this with respect to cores? How
19 did you make sure that your simulations adequately
20 simulated what the actual mapmakers were doing?

21 A. So you can program in a constraint that tells
22 the package to pay attention to cores, and you can look to
23 see the percentage of cores that are retained and see if
24 it's comparable to what the enacted plan did.

25 Q. And your report -- neither your report nor your

1 reply report tells us exactly what you did when you told
2 the computer to look at cores, right?

3 A. That's right.

4 Q. So here we are. What did you do?

5 A. I don't remember the exact line in the code.

6 Q. You don't remember the exact line in the code.

7 Is the code that you used in the record in this
8 case?

9 A. I have no idea.

10 Q. If the code that you used is not in the record
11 in this case and you can't tell us today, would it be fair
12 to say that we just don't know how you programmed this
13 package to account for cores when you were simulating what
14 the actual map drawers did?

15 A. Beyond the description that I just gave and
16 what's in the report, you wouldn't know any more than
17 that.

18 Q. And would you agree with me that, just as
19 compactness, if you use 7, you get a different result than
20 if you use .07? How you actually programmed the computer
21 to run these simulations with respect to cores would be an
22 important thing to know in evaluating whether your
23 simulations accurately mimicked what the actual
24 redistrictors actually did, right?

25 MR. MOSKOWITZ: Objection, your Honor.

1 There was a lot of references to "you," and I don't
2 understand the question of -- whether it was
3 regarding us as attorneys, the Court. Can we get
4 some specificity?

5 THE COURT: Overruled. But if he needs
6 clarification, he can ask for it.

7 Q. Mr. Trende, did you understand that question?

8 A. Not anymore. I might have at the time.

9 MR. HECKER: Can I ask the court reporter
10 to read it back, please.

11 (The record was read back by the court
12 reporter.)

13 BY MR. HECKER:

14 Q. It was a long question. Would you like me to
15 break it down?

16 A. I think that would help us.

17 Q. You weren't cavalier about what you told the
18 computer to do with respect to the cores of prior
19 districts, were you?

20 A. I don't think so.

21 Q. You recognized that whatever value you told the
22 computer to assign to preserving the cores of prior
23 districts was important, right?

24 A. I mean, it can be important. I don't know that
25 moving it one or two one direction or another will

1 actually affect the outcome of it, but it is something to
2 consider. Yes.

3 Q. What about moving it much more than one or two?
4 What about moving it a lot? Wouldn't it be important to
5 consider whether or not to move the cores figure a lot in
6 one direction or another?

7 A. Again, I think you do -- it's something to
8 consider, which is why I think you do the same type of
9 sanity check of seeing if you preserved district cores
10 roughly as well as the enacted plan did.

11 Q. Mr. Trene, if you went back right now and
12 changed the core figure that you used by moving it a lot,
13 you would expect the simulations to come out different,
14 wouldn't you?

15 A. Well, they would certainly change at least some,
16 yeah.

17 Q. And we don't know what figure we used, do we?

18 A. Well, to give an example, like I said, in my
19 initial report we didn't consider cores at all. In the
20 follow-up reports we considered all -- we did consider
21 cores among other things, and it doesn't change the
22 answer. So going from no consideration to consideration
23 that roughly replicates what the enacted plan does doesn't
24 change the answer. I guess it's conceivable that if I
25 moved it one way or the other a substantial amount, that

1 you'd get something different, but I don't know that I
2 have a reason to believe that.

3 THE COURT: My question is --

4 THE WITNESS: Yes, your Honor.

5 THE COURT: -- if you're giving a value to
6 the cores and it varies widely with what the enacted
7 maps are, do you change your value to come up with
8 something that's analogous to the enacted maps?

9 THE WITNESS: I mean, you can do it that
10 way because you want to try to follow what the
11 enacted maps are doing. Got it right the first time.
12 Frankly, we got it right without considering cores.

13 BY MR. HECKER:

14 Q. You didn't do that in this case, Mr. Trende, did
15 you? Like with compactness, you didn't run a sanity check
16 that involved analyzing the compactness scores -- and
17 there's lots of different measures -- in the enacted plan
18 and then go back and try a different number other than 1.
19 You didn't do that, right?

20 A. Because when you use the number 1, you get the
21 same Polsby-Popper scores -- Popper-Polsby --
22 Polsby-Popper scores as the enacted map shows. We got it
23 right the first time; so, no, I wasn't interested in what
24 happens if you use a compactness store of .01 because
25 we're already doing what the Legislature did when it did

1 its enacted map.

2 Q. How many different ways are there of measuring
3 compactness, sir?

4 A. Well, there are a lot of metrics out there.

5 Q. And Polsby-Popper's just one of them, right?

6 A. It's one of the most widely utilized ones, but
7 yes.

8 Q. Isn't the generally accepted methodology among
9 redistricting experts when measuring compactness to look
10 at different measures and see how they all shape up?

11 A. You can look at different measures. That's
12 right.

13 Q. Isn't it the generally accepted way of doing it,
14 to look at more than one compactness measure? Right?

15 A. I know people who look at a variety. I know
16 people who have their favorite compactness measure that
17 they do. If there's something wrong with some of the
18 other compactness measures, you have four experts who are
19 perfectly capable of running the scores and saying it's
20 off.

21 Q. Let's talk about county splits. On Page 11 of
22 your report -- I'll just read it to you. I don't think
23 it's controversial -- you say: I instructed the
24 simulation to create 5,000 districts that respect county
25 subdivisions. That's what you did, right?

1 A. Which -- I'm sorry.

2 Q. I'm in your original report at Page 11.

3 A. Okay.

4 Q. The bottom it says: I instructed the simulation
5 to create 5,000 sets of 26 reasonably compact districts,
6 right?

7 A. Yes.

8 Q. And we're talking about the congressional
9 districts, right?

10 A. That's correct. Yeah.

11 Q. How did you tell the computer to draw reasonably
12 compact districts? Your report doesn't tell us how you
13 did it, right?

14 A. I think I just explained that to you. The
15 compactness parameter's set at 1, and it replicated what
16 the enacted plan does.

17 Q. I confused myself, sir, and I apologize. Let's
18 look at Page 11 --

19 A. Yes, sir.

20 Q. -- and I'll slow it down for you. All right.
21 You know what, forget about the report because I'm not
22 sure where it is. You would disagree with me generally
23 that you instructed the computer to respect county
24 subdivisions?

25 A. That's right. Yes.

1 Q. And how did you do that?

2 A. That is a built-in parameter. You -- in the
3 shapefiles you assign a code for each county in New York,
4 and there is a command, county equals whatever you labeled
5 that column, and it'll respect county lines.

6 Q. When you say "respect county lines," you don't
7 mean it won't cause county lines to be split, do you?

8 A. You have to split county lines.

9 Q. Right. So you're not respecting county lines;
10 you are trading off one criterion, which is trying to
11 minimize county splits as much as you can, with the other
12 equally important redistricting criteria prescribed in the
13 Constitution, right?

14 A. That's right.

15 Q. And that requires a balancing fundamentally,
16 doesn't it, Mr. Trende?

17 A. Again, that's why we do things and make sure
18 they come out -- you know, the other criteria come out
19 roughly to what the Legislature was doing.

20 Q. Mr. Trende, just --

21 A. We perform comparably.

22 Q. -- just try and stick with me because you didn't
23 answer my question. It either does or doesn't require a
24 balancing. When an actual map drawer is trying to heed
25 the constitutional command about respecting county lines,

1 what the actual map drawer is doing is balancing that
2 criterion with other competing criteria, right?

3 A. That's my experience.

4 Q. Did you instruct this algorithm to balance the
5 goal of respecting county lines with other applicable
6 criteria?

7 A. You don't directly -- you don't directly tell it
8 to do that. That's why you perform the sanity checks of
9 going back and making sure that the other criteria are
10 respected, similar to what the enacted plan did.

11 Q. You don't do that because you can't do it,
12 right, Mr. Trende? There's no balance button in
13 Dr. Imai's algorithm, is there?

14 A. That's right.

15 Q. It's a toggle. You either turn respect counties
16 on or you turn it off. Those on the two choices in the
17 algorithm that you used, right?

18 A. That's right. There is a parameter where you
19 can tell it -- where you can affect the weights placed on
20 county traversals but --

21 Q. Did you do that?

22 A. No, I didn't.

23 Q. You didn't do that?

24 A. No.

25 Q. Let's talk about communities of interest. The

1 New York Constitution requires actual map drawers who are
2 actually drawing actual districts to consider communities
3 of interest, right?

4 A. That's right.

5 Q. There's no discretion not to do that, right?
6 You have to consider communities of interest if you are
7 actually drawing an actual plan, right?

8 A. You have to consider them, yes.

9 Q. And that's what you did in Virginia with
10 Professor Grofman, right, one of the things you did?

11 A. I think that's right, yes.

12 Q. You and Dr. Grofman together drew the Virginia
13 districts, all three maps, late last year, right?

14 A. That's right.

15 Q. And you guys sat down, and you looked at the
16 Virginia constitutional requirements, and you marshaled
17 your decades of collective experience in redistricting,
18 and you did your best to apply the Virginia criteria
19 reasonably, right?

20 A. That's right.

21 Q. And then you collectively wrote a report to the
22 Virginia Supreme Court telling them what you and
23 Dr. Grofman had done and why what you did was appropriate
24 and should be adopted, right?

25 A. That's right.

1 Q. And the Virginia Supreme Court did, in fact,
2 bless and adopt what you and Dr. Grofman did together in
3 Virginia, correct?

4 A. That's right.

5 MR. HECKER: Your Honor, we've marked as
6 S-2 a document that I'd like to show the witness and
7 the Court.

8 THE COURT: What's it -- S what?

9 MR. HECKER: S-2.

10 THE COURT: Thank you.

11 BY MR. HECKER:

12 Q. Mr. Trende, this is a 55-page document dated
13 December 7, 2021, right?

14 A. That's right.

15 Q. This is a copy of the memo or report, whatever
16 label you want to give it, that you and Dr. Grofman
17 submitted to the Virginia Supreme Court explaining why you
18 felt that the Virginia Supreme Court should adopt the plan
19 that you -- the plans that you and Professor Grofman drew,
20 correct?

21 A. This is the first memo, yes. There were two.

22 MR. HECKER: Your Honor, I'd like to offer
23 this into evidence.

24 THE COURT: Petitioners?

25 MR. MOSKOWITZ: No objection.

1 THE COURT: It's admitted.

2 (Exhibit S-2 was received in evidence.)

3 BY MR. HECKER:

4 Q. Now, Mr. Trende, just to jump sideways for a
5 second, my colleague just reminded me that I misspoke
6 earlier when we were discussing the number of precincts in
7 New York. Dr. Imai's validation testing was on 50
8 precincts. Do you remember we had talked about that?

9 A. Yes.

10 Q. And I believe I had said that New York has 1,400
11 precincts. I'm now being told it has 14,000. Does that
12 number surprise you?

13 A. As I said when you asked me, I don't know as I
14 sit here how many. I'll accept -- I mean, for purposes of
15 stipulation, I don't see a reason to disagree.

16 Q. Now, in your reply report you say that -- well,
17 why don't I just quote you rather than try and paraphrase
18 you. Can we look at your reply report at Page 19?

19 MR. HECKER: And, your Honor, this is the
20 reply report now.

21 THE COURT: Very good. I'm with you.

22 A. I'm sorry. We're on the reply?

23 Q. Yes. I'm jumping around a little bit.

24 THE COURT: Page 19.

25 Q. I'll try and get back on track. At the top of

1 Page 19 you say that communities of interest are a
2 notoriously difficult concept to nail that -- withdraw and
3 let me try it again. You say in the first sentence on
4 Page 19 that communities of interest are a notoriously
5 difficult concept to nail down, right?

6 A. Yes.

7 Q. But you did do your best with Dr. Grofman to
8 identify and heed communities of interest in Virginia when
9 you drew the Virginia map, right?

10 A. Yes.

11 Q. Okay. Take a look at Page 7 of Exhibit 2. And
12 if you just flip back to Page 6, you see this is a section
13 of the report that you authored with Dr. Grofman that
14 addresses communities of interest, right?

15 A. That's right.

16 Q. And so on the first full paragraph on Page 7 you
17 say: In particular, we were mindful -- that's a reference
18 to you and Dr. Grofman, right?

19 A. That's right.

20 Q. -- we were mindful of a Blue Ridge Mountains as
21 an important geographic divider in Virginia's history,
22 right?

23 A. That's right.

24 Q. So when you and Dr. Grofman were drawing the
25 districts, one thing that you were considering was drawing

1 districts that respected the Blue Ridge Mountains as an
2 important geographic divider, right?

3 A. That's right.

4 Q. And you also considered, turning to the second
5 sentence, the cores of the Shenandoah Valley, right?

6 A. That's the same thing as the Blue Ridge
7 Mountains, but yeah.

8 Q. And you considered the federal definition of
9 Appalachia, right?

10 A. That's right.

11 Q. And you considered the historic importance of
12 Southside Virginia, right?

13 A. Right.

14 Q. And the Piedmont region in general, right?

15 A. Yes.

16 Q. And the Fall Line, right?

17 A. That's right.

18 MR. HECKER: Capital F. Capital L.

19 Q. What's the Fall Line?

20 A. So if you're doing the geography of the south,
21 there's a point where the Appalachian -- so the
22 Appalachian Mountains kind of come off to the east, and
23 then there's a little escarpment that actually runs the
24 length of the south and creates waterfalls. It creates
25 waterfalls. That's why it's called the Fall Line. Past

1 that you're into the Coastal Plain.

2 Q. And that's an important geographical marker,
3 right?

4 A. Right.

5 Q. And you and Dr. Grofman also heeded that
6 important geographical marker when you were drawing
7 districts, right?

8 A. As best we could, yeah.

9 Q. You also were mindful when you were drawing the
10 Virginia districts of Virginia's major metropolitan areas,
11 right?

12 A. That's right.

13 Q. You wouldn't just willy-nilly upset major
14 metropolitan areas with district lines, would you?

15 A. No.

16 Q. I could go on. But wouldn't you agree with me,
17 Mr. Trende, that if you and Dr. Grofman had been
18 instructed not to pay any attention whatsoever to
19 communities of interest, the lines that you and he drew in
20 Virginia and recommended to that state's high court would
21 look very differently than if you had heeded those
22 communities of interest?

23 A. I'm really not trying to be disagreeable.

24 Q. Well, then just agree with me.

25 A. They would have looked different. Some parts of

1 Virginia -- like Appalachia's all concentrated in the
2 Virginia panhandle. So if you're trying to draw compact
3 districts, you're going to draw an Appalachia district,
4 and you're going to tend to draw a district that pays
5 attention to the Blue Ridge Mountains. But I think what
6 you're getting at, they would have been different in some
7 ways.

8 Q. And if you and Dr. Grofman were asked to draw
9 the districts in New York State for this cycle you would
10 have similarly tried in good faith to identify basic
11 communities of interest in New York, right?

12 A. I think that's right.

13 Q. And if you hadn't, that would have been
14 unlawful, right?

15 A. I mean, there are certainly communities of
16 interest that naturally get respected because of
17 New York's unique geography but --

18 Q. Well, it goes much farther than that, doesn't
19 it, Mr. Trende? It's not just the unique geography; it's
20 also, for instance, New York has major metropolitan areas,
21 doesn't it, Albany, Syracuse, Rochester, Buffalo? If you
22 and Dr. Grofman were going to draw the Upstate districts
23 for the congressional delegation, you would think about
24 not just New York's unique geography but also, among other
25 things, it's major metropolitan sectors, wouldn't you?

1 A. Yes. You wouldn't want to draw from like
2 Niagara Falls to Watertown, for an example.

3 Q. When you sat down to tell the computer to do
4 what it did with these simulations, did you give any
5 consideration to what the commissioners on the commission
6 had done in Round 1 of the commission process?

7 A. No.

8 Q. Are you generally aware that in theory there
9 were supposed to be two rounds of commission
10 recommendations to the Legislature?

11 A. That's my understanding, yes.

12 Q. And you're generally aware that the second step
13 didn't happen? There was no proposed final set of plans
14 submitted to the Legislature by the commission, right?

15 A. I think the commission deadlocked here. Yeah.

16 Q. But the commission did make a first set of
17 recommendations, correct?

18 A. I thought the Republican and Democratic
19 commissioners each made them, but maybe they came together
20 in the first round.

21 Q. Oh, I didn't mean to mislead you, sir. I'm not
22 saying that they came together, but they did make
23 recommendations. There were two plans that each received
24 same number of votes and were submitted to the
25 Legislature, correct?

1 A. That's my understanding. Yes.

2 Q. And you're aware, generally speaking, that
3 Plan A is the plan that was submitted by the Democrat
4 appointees and Plan B was submitted by the Republican
5 appointees?

6 A. That sounds familiar. Yes.

7 Q. And when you sat down to code the computer,
8 you're saying you didn't pay any attention to what any of
9 those commissioners did done in their proposals for the
10 first round during the commission?

11 A. That's right.

12 Q. Have you read any of the testimony before the
13 commission in connection with your work in this case?

14 A. I did not.

15 Q. Do you know one way or the other whether there
16 was any testimony in the approximately two dozen hearings
17 before the commission about communities of interest?

18 A. I don't.

19 Q. Do you know what the Southern Tier is?

20 A. There's a strip of counties along the southern
21 border of New York and Pennsylvania. They are referred to
22 as the Southern Tier.

23 Q. And what counties are generally understood to
24 comprise the Southern Tier?

25 A. I couldn't list all the counties for you. I

1 know there's some disagreement as to whether, say,
2 Allegany County's included or not, but generally I think
3 it runs from this county eastward to Broome.

4 Q. Does it also run westward towards Jamestown?

5 A. That's why I said I think -- my understanding
6 when I did New York, there was some disagreement over the
7 western tip of the southern districts on whether they
8 get -- always get included or not, but I think generally
9 they do.

10 Q. During the first round before the commission,
11 was there any general consensus between the Democrats and
12 Republicans on the commission about how to draw the
13 Upstate region?

14 A. I don't know.

15 Q. Was there any general consensus among the
16 Democrats and Republicans on the commission about how to
17 treat the so-called Southern Tier?

18 A. I don't know.

19 MR. HECKER: Your Honor, could we show
20 Mr. Trende what we've marked as S-3 and the Court, of
21 course?

22 THE COURT: Thank you.

23 Q. By the way, Mr. Trende, one of the things about
24 the simulation methodology that you used is it starts from
25 a blank page, doesn't it?

1 A. Yes. Yes.

2 Q. When your simulations start, they don't start
3 from the prior enacted plan; they start from a blank page,
4 right?

5 A. That's right.

6 Q. Mr. Trende, I'm showing you what's been marked
7 as Exhibit S-3. This is a four-page district, and the
8 first page shows --

9 THE WITNESS: I'm sorry. Does this need to
10 be --

11 (Discussion off the record with the court
12 reporter.)

13 BY MR. HECKER:

14 A. Oh, I'm sorry. I'm sorry. I was just trying to
15 be helpful. I'll stop.

16 Q. No problem.

17 The first page depicts the enacted congressional
18 plan, and for demonstrative purposes Districts 20, 22, 25,
19 and 26 are in dark gray and District 23 is in light gray.
20 And then the second and third pages show the same thing
21 for Plan A and Plan B, and then the fourth page puts them
22 all on the same page.

23 A. That's right. Yeah.

24 Q. Let me ask you a question: On the first page --
25 and I'm just going to ask you some questions about Steuben

1 County and Schuyler County, and I just want to know if you
2 know where those are, if you need me to point to them. Do
3 you know where Steuben County is on this map?

4 A. I believe it is the third from the left on the
5 bottom.

6 Q. It's the fourth from left.

7 And do you know where Schuyler County is?

8 A. I do not.

9 Q. Schuyler County is the small county immediately
10 to the northeast.

11 MR. HECKER: Your Honor, may I approach the
12 witness and just show him Schuyler County?

13 THE COURT: Yes. I think that would be
14 better.

15 Q. So that's Steuben, that's Chemung, and that's
16 Schuyler (indicating).

17 A. Okay.

18 Q. I'm just going to ask you to look at the Plan A
19 plan, which is the second page, the Plan B plan, which is
20 the third page, and, if it's helpful, the fourth page,
21 which shows them all together. Would you agree with me
22 that this document shows that there was a pretty strong
23 consensus among the Democrats and the Republicans on the
24 commission about how to approach the major metropolitan
25 areas of Albany, Syracuse, Rochester, and Buffalo?

1 A. Yeah. The Plan A and Plan B look roughly the
2 same, yeah.

3 Q. Remarkably close for a commission that
4 ultimately deadlocked, right?

5 A. They look -- I don't know about -- I don't know
6 about the comparison, but they are very close.

7 Q. And then same question with respect to the
8 Southern Tier: You could see that over towards the
9 Binghamton area in Plan A and Plan B there's a jag in
10 Plan B that looks different and the northern border of
11 these proposed District 23s are certainly not identical.
12 But would it be fair to say that these maps show there was
13 a general consensus even among and between Republicans and
14 Democrats on the commission that the way to approach
15 Upstate New York -- the way to balance, respect what's
16 there, respect for communities of interest, preserving the
17 prior cores, balancing compactness, achieving population
18 equality, all of that, there seems to have been a general
19 consensus about how you treat the four Upstate urban
20 centers and, generally speaking, what you do with the
21 Southern Tier, right?

22 A. There was a lot in that question, so I will
23 summarize it. It does look like the four urban cores you
24 describe in the Southern Tier districts are substantially
25 similar.

1 Q. And a couple of minutes ago you suggested that
2 one way to think about the Southern Tier reasonably might
3 be Steuben and everything to the east, correct?

4 A. Yes.

5 Q. But this shows that there's another way to think
6 about the Southern Tier, which is the entirety of the
7 Southern Tier from the west part of New York all the way
8 across the Pennsylvania border, right?

9 A. It shows that's how the Republicans and
10 Democrats both thought of it, yes.

11 MR. HECKER: Your Honor, I'd like to offer
12 this into the record.

13 THE COURT: Petitioners?

14 MR. MOSKOWITZ: No objection, your Honor.

15 THE COURT: It's admitted.

16 (Exhibit S-3 was received in evidence.)

17 THE COURT: About how much longer on this
18 witness, Mr. Hecker, just so I can get sort of an
19 idea of when we can take lunch?

20 MR. HECKER: The most honest answer I don't
21 know, but I think I'm more than halfway. In fact,
22 I'm highly confident I'm more than halfway. I just
23 don't know.

24 THE COURT: Would this be a good place to
25 take a break, or do you want another 15 minutes

1 before we break?

2 MR. HECKER: Your Honor --

3 THE COURT: I have to give staff an hour's
4 lunch.

5 MR. HECKER: I would really like to keep
6 going if that's okay.

7 THE COURT: Pick a spot in the next 15
8 minutes or so.

9 MR. HECKER: Okie doke.

10 BY THE COURT:

11 Q. I don't believe I got as far as talking about
12 S-4. I'd like to show the witness and the Court what
13 we've pre-marked as Exhibit S-4.

14 THE COURT: Thank you.

15 Q. Mr. Trende, you talked on your direct exam about
16 the ALARM Project, right?

17 A. That's right.

18 Q. And the ALARM Project is Dr. Imai's project at
19 Harvard, right?

20 A. That's right.

21 Q. You have respect for their work, right?

22 A. Yes.

23 Q. In fact, you downloaded the data that you used
24 to generate your partisan index from the ALARM Project's
25 website, right?

1 A. That's right.

2 Q. And the ALARM Project's website does more than
3 just offer that data; it also offers data about
4 simulating -- simulation plans that Dr. Imai and his team
5 have done for a variety of jurisdictions, right?

6 A. Correct.

7 Q. And one of those jurisdictions is New York,
8 correct?

9 A. It looks that way. Yes.

10 Q. Did you not look at what Dr. Imai did with his
11 algorithm in New York in connection with preparing your
12 report in this case?

13 A. I did not.

14 Q. You used the same algorithm he did, right?

15 A. If you're saying that he used SMC for the sample
16 plans that are before me, then yes.

17 Q. So this exhibit was taken from Dr. Imai's
18 website, or the ALARM Project website. The URL is at the
19 bottom of the exhibit. And this is how he or his team
20 depicts the enacted congressional plan and what I assume
21 is a random sample of three of the thousands of
22 redistricting simulations that he ran for New York. Do
23 you see that?

24 A. Yes.

25 Q. Do you see that none of the three samples

1 preserves the Southern Tier the way the Democrats and the
2 Republicans on the commission appear to have been jointly
3 proposing that it be preserved?

4 A. That seems right. Yes.

5 Q. Take a look at Sample Plan Number 1, and sort of
6 juxtapose it with where I told you Steuben and Schuyler
7 Counties are. Do you see that there's this quite
8 non-compact large congressional district in Sample Plan 1
9 that goes -- it's pink. It's one of the pink districts.
10 There are three. It goes all the way from the
11 northeastern part of the state to the southwest towards
12 Steuben, right?

13 A. That's right.

14 Q. And it ends -- or one of the places it ends is
15 in Schuyler County, right?

16 A. That's right.

17 Q. And do you know how far we are right now from
18 Schuyler County?

19 A. I don't.

20 Q. I'll just tell you it's about 18 miles down the
21 road. First town is Tyrone. Is Schuyler County part of a
22 community of interest -- well, withdrawn. If you look at
23 this district that I'm directing your attention to, do you
24 see that in the very northwestern part of the state
25 there's kind of a panhandle that ticks to the south in the

1 Prattsburgh area?

2 MR. HECKER: Your Honor, may I approach the
3 witness?

4 THE COURT: Northeastern you're talking
5 about?

6 MR. HECKER: Say that again.

7 THE COURT: Did you say northwestern?

8 MR. HECKER: I meant to say northeastern.

9 THE COURT: That's what I thought. Okay.

10 MR. HECKER: Did I misspeak?

11 THE COURT: Yeah.

12 BY MR. HECKER:

13 Q. Withdrawn and let me try again. If you look at
14 Sample Plan 1, to the northeastern most area that has
15 pink, do you see that panhandle where that oddly shaped
16 district that runs to the northeast from Schuyler County
17 kind of panhandles to the south?

18 A. I see the panhandle. Yes.

19 Q. I represent to you that that's Franklin County.
20 Is Franklin County part of a community of interest with
21 Schuyler County, sir?

22 A. I doubt it.

23 Q. What we're trying to do here fundamentally is
24 mimic what actual map drawers who actually would neutrally
25 and reasonably apply New York's redistricting criteria

1 would actually do if they were acting in a nonpartisan
2 way, right?

3 A. Yes.

4 Q. Mr. Trende, would anybody in their right mind
5 neutrally applying New York's redistricting criteria draw
6 a district that looks like this one in Sample Plan 1
7 connecting Schuyler County to Franklin County?

8 A. It seems about as crazy as drawing one from
9 Niagara Falls to Watertown, so however you want categorize
10 that. Sure.

11 Q. I'll accept your characterization. You're
12 saying that district looks crazy to you, right?

13 A. I think -- I think --

14 Q. Would it be fair to say that it's not the only
15 crazy district you've ever seen, but that is among the
16 array of crazy districts you've seen?

17 A. That's not a pretty district.

18 Q. Is it a crazy district?

19 A. It's not pretty.

20 Q. How about this, Mr. Trende: If you were trying
21 to predict what an actual map drawer actually applying
22 New York's actual criteria would do in this apportionment,
23 you wouldn't predict that they would draw a district like
24 that, would you?

25 A. That probably isn't one that would come to mind.

1 No.

2 Q. Did you, as part of your, quote/unquote, sanity
3 check exercise, go through your simulated maps and call
4 out the ones that in your significant experience drawing
5 actual districts didn't look to you, in your discretion,
6 like districts that an actual map drawer actually applying
7 New York's actual criteria would actually do?

8 A. I did not go through the 5,000 maps. No.

9 Q. Are any of the maps in your ensemble in the
10 record in this case?

11 A. No.

12 Q. If I want to go and look at Dr. Imai's maps that
13 he developed in the ALARM Project when he simulated
14 New York, I could go to the ALARM Project website and
15 download the information, including the shapefiles, right?

16 A. Yes.

17 Q. But if I want to or if the Court wants to or if
18 anybody else wants to evaluate whether the districts that
19 your simulations drew were crazy, we can't do that, can
20 we?

21 A. No, no more than in any of the other cases where
22 SMC's been accepted.

23 MR. HECKER: I think this is a good time to
24 take lunch.

25 THE COURT: Okay. This is the spot. We'll

1 take lunch. It's a little after 20 after. We'll get
2 back together at 1:35 to pick up again. 1:35. Okay?

3 MR. CUTI: Thank you, your Honor.

4 (A recess was taken.)

5 THE COURT: All right. Mr. Trende, you're
6 still under oath.

7 Mr. Hecker?

8 MR. HECKER: Thank you, your Honor. One
9 housekeeping item: I was told on the break by the
10 court reporter that Exhibits S-1, S-2, and S-3 have
11 been received into evidence in the record but that
12 S-4 has not as of yet, so I would just like to move
13 S-4 into the record.

14 THE COURT: Petitioners?

15 MR. MOSKOWITZ: Your Honor, I need a
16 reminder from our colleague here which document we're
17 looking at. Okay. Yes. No objection, your Honor.

18 THE COURT: S-4 was...

19 MR. HECKER: The ALARM Project.

20 THE COURT: Mr. Imai's?

21 MR. MOSKOWITZ: No objection.

22 THE COURT: It's admitted without
23 objection.

24 (S-4 was received in evidence.)

25 CROSS-EXAMINATION (CONT'D)

1 BY MR. HECKER:

2 Q. Good afternoon, Mr. Trende. I want to ask you a
3 couple of questions that are specific to the Senate, and I
4 wanted to start by asking you how your simulated plans on
5 the Senate side treat town splitting. What is the average
6 number of towns in your ensemble of Senate plans that are
7 split, if you know?

8 A. I don't know.

9 Q. But some of your ensemble of Senate plans splits
10 some towns, correct?

11 A. I would assume, but I actually don't know.

12 Q. What is your basis for assuming that some of
13 your simulated Senate plans split towns?

14 A. Well, you -- I mean, actually, yes. If we
15 consider New York City a town, it has to be split because
16 its population exceeds that of a Senate district, and
17 there are probably other cities in New York City about
18 which that -- or in New York about which that's true.

19 Q. Well, New York City's a city, not a town, right,
20 sir?

21 A. It's a municipality, but yeah.

22 Q. Well, there different kinds of municipalities
23 enumerated in the Constitution, right? There's counties,
24 there's cities, and there's towns, and the Constitution
25 doesn't treat them the same way, does it?

1 A. It shall consider the maintenance of cores,
2 existing -- existence of preexisting political
3 subdivisions, including counties, cities, and towns.

4 Q. Mr. Trende, let me direct your attention to
5 Section 4(a) of the Constitution on the first page of
6 demonstrative Exhibit S-5. Take a look at that long first
7 full paragraph, and look at the last five lines. Do you
8 see that on the fifth line from the bottom of the first
9 full paragraph of Section 4(a) of the Constitution it
10 says: No towns, except a town having more than a --

11 A. I'm sorry. Where are we? We're five lines from
12 the bottom?

13 MR. HECKER: Your Honor, may I approach?

14 THE COURT: Yes.

15 Q. Right there (indicating). The Constitution
16 says: No town, except a town having more than a full
17 ratio of apportionment, and no block in a city inclosed by
18 cities, streets, or public ways shall be divided in the
19 formation of Senate districts. Do you see that?

20 A. Yes.

21 Q. What does it mean for a town to have more than a
22 full ratio of apportionment?

23 A. I'm assuming that's the towns whose population
24 is greater than the Senate district plus 5 percent.

25 Q. Can you name the towns in the State of New York

1 that have more than a full ratio of apportionment?

2 A. No.

3 Q. Can you tell me where they are?

4 A. No.

5 Q. Can you tell me what region of the state
6 contains them?

7 A. No.

8 Q. Are there any towns in the Upstate region of
9 New York that contain more than a full ratio of
10 apportionment?

11 A. I don't know.

12 Q. So you don't know what the Constitution of the
13 State of New York says about which towns can or cannot be
14 split, right?

15 A. I mean, I think you showed me what it said, but
16 I don't know what towns those are, what it translates to.

17 Q. Would you agree with me that that constitutional
18 rule is mandatory and unequivocal for towns that do not
19 have a full ratio of apportionment?

20 A. Staying away from actual legal analysis, that's
21 my read of it.

22 Q. Well, you're a lawyer aren't you, sir?

23 A. I am, and that's why I know that when you're
24 doing statutory interpretation, you don't just look at the
25 language and move on.

1 Q. Well, let's just take it slow because I think
2 it's pretty clear. It says: No town, except the town
3 having more than a full ratio of apportionment, shall be
4 divided. Is there anything unclear about that, sir?

5 A. I see that. But, look, I'm not trying to be
6 difficult. I'm just saying that for all I know, there is
7 some case out there that has some different
8 interpretation. As someone just reading it here on the
9 stand, it looks pretty straightforward.

10 Q. Fair enough. I'll give you that. There could
11 be a case out there that says no town, except the town
12 having more than a full ratio of apportionment, shall be
13 divided holding that it means something else, but you'll
14 agree with me, as an attorney, that that language is
15 pretty clear and unequivocal, right?

16 MR. MOSKOWITZ: Objection, your Honor.

17 He's here as an expert witnesses. He's not -- he's
18 not here acting as an attorney.

19 MR. HECKER: You're Honor, he's here --

20 THE COURT: He's already answered the
21 question, I think.

22 Q. Okay. Mr. Trende, part of your role --
23 withdrawn. Mr. Trende, the essence of your role is to
24 cause the redistricting simulation algorithm to generate
25 an ensemble of representative maps that follow all of the

1 New York redistricting criteria except those -- except
2 partisanship, right?

3 A. The essence of my job here is to answer a
4 question before the Court and opine on the partisanship of
5 the districts. And if there is something that your
6 experts believe or that you believe is missing that makes
7 a difference -- they think makes a difference, they can do
8 it. I addressed this in the congressional districts. It
9 didn't make a difference. I have no reason to believe it
10 will be any difference for the Senate districts.

11 Q. You don't know one way or the other, do you?

12 A. I don't know.

13 Q. You didn't code the computer for your Senate
14 simulations to avoid the splitting of towns that have less
15 than a full ratio of apportionment, right?

16 A. That's correct.

17 Q. Mr. Trende, what's the "town on border" rule?

18 A. I don't know.

19 Q. What's the "block on border" rule?

20 A. I don't know.

21 Q. I'll represent to you that the "block on border"
22 rule and the "town on border" rule are contained in the
23 last three sentences of the paragraph we're looking at.
24 Can you just read those sentences and tell us if you could
25 describe what the "town on border" and "block on border"

1 rules are?

2 A. Do you want me to read them out loud or read
3 them and try to summarize?

4 Q. No, just to yourself.

5 Mr. Trende, would it be fair to say that you're
6 having trouble telling us what those rules mean on the fly
7 because they're complex?

8 A. It's a convoluted sentence, yes. The rule
9 itself may actually be pretty straightforward.

10 Q. Your simulations on the Senate side made no
11 effort to comply with the "town on border" or the "block
12 on border" rules, right?

13 A. That's right.

14 Q. Let's go to your original report, Page 15.

15 MR. HECKER: And, your Honor, I assume you
16 have a colored version of this with the blue and the
17 red.

18 THE COURT: I do. I'm sorry. Are you
19 talking about his report?

20 MR. HECKER: Yeah, Mr. Trende's original
21 report.

22 THE COURT: No. I'm sorry. I don't.

23 MR. HECKER: Oh. Could we get the judge a
24 colored version of that?

25 THE COURT: I have the report, but it's all

1 black and white.

2 MR. HECKER: The color's really important.

3 Your Honor, may I approach?

4 THE COURT: You may.

5 MR. HECKER: I just have copies of his --

6 THE COURT: Thank you.

7 MR. HECKER: -- regular report and reply
8 report in color.

9 THE COURT: Very good.

10 BY MR. HECKER:

11 A. I do not.

12 Q. Oh, let's get you a colored one too.

13 A. I don't have any copy --

14 THE CLERK: The original exhibits are right
15 there with the blue --

16 Q. Mr. Trende, you testified on direct at some
17 length about what the chart on Page 15 of your original
18 report shows, right?

19 A. That's right.

20 Q. And same thing with Page 21, the chart about the
21 Senate, right?

22 A. That's right.

23 Q. What you're doing in those two charts is
24 calculating the partisanship of the districts in the newly
25 enacted congressional and Senate plans, right?

1 A. Yes, that's part of it. Yes.

2 Q. And you calculated the partisanship of the newly
3 enacted districts by using an index of statewide results
4 from recent prior elections, right?

5 A. Right, average Democratic statewide performance
6 in these districts.

7 Q. And that's a generally accepted methodology
8 that, leaving aside exactly which statewide races you use
9 in exactly which years, every expert who uses simulations
10 agrees you use to measure the partisanship of a
11 legislative district, right?

12 A. I assume everyone does it, yes. It's certainly
13 widespread.

14 Q. You've never heard of anybody doing it a
15 different way in a redistricting simulation case, have
16 you?

17 A. I don't think so. No.

18 Q. And what you did on this chart is you took each
19 of the legislative districts in the newly enacted plan,
20 and for those that had a partisanship that you calculated
21 to be less than 50 percent Republican based upon the index
22 you used, you drew it in red, right?

23 A. No. The enacted plan is all in black.

24 Q. Forgive me. I misspoke. My bad. What you did
25 is you took all of your simulated congressional districts,

1 and the ones that had a partisanship of less than 50
2 percent Republican according to the index you use you
3 marked in red, right?

4 A. That's right.

5 Q. And for all of the districts in your simulations
6 that had a partisanship that you calculated to be more
7 than 50 percent Democrat you marked in blue, right?

8 A. Right.

9 Q. There are good reasons why no expert would
10 calculate the partisanship of a newly enacted legislative
11 district based upon what we call endogenous district data,
12 right?

13 A. Give me some examples.

14 Q. Well, first of all, an endogeneity district is a
15 district -- is data from a district that is the district
16 you're trying to measure, correct?

17 A. Okay.

18 Q. Is that right or wrong?

19 A. That is right. That's what endogeneity means.

20 Q. And so there's uniform consensus among the
21 experts who have testified about redistricting simulations
22 in prior cases that you wouldn't calculate the
23 partisanship of a newly enacted district by using
24 endogenous data about that district, right?

25 A. Right. You can't calculate the underlying

1 partisanship of the district by saying, hey, in the
2 past -- you know, in the past -- yeah, that's right.

3 Q. You testified in the Ohio case, right?

4 A. Which one? Actually I don't think I ever
5 testified in either of the Ohio cases.

6 Q. I meant you gave a deposition. Withdrawn.

7 A. I don't think I gave a -- I gave a deposition in
8 the first Ohio -- well, you withdrew.

9 Q. You're familiar with Dr. Jowei Chen, J-o-w-e-i,
10 right?

11 A. Yes.

12 Q. Let me just read a few sentences from his
13 redistricting simulation expert report in Ohio and just
14 see if you agree with them. Recent statewide elections
15 provide reliable bases for comparisons of a precinct's
16 partisan tendencies because in any statewide election the
17 anomalous candidate-specific effects that shape the
18 outcome are equally present in all precincts across the
19 state. You agree with that, right?

20 A. Oh, yeah. Yeah. The statewide elections give a
21 good baseline for how it goes, yeah, but they don't
22 correspond one to one.

23 Q. And let's see if you agree with this: Statewide
24 elections are a better basis for comparison than the
25 results of congressional or endogenous elections because

1 the particular outcome of any congressional election may
2 deviate from the long-term partisan voting trends of that
3 district due to factors idiosyncratic to the district as
4 currently constructed. You agree with that, right?

5 A. Can you repeat that quote?

6 MR. HECKER: Can you read that back?

7 (The record was read back by the court
8 reporter.)

9 BY MR. HECKER:

10 Q. Statewide elections are a better basis for
11 comparison than the results of congressional or endogenous
12 elections because the particular outcome of any
13 congressional election may deviate from the long-term
14 partisan voting trends of that district due to factors
15 idiosyncratic to the district as currently constructed.

16 A. Right. So like Antonio Delgado might win a
17 district that otherwise is pretty Republican. Yeah,
18 that's right.

19 Q. Such factors can include the presence or absence
20 of a quality challenger, anomalous differences between the
21 candidates and campaign efforts or campaign finances,
22 incumbency advantage, or candidate scandals. You agree
23 with that, right?

24 A. Sure.

25 Q. That's why or at least that's some of the

1 reasons why everybody who does what you did in this case
2 measures the partisanship of the newly enacted legislative
3 districts based upon statewide prior election results,
4 right?

5 A. Yeah. That's why I used the statewide prior
6 elections. Yeah. Absolutely.

7 Q. Could we switch to your reply brief and just
8 look at a couple of charts in your reply brief? Oh.
9 Before I do, I'm sorry, I just want to confirm that we're
10 on the same page, which would require you to look at
11 Page 21 for us literally to be on the same page.

12 THE COURT: Of the reply?

13 MR. HECKER: Sorry, your Honor. I wanted
14 to finish with the initial report --

15 THE COURT: Okay. That's fine.

16 MR. HECKER: -- Page 21 of the initial
17 report.

18 Q. I think I know the answer, but just to make sure
19 we're all on the same page, so to speak, with respect to
20 the Senate plan, when you calculated the partisanship of
21 each new Senate district, you similarly -- withdraw. I
22 made the simple mistake.

23 A. It's complicated stuff.

24 Q. When you calculated the partisanship of all of
25 the legislative districts in your Senate simulations using

1 the index you used, you marked them as red if they were
2 less than 50 percent Republican-leaning based on the index
3 you used and you marked them as blue if they were more
4 than 50 percent Democratic-leaning based on the index you
5 used, right?

6 A. Right.

7 Q. Same index that everybody uses methodologically,
8 right?

9 A. Same basic concept, yes.

10 Q. Okay. Now we're going to turn to the reply
11 brief for real, the reply report. Let's look at Page 17.
12 The bottom of Page 17 shows the results after you froze
13 the majority-minority districts, right?

14 A. Yes.

15 Q. So the bottom of Page 17 of your reply is
16 showing the partisanship that you calculated of the four
17 Long Island districts, Districts 1, 2, 3, and 4, right?

18 A. Yes.

19 Q. And the results of the simulations that you ran
20 on the congressional side show that every single one of
21 the thousands of simulations you ran drew at least three
22 out of four congressional districts that leaned Democrat
23 based on the index you used, right?

24 A. So this is where we get off-kilter, is that I --

25 Q. Is it true or false?

1 A. It's false. You're -- this is where -- as I
2 said, this is where --

3 Q. I said based on the index you used.

4 MR. MOSKOWITZ: Objection. He's trying to
5 answer.

6 Q. Well, isn't it true based on the index you used,
7 sir?

8 THE COURT: Let him answer. You asked him
9 the question. Let him answer the question.

10 Q. I'll rephrase the question. Isn't it true --

11 MR. MOSKOWITZ: The question is pending.
12 He was trying to answer. He got cut off.

13 THE COURT: I'm going to let him answer the
14 question.

15 MR. HECKER: Fair enough.

16 A. As I said, this is where we're getting a little
17 off-kilter, which is my way of saying I kind of disagree
18 with you, because I don't categorize the districts based
19 entirely directly on this partisan share because I know
20 that Republicans win districts that are above 50 percent
21 plus won routinely in New York, so I'm not going to
22 concede that everything that falls above 50 percent, as I
23 think I explained at length in my direct, is not -- is
24 anything other than a -- you know, some of these districts
25 do lean Republican, including some of those dots you see

1 for Line 2 and probably ordered District Number 3.

2 Q. Let me ask a different question, then, and see
3 if we could find some common ground. Every single
4 simulation you ran drew at least three out of four
5 Long Island districts in which the partisanship of the
6 district was more than 50 percent Democrat based upon the
7 index you used?

8 A. Three of the four districts have an average
9 Democratic statewide vote share in excess of 50 percent in
10 every simulation, yes.

11 Q. And that's the way you calculated the
12 partisanship of those districts, right?

13 A. That's the underlying district partisanship,
14 yes.

15 Q. And the vast majority of the thousands of
16 simulations that you ran drew all four districts in
17 Long Island in which a majority of the district was
18 Democrat according to the index you used to calculate the
19 partisanship, right?

20 A. The index which shows the average Democratic
21 vote share is above 50 percent in a majority of the
22 districts, yes.

23 Q. Can we go a little bit farther than a majority?
24 Can we say the vast majority, sir? Isn't that what this
25 chart shows, the vast majority? Don't give it up if it's

1 not true.

2 A. Well, no. I'm trying to think -- I'm remember
3 how I answered -- exactly how I answered the question, but
4 yes.

5 THE COURT: We're talking about four
6 districts here?

7 MR. HECKER: We're talking about the four
8 Long Island districts, and we're looking at the first
9 bar on the left of the chart on the bottom of
10 Page 17 --

11 THE COURT: Right.

12 MR. HECKER: -- which I think is
13 overwhelmingly blue and barely red, and he said a
14 "majority" when I asked the "vast majority," and I'm
15 just trying to see if he'll agree with me.

16 BY MR. HECKER:

17 Q. Calling balls and strikes, the vast majority of
18 your simulations drew all four districts more than 50
19 percent Democrat according to the index that you used to
20 calculate the partisanship of those districts; isn't that
21 fair, Mr. Trende?

22 A. We may have different understandings of exactly
23 what vast means, but yes. A supermajority of the maps
24 drawn show the average Democratic statewide vote share
25 above 50 percent in all four districts, yes.

1 Q. And let's look at the top of Page 18. Now we're
2 talking about Districts 10, 11, and 12, correct?

3 A. Yes.

4 Q. Would it be fair to say that literally every
5 single one of the thousands of simulations you drew,
6 without exception, drew districts in which the
7 partisanship of the district, as you measured it with your
8 index, was more than 50 percent Democrat?

9 A. Almost certainly every single one. The average
10 statewide Democratic vote share, which is how I
11 measured -- how I constructed my index, is above 50
12 percent.

13 Q. Let's talk about the gerrymandering index. The
14 idea behind the gerrymandering index is that if you
15 isolate through the simulations all of the redistricting
16 criteria that were actually applied by actual people
17 drawing the actual lines except for alleged partisanship,
18 then the delta between the results you see in the
19 simulated plans and actual plans is what goes into the
20 gerrymandering index, right?

21 A. The average -- the difference between the
22 average partisanship and the actual partisanship at each
23 rank is what goes into the gerrymandering index.

24 Q. But this is what I'm confused about, Mr. Trende.
25 Are you measuring partisanship, or are you just measuring

1 differences between your ensemble and the actual map
2 including partisan differences and nonpartisan
3 differences? Isn't the gerrymandering index composed of
4 both types of differences?

5 A. I don't understand your question.

6 Q. Well, let me ask it to you this way:
7 Hypothetically, if there are no differences whatsoever
8 between the inputs that you put into your simulations and
9 what the actual mapmakers actually did and the way you
10 code it gets it completely right, including with respect
11 to how the computer balances the often-competing criteria
12 that must be balanced, then there would be no
13 gerrymandering index if there was no partisanship in
14 either the enacted or the simulated plans, right? Are you
15 following me?

16 A. I think so, and I think the answer is that's not
17 right. There would still be a gerrymandering index
18 because these ensemble plans all generate gerrymandering
19 indexes. What you'd would be likely to get is an
20 gerrymandering index that falls well within the range of
21 gerrymandering indexes produced by the ensemble.

22 Q. Let me ask you this hypothetical: If there was
23 absolutely so partisan intent in the enacted plan and the
24 actual mapmakers didn't have access to the data, didn't
25 think about partisanship at all, and you ran simulations

1 that instructed the computer to keep population deviations
2 within the 30 percent range, but the actual mapmakers had
3 0 population deviation, that would create a gerrymandering
4 index, right?

5 I know you wouldn't do it, Mr. Trende. It's
6 absurd. But I'm trying to illustrate the point through a
7 hypothetical. If you code the computer to treat equal
8 population at plus or minus 30 percent and the people who
9 were actually drawing the lines keep it at 0 percent,
10 you'd have a gerrymandering index that's significant,
11 right?

12 A. It would depend on the partisanship of your
13 enacted districts, but I suppose it probably would.

14 Q. Well, wouldn't it throw the whole partisanship
15 off precisely because you're doing it a different way than
16 the mapmakers actually did?

17 A. Look, I'm not going to tell you what the outcome
18 of a hypothetical simulation I've never done would be
19 because you might get the same basic distribution.
20 New York City, it doesn't really matter what you do.
21 You're just going to end up with a bunch of Democratic
22 districts except maybe the one on Staten Island. So I
23 don't know what happens if you do something absurd like
24 that.

25 Q. If you --

1 A. You're always going to get a gerrymandering
2 index in an ensemble of 5,000 because there's randomness
3 built in. I don't know what the magnitude of the
4 gerrymandering index becomes if you make the deviations
5 plus or minus 30.

6 Q. You told us before lunch that you set the
7 compactness input to 1 in your simulations, right?

8 A. Right.

9 Q. And you said you could have made it maybe 7 if
10 you wanted, right?

11 A. Right.

12 Q. If you went back and changed the compactness
13 input from a 1 to a 7, that would change the
14 gerrymandering index, wouldn't it?

15 A. It might. I mean --

16 Q. How can you say "it might"? Of course it would.

17 A. Because we ceded to you half -- a third of the
18 districts drawn in New York and we got the same basic
19 output. I mean, given that, I'm not going -- or we
20 decided to keep intact the same municipalities that you
21 did, and we got the same basic output. Those are major
22 changes in constraints that didn't really affect anything.
23 So without having actually done the work, I'm not going to
24 concede to you definitively what's going to happen. It
25 could happen. I can see how it could happen but --

1 Q. And the reason why it could happen is because
2 what you call the gerrymandering index measures
3 gerrymandering when there's gerrymandering, but it also
4 could measure other differences between what you did and
5 the actual mapmakers did if there are such differences,
6 right?

7 A. I'm sorry. Again, that was a lot built into
8 that question.

9 Q. I'm trying to get at whether the gerrymandering
10 index that you call it -- by the way, has any expert in
11 any case ever talked about the gerrymandering index in the
12 context of redistricting simulations?

13 A. I don't know about that.

14 Q. So you would agree with me that you've never
15 heard the gerrymandering index discussed by any --

16 MR. MOSKOWITZ: Objection. He just said he
17 didn't know.

18 MR. HECKER: He said, "I don't know about
19 that."

20 THE COURT: If he doesn't know -- if he
21 knows, he can answer.

22 Q. You can't name a case in which any redistricting
23 expert has ever used the gerrymandering index in a
24 redistricting simulation exercise, can you?

25 A. I can't name one, no.

1 Q. I want to talk about this 53 percent stuff. In
2 your reply report you talk about a 53 percent threshold,
3 that I think what you're saying is that there is some
4 basis for you to believe that when a district has a
5 partisanship calculated according to the statewide index
6 that you and everybody else uses is around 53 percent
7 Democrat, that's more or less where there's parity between
8 the two parties. Is that the essence of what you're
9 getting at in your reply brief about the 53 percent
10 summary?

11 A. I think that's a fair summary.

12 Q. But you didn't arrive at that number in a
13 statistically or mathematically rigorous way, did you?

14 A. I mean, I did a regression of the congressional
15 vote share on the index that gave about that answer, and
16 sometimes you can just look at the data like in the table
17 in Table 1 and it's plain as punch.

18 Q. Did your regression account for -- withdrawn.
19 Did your regression account for incumbency?

20 A. It did not.

21 Q. Wouldn't you agree with me that it's important
22 for a regression to account for incumbency if the purpose
23 of a regression is to compare past statewide election
24 results to a prediction of the partisanship of a
25 legislative district?

1 A. I mean, that's a consideration that you can
2 certainly build into your model. This model explained 91
3 percent of the variants, which is a pretty good outcome.
4 If one of your four experts thinks you would get a
5 different answer accounting for incumbency, I'd be
6 interested to see it.

7 Q. I'm not asking you if you could do it. I'm
8 asking you if it's important. You'd agree with me that
9 you'd want to account in your regression for all factors
10 that you thought were statistically important, right?

11 A. Right. So --

12 Q. So I want to know if this one is important. Was
13 it or was it not important to try to account for
14 incumbency in this regression?

15 A. So when I did the classification question in
16 Wisconsin, as a matter of fact, when you included
17 incumbency, it didn't return a significant value, so I'm
18 not going to say with definitiveness here that accounting
19 for it would make a difference.

20 Q. I'm not saying whether it would or wouldn't have
21 made a difference. You did it in Wisconsin because it was
22 important to do, right?

23 MR. MOSKOWITZ: Objection. He's been asked
24 three times now.

25 MR. HECKER: And he hasn't answered it

1 once.

2 THE COURT: I think you did ask whether it
3 would make a difference.

4 MR. HECKER: No, I asked whether -- with
5 respect, your Honor, I didn't. I didn't ask whether
6 it would make a difference. I asked whether it was
7 important that he did or didn't do it, and he told me
8 he did it in Wisconsin.

9 THE COURT: He said he -- I think he said
10 it wouldn't make a difference or it may not make a
11 difference. I don't know. Go ahead. Ask it one
12 more time and let's move on.

13 BY MR. HECKER:

14 Q. Are you aware of any redistricting expert in any
15 case ever who has attempted to opine on how to calculate
16 the partisanship of an enacted legislative district based
17 upon a prior index of statewide results by doing a
18 regression analysis that did not account for incumbency
19 other than you in this case?

20 A. Me in Wisconsin, and I think it is not
21 necessarily important. If it doesn't make a difference,
22 it's not important. So I was actually curious to see if
23 one of your experts would run it and find it made a
24 difference. If it doesn't make a difference --

25 THE WITNESS: Sorry, your Honor.

1 Q. Last question: Other than you, are you aware of
2 anybody who's ever done a regression like that in any case
3 ever without accounting for incumbency?

4 A. No.

5 Q. Almost done, Mr. Trende. The 55.6 percent
6 ceiling, you seem to be suggesting that there's a ceiling
7 of competitiveness in the State of New York in
8 congressional elections at 55.6 percent. Is that the gist
9 of what you're testifying?

10 A. I'm saying it's somewhere around there. Based
11 on the data I have, I used that as a cutoff, but it's not
12 like there's a cliff that everything drops off at 55.6
13 percent.

14 Q. And the data that you use to put that number in
15 your testimony in this case is the chart on Page 10 of
16 your reply brief, right?

17 A. That's right.

18 Q. You reply report. I'm sorry.

19 A. I know what you meant.

20 Q. A lot of briefs in this case.

21 And so what you essentially did is you took your
22 chart on Page 10 and you kind of drew a line horizontally
23 across the page between 18 and 24 --

24 A. No.

25 Q. -- no -- between 24 and 3 --

1 A. Yes.

2 Q. -- and you decided based on that that a
3 Republican can't be elected to Congress in the State of
4 New York if the partisanship is below 55.6 percent
5 according to the statewide index you used, right?

6 A. That's the highest I can say that a Republican
7 has won at. I also have to know that they've never won 3
8 or 4. I'm not sure about 20 off the top of my head. I
9 think that's Tompkins' district. But, anyway --

10 Q. Whose district is 24?

11 A. 24 is Katko.

12 Q. Is there anything idiosyncratic about
13 Congressman Katko, soon to be former Congressman Katko,
14 that might factor into your analysis of how you're looking
15 at this chart?

16 A. He's a talented politician. He fits the
17 district well.

18 Q. He's an unusually popular Republican incumbent
19 in a district that is a Democrat district even as you
20 would calculate it in your reply papers, right?

21 A. He does very, very well for a Republican in that
22 district.

23 Q. And so if you were to hypothetically discount
24 those races as idiosyncratic and unrepresentative and move
25 your line up one to the line between 18 and 24, that would

1 materially -- that would materially impact where you're
2 calculating this ceiling by approximately 3 percent,
3 right?

4 A. Well, yeah, but if you're going to start
5 throwing people out, you're going to throw out Antonio
6 Delgado in 19. And so Republicans almost always -- you
7 know, have only lost one race up to 52 percent. Rather
8 than making those type of ad hoc calls, I just looked at
9 the actual data that we had.

10 Q. So you're not saying to a reasonable degree of
11 professional certainty that there's a calculable ceiling
12 on competitiveness in New York congressional elections at
13 55.6 percent, are you?

14 A. Yeah. I'm saying from the data that we see
15 that's where Republicans stop winning, and so that's the
16 usable threshold. If someone wants to come in with a
17 contrary analysis and show, no, they win at 65 percent,
18 which they never have, I'd be interested to see it.

19 Q. Mr. Trende, I don't think you answered my
20 question. I was asking you if this is your opinion to a
21 reasonable agree of professional certainty, and it's an
22 important question because it's the standard that applies
23 to your expert testimony, right? You're a lawyer and an
24 expert. That's the standard, right?

25 Can you just tell me, are you saying, yes or no,

1 to a reasonable degree of professional certainty that the
2 ceiling beyond which congressional districts in the State
3 of New York become uncompetitive is when the statewide
4 index is 55.6 percent? Are you saying that to a
5 reasonable degree of professional certainty or no?

6 A. Yes.

7 Q. Based upon this chart only, right?

8 A. Based upon my knowledge of elections and based
9 upon the data presented in this chart, yes, and anything
10 else mentioned in my report.

11 MR. HECKER: That's all I have for now,
12 your Honor.

13 THE COURT: Thank you, Mr. Hecker.
14 Who's next on cross-examination? You said
15 you had an agreement between the -- okay.

16 Mr. Channing (sic), please proceed.

17 MR. CHILL: Thank you, your Honor.

18 CROSS-EXAMINATION

19 BY MR. CHILL:

20 Q. When I was -- I'm fairly old now, in my 80s, but
21 I can remember still back when I was a freshman in
22 college. We had a course called Statistics. The first
23 thing they told me was -- they gave me a book called How
24 to Lie with Statistics. And I believe a problem because
25 I'm not -- I don't pretend to be as knowledgeable as you

1 are in this world, but I am what you call a voter, and I
2 know that statistics don't vote. I know numbers don't
3 vote. Human beings vote; is that correct?

4 A. Yes.

5 Q. And human beings vote based on what's going on
6 at the time that they vote?

7 A. So most political scientists --

8 Q. I'm not asking that. I'm asking what your view
9 is. Yes or no?

10 A. Well, consistent with most political scientists,
11 I think of something called retrospective voting, which is
12 that most people vote based on --

13 Q. If --

14 A. -- on how they have perceived things over the
15 course of the last two to four years. It's Ronald
16 Reagan's famous question. Are you better off today than
17 you were four years ago?

18 Q. Are you telling me that the vote that's going to
19 come up now is going to be the same based on four years
20 ago and the fact that the price of gasoline is going to be
21 \$5 a gallon? Do you understand my question?

22 A. Yeah. I hope it won't be. But, yes, they --

23 Q. You hope it won't be? If you're --

24 A. If they don't --

25 Q. Excuse me. Let me rephrase the question. If

1 you walk in there and you are not a wealthy person and you
2 have to choose between driving your car at \$5 a gallon and
3 paying for your food, that's not going to impact how
4 they're going to vote on the particular election coming up
5 now, yes or no?

6 A. So, yes, that will --

7 Q. Thank you.

8 A. -- but --

9 Q. Thank you.

10 A. -- it's not just how things are today.

11 MR. CHILL: Can I go on to my next
12 question.

13 A. They do it relative to how things were four
14 years ago.

15 MR. CHILL: Can I go on to my next
16 question, your Honor?

17 THE COURT: Go ahead.

18 MR. CHILL: It's cross-examination.

19 THE COURT: Next question.

20 MR. CHILL: His counsel can rehabilitate
21 him --

22 THE COURT: Understood.

23 MR. CHILL: -- and that's the way it goes.

24 BY MR. CHILL:

25 Q. How about if the people today who are going to

1 vote soon in 2022 elections are looking at what's going on
2 in Ukraine and they see the murderous stuff that's going
3 on every day and getting worse? Do you think that
4 might -- and they don't like the way the president is
5 reacting to it, do you think that might affect their vote?

6 A. It could.

7 Q. Okay. How about when they see crime in the big
8 cities?

9 A. It could.

10 Q. How about incumbency?

11 A. It could.

12 Q. And what happened two, three years ago would not
13 necessarily indicate how they're going to vote today?

14 A. It gives a baseline that people --

15 Q. I didn't ask you about that. That's how they're
16 going to vote today?

17 A. Yes. What happened two or three years ago
18 impacts how they vote today.

19 Q. How much?

20 A. It gives a baseline by -- I cannot quantify it,
21 but it gives a baseline from which people evaluate current
22 data.

23 Q. If --

24 A. \$5-gallon gas today is way different. It was \$2
25 four years ago --

1 Q. That's correct.

2 A. -- or \$8 four years ago.

3 Q. I want to thank you for that answer. It was
4 very helpful to me. Thank you.

5 A. You're welcome.

6 Q. The difference between \$2 and \$5 is going to
7 change somebody's vote, won't it?

8 A. It could, yes.

9 Q. Okay. So in the real world when you go over the
10 whole State of New York, you really have no idea what any
11 person will vote other than in heavily Democratic or
12 heavily Republican areas or what we call marginal or
13 competitive districts given these factors today?

14 A. I'm not going to say I have no idea. No.

15 Q. Well, will you concede that given the factors we
16 just discussed and the competitive districts it can make a
17 difference? How many competitive districts are there?

18 A. The outcome of the 2022 elections aren't set in
19 stone. They could vary between now and November. Yes.

20 Q. Well, thank you again for answering my question.
21 That's very helpful.

22 It can change. It can change every day. What
23 it doesn't do is reflect, depending on the amount of the
24 change and the magnitude of the change, what happens to
25 you four years ago, does it?

1 A. Can you say that again?

2 Q. What happens three or four years ago pales in
3 comparison to what's happening today or what's going to
4 happen to you now in the next election, correct?

5 A. It provides the baseline against -- so I'm not
6 going to say it pales in comparison because it's all part
7 of the evaluation.

8 Q. Where is it more important? You can answer that
9 question, can't you? Isn't contemporary events more
10 important than past events?

11 A. People will look at the change more than they
12 look at the absolute value, so the -- where things end up
13 is what decides things based on where things were two or
14 four years ago. It's a comparative analysis.

15 Q. You've answered the question.

16 Tell me something. I see people today, young
17 kids and even older people, worrying about going under the
18 table because of atomic warfare threatened by Putin. Do
19 you think that would impact somebody dramatically with
20 regards to whether Democrats or Republicans registered?

21 A. It could. I mean, it could.

22 Q. A lot more than four years ago when there was no
23 threat of any possible atomic weapon?

24 A. It certainly wasn't at the forefront of anyone's
25 find four years ago.

1 Q. So if you take all of these factors into
2 consideration, you can see that events of today dictate
3 the outcome of reality in the real world, then how can you
4 say how many Republicans and how many Democrats are going
5 to get elected given there are marginal districts or there
6 are competitive districts? You don't know?

7 A. No, I don't know exactly who is going to win.

8 Q. Then how can you as an expert go and want this
9 Court and every Court to go and overthrow a
10 Democratic-elected Legislature, which is the most
11 Democratic way we know in the United States as opposed to
12 Russia, and to say they did something that you think is
13 wrong?

14 MR. MOSKOWITZ: Objection, your Honor.
15 There's a lot loaded in there that I don't think
16 Mr. Trende ever did.

17 MR. CHILL: Well, he's saying --

18 Q. Trende, are you not saying that based on your
19 mathematical, statistical stuff that I don't even pretend
20 to know what you're talking about -- I'm being very honest
21 about that. Mr. Hecker, thank God, knows a lot more than
22 I do. But, most assuredly, the point I'm trying to make
23 is you're --

24 THE COURT: Just ask a question, Mr. Chill.

25 MR. CHILL: Okay. Yes. Yes. I'm sorry,

1 your Honor. I will.

2 Q. I'm going to ask you, you are predicting
3 approximately how many Republican -- based on your
4 analysis, how many Republican seats and how many Democrat
5 seats will come out?

6 A. I don't know how many wins there's going to be
7 in a given year. What I know is how the district shares
8 deviate from what we'd expect. What the Court and the
9 lawyers argue about from that, I'm not going to be here
10 for that. I'm just here to testify how the maps deviate
11 from what you'd expect from a drawn map and how that
12 translates to understanding what the motivations of the
13 Legislature was.

14 Q. So you have some mathematical view, and I'm
15 asking you about a real-world view. And they're
16 different?

17 A. They can be. I think the mathematical view --
18 the mathematical view can inform your real-world view.
19 But, again, that is not my job.

20 Q. You're telling me that your mathematical formula
21 can inform how I vote, my wife votes, my children vote?
22 That's what you just said?

23 A. I'm sorry. I misunderstood your question. I
24 thought we were talking about democracy and the maps and
25 everything. I'm saying all I'm here to say -- talk about

1 today is how the enacted maps -- what the role of
2 partisanship was in the enacted maps. And then after
3 everyone else testifies there's going to be a big fight
4 among the lawyers and judges will weigh in. And I'm not
5 here for that. I'm just here to say that the enacted maps
6 were plainly drawn with partisan intent to disfavor
7 Republicans in competitive districts.

8 Q. But in the real world that may not be true?

9 MR. MOSKOWITZ: Objection, your Honor. I
10 think this has been asked and --

11 THE COURT: It has. You've already asked
12 that Mr. Chill.

13 MR. CHILL: Thank you, your Honor.

14 Q. Now, I thought that we talked about population
15 equality, and I think you said your simulations do not
16 come to perfect population equality. Is that is correct?

17 A. That's right.

18 Q. Are you aware, therefore, that your simulations,
19 if they were put into the real world, they would be
20 unconstitutional?

21 A. Directly doing the --

22 Q. If --

23 A. I'm trying to answer, sir.

24 THE COURT: Let him answer the question,
25 Mr. Chill.

1 Q. I'll rephrase the question -- withdraw the
2 question.

3 MR. MOSKOWITZ: He was already answering.

4 Q. Go ahead.

5 THE COURT: He was answering.

6 Go ahead. You can answer the question.

7 A. Directly inputting the congressional districts
8 would not pass -- well, the Courts have tolerated some
9 population deviation, so you may be able to convince the
10 Court that a deviation of .3 percent for congressional is
11 acceptable. Since these maps aren't drawn with
12 partisanship as a motivation, the Senate maps are all well
13 under the threshold for one person, one vote.

14 Q. I want to thank you for that answer because that
15 answer is dead wrong.

16 Because you're a lawyer, do you know a case
17 called Karcher v. Daggett?

18 MR. MOSKOWITZ: Objection. Now we're
19 having an argument.

20 THE COURT: Yes. Sustained.

21 Q. Karcher -- are you familiar with the Supreme
22 Court case Karcher v. Daggett?

23 A. I am.

24 Q. And do you know in that case that the Supreme
25 Court did not allow a deviation of one person let alone .3

1 percent?

2 A. I would have to review the exact finding of that
3 case.

4 Q. I'm sorry. You said you were familiar with the
5 case.

6 A. Well, yes. I've heard of it. I know it, but
7 I'm not going --

8 Q. Will you take my word for it that the Supreme
9 Court of the United States has said not even a deviation
10 of one person is permitted?

11 MR. MOSKOWITZ: Objection, your Honor.

12 THE COURT: No testifying, Mr. Chill. Ask
13 a question.

14 MR. CHILL: I asked him to take my word for
15 it.

16 A. I won't take your word for it.

17 Q. Okay. So you stick to your views that .3
18 percent is an appropriate deviation under the Constitution
19 of the United States? Is that your final statement?

20 A. It can be. I believe West Virginia has more
21 than one population deviation because the Court has
22 allowed it.

23 Q. This is a court in New York State under the
24 United States of America subject to the dictates of the
25 Supreme Court of the United States whether you like it or

1 not. I'm asking you for this state.

2 THE COURT: If he knows.

3 MR. CHILL: Yeah, if he knows.

4 A. As I said, I think the Court has allowed a small
5 population deviation in West Virginia when they're trying
6 to conform to county lines. But, again, you would have
7 to -- you would, admittedly, have to justify the
8 deviations. Realistically these maps would be adjusted by
9 block work, which would not alter the outcome of the
10 simulations.

11 Q. You keep talking about outlier results, and yet
12 even in districts that you are announcing would show the
13 trend Democratic, a Republican could get elected, correct?

14 A. It's possible.

15 Q. And vice versa?

16 A. It's possible.

17 Q. Katko is one of those districts, correct?

18 A. Katko does very well in a Democratic district.

19 Q. Yes.

20 And Delgato?

21 A. Same story the other way.

22 Q. The other way.

23 So, again, in the real world, now true, and
24 notwithstanding your analysis, the real world does
25 something different; the results of the real world are

1 different?

2 A. I mean, that's part of my analysis, but yes.
3 There are Republicans who do well in Democratic districts
4 sometimes and vice versa.

5 Q. Does your simulations predict or your report
6 predict approximately how many Democratic districts or
7 Republican districts should be the outcome based on your
8 simulation?

9 A. No, and it's not just Republican and Democratic.
10 It's competitive. You can look at the dot plot and get a
11 sense for where things should be versus where they are.

12 THE COURT: I'm going to ask you both to
13 speak up --

14 THE WITNESS: I'm sorry, your Honor.

15 THE COURT: -- please.

16 Q. Can I look at the report, Page 10 of your
17 rebuttal report?

18 THE COURT: His original report?

19 MR. CHILL: Rebuttal, your Honor.

20 Q. Take a look at this table and work with me on
21 it, please. The first column other than district is your
22 index. What does your index --

23 A. I'm sorry, sir. I want to make sure we're on
24 the same page.

25 Q. Yeah. Sure.

1 A. Table 1?

2 Q. Page 10 of your rebuttal, Table 1.

3 A. Table 1. Okay.

4 Q. Index --

5 A. Yes, sir.

6 Q. -- the one that's titled Index. What does it
7 show -- supposed to show?

8 A. It shows the average Democratic statewide vote
9 share in the district.

10 Q. Yes, and it's based on -- is it not based on the
11 statewide elections that you picked to create this index?

12 A. It's the statewide districts in this kind of
13 canonical data set, and I used them all to avoid the
14 charge of cherry picking.

15 Q. I didn't ask you about that. I just asked you
16 if -- based on the statewide races that you've used for
17 your report.

18 A. That I used, yes.

19 Q. So let's look at District 27. You're off -- the
20 2020 election from 42.89 percent in reality was 39.50
21 percent, correct?

22 A. It's 39.50 in 2020, yes.

23 Q. Yes, and 2018 it's 7 points' difference, 49.81?

24 A. Oh, yeah, Democrats got 49.81.

25 Q. And then, again --

1 A. Collins had a scandal.

2 Q. -- look at this 2016, the national election. It
3 changed dramatically, did it not?

4 A. Yeah. It's 32.8.

5 Q. Okay. So at least for District 27, your average
6 statewide index is not reflected in the Democratic share
7 of the actual election?

8 A. That's absolutely true. Democrats tend to run
9 behind the statewide index. Absolutely. 100 percent.

10 Q. So how many of these do I have to go through
11 where you admit that that's true of many, many districts
12 in here?

13 A. I will freely concede that the statewide
14 Democratic vote share is usually higher than the
15 Democrat's congressional share.

16 Q. And, therefore, the index is not accurate. So
17 how much is it off if you average it?

18 MR. MOSKOWITZ: Objection, your Honor.

19 THE COURT: Sustained.

20 MR. MOSKOWITZ: Thank you.

21 THE COURT: You can ask him that, but you
22 can't testify to that.

23 MR. CHILL: I asked, how much is it off?

24 THE COURT: Well, you are saying it was off
25 by such and such and --

1 MR. MOSKOWITZ: You just characterized it
2 as inaccurate.

3 BY MR. CHILL:

4 Q. Okay. If you were to do it, how much off, on
5 average, would it be?

6 A. I don't think I've calculated the -- well, since
7 the regression calculates the average off, but generally
8 speaking, the Democratic congressional candidates run
9 about 3 percent behind the index.

10 Q. So does 3 percent, in your view, not make a
11 difference in terms of the outcome of which district gets
12 elected Republican, which Democratic?

13 A. It makes a huge difference. That's why you
14 wouldn't want to use 50 percent as the cutoff between a
15 Republican and Democratic district. 100 percent agree
16 with that.

17 Q. I'm just basing it on your table.

18 A. I'm agreeing with you.

19 Q. Well, thank you.

20 MR. CHILL: Bear with me, your Honor. I'm
21 coming to an end soon. If you'll give me a couple
22 minutes.

23 THE COURT: That's fine, Mr. Chill.

24 Q. On Pages 10 and 11 of your original report I'm
25 looking at the statements of David Wasserman.

1 A. Oh, yes, sir. That was -- oh, that's in my
2 initial report, sir.

3 Q. Sorry.

4 A. That's okay.

5 THE COURT: He said Page 10 and 11 of your
6 initial report.

7 Q. I'm drowning in reports. I apologize.

8 A. Yes, sir, it is on Page 10 of my original
9 report.

10 Q. Yeah, 10 and 11, the bottom of 10 and 11. You
11 quote from a person named David Wasserman, editor of the
12 Cooke Political Report, correct?

13 A. Yes.

14 Q. Is Mr. Wasserman a political scientist?

15 A. I don't believe so.

16 Q. Do you have any idea what Mr. Wasserman relied
17 on to form his opinion?

18 A. I'm guessing he relied upon --

19 Q. I asked if you know, not guess.

20 A. Okay. He's relying on -- at least in part on
21 the Cook Political -- Partisan Voting Index, which is
22 included in my report.

23 Q. Okay. Do you know whether he conducted an
24 analysis?

25 A. He would have used the Cook Political Report,

1 which is something that political scientists rely upon in
2 their work all the time to assess district partisanship.

3 Q. And have you relied on Mr. Wasserman's opinion
4 formulating your report or just pointing it out?

5 A. I mean, it's informative when a nonpartisan,
6 extremely well-respected congressional analyst like David
7 Wasserman says it. It's something that I pay attention
8 to, but it's not the overwhelming consideration.

9 Q. Well, he's not here to be cross-examined, is he,
10 now?

11 A. He is not.

12 Q. How about Mr. Nathaniel Rakich?

13 MR. CHILL: Next page, your Honor.

14 A. He is not in this room either.

15 Q. Is he a political scientist?

16 A. I don't believe so.

17 Q. Do you know what Mr. Rakich replied on for his
18 statement?

19 A. So FiveThirtyEight uses an index of presidential
20 election results and state legislative results in
21 analyzing districts, so that is almost certainly what he
22 relied upon.

23 Q. Okay. But, again, as you can see, he's not here
24 to be cross-examined, so we don't really know whether it's
25 accurate or not, correct?

1 A. Yeah. If we -- again, knowing how these things
2 work, I believe, from my recollection, it's all spelled
3 out in the article that's linked, but I will concede he is
4 not here to be cross-examined.

5 Q. Is the article in your report?

6 A. No, it is not.

7 Q. So we don't have the article to look at even, do
8 we?

9 A. Not from what my report, no.

10 Q. Okay. And Mr. Reisman? Is Mr. Reisman a
11 political scientist?

12 A. I don't believe so.

13 Q. You state he's an attorney for Brennan Center.

14 A. Yes.

15 Q. Are you aware that Mr. Reisman's not an
16 attorney?

17 A. I don't know one way or the other. That's my
18 understanding.

19 Q. From where did you get that understanding?

20 A. Probably from the article.

21 Q. What article?

22 A. The article that's linked.

23 Q. In that article you claim that he's an attorney
24 for the Brennan Center.

25 A. Or I made a mistake.

1 Q. You might have made a mistake?

2 A. It's possible.

3 Q. In fact, he's a reporter for Spectrum News, is
4 he not?

5 A. I don't know.

6 Q. But you used him without looking into what he
7 really was?

8 A. I might have made a mistake.

9 Q. Okay. Mr. Duncan Hosie, is he a political
10 scientist?

11 A. I don't believe so.

12 Q. And other than a Wall Street article that you
13 cite, does he have any credentials that you relied on?

14 A. I don't know if he has any other credentials.

15 Q. So other than the fact that he had an opinion in
16 the Wall Street Journal, he had no other credibility, in
17 your view?

18 A. I don't think that's what I said.

19 Q. Well, take a look.

20 A. He's an attorney for the ACLU making a bit of a
21 statement against interest. So, yeah, I give it -- I
22 found it something worth relating at the very least.

23 Q. You rely on the ACLU for his credentials?

24 A. I like the ACLU, so...

25 Q. I know, but Republicans usually don't.

1 A. I'm a Libertarian, not a Republican.

2 Q. I see.

3 A. I love the ACLU.

4 THE COURT: Next question.

5 MR. CHILL: I'm going on, your Honor.

6 Q. How about Colby Itkowitz and Blanco?

7 A. Colby is not a political scientist. I don't
8 know about Adrián Blanco.

9 Q. You don't know about the rest of them, and you'd
10 gave the same answer that you gave about they're not here,
11 they can't be cross-examined? I don't want to go through
12 this and repeat this endlessly.

13 A. That's right.

14 MR. CHILL: If I could have a two-minute
15 break, your Honor. I'm about to wind up. I'll just
16 like to check with my team if that's okay.

17 THE COURT: Very good, Mr. Chill.

18 MR. CHILL: Thank you.

19 Q. Mr. Trende, I have one last question about all
20 the people that you cited: If you didn't -- if you didn't
21 know much about many of them or their sources, why did you
22 cite them?

23 MR. MOSKOWITZ: Objection, your Honor.

24 That characterizes his testimony and what he knew
25 about --

1 MR. CHILL: I thought it was based on his
2 testimony.

3 THE COURT: I'm going to let him ask it.
4 Go ahead. Although I think he's even
5 answered that. They seemed of interest to him and
6 worth mentioning. I don't think it was any more than
7 that.

8 But go ahead, Mr. Trende.

9 MR. CHILL: That was only one last question
10 on that one anyway.

11 BY MR. CHILL:

12 A. I thought they were an interesting cross-section
13 of political viewpoints evaluating these districts that
14 made for a nice introduction to the report and may give
15 some context to the map being drawn.

16 Q. In your original report, Mr. Trende, Page 12 --
17 Footnote 12 -- Footnote 2, excuse me, Footnote 2, you
18 state: The simulation approach tends not to be as
19 sensitive to the choice of elections as other metrics
20 unless political coalitions in a state vary radically from
21 election to election, correct?

22 A. That's right.

23 Q. And, therefore, the choice of election would
24 impact your simulation if political coalitions did vary
25 from election to election, correct?

1 A. If you have a very unusual statewide candidate
2 who has a very different political coalition than other
3 statewide candidates, yes. It's not my understanding of
4 recent New York elections.

5 Q. Well, do you know if the elections in New York
6 tend to vary radically from election to election?

7 A. The basic configuration? You know, if you had
8 a -- if you had Rudy -- to explain, if you had -- if Rudy
9 Giuliani had made it to the 2000 Senate election, he
10 probably would have run mutually well in New York City,
11 which would be something to keep in mind. But absent
12 something like that, the political coalitions tend to look
13 more or less the same.

14 Q. Is Rudy Giuliani in your simulation?

15 A. No. That's why it's reliable.

16 Q. I don't understand what he's got to do with
17 this.

18 A. I was trying to give an example of a candidate
19 who might have had an unusual political coalition that you
20 would want to be aware of. He's not in here. No one like
21 him is in here, which is part of what makes this reliable.

22 Q. No one's in here, and the difference between
23 elections in 2018 and 2020 didn't have large variations?

24 A. The political coalition's roughly the same, yes.

25 Q. You mean when Trump ran the first time and Trump

1 ran the second time, for example, that would not have been
2 a variation?

3 MR. MOSKOWITZ: Objection, your Honor. I
4 think we're now switching what elections we're
5 talking about.

6 MR. CHILL: No, I'm not. I'm asking him --

7 THE COURT: I'm going to let him ask it.
8 Go ahead.

9 Are you waiting for the question, sir?

10 THE WITNESS: Yes, your Honor. I didn't
11 get the --

12 THE COURT: Mr. Chill, he's waiting for a
13 question.

14 BY MR. CHILL:

15 Q. I'm giving you a election -- a statewide
16 election, presidential election, okay, and -- I'm giving
17 you two: the first time Donald Trump ran and the second
18 time Donald Trump ran. Weren't the results radically
19 different?

20 A. I don't think they were radically different. I
21 think he did better in 2016 than 2020, but the basic
22 political coalitions are roughly the same.

23 THE COURT: Next question.

24 Q. Did he not win in the first time overwhelmingly
25 the Electoral College and lose overwhelmingly in the

1 Electoral College the second time?

2 A. I think he had a narrow Electoral College
3 victory and narrow Electoral College loss, but they
4 switched, yes, nationally.

5 Q. And the first time, you say it was a narrow
6 electoral victory?

7 A. 303 electoral votes.

8 Q. And how much did Mrs. Clinton have?

9 A. It would have been 237 or so.

10 Q. And what was the gap?

11 A. That would be like 66 points, 67 electoral
12 votes.

13 Q. That's narrow.

14 And how much did --

15 MR. MOSKOWITZ: We're getting very far
16 afield here, your Honor.

17 MR. CHILL: I'm trying to show there's
18 variation, your Honor, in the national election.

19 THE COURT: You've made your point,
20 Mr. Chill, I think.

21 MR. CHILL: Okay. I accept your Honor's
22 view of that, and I'll withdraw from the --

23 THE COURT: Thank you, Mr. Chill.

24 MR. CHILL: Thank you, your Honor.

25 THE COURT: Anyone on behalf of the

1 Governor, Lieutenant Governor?

2 MS. MCKAY: Everyone's saying it, but
3 briefly.

4 THE COURT: Ms. McKay?

5 MS. MCKAY: I really will be brief.

6 THE COURT: Okay.

7 CROSS-EXAMINATION

8 BY MS. MCKAY:

9 Q. Good afternoon, Mr. Trende.

10 A. Good afternoon.

11 Q. You mentioned that you were retained for this
12 case obviously. I don't think we talked about your rate.
13 It's \$400 an hour?

14 A. That's correct.

15 Q. Okay. And you mentioned you're a Libertarian,
16 correct?

17 A. Correct.

18 Q. Would you agree that there's some serious
19 overlap with the Libertarians and Republicans?

20 A. On some issues. I voted for Clinton and for
21 Biden and for the Democratic -- I was one of like 35
22 percent of Ohio voters who voted for the gubernatorial,
23 so...

24 Q. Mr. Trende, I asked you just a simple yes-or-no
25 question. I know you've been on the stand for a while, so

1 I'm going to try to keep it brief.

2 Okay. So next I want to ask you, do you make
3 any political contributions?

4 A. I donated \$1,000 to Clinton in 2016, and I think
5 I donated in McCain back in 2008 and maybe a congressional
6 candidate in Massachusetts.

7 Q. Okay. Is that something that you regularly do?

8 A. Those are the only three I can think of.

9 Q. Okay. Have you ever worked for campaigns?

10 A. No.

11 Q. Are you familiar with Conservative Country, the
12 entity, or the Facebook page I should say?

13 A. I've been made aware of it, yes.

14 Q. Do you have any affiliation with that group?

15 A. None.

16 Q. And you've testified that RealClearPolitics is
17 nonpartisan. Is there any connection between
18 RealClearPolitics and Conservative Country?

19 A. Not anymore.

20 Q. Okay. Now, with respect to the substance of
21 what you're here testifying about, you've gone into it a
22 lot, and I do not have the expertise to get too in the
23 weeds with you, but generally speaking, would you agree
24 that this is a very technical subject?

25 A. Yes.

1 Q. And I believe you -- your report has numerous
2 places where you say -- you know, you're trying to put it
3 in layman's terms. You're saying to better understand, I
4 believe at one point, you said, right?

5 A. Yes.

6 Q. And to simplify greatly, you give examples of
7 clusters, right?

8 A. That's right.

9 Q. So you would agree that it's -- laypeople really
10 have to kind of defer to the experts on this subject,
11 right?

12 A. That's --

13 Q. Okay. If you disagree, a simple no is fine.

14 A. I don't think there has to be blanket deferral
15 but...

16 Q. And even politicians need to hire statisticians
17 to draw maps, right?

18 A. Yes.

19 Q. Like that's LATFOR; that's why that exists,
20 correct, because politicians are not the ones -- are not
21 able to really understand the statistics behind it that
22 you've been here talking about, correct?

23 A. Yeah. Most politicians can't create a
24 shapefile. Yeah.

25 MS. MCKAY: All right. No further

1 questions.

2 THE COURT: Thank you, Ms. McKay.

3 Redirect, Mr. Moskowitz?

4 MR. MOSKOWITZ: We have nothing, your
5 Honor.

6 THE COURT: All right. You can step down,
7 sir.

8 THE WITNESS: Thank you, your Honor.

9 THE COURT: Thank you.

10 (The witness was excused.)

11 THE COURT: This is an appropriate place to
12 take a break. We'll probably go to about 4:30 if we
13 have witnesses here. So we'll take ten minutes.
14 We'll start in again. Okay? Thank you.

15 (A recess was taken.)

16 THE COURT: Petitioners' next witness?

17 MR. BROWNE: Good afternoon, your Honor.

18 For the record, Robert Browne on behalf of
19 Petitioners. The petitioners at this time would call
20 Claude A. Lavigna.

21 CLAUDE A. LAVIGNA,

22 called herein as a witness, having been first duly sworn,
23 was examined and testified as follows:

24 THE DEPUTY: Would you please state and
25 spell your name for the Court.

1 THE WITNESS: Sure. My name is Claude A.
2 Lavigna. Last name's spelled L-a-v-i-g-n-a.

3 THE COURT: I'll ask you to keep your voice
4 up, Mr. Lavigna, when you're answering questions so I
5 can hear a little better and you also, Mr. Browne,
6 Attorney Browne.

7 MR. BROWNE: Certainly.

8 THE COURT: Please proceed.

9 MR. BROWNE: Thank you, your Honor.

10 DIRECT EXAMINATION

11 BY MR. BROWNE:

12 Q. Mr. Lavigna, could you tell the Court why you're
13 here today?

14 A. I was retained by the petitioners to evaluate
15 the 2020 congressional maps -- 2022 congressional maps and
16 2022 state Senate maps.

17 Q. And, Mr. Lavigna, as part of your evaluation,
18 did you produce reports?

19 A. Yes, I did.

20 MR. BROWNE: And, your Honor, if I could
21 have marked -- and I think they've been previously
22 marked -- and may I approach, your Honor?

23 THE COURT: You may.

24 MR. BROWNE: -- Petitioner's Exhibit 3 and
25 Petitioner's Exhibit 4. I have copies for the Court,

1 your Honor. May I approach?

2 THE COURT: Yes.

3 MR. BROWNE: Thank you.

4 BY MR. BROWNE:

5 Q. And, Mr. Lavigna, I put in front of you
6 Petitioner's Exhibit 3 and Petitioner's Exhibit 4. Are
7 those your reports?

8 A. Yes, they are.

9 MR. BROWNE: And, your Honor, the
10 petitioners would offer those into evidence at this
11 point.

12 MR. GOLDENBERG: No objection.

13 THE COURT: Ms. McKay?

14 MS. MCKAY: No objection, your Honor.

15 MR. CHILL: No objection.

16 THE COURT: Admitted without objection.

17 MR. BROWNE: Thank you, your Honor.

18 (Petitioner's Exhibits 3 and 4 were
19 received in evidence.)

20 BY MR. BROWNE:

21 Q. Mr. Lavigna, let's take a step back.

22 THE COURT: One second. What are they
23 labeled?

24 MR. BROWNE: Petitioner's Exhibit 3 is the
25 original report, and that's dated February 14, 2022.

1 THE COURT: And Number 4?

2 MR. BROWNE: It's the rebuttal report dated
3 March 1, 2022.

4 THE COURT: And that's 4?

5 MR. BROWNE: Yes, sir.

6 THE COURT: Thank you. Please proceed.

7 MR. BROWNE: Thank you, your Honor.

8 BY MR. BROWNE:

9 Q. Mr. Lavigna, let's take a step back from your
10 reports for a second. Can you tell us your educational
11 background?

12 A. Yeah. I went to Harrison High School in
13 Westchester County, graduated from there, went to Ohio
14 University for two years, transferred to the State
15 University of New York at Albany where I graduated in 1985
16 with a degree in communication.

17 Q. And, Mr. Lavigna, where are you currently
18 employed?

19 A. I'm currently the president and CEO of Eagle
20 Point Strategies based -- a survey research firm based in
21 Albany, New York. I'm also the vice president of
22 Research & Analytics at co/efficient, another survey
23 research firm, based in Kansas City, Missouri; and I am
24 the director and treasurer of Balance New York, an
25 independent expenditure committee, in New York.

1 Q. And you hold all those positions concurrently;
2 is that right?

3 A. Yes.

4 Q. Can you tell us what co/efficient is?

5 A. Co/efficient is a -- it's a national polling
6 firm. It does a lot of voter contact through texting
7 tele-town halls, virtual town halls, and I'm in charge of
8 the polling division, so...

9 Q. And you mentioned Eagle Point Strategies. Could
10 you tell us what Eagle Point Strategies is?

11 A. Yeah. Eagle Point Strategies is a full-service
12 survey research firm based in Albany, New York.

13 Q. And how long has Eagle Point Strategies been in
14 existence?

15 A. Eagle Point Strategies was created in 2008.

16 Q. And are you the actual founder of Eagle Point?

17 A. Yes, I am.

18 Q. Do you hold any other titles, other than
19 founder?

20 A. No, not for Eagle Point. No.

21 Q. What does Eagle Point Strategies do?

22 A. Eagle Point Strategies a survey research firm.
23 The bulk of its clients are in New York State. It's
24 basically state Senate races, state assembly races,
25 congressional, county execs. It's also done issue

1 advocacy campaigns for different issues before the state
2 Legislature that various activists will hire the polling
3 firm for.

4 Q. And you mentioned issue advocacy. What exactly
5 is issue advocacy.

6 A. Issue advocacy is for groups that are trying to
7 get certain legislation passed. Eagle Point Strategies
8 worked on the casino gaming legislation to get that
9 passed, marriage equality, pro-marriage equality, and also
10 medical marijuana.

11 Q. And you also mentioned positions you hold
12 currently. You mentioned Balance New York. Could you
13 tell the Court, or all of us, what balance New York is?

14 A. Balance New York an independent expenditure
15 committee created in the 2014 election cycle. Its mission
16 statement was to elect Republican members to the state
17 Senate.

18 Q. And, Mr. Lavigna, have you held any other
19 positions other than these three positions we just
20 discussed? Have you held decisions prior to any of these
21 positions?

22 A. Prior to those positions I was a production
23 manager for the state Senate Republican Campaign
24 Committee. I started in 1988, spent about 20 years there,
25 eventually got into the data services position, and then

1 we developed an in-house polling operation at the Senate
2 Campaign Committee, which I headed up.

3 Q. And what was your ultimate title with the State
4 Senate --- Republican State Senate Committee?

5 A. Deputy director by the end.

6 Q. And, Mr. Lavigna, in all these positions did you
7 obtain any specialized knowledge or skills?

8 A. Yes. I mean, when you -- the specialized
9 knowledge or skills is to understand each district,
10 different parts of the state, how they're all different,
11 you know, how to advise candidates or different campaigns
12 on how to target their messaging, you know, so I was kind
13 of a strategist for that.

14 Q. And did you obtain specialized knowledge about
15 the political landscape and geography of New York?

16 A. Yes. Through our survey research, you know, as
17 we drill down into the districts, we have a lot of
18 different knowledge just based on the political geography
19 that's out there.

20 MR. BROWNE: Your Honor, at this point I
21 would offer Mr. Lavigna as an expert based on his
22 knowledge, skill, and appearance.

23 MR. GOLDENBERG: No objection.

24 MS. MCKAY: No objection.

25 MR. CHILL: No objection.

1 THE COURT: I'm admitting -- or qualifying
2 him as an expert.

3 Go ahead.

4 MR. BROWNE: Thank you, your Honor.

5 BY MR. BROWNE:

6 Q. Mr. Lavigna, I want to talk about your reports a
7 little bit right now. I want to talk about what you
8 considered in putting together your reports.

9 A. I considered -- I looked at the 2022 maps for
10 Congress and for state Senate, I looked at the 2012 maps
11 for Congress and state Senate, I looked at election data
12 from the State Board of Elections, I looked at testimony
13 to the Independent Redistricting Committee, and I looked
14 at data from the Cook Partisan Voting Index.

15 Q. And where did you obtain all these documents?

16 A. They're all publicly -- public information on
17 the internet.

18 Q. And, Mr. Lavigna, I want to talk now
19 specifically about the congressional -- the 2022
20 congressional report. Were you able to form an opinion as
21 to the 2022 congressional district map?

22 A. Yes, I was.

23 Q. And what was your opinion?

24 A. My opinion on the congressional district maps is
25 it was a partisan gerrymander that protected incumbents

1 and reduced competitiveness across other districts.

2 Q. And what made you reach this conclusion or draw
3 this opinion?

4 A. I reach that conclusion based on communities
5 that were split. A lot of it is cracking Republican
6 voters out of seats and packing them into other seats
7 making them significantly strong Republican districts,
8 which reduces competitiveness across other seats.

9 Q. Can you give us some examples of where this
10 occurred within the congressional districts, the 2022
11 congressional district map?

12 A. Sure. Looking at Suffolk County, you know,
13 Congressional District 1 and Congressional District 2 were
14 Republican districts. What we see is
15 Republican-performing areas in District 1 were cracked
16 out, put into District 2, which makes District 2
17 significantly Republican but at the expense of District 1,
18 which is now -- you know, leans to Democratic district by
19 packing those voters out.

20 Q. Were there other examples that you can let us
21 know about?

22 A. Yeah. I think on Congressional District 3,
23 along the North Shore of Long Island, which had originally
24 stretched into Queens, now goes, you know, through Queens
25 into the Bronx, and then pulls in that Sound Shore area of

1 Westchester, which is Mamaroneck, Larchmont, Rye, which is
2 a very, you know, liberal, Democratic area but took out
3 some of those middle class, more conservative areas in the
4 North Shore of Long Island making that district, you know,
5 much more Democratic than it was before. That would be
6 one of them.

7 Q. Are there other examples outside of the
8 Long Island area?

9 A. Yeah. I think if you go to New York City, on
10 District 11, which is, you know, predominantly
11 Staten Island, it contained prior the portion of Brooklyn,
12 which had a lot of --

13 (There was an outside interruption.)

14 THE WITNESS: Should I wait?

15 THE COURT: One second.

16 Q. Sp, Mr. Lavigna, you were talking about
17 District 11.

18 A. So District 11, again, Staten Island-based. The
19 portion of Brooklyn that was in that congressional
20 district was a lot of Orthodox Jewish voters, Russian
21 voters. They're very conservative, much more in line with
22 the Staten Island voters. That part was taken out of
23 Congressional District 11, and then it went to another
24 part of Brooklyn, which brought in more of the stronger
25 Democratic-performing areas, more liberal areas like

1 Park Slope, which changed that district from a Republican
2 district to now a Democratic district.

3 Q. So we've talked about Long Island,
4 New York City, and Staten Island. Are there other
5 examples outside of the City and Long Island?

6 A. Yes. I think when you go Upstate New York,
7 especially the new District 23, which is the Southern
8 Tier, and District 24, which is the northern part of
9 New York which stretches from Erie County all the way to
10 the St. Lawrence County, those districts were Republican
11 districts, but now they are very strong Republican
12 districts. Republican voters were packed into those
13 districts, which then made the surrounding districts much
14 less competitive.

15 Q. And based on all of this, Mr. Lavigna, what is
16 your opinion again about the enacted 2022 congressional
17 district maps?

18 A. My opinion is that they were partisan
19 gerrymander and, you know, voters were packed --
20 Republican voters especially were packed into districts
21 making others less competitive.

22 Q. And do you hold this to a reasonable agree of
23 professional certainty?

24 A. Yes, I do.

25 Q. Mr. Lavigna, I want to talk now about the state

1 Senate maps that were enacted. Did you -- were you able
2 to form an opinion about the 2022 state Senate maps?

3 A. Yes, I was.

4 Q. And could you tell us what that opinion is?

5 A. Yes. The state Senate maps were similar in
6 certain ways of the congressional drawing. Again, if you
7 go to Suffolk County on the state Senate maps, the old --
8 the current Districts 1, 2, 3, and 4 are Republican
9 districts served by Republican-elected members with the
10 exception of District 3, which for one period of time for
11 one session had a Democratic representative. It's now
12 backed Republican. Those were -- you know, they were not
13 strong Republican districts, but they were competitive.

14 Now, District 1 -- again, Republicans in
15 District 1 were cracked out, put into District 2 making
16 District 2 a strong Republican district,
17 Democratic-performing areas were put into District 1
18 making 1 now a Democratic seat, and the same with 3 and 4.
19 People -- folks were cracked out of 3, put into 4.
20 District 4 -- 4 is now a very strong Republican district,
21 and 3 is now a Democratic-leaning district.

22 Q. Are there other examples which helped you form
23 your opinion about the state Senate maps?

24 A. Yeah. I think in District 9, in Nassau County,
25 you know, you had the Five Towns area formerly in there,

1 which is an Orthodox Jewish area. That was taken out of
2 District 9 and put into District 10, which is really a
3 New York City seat, you know, based in Queens, and that,
4 you know, that Jewish community is not in line with the
5 area of Queens that it was drawn into.

6 Q. And are there other examples outside of
7 New York City and Long Island?

8 A. Yeah. I think if you go up the Hudson Valley,
9 the new 48, which is similar to the old District 46 -- the
10 new 48 took out of the northern portion of 46 like
11 Montgomery County, Schenectady County, which were
12 Republican-performing counties. They were replaced by
13 more Democratic-performing areas in Ulster, Dutchess,
14 Columbia Counties.

15 Q. And are there other examples you would want to
16 point out?

17 A. I think the last one would be District 54, which
18 was a strong Republican district in Upstate New York.
19 More Republicans were put into that district making it an
20 extremely strong Republican-forming district, 54.

21 Q. And based on all this what is your opinion
22 regarding the 2022 state Senate districts?

23 A. Again, similar to the congressional districts,
24 it was a partisan gerrymander to protect, you know,
25 Democratic incumbents and resulted in reduced

1 competitiveness across other districts.

2 Q. And do you hold your opinion to a degree of
3 professional certainty?

4 A. Yes, I do.

5 Q. Mr. Lavigna, the last area I want to talk to you
6 about is the rebuttal report of Stephen -- and I'm going
7 to butcher this name. I apologize -- Ansolabehere. Did
8 you have a chance to review the professor's report?

9 A. Yes, I did.

10 Q. And did you draw any conclusions about his
11 report?

12 A. Yes, I did. The professor used -- when he
13 looked at partisanship, used statewide campaigns to
14 determine partisanship. In New York, especially in the
15 recent history, Republican statewide candidates have not
16 been the strongest candidates; they've also been outspent
17 by a tremendous amount of money, so they have not been
18 competitive statewide races. So it's -- to me, it's on
19 the barometer to measure what goes on down-ballot using
20 uncompetitive races on the top of the ticket.

21 Q. What does that do to the picture that's
22 developed?

23 A. It makes it seem like it's more
24 Democratic-leaning at times because you just don't have --
25 you're running Republican candidates with no name ID, no

1 resources.

2 Q. The professor raises a number of issues with
3 your analysis. Can you address the issues he's raised?

4 A. Yes. One of the things that I looked at were
5 actual election results of state Senate races or
6 congressional races especially because they tend to be
7 more competitive and voters would know who the candidates
8 are on both sides. So those down-ballot races are much
9 more indicative of partisanship than an uncompetitive top
10 ticket -- top line.

11 MR. BROWNE: Thank you. Your Honor, I have
12 nothing further. I tender the witness.

13 THE COURT: Thank you, Mr. Browne.
14 Who's starting cross-examination for
15 Respondents?

16 MR. CHILL: I am, your Honor.

17 THE COURT: Mr. Chill?

18 MR. CHILL: Your Honor, I might need a
19 bathroom break somewhere through just in case.

20 THE COURT: Pardon me?

21 MR. CHILL: I will need a bathroom break if
22 I need it somewhere through or halfway through.

23 THE COURT: If you need a bathroom break,
24 you let me know.

25 MR. CHILL: Yes, sir. Thank you.

1 CROSS-EXAMINATION

2 BY MR. CHILL:

3 Q. Mr. Lavigna --

4 A. Yes.

5 Q. -- in the first paragraph of your report,
6 Page 2, you state that you are a political research and
7 campaign strategist with over ten years of experience and
8 expertise, but you give no details of your experience,
9 correct?

10 A. I give some details on that, that I provide -- I
11 think it's on political trends. And, you know, I do give
12 some background on it.

13 Q. Not much, do you admit?

14 A. Right.

15 Q. Not much.

16 Your curriculum vitae shows and you have
17 admitted you have -- that you have some political bias in
18 your work for Republicans; is that correct?

19 A. That's correct.

20 Q. And my understanding -- tell me if you think I'm
21 wrong -- is that experts are supposed to be, at least
22 publicly, nonpartisan?

23 MR. BROWNE: Objection, your Honor. He's
24 already been admitted as an expert.

25 THE COURT: Yeah. Sustained.

1 MR. CHILL: But it goes to his weight.

2 THE COURT: He can bring it up.

3 MR. CHILL: It goes to his weight, your

4 Honor.

5 THE COURT: He can bring it up. He's

6 biased towards Republicans if he says he is.

7 MR. CHILL: Yes. That's the idea.

8 THE COURT: Go ahead.

9 BY MR. CHILL:

10 Q. Next you claim, again, Page 2: I am a national
11 pollster who has conducted survey research for leading
12 elected officials, corporations, and public affairs
13 initiatives for decades; is that correct?

14 A. That's correct.

15 Q. Again, you give no details do you?

16 A. No, not in the report.

17 Q. We only have the two reports.

18 A. Right.

19 Q. In your third sentence you state: I provide
20 strategic guidance on political trends and have deep
21 understanding of partisan influence in redistricting
22 efforts and political campaigns. And, again, you give no
23 details; is that correct?

24 A. That's correct.

25 Q. In your fourth sentence you claim: Through my

1 experience as a political strategist, I have developed a
2 deep understanding of New York's geographical and
3 political landscape. You do not explain how this
4 experience leads to or connects to having this, quote,
5 deep understanding, end quote, do you?

6 A. Not in the report, no.

7 Q. You are not a political scientist, correct?

8 A. I am not a political scientist.

9 Q. You have no master's degree of any kind?

10 A. I do not.

11 Q. You certainly don't have a PhD obviously?

12 A. No.

13 Q. Nor have you published any reports on
14 redistricting?

15 A. No, I have not.

16 Q. Now, isn't it true that you rely extensively in
17 your rebuttal report on the Cook Partisan Voting Index,
18 CPVI?

19 A. I do rely on that, yes.

20 Q. And isn't it true that you never said anything
21 about the CPVI or Cook report in your initial report?

22 A. I did not in the initial report.

23 Q. Is there a reason why you left that out of your
24 initial report?

25 A. No reason.

1 Q. There was a time constraint put on -- you had to
2 serve the reports by a certain period of time. Do you
3 know that?

4 A. Yeah. I didn't know what the dates were, but I
5 knew there was a time constraint on it.

6 Q. But you waited to put in your main reliant --
7 data reliance in the second report, not in the first
8 report?

9 A. Well, in my second report, I think, I'm more
10 rebutting the other report.

11 Q. So is it fair to say that at least in your
12 initial report, the CV -- I'm sorry -- CVPI, is that a
13 good way to say it --

14 A. Yes.

15 Q. -- a short term without going through the
16 whole --

17 A. Yes.

18 Q. -- Cook and so on?

19 A. You can just say Cook.

20 Q. I'll try to say CV -- or I'll say Cook.

21 A. If you say Cook, you'll be fine.

22 Q. Cook. Cook. Okay. I don't want to --

23 A. That'll make it easier.

24 Q. Let's go to your tables, the CVP -- Cook tables.

25 A. Cook tables.

1 THE COURT: What page?

2 MR. CHILL: This is the rebuttal report,
3 your Honor, because he said it's only on his rebuttal
4 report.

5 THE COURT: The rebuttal report?

6 MR. CHILL: Yes, rebuttal report,
7 Pages 5, 7, 10, and 13. And I'm going to take him
8 through it, your Honor.

9 BY MR. CHILL:

10 Q. Is it fair to say that you believe that the Cook
11 report is accurate?

12 A. Yes, it is fair to say.

13 Q. So let's look at -- on Page 5. Can this --
14 Congressional District 18 has a PVI of R 1, correct? R 1
15 would mean Republican, would it not?

16 A. Wait. Page 5?

17 Q. 5 --

18 THE COURT: Are you looking at --

19 Q. -- the chart on Page --

20 THE COURT: -- the graph?

21 Q. The chart. The chart.

22 A. On Page 5?

23 Q. The chart on Page 5.

24 A. Okay.

25 MR. BROWNE: I think we have our pages

1 confused here.

2 THE WITNESS: Yeah. I have 1, 2, and 3.

3 MR. BROWNE: Congressional District 18 is
4 not mentioned on Page 5.

5 MR. CHILL: Hold on. Hold on. Hold on.
6 Hold on.

7 BY MR. CHILL:

8 Q. Congressional District -- Congressional
9 District --

10 THE COURT: 1, 2, and 3. I have
11 Districts 1, 2, and 3.

12 Q. Yeah, 1 and 2, the one that Lee Zeldin's on.

13 A. Yes.

14 Q. Lee Zeldin, District 1.

15 A. Yes.

16 Q. Excuse me. District 1. So R+1 would say leans
17 Republican, wouldn't it?

18 A. R+1 would be leaning Republican, yes.

19 Q. Yes.

20 And strongly Republican, R+6, isn't it?

21 A. Yes.

22 Q. Strong Republican, wouldn't you agree?

23 A. Yes.

24 Q. Is a Republican the congressman today in that
25 district?

1 A. Yes, he is.

2 Q. Okay. Was the district always Republican?

3 A. Not -- not always.

4 Q. So would you concede that for at least 12 years
5 a Democrat held that district --

6 A. Yes.

7 Q. -- under the old map, a Democrat?

8 A. Yes.

9 Q. In an R+6 district. So certainly with respect
10 to District 1, it's not totally accurate when it says R+1?

11 A. Well --

12 Q. Yes or no?

13 A. No, it's -- it's accurate. It's accurate. I
14 think when the -- the CPVI is -- it's a standardized
15 measurement across the country for congressional
16 districts. There are other things that come into play
17 when you run a race at certain times. It could be a
18 candidate may have a legal issue. It could be any
19 numerous things that adds a different kind of context to a
20 number.

21 Q. So when you use these CV -- these Cook
22 reports --

23 A. Yes.

24 Q. -- because of what you just said yourself now --
25 it's certainly imponderable that might come into a local

1 election -- it could change the outcome?

2 A. Yes.

3 Q. So, therefore, it's not necessarily totally
4 accurate, fair?

5 A. I don't know if "accurate" -- it's a guide, yes,
6 but --

7 Q. Predictable?

8 A. It's not a -- it's not a predictor. It's not a
9 hard predictor.

10 Q. Those always reflect what the R number shows --

11 A. Right.

12 Q. -- or the D number shows, correct?

13 A. Correct.

14 Q. Let's look at the same page, Congressional
15 District 3. I'm sorry. Change -- we're going to change
16 tables. Let's go to Page 7 -- no. Let's go to Page 10.

17 THE COURT: Page 10?

18 MR. CHILL: 10, your Honor. There's a
19 table on Page 10.

20 Q. Now, the old district map -- I'm talking about
21 the 2012 map, correct, when I talk about the old map?

22 A. Yep.

23 Q. -- has a PVI in 19, District 19. Do you see it?

24 A. Yep.

25 Q. R+3, pretty strong?

1 A. I wouldn't call it strong, but it's definitely
2 leaning Republican, R+3.

3 Q. R+3?

4 A. Yep.

5 Q. Leaning Republican.

6 And who holds the seat now, a Democrat or a
7 Republican?

8 A. A Democrat.

9 Q. So when -- it says R+3, which you indicate that
10 a Republican will win, but a Democratic won; isn't that
11 correct?

12 A. The R+3 --

13 Q. Did a Democrat win or not?

14 A. What's that?

15 Q. A Democrat did win?

16 A. A Democrat won in --

17 Q. In an R+3 district?

18 A. Right, in a district that leaned Republican.

19 Prior to that it was Republicans Faso and Gibson.

20 Q. Let's go to Page 13. Let's look at District 24.
21 That's got a D+2. That means it leans Democratic,
22 correct?

23 A. Correct.

24 Q. And who was the congressman from 2015 to the
25 present? I think that's three terms.

1 A. Right. John Katko.

2 Q. And he's not a Democrat?

3 A. No, he's not.

4 Q. So, again, when I use the word predictor, it
5 wasn't accurate to the extent that what it should have
6 shown if it was accurate, that a Republican would carry
7 that district; is that a fair statement?

8 A. Not in this particular case because --

9 Q. I'm asking about this particular case.

10 A. Right, because District --

11 THE COURT: He answered it and said --

12 MR. CHILL: Okay. I'm ready to move on,
13 your Honor.

14 Q. District 22, same page, 13. You would have to
15 say -- it's an R+9 -- it's a strong Republican district,
16 would you not --

17 A. Yes, it is.

18 Q. -- according to the Cook report?

19 A. Yes.

20 Q. And yet only recently a Democrat holds that
21 district, correct?

22 A. Correct.

23 Q. So, once again, is it fair to say it does not
24 accurately predict what it should have predicted based on
25 the Cook report? Fair statement?

1 A. For that district for that time, yes.

2 Q. That district --

3 A. Yes.

4 Q. -- and the other district we talked about? Same
5 answer?

6 A. Yes.

7 Q. District 11 -- let's see what page that's on.

8 THE COURT: What page?

9 MR. CHILL: I'm going to try to find the
10 page, your Honor. Yes. It's on Page 7, your Honor.

11 THE COURT: Thank you.

12 Q. -- has a PVI rating of R+7, is that correct, in
13 the old district?

14 A. That's correct.

15 Q. And that's a really strong Republican district?

16 A. That's a somewhat strong Republican district,
17 yes.

18 Q. Someone strong Republican district.

19 And yet from 2019 to 2021 a Democrat won in that
20 very strong Republican district; isn't that correct?

21 A. Yep. Max Rose had it for a cycle.

22 Q. It says so, Max Rose. Thank you for putting it
23 into the chart.

24 MR. CHILL: Let's go back again to a chart,
25 your Honor.

1 THE COURT: I mean, I think you've made
2 your point, Mr. Chill.

3 MR. CHILL: Okay.

4 THE COURT: I don't know if you want to ask
5 him a question.

6 MR. CHILL: I have one more without --

7 BY MR. CHILL:

8 Q. Old District 1 --

9 THE COURT: What page?

10 MR. CHILL: I'm looking for the page.

11 THE COURT: Probably 5?

12 THE WITNESS: 5.

13 MR. CHILL: Huh?

14 THE COURT: 5.

15 THE WITNESS: 5.

16 MR. CHILL: 5. You're a very helpful
17 witness. Thank you.

18 BY MR. CHILL:

19 Q. -- that district is, again, a strong Republican
20 district, R+6, is it not?

21 MR. BROWNE: Your Honor, I think we've
22 already talked about District 1.

23 MR. CHILL: He asked me if I had one more,
24 and I said --

25 THE COURT: I think we did talk about

1 Page 5.

2 MR. CHILL: No, I have one more on that
3 page.

4 THE COURT: Wouldn't it have made more
5 sense just -- I mean, you've made your point on all
6 these districts --

7 MR. CHILL: Okay.

8 THE COURT: -- to ask him a question about
9 the validity of his --

10 MR. CHILL: Yeah. Yeah.

11 THE COURT: -- what he's testifying about?

12 MR. CHILL: Yeah.

13 BY MR. CHILL:

14 Q. So certainly you would have to concede, would
15 you not, that the Cook report is not a very good
16 predictor; it depends on local factors often?

17 A. It's a good predictor, but local factors do come
18 into play, yes. It's never going to predict 100 percent
19 but --

20 Q. This is the only data that you have in your
21 report; is that not correct?

22 A. Predictive data, yes.

23 Q. No. I mean data that you opine to.

24 A. Yes.

25 Q. On Page 3 of your rebuttal report you claim that

1 the Cook report is, quote, widely considered by courts,
2 nonpartisan organizations, and redistricting experts to be
3 a reliable measure of partisan lean in districting. And
4 you cite a number of cases, the Benisek case and the Rucho
5 case and a Phillip Randolph case, correct?

6 A. Correct.

7 Q. You're not a lawyer, are you?

8 A. No, I'm not.

9 Q. Did you read these cases?

10 A. I did not read those cases.

11 Q. You cited them without reading them?

12 A. Well, I worked with counsel on those cases.

13 Q. Counsel gave you the cases, and you put them in
14 your report --

15 A. Yes.

16 Q. -- but you didn't read them?

17 A. I did not read those cases, no.

18 Q. But you relied on these cases to form your
19 opinion, did you not? You put them in your report.

20 A. Yes. Yes.

21 Q. You put them in the report, so I'm asking you,
22 you didn't rely on them; you didn't read them?

23 A. I did not.

24 Q. Did you know that the Benisek case was reversed
25 by the Supreme Court of the United States?

1 A. I did not.

2 Q. Isn't it true that the Ohio case you cite was
3 not used directly by the Court?

4 A. I don't know that.

5 Q. You don't know that.

6 Isn't it true that aside from these two state
7 cases in other jurisdictions that are not precedentially
8 binding on this Court, the Cook report has never been used
9 in any other redistricting litigation, not in New York,
10 not anywhere else, not in any of the 50 states?

11 THE COURT: Is that a question?

12 MR. BROWNE: Yeah.

13 MR. CHILL: Yes.

14 Q. Isn't it true that it hasn't been used
15 elsewhere?

16 A. I'm not aware of that, true or not true.

17 Q. You don't know?

18 A. No.

19 Q. In your rebuttal report, Page 4, you criticize
20 Dr. -- I can't pronounce that name either --
21 A-n-s-o-l-a-b-e-h-e-r-e because, quote, he did not
22 consider whether these races were representative of
23 New York's actual turnout or candidate quality, including
24 selecting races with strong incumbents or with underfunded
25 challengers. You made that statement?

1 A. Yes, I did.

2 Q. Isn't it true that the Cook report does not
3 consider New York's actual turnout?

4 A. The Cook report does not consider the statewide
5 candidate turnout.

6 Q. Isn't it true that the Cook report does not
7 consider congressional candidate quality?

8 A. Correct.

9 Q. Isn't it true that the Cook report does not
10 consider incumbency?

11 A. Correct.

12 Q. Isn't it true that the Cook report does not
13 consider campaign fundraising or whether a challenger is
14 underfunded?

15 A. Correct.

16 Q. So isn't it true that the Cook report is subject
17 to all of the critiques you offered against Dr. --
18 whatever his name is. Yes?

19 A. Yes, but the Cook -- the Cook --

20 Q. I just asked you, the same criticism that you
21 made of the other expert is true of the Cook report? Is
22 that not a fair statement?

23 A. It's a fair statement.

24 Q. Isn't it true that the Cook report also does not
25 consider contemporary events?

1 A. It does not. I'm not aware of that. No.

2 Q. You claim that the more common method of gouging
3 the partisan tendencies of a district is to look at the
4 previous elections in the state, correct?

5 A. Yes.

6 Q. The Cook report is a measure of district
7 partisanship relative to the national average, correct?

8 A. Yes.

9 Q. In other words, if a district has a score of
10 R+1, it means that the district is 1 percent more
11 Republican than the national average, correct? However,
12 if the national mood is Democratic-leaning, which it has
13 been lately, correct --

14 A. Yes.

15 Q. -- then an R+1 could still mean a
16 Democratic-leaning district; isn't that so?

17 A. Yes. An R+1 is a tight district. Correct.
18 Yes.

19 Q. But still definitely Republican-leaning?

20 A. Yeah.

21 Q. So the fact that New York has nine districts
22 under the old plan who are R-leaning, the Cook report
23 doesn't say there that should be nine Republicans elected
24 in this state, correct?

25 A. Say that again.

1 Q. I'll say it slowly. I'm sorry. The fact that
2 New York has nine districts under the old plan with an R+
3 rating, it does not say that there should be nine
4 Republicans elected in the state?

5 A. Right. Correct.

6 Q. It just means that there are nine districts that
7 were more Republican-leaning than the country overall?

8 A. Yes.

9 Q. But the national congressional vote in 2020 was
10 Democratic-leaning by approximately 3 percentage points;
11 isn't that correct?

12 A. I'm not aware of that.

13 Q. Okay. In your rebuttal report, Page 4, you
14 state: I first examined whether new district lines could
15 be justified by valid considerations based on traditional
16 redistricting principles, including compactness,
17 contiguity, population shifts, and keeping counties,
18 towns, and communities of interest together. Did I quote
19 you accurately?

20 A. Yes.

21 Q. But you provide no data or any evidence
22 measuring the geographic compactness of the old or new
23 districts. You don't?

24 A. No.

25 Q. Isn't it true that you provide no data or

1 evidence of population shifts with retention of core
2 districts between the old and new districts? You have no
3 data to back any of this up?

4 A. Right.

5 THE COURT: Let him answer the question
6 instead of answering for him.

7 MR. CHILL: I'm sorry. I apologize. I
8 hear.

9 Q. Isn't it true that you provide no data counting
10 the number of divided counties, towns or offer any
11 systematic definition or location of communities of
12 interest?

13 A. Yes.

14 Q. You should be happy. I'm going to leave the
15 Cook business.

16 I want to talk to you about the Voting Rights
17 Act. Isn't it true that in coming to your conclusion, you
18 do not take into account the Voting Rights Act of 1965?

19 A. I did not look at the Voting Rights Act of 1965.

20 Q. Even though you didn't look at it, are you aware
21 that the Voting Rights Act of 1965 demands, as a matter of
22 law, that minorities have an opportunity to elect
23 candidates of their choice?

24 A. Yes, I am.

25 Q. Okay. And we've heard a lot about cracking and

1 packing, so forgive me, this interracial area. Isn't it
2 true that the Supreme Court demands that the district
3 lines cannot contain too many minorities -- that would be
4 called packing, or racist -- in certain places or too
5 little? That would be called cracking. You can't put too
6 many minorities --

7 A. Right. Correct.

8 Q. Are you aware that just a few weeks ago a
9 justice of the Supreme Court of the United States stated
10 that drawing these majority-minority districts or what we
11 call Voting Rights districts is extremely difficult to do
12 without packing or cracking?

13 A. I'm not aware of that.

14 Q. And isn't it true that drawing these Voting
15 Rights districts would take precedence of all other
16 redistricting criteria except equal population?

17 A. Yes.

18 Q. In your rebuttal report, Page 8, you note,
19 quote, keeping these districts, 7, 8, and 9, as
20 majority-minority districts does not require the
21 Legislature to contort District 11 into its present
22 configuration, which breaks up important communities of
23 interest? Did I quote you correctly?

24 A. Yes.

25 Q. You do not provide evidence to substantiate this

1 statement, do you?

2 A. No, I don't.

3 Q. Are 7, 8, and 9 communities of interest?

4 A. Yes, they are.

5 Q. What's the community of interest?

6 A. Wait. Sorry. I'm not aware of them being a
7 community of interest.

8 THE COURT: Are we talking about
9 Districts 7, 8, and 9?

10 MR. CHILL: Yes, your Honor.

11 THE COURT: Of the congressional districts?

12 MR. CHILL: Yes. I left that -- I'm not
13 touching the state Senate.

14 THE COURT: Okay.

15 BY MR. CHILL:

16 Q. So what -- you say that communities of interest
17 were broken up in District 11. What communities of
18 interest were broken up in District 11?

19 A. The Orthodox --

20 THE COURT: I'm sorry. I missed your
21 answer.

22 A. The Orthodox Jewish community.

23 THE COURT: Thank you.

24 A. The Russian communities.

25 Q. Were they in -- excuse me.

1 A. They are in 11.

2 Q. Are you staying that they're in 11 -- they were
3 in 11?

4 A. They were in 11.

5 Q. I'll get to that.

6 So you define Orthodox -- Orthodox Jews, I take
7 it, right?

8 A. Yes.

9 Q. -- as communities of interest?

10 A. Yes.

11 Q. We'll return to that.

12 But doesn't drawing, when you have to draw
13 numerous majority-minority districts as required by law,
14 necessarily impact adjoining non-minority-majority
15 districts --

16 A. It could.

17 Q. -- including the 11th?

18 A. It could.

19 Q. Well, you mentioned Jewish Orthodox, so let's
20 talk about the Jewish Orthodox. In your initial report,
21 Page 4, you state, quote, by breaking up concentrated
22 Orthodox Jewish and Russian communities with strong social
23 and cultural ties, the new map spreads conservative
24 Republican-leaning voters across multiple districts. And
25 you go on, these new districts move large numbers in the

1 Russian Jewish communities into Brooklyn into
2 Congressional District 8 and divide the Orthodox Jewish
3 communities between Congressional District 9 and
4 Congressional District 10.

5 You also state in your rebuttal report, Brooklyn
6 has one of the largest Orthodox Jewish populations in the
7 world. Culturally, spiritually, and politically they form
8 a community of interest, which is something you said a few
9 minutes before when we were talking, correct?

10 A. Correct.

11 Q. You also make the following assertion in your
12 rebuttal report, Page 6: The Legislature cracked
13 established Orthodox Jewish and Russian communities with
14 strong social and cultural ties spreading these
15 conservative Republican-leaning voters across multiple
16 districts?

17 A. Yes.

18 Q. Okay. Jew is a noun; is that correct?

19 A. It's a religion. Jewish is a religion.

20 Q. I asked you a question. Is the word Jew a noun?

21 A. Yes.

22 Q. Okay. On this noun what are the
23 characteristics, criteria, or markers that defines one as
24 a Jew?

25 A. When I wrote this, what I was talking about --

1 Q. Could you answer my question, please?

2 A. I can't.

3 Q. You can't answer the question? You don't have
4 markers?

5 A. No.

6 Q. So you can't define who is a Jew.

7 Isn't it true that the census does not count
8 Jews as a minority?

9 A. I'm not aware of that.

10 Q. Isn't it true that the census doesn't count Jews
11 any which way?

12 A. I'm not aware of that.

13 Q. So how do you know who's a Jew in Brooklyn?

14 A. It'd be --

15 Q. I haven't got to Orthodox yet. Wait.

16 A. The --

17 Q. I'm just talking about Jew.

18 A. It's just a long -- having worked on those
19 districts -- in those districts and been there, we know
20 who -- it's their community. We understand that.

21 Q. You don't have a shred of evidence other than
22 the fact that you worked in those communities and know
23 who's a Jew to back up your statement that these Jewish
24 communities were cracked or packed or whatever you said,
25 correct?

1 A. I know from what I saw.

2 Q. Evidence? Data? Poll numbers? Voting
3 patterns?

4 A. Poll numbers, I mean --

5 Q. No. No. No. Do you have it in your report
6 anywhere?

7 A. No.

8 Q. Now, Orthodox is an adjective modifying the noun
9 Jew. So you talked about Orthodox Jews, right?

10 A. Yes.

11 Q. One of the criteria, markers, measurements
12 defined in Jew is Orthodox.

13 MR. BROWNE: Your Honor, I'm going to
14 object. Let's just get to the question.

15 THE COURT: Yeah. I'm not quite sure where
16 this is going, Mr. Chill.

17 MR. CHILL: Well, I'll make a --

18 THE COURT: If you want to ask him where'd
19 he get his -- he probably took it from some data. I
20 don't know. If you want to ask him where --

21 MR. CHILL: I asked him and --

22 THE COURT: -- he got the figures --

23 MR. CHILL: -- I'm going to show him
24 that -- if he's willing to concede that he has no
25 data at all showing -- defining what an Orthodox Jew

1 is, let alone a Jew, I will stop the questioning on
2 this area.

3 BY MR. CHILL:

4 Q. Yes, Mr. --

5 THE COURT: Let's move on.

6 MR. CHILL: I'm moving on.

7 Q. Will you concede that you have no data at all
8 and no way of defining what's Orthodox and no way of
9 defining what's Jewish?

10 THE COURT: He's already said that.

11 Q. Okay. So if you can't define Jew and you can't
12 define Orthodox Jew, how do you know how they vote?

13 A. We know how they --

14 Q. You can't define who they are. Who's voting --

15 THE COURT: Let him answer the question.

16 A. We know how they vote. Because of their
17 community, we can look at election results by election
18 district. We know how they vote.

19 Q. Where is that in your report?

20 A. I talked -- I spoke about it in the report.

21 Q. Where?

22 A. Well --

23 Q. Where?

24 A. -- we can identify the election results.

25 Q. Where in your report do you --

1 A. It's not in my --

2 Q. -- talk about how Orthodox Jews vote?

3 A. It's not in my -- it's not in the report.

4 Q. Let's go up to Kiryas Joel, and this is --

5 THE COURT: Are you referring to the
6 report?

7 MR. CHILL: That's the second report, your
8 Honor, Page 10.

9 THE COURT: What page?

10 MR. CHILL: Page 10, your Honor.

11 BY MR. CHILL:

12 Q. You claimed --

13 THE COURT: One second.

14 MR. CHILL: I'm sorry.

15 THE COURT: Whereabouts on Page 10 are you?

16 MR. CHILL: Yes, your Honor.

17 THE COURT: Are you referring to certain
18 language in that on Page 10?

19 MR. CHILL: Yes, I'm going to.

20 BY MR. CHILL:

21 Q. You claim that the new map separates the
22 Orthodox communities in Sullivan and Rockland Counties
23 from the Kiryas Joel Jewish community in Orange County,
24 correct?

25 A. Yes.

1 Q. But you can't define Orthodox -- or Orthodox
2 Jewish again, right?

3 MR. BROWNE: Objection, your Honor. Asked
4 and answered.

5 THE COURT: Sustained.

6 MR. CHILL: It's a different area of the
7 state, your Honor.

8 MR. BROWNE: It's the same question, your
9 Honor.

10 MR. CHILL: But it's a different part of
11 the state. If it still had the same criteria that he
12 can't measure with respect to Rockland and Sullivan
13 County, I'll --

14 THE COURT: Move on, Mr. Chill.

15 MR. CHILL: I'll go on.

16 BY MR. CHILL:

17 Q. Is it your contention that these Orthodox Jews
18 tend to vote Republican rather than Democratic?

19 A. Yes.

20 Q. Are you familiar with the election in the area
21 known as Kiryas Joel, which you mentioned, election
22 results?

23 A. Yes.

24 Q. And is that a district heavily populated by
25 Orthodox Jews voting Republican?

1 A. It depends. The community -- if you look at
2 election results from that community, you will see large
3 differences in votes. Sometimes in an election district
4 it can be 400 to 5 for a Democrat or 400 to 5 for
5 Republican.

6 Q. And the fact that they're Orthodox does not
7 dictate how they're going to vote, is that a fair
8 statement, on a given election?

9 A. I would almost say the opposite. The fact that
10 they're Orthodox could potentially tell you how they were
11 going to vote.

12 Q. Well, do you think that the -- did they vote
13 Democratic or Republican for Congress.

14 A. They vote for the candidate. It's not --

15 Q. No, in the last election.

16 A. I don't know the last election. I don't recall.

17 Q. And if I tell you that they voted for a Democrat
18 named Sean Patrick Maloney, would you believe me?

19 A. Yes.

20 Q. Even though in the same election cycle they
21 voted heavily Republican for other candidates?

22 A. Yes.

23 Q. In your rebuttal report, Page 9, you mention the
24 following community members --

25 THE COURT: One second. Let me catch up.

1 MR. CHILL: Sorry. Sorry. Sorry.

2 THE COURT: Rebuttal report, Page 9.

3 MR. CHILL: Yeah.

4 THE COURT: How far down?

5 MR. CHILL: Your Honor, maybe I should take
6 a short bathroom break here if that's okay. I'm not
7 far from finishing. I'm not far from finishing my
8 cross.

9 THE COURT: You need a bathroom break?

10 MR. CHILL: Yes. Please.

11 THE COURT: Take five minutes.

12 (A recess was taken.)

13 THE COURT: All right. Let's continue.
14 You're still under oath, sir.

15 BY MR. CHILL:

16 Q. In your rebuttal report, Page 9, you mention the
17 following community members as expressing their desire to
18 keep their Brooklyn Jewish populations together. One of
19 those you mentioned was Avi Greenstein. You do not attach
20 copies of transcripts of their comments, do you?

21 A. I did not.

22 Q. Have you read those statements that you cite in
23 here?

24 A. Yes, I have.

25 Q. And how about David Pollock?

1 THE COURT: Are you asking him if he read
2 his public comments?

3 MR. CHILL: Yes.

4 Q. Have you read his statements?

5 A. I've read the public comments on the IRC
6 website.

7 Q. And I show you this document.

8 THE COURT: Is it marked?

9 MR. CHILL: Mark it for -- I'm not offering
10 it into evidence.

11 THE COURT: Please bring it over so she can
12 mark it.

13 (Exhibit A-1 was marked for
14 identification.)

15 MR. BROWNE: So there is some writing on
16 that document, your Honor. As long as we can put
17 that on the record --

18 MR. CHILL: Okay. I don't mind. I'm just
19 going to ask him if that's what he read.

20 MR. BROWNE: Your Honor, there's -- the top
21 most paragraph on the exhibit is circled, and there's
22 a sentence underlined.

23 MR. CHILL: I'm going to ask about that
24 sentence.

25 MR. BROWNE: And there's also writing on

1 the bottom. I can't make it out.

2 MR. CHILL: That comes from the original.

3 THE COURT: Thank you.

4 All right. Show it to the witness --

5 MR. CHILL: Yes.

6 THE COURT: -- Mr. Chill.

7 BY MR. CHILL:

8 Q. Do you recognize --

9 THE COURT: See if he can identify what it
10 is.

11 A. I looked at it online. It wasn't a paper.

12 THE COURT: You're familiar with it?

13 THE WITNESS: Yes.

14 THE COURT: All right. Question?

15 MR. CHILL: The question, I want him to
16 read the first paragraph out loud.

17 THE COURT: Can you identify what it is
18 first? I don't know what you're looking at.

19 BY MR. CHILL:

20 Q. It's -- tell the Court what you're looking at.

21 A. I'm looking at David Pollock, Jewish Community
22 Relations of New York.

23 Q. In which you put into your report as a source?

24 A. His testimony, yes. Do you want me to read it?

25 Q. Yes, please. Read it out loud.

1 A. It is important to note that New York State's
2 Jewish communities are not homogenous. The Jewish
3 community is --

4 Q. Slowly.

5 A. The Jewish community is incredibly diverse.
6 Geographically we reside throughout the state.
7 Religiously we span secularism to Haredi yeshiva and
8 Hasidic. Economically we are rich, poor, and everything
9 in between. Politically we span the spectrum from liberal
10 to conservative, and our immigrants in New York include
11 concentrations of émigrés from the former Soviet Union,
12 Israel, Syria, Iran, Ethiopia, and many, many more. My
13 service to the Jewish community has taught me that no one
14 speaks for the entire Jewish community at the JR --
15 JCRC-NY. We try to identify and to develop consensus
16 among the various Jewish communities and to act where --
17 when there is consensus.

18 Q. Thank you.

19 And this is one of the sources you relied on?

20 A. Other parts of it, but yes.

21 Q. Parts of it.

22 With respect to Mr. Goldenberg that's in your --
23 cited, do you know what makes him a member of sufficient
24 importance to qualify as giving any weight to what he
25 thinks?

1 A. No, I don't.

2 Q. And with respect to Mr. Greenstein, do you know
3 what gives him a -- makes him a community member of
4 sufficient importance to qualify as giving him any weight
5 to his desires?

6 A. No, I don't.

7 Q. And with respect to Mr. Fryshman, who is also
8 cited in your report, do you know what makes him a
9 community member of sufficient importance to qualify as
10 giving any weight to his desires?

11 A. No, I don't.

12 Q. And you also mentioned a Dr. Israel Weinstock in
13 your reports; is that correct?

14 THE COURT: Are you still on Page 9?

15 MR. CHILL: No. I'm just going to ask him
16 the question, if he knows -- if he's aware of who
17 Israel Weinstock is.

18 A. I don't recall what --

19 Q. You don't remember -- do you remember using him
20 at all?

21 A. I don't remember all the names, no.

22 Q. Do you remember him?

23 A. I do not.

24 Q. Okay. Do you remember a Mr. Louis Jerome you
25 mention in your report?

1 A. Yes, I do.

2 Q. Okay. And same question I asked you before:
3 What gives him the status as a community leader sufficient
4 for you to rely on him with respect to his desires?

5 A. I don't know.

6 Q. On Page 5 of the rebuttal report you claim that
7 District 3 was competitive.

8 THE COURT: One second.

9 MR. CHILL: Sorry, your Honor.

10 THE COURT: Page 5.

11 MR. CHILL: I have to get it too.

12 BY MR. CHILL:

13 Q. Okay. With me?

14 A. Yes.

15 Q. You claim that District 3 was competitive; isn't
16 that true?

17 A. Yes, I did.

18 Q. And isn't it true that a Republican has never
19 won that district in 20 years?

20 A. Never won, correct.

21 Q. Even though you claim it's competitive?

22 A. It's competitive. They weren't landslides. It
23 was competitive. They were competitive.

24 Q. Competitive but never won by --

25 A. But never won.

1 Q. Okay. On Page 6 of your rebuttal report you
2 state that District 1 has been represented by a Republican
3 for years. Isn't it true that District 1 has also been
4 represented by a Democrat for 12 years as opposed to a
5 Republican for only 6 years?

6 A. Yes.

7 Q. Also on Page 6 of the rebuttal report you claim
8 that Republican-leaning communities share social values.
9 What are the social values that Republican-leaning
10 communities share?

11 A. Social values run the gamut from economic
12 outlooks, community, church. It's a bind. It's a tie.

13 Q. Tie? Democrats don't share that value of going
14 to church?

15 A. They do. They share different ones. They can
16 be church as well. It can be --

17 Q. So are you suggesting or saying that Republicans
18 go to one kind of church and Democrats go to a different
19 kind of church?

20 A. No.

21 MR. BROWNE: Objection, your Honor.

22 THE COURT: Sustained. I don't know if we
23 need that. Next question.

24 MR. CHILL: Okay. I'm happy to move on,
25 your Honor, but he did open the door.

1 Q. On Page 8 of your rebuttal report you state that
2 Jewish populations in Brooklyn share ties that stretch
3 across connected neighborhoods. What are the ties that
4 discrete Jewish neighborhood communities share across
5 connecting neighborhoods?

6 A. Again, ties in the Jewish community is religion.

7 Q. They're all Jewish --

8 A. Right.

9 Q. -- which you couldn't define?

10 A. I can define Jewish. That's not --

11 Q. So we'll revisit that from the beginning.

12 MR. BROWNE: Objection, your Honor.

13 THE COURT: Let's not revisit that.

14 MR. CHILL: Okay. Okay, your Honor. I
15 agree. I agree.

16 Q. On Page 10 of your rebuttal report you claim
17 that the enacted plan maneuvers District 18 from a
18 Republican-leaning district to a Democratic-leaning
19 district; is that correct?

20 A. Yes.

21 Q. Isn't it true that for more than ten years
22 District 18 has elected a Democratic even though under the
23 2012 map District 18 is rated R+1?

24 A. Yes.

25 Q. On Page 11 you conclude that District 19 has not

1 always been a Democratic district. Fair statement?

2 A. Fair statement.

3 Q. Isn't it true, however, that notwithstanding
4 having been elected under the 2012 map with a Cook rating
5 of R+3, the present congressman is a Democrat?

6 A. Yes.

7 Q. Your original report did not address or offer
8 any accounting for the fact that New York is losing a
9 congressional district, correct?

10 A. Correct.

11 Q. And your report does not offer any explanation of
12 how that change might impact the boundaries of the new
13 districts, right?

14 A. Correct.

15 Q. You state that the new District 24 stretches
16 across four media markets. Do you recall that statement?

17 A. Yes.

18 Q. Can you find in there where you said that?

19 A. What's that?

20 Q. Can you -- do you know where you said that? I
21 don't want to hold up the judge while I look for it.
22 You'll find it faster.

23 A. It's in my original report.

24 Q. I think so.

25 THE COURT: District 24 are you referring

1 to?

2 MR. CHILL: New District 24.

3 THE COURT: Page 12 at the bottom of the --
4 I assume, of the rebuttal report, I assume.

5 MR. CHILL: Yes. Yes. Yes. Yes. Yes.
6 I'm trying to move it along.

7 THE COURT: If you could --

8 MR. CHILL: I'm trying.

9 THE COURT: -- identify the page and
10 whereabouts on the page you're referring to.

11 MR. CHILL: I'm sorry, your Honor. I
12 apologize.

13 THE COURT: That's all right.

14 BY MR. CHILL:

15 Q. Isn't it true that you offer no evidence of this
16 nor data to substantiate this claim?

17 A. What page are we on?

18 THE COURT: Page 12, bottom. I think we're
19 still talking.

20 MR. CHILL: Yes.

21 THE COURT: -- about District 24.

22 MR. CHILL: Yes, District 24.

23 BY MR. CHILL:

24 A. Okay. What was the question?

25 Q. The question is, isn't it true that you offer no

1 evidence nor data to substantiate this claim?

2 A. What was the claim? I was looking for the
3 pages.

4 Q. That new District 24 stretches across four media
5 markets.

6 A. Correct.

7 Q. You provide no data showing the number of people
8 of each media market?

9 A. Correct.

10 Q. You don't provide any information about which
11 media market you are discussing --

12 A. Correct.

13 Q. -- or any explanation of how you are defining a
14 media market --

15 A. Correct.

16 Q. -- nor any discussion of media markets in the
17 context of any of the other districts? You don't discuss
18 media markets with respect to any other districts, do you?

19 A. Correct.

20 Q. Isn't it true that these communities you're
21 talking about share Lake Ontario waterfront, Lake Ontario
22 watershed, and issues concerning the lake?

23 A. They do.

24 Q. So it's not just media markets?

25 A. Well, not all of them go to the lake, but yes.

1 Q. Which districts do you claim on partisan
2 gerrymanders?

3 A. 23. 24.

4 Q. So you don't mention 4, 5, 6, 7, 12, 13, 14, 15,
5 20, 25, or 26. Does that mean they are not -- those
6 districts are not partisanly gerrymandered?

7 A. I was looking at the districts where Republicans
8 were packed into. They could be by default because when
9 you pack into a Republican district, you're reducing
10 competitiveness across the other districts and you're
11 protecting incumbents.

12 Q. So are you claiming that as a result of partisan
13 gerrymandering specific districts, it affects the entire
14 state? Is that what you're saying?

15 A. It affects -- it definitely affects the
16 surrounding districts.

17 Q. But you don't know which one of those are the
18 surrounding districts?

19 A. I can tell you looking at a map.

20 Q. No. Just your -- I'm asking you as an expert.

21 THE COURT: I think he just said that he'd
22 have to look at the other maps.

23 Q. Oh, go look. Go look. I'm sorry. I didn't
24 hear you.

25 A. Right. So 23 -- if you go to 24, the district

1 along the lake, it would impact 25 because you make 25 a
2 solid Democratic district by going from Niagara County
3 then south around Monroe back up to the lake, because you
4 miss the lake in Monroe, to get up to St. Lawrence County.
5 See, it kind of just circles Rochester, so it impacted
6 that district, which is --

7 Q. So the boundaries of one district can impact the
8 boundaries of an adjoining district; isn't that correct?

9 A. That's correct.

10 Q. So isn't it possible, as an expert, that Voting
11 Rights districts adjoining District 11 can impact what
12 District 11 ends up looking like population-wise?

13 A. The Voting Rights wouldn't affect 25.

14 Q. I'm not talking about 25. I'm asking you about
15 11?

16 A. Oh, okay.

17 Q. -- Staten Island. If you have to do Voting
18 Rights -- I'm going to make it simple -- do Voting Rights
19 districts in adjoining districts next to 11 and you have
20 to do those lines by law, so many minorities here, so many
21 minorities there, isn't it inevitable that you have to
22 affect the adjoining district, which is 11, in some way?

23 A. It's possible.

24 Q. In your original report, Pages 3 and 4, you
25 state, quote, this partisan revision creates multiple town

1 splits?

2 THE COURT: He's looking for it. Can you
3 tell us where you are on the page?

4 MR. CHILL: Probably the bottom of the
5 page, sir.

6 THE COURT: Oh, it's the very -- it goes
7 over onto the other page.

8 MR. CHILL: Yes, the bottom of the page,
9 your Honor.

10 BY MR. CHILL:

11 A. What page are we on?

12 Q. Bottom of 3.

13 THE COURT: Starts on the very bottom of 3
14 and goes over to Page 4.

15 A. Got it. Thank you.

16 BY MR. CHILL:

17 Q. Town splits. Isn't it true that given the legal
18 requirement that congressional districts cannot vary in
19 population even by one person that it is impossible not to
20 split town lines and yet comply with this requirement?

21 A. I don't know if it's impossible, but yes.

22 Q. In your original report, Page 4, Paragraph 2,
23 you state, with respect to District 3, the communities in
24 new District 3 have no nexus, right?

25 A. Yes.

1 Q. Isn't it true that they share the fact that the
2 inhabitants of District 3 all live along the Long Island
3 Sound and the district is called the Sound District?

4 A. That's true.

5 Q. Again in your original report, Paragraph 3, you
6 state, quote, the Legislature also divided an established
7 Asian community in District 10 by moving half of it to
8 District 11?

9 A. Yes.

10 Q. And you have no data to back that up; that's
11 fair to say?

12 A. Yes.

13 Q. In fact, isn't it true that the Asian community
14 is not split between 10 and 11; the new Congressional 10
15 includes the eastern half of Sunset Park, which is
16 predominantly Asian, along with Manhattan's Chinatown just
17 as it was drawn in 2012 by a federal court? Do you know
18 that?

19 A. I do not know that.

20 Q. In addition, the new 10 also includes the Asian
21 neighborhoods of South Brooklyn, Bensonhurst, and
22 Bath Beach. Did you know that?

23 A. No.

24 Q. You also claim, Page 8, same report, that the
25 enacted land severely divides united Hispanic communities,

1 right?

2 THE COURT: Are you looking for it?

3 THE WITNESS: Yes.

4 THE COURT: Can you refer us to where you
5 are on the page, sir? How much longer do you
6 anticipate, Mr. Chill, your cross-examination will
7 take?

8 MR. CHILL: Three, four minutes.

9 THE COURT: Okay. It's 25 after.

10 MR. CHILL: Page 4. I'm not going to hold
11 the Court up on this question.

12 BY MR. CHILL:

13 Q. In the original report, Page 6, Paragraph 3,
14 last line -- I'm doing better -- as a result of new
15 District 22, you say District 22 shifts a competitive
16 Republican district to a safe Democratic district in the
17 new map?

18 A. Yes.

19 Q. But the Cook report only rates it as likely?

20 A. The new 22?

21 Q. Yeah.

22 A. It is likely Democrat.

23 Q. Yeah.

24 A. Yes.

25 MR. CHILL: I have no further questions,

1 your Honor.

2 THE COURT: Thank you, Mr. Chill.

3 All right. I just want to ask, who else
4 hasn't gone yet? Anybody on Majority? How long do
5 you anticipate your cross-examination to take?

6 MR. GOLDENBERG: I always worry about the
7 accuracy of these estimations.

8 THE COURT: Right.

9 MR. GOLDENBERG: I'd say, ballpark, an
10 hour. It could be an hour to 90 minutes.

11 THE COURT: All right. I think this is an
12 appropriate place, then, to take a break and start
13 again in the morning.

14 MR. GOLDENBERG: It could be less. But I
15 agree, your Honor, if your goal is to stop at 4:30.

16 THE COURT: It is. The staff has to wind
17 up in their office, so we can start again in the
18 morning fresh. We'll start again at 9:30 sharp.
19 I'll ask everybody to be here on time and I'll be
20 ready. We'll go right then. Okay. Thank you all.

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SUPREME COURT OF THE STATE OF NEW YORK

COUNTY OF STEUBEN : SUPREME CALENDAR

-----x

TIM HARKENRIDER, GUY C. BROUGHT,
LAWRENCE CANNING, PATRICIA CLARINO,
GEORGE DOOHER, JR., STEPHEN EVANS, LINDA
FANTON, JERRY FISHMAN, JAY FRANTZ,
LAWRENCE GARVEY, ALAN NEPHEW, SUSAN
ROWLEY, JOSEPHINE THOMAS, and MARIANNE
VOLANTE,

Petitioners,

-versus-

GOVERNOR KATHY HOCHUL, LIEUTENANT
GOVERNOR AND PRESIDENT OF THE SENATE
BRIAN A. BENJAMIN, SENATE MAJORITY
LEADER AND PRESIDENT PRO TEMPORE OF THE
SENATE ANDREA STEWART-COUSINS, CARL
HEASTIE, NEW YORK STATE BOARD OF
ELECTIONS, and THE NEW YORK STATE
LEGISLATIVE TASK FORCE ON DEMOGRAPHIC
RESEARCH AND REAPPORTIONMENT,

Respondents.

Index No:
E2022-0116CV

BENCH TRIAL

-----x

Steuben County Courthouse
Bath, New York
March 15, 2022

P r e s i d i n g :

THE HONORABLE PATRICK F. McALLISTER
Judge

A p p e a r a n c e s :

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I N D E X T O E X H I B I T S

<u>For the Senate Majority:</u>		<u>ID</u>	<u>EVD</u>
S-14	Table of district-level population	160	--
S-15	Tapp CV	203	(rec Day 3)
<u>For the Assembly:</u>		<u>ID</u>	<u>EVD</u>
A-2	Barber affidavit (report)	68	69

1 THE COURT: Let's note appearances for
2 today. Let's start with the petitioners.

3 MR. BROWNE: Your Honor, Robert Browne on
4 behalf of Petitioners.

5 MR. WINNER: George Winner, Keyser,
6 Maloney & Winner, for Petitioners.

7 MR. TSEYTLIN: Misha Tseytlin on behalf of
8 Petitioners.

9 MS. DiRAGO: Molly DiRago on behalf of
10 Petitioners.

11 THE COURT: On behalf of the Governor?

12 MS. MCKAY: Heather McKay and Muditha
13 Halliyadde on behalf of the New York State Attorney
14 General's Office.

15 THE COURT: Thank you.

16 On behalf of the Senate Majority Leader?

17 MR. GOLDENBERG: Good morning, your Honor.
18 Alexander Goldenberg, Cuti Hecker Wang.

19 MR. HECKER: Eric Hecker, Cuti Hecker Wang.

20 MR. CUTI: John Cuti, Cuti Hecker Wang.

21 MS. REITER: Alice Reiter, Cuti Hecker
22 Want.

23 MR. MULLKOFF: Daniel Mullkoff, Cuti Hecker
24 Wang.

25 THE COURT: Thank you.

1 On behalf of the Speaker of the Assembly?

2 MR. CHILL: Daniel Chill.

3 THE COURT: Mr. Chill.

4 MS. REICH: Elaine Reich, Graubard Miller.

5 THE COURT: Thank you, Ms. Reich.

6 MS. REICH: Good morning, your Honor.

7 MR. BUCKI: And Craig Bucki, B-u-c-k-i,
8 from Phillips Lytle in Buffalo.

9 THE COURT: Thank you, Mr. Bucki.

10 All right. So we're going to continue with
11 cross-examination of Mr. Lavigna, and I believe --
12 Mr. Goldenberg, were you going to do cross on that?

13 MR. GOLDENBERG: Yes, your Honor.

14 THE COURT: All right. Let's have
15 Mr. Lavigna come in -- or he's here. Please swear
16 Mr. Lavigna in again, please.

17 CLAUDE A. LAVIGNA,

18 called herein as a witness, having been first duly sworn,
19 was examined and testified as follows:

20 THE DEPUTY: Please state and spell your
21 name again for the Court.

22 THE WITNESS: Claude Lavigna,
23 L-a-v-i-g-n-a.

24 THE DEPUTY: Thank you.

25 THE COURT: All right. Mr. Goldenberg?

1 MR. GOLDENBERG: Good morning, your Honor.

2 THE COURT: Good morning.

3 CROSS-EXAMINATION

4 BY MR. GOLDENBERG:

5 Q. And good morning, Mr. Lavigna.

6 A. Good morning.

7 Q. My name is Alex Goldenberg. I'm an attorney at
8 Cuti Hecker Wang, and I'm one of the attorneys for the
9 Senate respondents in this case. I just want to give you
10 and the other attorneys and the Court a heads-up that I
11 have placed at the desk already this morning four exhibits
12 that were introduced yesterday by the petitioners marked
13 Petitioner's Exhibits 1 through 4. Those are the experts
14 reports submitted by you and by Mr. Trende, and I'll be
15 referring to them at various times throughout our
16 conversation today.

17 A. Okay.

18 Q. Mr. Lavigna, you submitted two reports in this
19 case; is that correct?

20 A. Yes, I did.

21 Q. And in your first report you assign labels to
22 different congressional and state Senate districts, such
23 as safe or leaning or competitive or stronghold; is that
24 correct?

25 A. Yes, I did.

1 Q. And you don't explain in that report what you're
2 basing those characterizations on, do you?

3 A. Not in the report.

4 Q. Your first report includes no data; is that
5 correct?

6 A. That's correct.

7 Q. There are no tables?

8 A. That's correct.

9 Q. There are no charts?

10 A. That's correct.

11 Q. And there are no election results?

12 A. That's correct.

13 Q. Mr. Browne asked you on direct examination what
14 you considered when drafting your reports, and one of the
15 things that you identified for Counsel was the CPVI. Do
16 you recall giving that response?

17 A. Yes, I do.

18 Q. Did you consider the CPVI when drafting your
19 first report or only your second report?

20 A. Both reports.

21 Q. But when you described on Page 2 of your first
22 report what information you relied on to reach your
23 conclusions, you didn't mention the CPVI, did you?

24 A. I did not.

25 Q. Is there any data that you relied on in

1 connection with your first report other than the CPVI?

2 A. Yes. I used data from the Board of Elections
3 for past election results, that type of data. Yes.

4 Q. And was that -- when you say "for past election
5 results," what elections are you referring to?

6 A. Generally down-ballot races, state Senate; if it
7 was Congress, looking at congressional races.

8 Q. And you got that data directly from the State
9 Board of Elections? Is that your testimony?

10 A. Yes.

11 Q. And when Mr. Browne asked you yesterday what
12 data or information you relied on in reaching your
13 conclusions, you didn't mention that; is that correct?

14 A. I don't recall.

15 MR. BROWNE: Objection, your Honor. That
16 mischaracterizes the testimony.

17 THE COURT: You'll have to speak up,
18 Mr. Brown.

19 MR. BROWNE: I'm sorry, your Honor.
20 Objection based on that mischaracterizes the
21 testimony from yesterday.

22 THE COURT: Overruled. Go ahead.

23 BY MR. GOLDENBERG:

24 A. What was the question again?

25 Q. The question was, when you described yesterday

1 what you relied on in reaching your conclusions, you
2 didn't mention data from the Board of Elections, did you?

3 A. I thought I did. I don't recall that.

4 Q. Did you use the same data with respect to your
5 analysis of each congressional and state Senate district?

6 A. I looked at all the data. I may not have used
7 for every single race every data point that I looked at
8 for another race, but I did look at all that data.

9 Q. So it's possible, then, that for a particular
10 Senate district or congressional district you looked at
11 the CPVI in one or more other elections; in that very
12 different congressional or Senate district you did not
13 look at those same set of elections?

14 A. Correct.

15 Q. Was each description that you used to describe
16 districts, for example, competitive, stronghold, or safe,
17 tied to a specific level of partisan performance reflected
18 in the data?

19 A. Generally, yes.

20 Q. What was the threshold for a stronghold
21 district?

22 A. A stronghold district, especially using the Cook
23 Partisan Voter Index, once you get to 5 and higher,
24 it's -- that's where the strong starts coming in, and then
25 there's levels of that.

1 Q. When you say "levels of that," what do you mean?

2 A. Well, an 8 is stronger than a 5; a 10 is
3 stronger, so a 10 would be, you know, much stronger.

4 Q. And did you use consistent terminology to
5 differentiate between data that suggested an 8 percent
6 difference or a 10 percent difference?

7 A. To the best of my ability, I did.

8 Q. But there could have been variations in the
9 words you used to describe various districts; is that
10 correct?

11 A. Correct.

12 Q. With respect to the CPVI itself, what elections
13 does that index use to calculate the numbers in the index?

14 A. That generally looks at presidential turnout,
15 presidential results, presidential elections, that type of
16 stuff. It's more high end.

17 Q. And specifically how many presidential elections
18 are accounted for in the CPVI?

19 A. I think it goes back two.

20 Q. So in other words, the current CPVI numbers
21 would be the 2020 presidential election and the 2016
22 presidential election, correct?

23 A. Correct. To the best of my knowledge, yes.

24 Q. And the CPVI itself does not factor in other
25 elections like state gubernatorial or attorney general

1 elections, correct?

2 A. No, it does not.

3 Q. Do you know how the CPVI uses those presidential
4 election results to characterize the plus R or plus D
5 factor in a given district?

6 A. I don't know their algorithms or anything like
7 that, no.

8 Q. Do you know whether it's an algorithm or just
9 the standard measure that they use to come up with their
10 numbers?

11 A. No, I don't know the background on that.

12 Q. The CPVI is associated with the Cook Political
13 Report; is that correct?

14 A. Correct.

15 Q. Does the Cook report itself encourage analysts
16 to use statewide races to supplement the data that is used
17 for that index?

18 A. Not to my knowledge.

19 MR. GOLDENBERG: I'd like to mark an
20 exhibit for identification as S-6. May I approach,
21 your Honor?

22 THE COURT: Yes.

23 (Exhibit S-6 was marked for
24 identification.)

25 THE COURT: Thank you.

1 BY MR. GOLDENBERG:

2 Q. Mr. Lavigna, I'd like to direct your attention
3 specifically to the second sentence of the third paragraph
4 of this document that I've just handed to you. And I'm
5 going to read it, and just let me know, please, if I've
6 read it correctly.

7 MR. BROWNE: Your Honor, can we get an
8 identification on what the document is?

9 THE COURT: Yes. Have him identify the
10 exhibit.

11 Q. Mr. Lavigna, I'll represent to you that this
12 document is a printout from the website of the Cook
13 Political Report in which the authors of the report and
14 the CPVI identify how their index works and the factors
15 that go into it and also provide some additional
16 information about the index. Have you seen this text
17 before? Are you familiar with this language from the
18 website?

19 A. I did look at the website. I don't know if I'm
20 familiar with all of this language. I had read it prior.

21 Q. Okay. And, again, turning to the second
22 sentence of the third paragraph, it states: While other
23 data, such as the results of senatorial, gubernatorial,
24 congressional, and other local races can help fine-tune
25 the exact partisan tilt of a particular district. And it

1 then goes on to say: Those results don't help for
2 comparisons across state lines. Do you see that language?

3 A. Yes.

4 Q. Is it fair to say that this language indicates
5 that in the view of the authors of the Cook Political
6 Report and the CPVI, data such as senatorial,
7 gubernatorial, and congressional races can help with the
8 analysis of particular districts in a state?

9 A. Can you repeat that, please?

10 MR. GOLDENBERG: Can you read it back?

11 (The record was read back by the court
12 reporter.)

13 BY MR. GOLDENBERG:

14 A. Yes.

15 Q. You reviewed the report that we submitted for
16 Dr. Ansolabehere; is that correct?

17 A. Yes.

18 Q. And you state in your report -- and I can direct
19 you to the language -- this is in your reply report on
20 Page 4. That's Petitioner's Exhibit 4 that's right in
21 front of you. You state that: This narrow approach,
22 meaning the approach used by Dr. Ansolabehere, excludes
23 available and highly relevant data. Do you see where you
24 wrote that?

25 A. In Paragraph 2?

1 Q. Correct.

2 THE COURT: Paragraph 2, is it not?

3 Q. It is the third sentence in Paragraph 2 on
4 Page 4.

5 A. Yes. I see that.

6 Q. You don't identify in your report what data
7 Dr. Ansolabehere excludes, correct?

8 A. Correct.

9 Q. We established that the CPVI is an index based
10 on the last two presidential elections; is that correct?

11 A. That's correct.

12 Q. And Dr. Ansolabehere includes those races in the
13 data that he presents, correct?

14 A. I did not see that.

15 MR. GOLDENBERG: I would like to mark for
16 identification S-7. And before I do that, your
17 Honor, I would like to move into the record the
18 previously marked exhibit, S-6.

19 MR. BROWNE: Your Honor, we would object to
20 that. There's no foundation for this document.
21 Where did it come from? It's not a complete
22 document. It's a screenprint.

23 THE COURT: Mr. Goldenberg?

24 MR. GOLDENBERG: I've identified for the
25 Court that document was printed directly from the

1 Cook Political Report website.

2 THE COURT: Sustained. The objection's
3 sustained.

4 (Exhibit S-7 was marked for
5 identification.)

6 MR. GOLDENBERG: May I approach, your
7 Honor?

8 THE COURT: You may. Thank you.

9 BY MR. GOLDENBERG:

10 Q. Mr. Lavigna, do you recognize this as the expert
11 report submitted by Dr. Ansolabehere that you reviewed
12 earlier in this case?

13 A. Yes.

14 Q. I'd like to turn your attention specifically --
15 and unfortunately the document doesn't have page numbers,
16 but we're looking at Paragraph 49 at the moment and
17 specifically the last sentence of Paragraph 49. Here
18 Dr. Ansolabehere reports data from prior elections; is
19 that correct?

20 A. Yes, he does.

21 Q. And he lists six elections in this paragraph; is
22 that correct?

23 A. Yes, he does.

24 Q. And those elections include the 2016
25 presidential election and the 2020 presidential election;

1 is that correct?

2 A. That's correct.

3 Q. And those elections also include four other
4 elections, the 2016 US Senate election, the 2018 US Senate
5 election, and 2018 governor's race; is that correct?

6 A. Yes.

7 Q. I will represent to you -- and if we want to go
8 through the rest of the report, we can -- that where
9 Dr. Ansolabehere refers to prior election results he
10 includes those six races throughout the report. Does
11 looking at this document change your view as to whether
12 Dr. Ansolabehere included the presidential election data
13 in his report?

14 A. It does.

15 Q. In fact, he did include that data, correct?

16 A. He did.

17 Q. And to the extent that Dr. Ansolabehere relied
18 on that presidential data and the other races referred to
19 in his report, he took a broader approach than relying
20 only on the CPVI; is that correct?

21 A. Yes.

22 Q. I believe you testified yesterday that one of
23 your concerns with Dr. Ansolabehere's approach was that
24 part of his analysis relied on data from certain statewide
25 elections that you felt were not as representative of

1 political performance in New York. Is that an accurate
2 description of your testimony?

3 A. Yes, that is.

4 Q. I'd like to turn your attention to Exhibit P-1
5 which is before you. This is the expert report submitted
6 by Sean Trende in this matter. And I'd like to turn your
7 attention specifically to Page 12 and Footnote 2.

8 THE COURT: Is that his original report?

9 MR. GOLDENBERG: Yes, your Honor.

10 THE COURT: Page 12?

11 MR. GOLDENBERG: Yes, your Honor. It's
12 first marked Petitioner's 1, Page 12, Footnote 2.

13 BY MR. GOLDENBERG:

14 Q. Mr. Lavigna, in this footnote Mr. Trende
15 identifies the data set that he used in preparation of his
16 first report -- and I should clarify -- the data set with
17 respect to prior election results that he used; is that
18 correct?

19 A. I'm not aware of what Mr. Trende did.

20 Q. I'll refer you to the second sentence where
21 Mr. Trende says: I have used the calculation of
22 partisanship contained in the dataset that I downloaded
23 from the ALARM Project. Do you see where the text says
24 that?

25 A. Yes.

1 Q. And he then says: This is an average of the
2 performance in a precinct across the 2016 presidential
3 election, 2016 New York Senate election, 2018 New York
4 governor election, and 2018 New York attorney general
5 election, and the 2020 presidential election in New York.
6 Do you see where he says that?

7 A. Yes, I do.

8 Q. If Mr. Trende relied on that data in connection
9 with his analysis of partisanship in New York, do you
10 think that would have been a mistake?

11 A. I would have no -- I would not know that.

12 Q. So you testified yesterday that, in your view,
13 using a broader array of state election data does not
14 accurately reflect partisanship in New York. That's what
15 you testified, correct?

16 A. Correct.

17 Q. So would your view be that if Mr. Trende relied
18 on that data, it did not provide an accurate view of
19 partisanship in New York?

20 A. If it was solely on that, potentially yes. I
21 don't know what else he relied on.

22 Q. But if it was solely that, in your view, that
23 would have been the wrong dataset to rely on?

24 A. I would not have done that. No.

25 Q. You suggest on the same page we just looked at

1 on your reply report that -- at the end of the paragraph
2 we just read that Dr. Ansolabehere does not have a passing
3 understanding of New York's political geography. Do you
4 see that at the end of the paragraph?

5 A. Yes, I do.

6 Q. You've never spoken to Dr. Ansolabehere, have
7 you?

8 A. I have not.

9 Q. And as you sit here today, you have no personal
10 knowledge regarding his work on New York elections, do
11 you?

12 A. No.

13 Q. I'd like to discuss your analysis of the state
14 Senate districts in the State of New York. You testified
15 yesterday that you have particular knowledge and
16 experience with state Senate elections; is that fair to
17 say?

18 A. Yes, it is.

19 Q. And that knowledge and experience comes from
20 working over many years in different capacities to help
21 elect state Senate Republicans; is that correct?

22 A. That's correct.

23 Q. I'd like to turn your attention back to the
24 reply report that we were just looking at.

25 MR. GOLDENBERG: Your Honor, this is again

1 Petitioner's Exhibit 4, Mr. Lavigna's reply report.

2 THE COURT: What page?

3 MR. GOLDENBERG: It is Page 3, your Honor,
4 bottom of Page 3, the final clause at the end of the
5 first sentence of the final paragraph.

6 Q. And I'm going to read what you wrote,
7 Mr. Lavigna. You wrote, in connection with congressional
8 districts: I first examined whether the new district
9 lines could be justified by valid considerations based on
10 traditional redistricting principles, including
11 compactness, contiguity, population shifts, and keeping
12 counties, towns, and communities of interest together. Is
13 that an accurate description of what you wrote there?

14 A. Yes, it is.

15 Q. Did you consider those same factors and
16 redistricting principles with respect to your analysis of
17 the state Senate districts?

18 A. Yes, I did.

19 Q. One of the criteria or principles that you list
20 in the sentence I just read is, quote, population shifts;
21 is that correct?

22 A. Yes.

23 Q. And your reference to population shifts is
24 connected to the redistricting principle of population
25 equality; is that correct?

1 A. Yes.

2 Q. Do you agree that the Federal Constitution of
3 the United States requires that state legislative
4 districts be nearly as equal in population as practicable?

5 A. Yes.

6 Q. And do you agree that the state Constitution
7 also contains a similar requirement regarding equal
8 population?

9 A. Yes.

10 Q. I would like to direct your attention back to
11 Petitioner's Exhibit 1. This is the original report
12 submitted by Mr. Trende, and specifically I would direct
13 you to Page 25. I will represent to you, Mr. Lavigna,
14 that this chart that Mr. Trende submitted in his report is
15 a report on the current deviations from -- the current
16 population deviations from the appropriately sized Senate
17 district that would need to be created in 22 in the
18 current Senate districts as they now exist from 2012. Do
19 you see the data?

20 A. Yes, I do.

21 Q. And Mr. Trende reports this deviation both as an
22 absolute number and also as a percentage of the deviation
23 from the mean; is that correct?

24 A. Yes.

25 Q. Please take a moment to review this page. Would

1 you agree in looking at this chart that there are
2 significant populations in districts throughout the state?

3 A. Yes.

4 Q. And that under the current lines, as drawn in
5 2012, certain districts are overpopulated and certain
6 districts are underpopulated; is that correct?

7 A. Yes.

8 Q. And I would direct your attention specifically
9 to the most overpopulated district, which is 25, and the
10 least populated district, which is 21 -- 51, five-one.
11 And am I correct that the total population difference
12 between these two districts as of now is 102,000 people,
13 slightly more than 102,000 people?

14 A. Yes.

15 Q. And as reflected this chart that Mr. Trende
16 prepared, the total population deviation between these two
17 districts is 32 percent; is that correct?

18 A. Yes.

19 Q. Would you agree that a 32 percent total
20 population deviation between Senate districts is
21 unconstitutional?

22 A. Yes.

23 Q. And that is true under both the State and
24 Federal Constitutions, correct?

25 A. Yes.

1 Q. Would you also agree that other than
2 District 31, every district between 5 and 38 in this chart
3 is presently overpopulated?

4 A. Yes.

5 Q. Would you also agree that after District 38
6 every district, without exception, is underpopulated?

7 A. Yes.

8 Q. Based on your familiarity with the New York
9 State Senate, are you aware that Districts 39 and above
10 are all districts located either in or north of
11 Westchester County?

12 A. Yes, I am.

13 Q. And in order to achieve population equality
14 among districts with different populations, it's necessary
15 to move population between districts; is that correct?

16 A. That's correct.

17 Q. And the more inequality you have, the more
18 people that need to be moved; is that correct?

19 A. Yes.

20 Q. You don't cite population data anywhere in your
21 report about the Senate, do you?

22 A. I do not.

23 Q. You don't mention population deviations under
24 the 2012 plan, do you?

25 A. No.

1 Q. You don't mention how population deviations have
2 changed under the 2022 plan, do you?

3 A. No.

4 Q. You never mentioned when discussing any specific
5 district whether that district needed to add or lose
6 people, do you?

7 A. I did not.

8 Q. And you never mention anything about what we've
9 observed in this chart, which is a regional
10 malapportionment and broad overpopulation of the districts
11 in and north of Westchester relative to the districts
12 south of Westchester; is that correct?

13 A. That's correct.

14 Q. You state on Page 9 of your initial report --
15 and you're welcome to look at it if you'd like to refresh
16 your recollection -- that, quote, it is highly likely that
17 the decision to pair Republican incumbents from
18 Districts 51 and 49 was motivated by partisan intent. Do
19 you recall saying that?

20 A. Yes, I do.

21 Q. You don't mention anywhere in your report that
22 District 51 is presently the most underpopulated district
23 anywhere in New York State, do you?

24 A. I do not.

25 Q. You also don't mention anywhere in your report

1 that nine of the ten most underpopulated districts in
2 New York at this time are represented by Republican
3 incumbents, do you?

4 A. I do not.

5 Q. You don't have any reason to believe that the
6 fact underlying that question, that nine of the ten
7 districts that are most underpopulated presently are
8 represented by Republicans, is inaccurate, do you?

9 A. No.

10 Q. I would also represent to you -- and we could go
11 through it if you'd like, but I will represent it to you
12 for the purposes of this question -- that every district
13 in New York State that is presently underpopulated by more
14 than 25,000 people, with the exception of District 53, is
15 represented by a Republican right now. That is not a fact
16 that is mentioned anywhere in your report, is it?

17 A. It is not.

18 Q. You identify a number of districts other than
19 the two I just asked you about in which population shifted
20 from one district to another, and you note that sometimes
21 the effect of increasing or decreasing population had the
22 effect of benefitting or working to the detriment of a
23 particular party; is that correct?

24 A. Yes.

25 Q. But, again, you never state for any of these

1 districts how much population they needed to add; is that
2 correct?

3 A. Correct.

4 Q. And you never evaluate in your report how
5 population changes in one district affected the population
6 and need for adjustment in surrounding districts; is that
7 correct?

8 A. Correct.

9 Q. One of the criteria that you reference in your
10 reply report in the sentence that I read back to you is
11 county splitting. Are you familiar, Mr. Lavigna, with the
12 constitutional principle -- this is a New York State
13 constitutional principle -- that a map drawer should try
14 to avoid splitting counties?

15 A. Yes.

16 Q. Would you agree that a neutral and established
17 redistricting principle in the State of New York is that
18 counties, to the extent possible, should not be split in a
19 legislative reapportionment plan?

20 A. Yes.

21 Q. I will represent to you that in your report and
22 analysis of the state Senate districts you mention county
23 splits twice. You mention the Queens-Nassau split in
24 District 9 and the Erie-Niagara County split in
25 District 60. Do you recall referencing those county

1 splits?

2 A. Yes.

3 Q. We could go through the report if you'd like.
4 Again, for time and convenience to the Court and the other
5 parties, I will represent to you that I didn't see any
6 other reference to county splits. As you sit here today,
7 do you recall any mention that you made of whether
8 counties were split or made whole in the 2022 plan other
9 than those I just referenced?

10 A. No.

11 Q. You never once identify in your report counties
12 that were split in 2012 but are united in 2022; is that
13 correct?

14 A. Correct.

15 Q. You don't mention that the Legislature united
16 Delaware County in 2022, correct?

17 A. Correct.

18 Q. Or St. Lawrence County, correct?

19 A. Correct.

20 Q. Or Ulster County, correct?

21 A. Correct.

22 Q. Or Chenango County, correct?

23 A. Correct.

24 Q. Or Ontario County, correct?

25 A. Correct.

1 Q. Or Washington County, correct?

2 A. Correct.

3 Q. Or Tompkins County, correct?

4 A. Correct.

5 Q. In fact, in your report you criticize the
6 realignment of population in Tompkins County, but you
7 never mention that as part of that realignment, Tompkins
8 County, which had been split in 2012, is now whole in
9 2022; is that correct?

10 A. Correct.

11 Q. You testified on direct examination that one
12 example of a county split and change in the new plan that
13 suggests improper partisan intent is the Queens-Nassau
14 split in District 9 around the area of the Five Towns in
15 Far Rockaway; is that correct?

16 A. Yes.

17 Q. I believe you also testified on direct that this
18 county split was problematic, in your view, because it
19 took Jewish -- it combined, rather, Jewish areas in the
20 Five Towns, which is on the Nassau side of the border,
21 with territory in Queens that you represented was of a
22 different character; is that accurate?

23 A. Yes.

24 Q. Would you agree that the Queens neighborhood
25 adjoining this group of towns in Nassau County, the Queens

1 neighborhood in Far Rockaway, is, in fact, itself a
2 heavily Jewish neighborhood that is closely connected with
3 the communities directly to its east?

4 A. Not aware of that.

5 Q. I'd like to mark for identification Senate
6 District 8. Your Honor, this will be used solely for
7 demonstrative purposes.

8 (Exhibit S-8 was marked for
9 identification.)

10 MR. GOLDENBERG: May I approach?

11 THE COURT: You may. Thank you.

12 BY MR. GOLDENBERG:

13 Q. Mr. Lavigna, are you familiar with the internet
14 information resource Google Maps?

15 A. Yes.

16 Q. I assume on occasions in your life you've used
17 Google Maps either on a computer or on a phone.

18 A. Yes.

19 Q. I will represent to you that I entered a search
20 into Google Maps for synagogues near Far Rockaway, Queens,
21 and printed the results for this demonstrative exhibit
22 that you're looking at. As you look at this map,
23 Mr. Lavigna, there are, in fact, many synagogues and Jewish
24 institutions in this area of Far Rockaway, Queens, which
25 is immediately to the west of the Five Towns in Nassau

1 County, correct?

2 A. Yes.

3 Q. The New York State Constitution requires that
4 the map drawer try to keep cities whole where possible; is
5 that correct?

6 A. Yes.

7 Q. You don't mention anywhere in your report or
8 analysis of the Senate that New Rochelle was divided in
9 the 2012 plan but is united in the 2022 plan; is that
10 correct?

11 A. Correct.

12 Q. And same for the City of Auburn, correct?

13 THE COURT: City of what?

14 MR. GOLDENBERG: Auburn, your Honor.

15 THE COURT: Thank you.

16 A. Correct.

17 Q. On Page 10 of your initial report you criticize
18 the Legislature for keeping the City of Rochester in only
19 two districts instead of three districts; is that correct?

20 A. Yes.

21 Q. But, in fact, avoiding the unnecessary division
22 of cities is a principle that the Constitution directs map
23 drawers to consider, correct?

24 A. Correct.

25 Q. On direct examination yesterday you identified

1 Districts 46 and 48 in the Senate plan as districts that
2 reflect improper partisan intent; is that correct?

3 A. Yes.

4 Q. District 46 in the 2022 map combines
5 Schenectady, Troy, and Saratoga Springs into a single
6 district; is that correct?

7 A. Yes.

8 Q. And you don't mention anywhere in your report
9 that all three of these cities outside of Albany were
10 split in the 2012 plan but are now kept whole in the 2022
11 plan; is that correct?

12 A. Correct.

13 Q. You allege that District 48 replaces some
14 Republican voters with Democratic voters from Ulster,
15 Dutchess, and Columbia Counties, and you suggest again
16 that those population moves were motivated by partisan
17 intent; is that correct?

18 A. Correct.

19 Q. But you don't mention in your report that these
20 districts were significantly underpopulated heading into
21 the 2022 redistricting process; is that correct?

22 A. Correct.

23 Q. You also don't mention in your report that
24 Ulster County was split across four Districts in 2012 and
25 is now whole in District 48; is that correct?

1 A. Correct.

2 Q. During cross-examination by my friend,
3 Mr. Chill, yesterday afternoon, you testified with respect
4 to the congressional districts that you did not consider
5 the Voting Rights Act when analyzing those districts; is
6 that correct?

7 A. Correct.

8 Q. Did you analyze the New York State
9 Constitution's new provision from 2014 regarding
10 minority -- racial and language minority voting rights
11 when you evaluated the congressional districts?

12 A. I did not.

13 Q. Did you consider the new provision from the 2014
14 constitutional amendment related to racial and language
15 minority voting rights when you evaluated the Senate plan?

16 A. I did not.

17 Q. So to go back to the example of Rochester, which
18 we talked about briefly a moment ago, you did not evaluate
19 when preparing your analysis of the Senate that the
20 portion of Rochester that had been cut out from the
21 southern part of the city in 2012 is a heavily black
22 population; is that correct?

23 A. Correct.

24 Q. And you've also rendered testimony yesterday and
25 also in your expert report regarding redistricting and

1 reconfiguration on Long Island; is that correct?

2 A. Correct.

3 Q. When you evaluated the 2022 Senate districts on
4 Long Island, you didn't consider the split directly
5 through the middle of the large Hispanic community in
6 Brentwood and its neighboring communities of North Bay
7 Shore and Baywood; is that correct?

8 A. Correct.

9 Q. And when you considered the redistricting of
10 Long Island, you also didn't consider the cracking of the
11 black and Hispanic communities in Wyandanch and Wheatley
12 Heights in 2012 that was correct in 2022; is that correct?

13 A. Correct.

14 Q. Are you familiar with the fact that the New York
15 State Constitution, beyond the redistricting rules that
16 apply to all legislative districts, contains specific
17 rules related to the apportionment of districts in a
18 New York State Senate?

19 A. I'm not.

20 Q. Are you familiar with the "town on border" rule?

21 A. Not in depth, no.

22 Q. When you say, "not in depth" --

23 A. I mean, I've heard of it. I have not --

24 Q. So fair to say, Mr. Lavigna, that you've heard
25 of the rule, but you are not familiar specifically with

1 how the rule applies to redistricting of the Senate?

2 A. Correct.

3 Q. Are you familiar with the "block on border"
4 rule?

5 A. Same answer.

6 Q. Same answer you just gave for the "town on
7 border" rule, correct?

8 A. Yes.

9 Q. So is it fair to say that because you're not
10 familiar with the specifics or application of these rules
11 that you did not consider how they affected the
12 redistricting of the Senate in 2022; is that correct?

13 A. Yes.

14 Q. Are you familiar with the rule in the state
15 Constitution as it pertains to the state Senate that it is
16 prohibited for the map drawer to split a town unless that
17 town is too populous to fit within one district?

18 A. Yes.

19 Q. So you are familiar with the fact that beyond
20 the general principle that applies to counties and cities,
21 that you should avoid splitting them or you could avoid
22 splitting them, there is a stricter rule as it pertains to
23 the Senate with respect to splitting towns?

24 A. Yes.

25 Q. In 2012 the Town of Huntington on Long Island

1 was split between two districts, correct?

2 A. Yes.

3 Q. The new plan keeps the Town of Huntington whole;
4 is that correct?

5 A. Yes.

6 Q. And you would agree that if the Town of
7 Huntington is kept whole, that change affects the
8 population of surrounding districts and requires changes
9 to those districts, correct?

10 A. Correct.

11 Q. No town that was whole in the 2022 -- strike
12 that. No town that was whole in the 2012 plan is split in
13 the enacted plan, correct?

14 A. Not to my knowledge.

15 Q. So fair to say, as you sit here today, you are
16 not aware of any town anywhere in New York State that was
17 whole in 2012 and that the Legislature split in 2022?

18 A. Yes.

19 Q. And if I represent to you that there is no such
20 town, you would have no reason to doubt that, correct?

21 A. Correct.

22 Q. You testified on direct examination that
23 District 54 was a strong Republican district that added
24 even more Republicans in 2022, which you suggest is
25 evidence of packing and thereby partisan intent; is that

1 correct?

2 A. Yes.

3 Q. And you're welcome to look at the map of the
4 Senate which is attached as an exhibit to your report if
5 you wish to. Given your familiarity with the Senate, you
6 may also know this without reference to the map, but
7 District 54 is a Republican district right now in a part
8 of the state where there are many surrounding Republican
9 counties; is that fair to say?

10 A. Fair, yes.

11 Q. And District 54 was underpopulated by 26,059
12 voters in the 2020 census based on the 2012 lines, and I
13 am basing that number on the report submitted by
14 Mr. Trende that we have looked at. Is that correct, that
15 District 54 is presently underpopulated by 26,059 voters?

16 A. Yes.

17 Q. In 2012 Senate District 54 was one of six
18 Upstate districts that split Monroe County; is that
19 correct?

20 A. Yes.

21 Q. In the 2022 enacted plan, the Legislature
22 eliminated the split in which 54 goes into Monroe County;
23 is that correct?

24 A. Yes.

25 Q. In doing so, the Legislature further reduced the

1 population of District 54 thereby adding a need to
2 increase the population from elsewhere; is that correct?

3 A. Yes.

4 Q. District 54 also reassembled within the district
5 the County of Ontario, which was split among multiple
6 districts in 2012 and united in 2022; correct?

7 A. Yes.

8 Q. You don't mention that in your report when you
9 talk about Senate District 54, correct?

10 A. Correct.

11 Q. And you didn't mention that yesterday on direct
12 examination when you talked about Senate District 54,
13 correct?

14 A. Correct.

15 Q. In each of your reports, Mr. Lavigna, you
16 discuss a number of what you describe as communities of
17 interest; is that correct?

18 A. Yes.

19 Q. I'd like to direct examination and the Court's
20 attention to the Trende reply affidavit. This is the
21 exhibit submitted yesterday as Petitioner's 2. And
22 specifically, Mr. Lavigna, I will direct your attention to
23 Page 19 of that affidavit. The first clause of the first
24 sentence in this report submitted by Mr. Trende states:
25 Communities of interest are a notoriously difficult

1 concept to nail down as they typically have a vague
2 definition. Is that correct?

3 A. Yes, it says that. Yes.

4 Q. And then he goes on to, you know, offer an
5 example of a definition that's provided in a Kansas state
6 redistricting document; is that correct?

7 A. Yes.

8 Q. Mr. Trende then goes on to say in the next
9 sentence, quote, that makes them, referring to communities
10 of interest, vulnerable to ad hoc reasoning. Do you see
11 where Mr. Trende says that?

12 A. Yes.

13 Q. Do you agree with Mr. Trende that defining
14 communities of interest inherently involves an element of
15 subjectivity?

16 A. Yes.

17 Q. Neither of your reports cites a fixed standard
18 for how you define a community of interest; is that
19 correct?

20 A. That's correct.

21 Q. And you don't cite any rule that establishes how
22 a community of interest is to be defined; is that correct?

23 A. Correct.

24 Q. You state on Page 11 of your reply that urban
25 centers like Mount Vernon and Yonkers in Westchester

1 County have close historical ties to wealthier areas to
2 the northeast like Larchmont, Mamaroneck, Rye,
3 New Rochelle, and Pelham; is that correct?

4 A. Correct.

5 Q. You don't cite any historical literature to
6 support the idea of this association, do you?

7 A. I do not.

8 Q. You don't cite any social science analysis to
9 support this association, do you?

10 A. I do not.

11 Q. You don't cite any demographic data, do you?

12 A. No.

13 Q. And you don't cite any academic literature,
14 right?

15 A. Correct.

16 Q. You're not telling this Court that you have the
17 only reasonable opinion of what constitutes communities of
18 interest in New York, are you?

19 A. No.

20 Q. I'd like to show you what we will mark as S -- I
21 believe we're up to 9.

22 (S-9 was marked for identification.)

23 THE COURT: Can you identify it, please?

24 BY MR. GOLDENBERG:

25 Q. We've marked S-9 for identification and

1 demonstrative purposes. Mr. Lavigna, this is a map of
2 2012 congressional districts in Suffolk County, and I will
3 now describe what the red markings on the map relate to.
4 Before I do I just want to ask you, on Page 6 of your
5 reply you identify a group of, quote, neighboring towns
6 and villages that you state have common interests on
7 Long Island?

8 A. Yes.

9 Q. And, Mr. Lavigna, just to avoid any confusion,
10 I'm now asking questions about the congressional plan and
11 not the state Senate plan and specifically your statements
12 with respect to the congressional plan. Is that
13 understood?

14 A. Yes.

15 Q. What we have done in this exhibit, Mr. Lavigna,
16 is marked in red by the census-defined territory the
17 cities, villages, or unincorporated areas that you
18 reference on Page 8 of your report.

19 THE COURT: I thought you said 6.

20 Q. Correction. Page 6.

21 MR. GOLDENBERG: That's correct, your
22 Honor.

23 Q. I would ask you, Mr. Lavigna, to please take a
24 moment to look at this map. Do the red markings on this
25 map reflect the communities that you referred to in your

1 report on Page 6?

2 A. Yes, they do.

3 Q. First, you state in your report that East Islip
4 was moved from Congressional District 1 to Congressional
5 District 2 in the 2022 plan. In fact, East Islip, as
6 reflected on this map, was already part of Congressional
7 District 2 under the 2012 plan; is that correct?

8 A. Yes.

9 Q. And with respect to the remaining areas
10 identified in this demonstrative exhibit which were part
11 of Congressional District 1 in 2012, is it fair to say
12 that these areas are dispersed across a fairly wide area
13 within Suffolk County?

14 A. Yes, it is.

15 Q. Southold, for example, is on the north fork
16 relatively close to Greenport in the east end of
17 Long Island; is that correct?

18 A. Yes.

19 Q. Riverhead is known as a community on the North
20 Shore of Long Island that is right at the point where the
21 forks split apart, again, towards the eastern end of
22 Long Island, correct?

23 A. Correct.

24 Q. Manorville is more towards the center of Suffolk
25 County but, again, to the east within the county, correct?

1 A. Yes.

2 Q. Hauppauge is the county seat of Suffolk County;
3 is that correct?

4 A. Yes, it is.

5 Q. That's where the county Legislature is based,
6 correct?

7 A. Correct.

8 Q. And other towns that you identify -- I'm
9 sorry -- not towns -- other villages or unincorporated
10 areas that you identify within the Town of Smithtown are
11 on the north fork further to the west than the other areas
12 identified in Suffolk County, correct?

13 A. Correct.

14 Q. And Brookhaven Village is all the way on the
15 South Shore of Suffolk County, correct?

16 A. Correct.

17 Q. Turning to Congressional Districts 8, 9, 10,
18 and 11 located in Brooklyn in the first three instances
19 and Brooklyn and Staten Island in the fourth, you state in
20 both of your reports that the enacted plan, quote, cracks
21 Jewish and Russian voters in these communities; is that
22 correct?

23 A. Yes.

24 Q. Under the 2012 plan the Jewish communities that
25 you are referring to in your reports were split within

1 these same districts, correct?

2 A. I'm not aware they were split that far outside
3 of 11.

4 Q. You're not aware that the Jewish communities
5 were split that far out of 11?

6 A. Yes.

7 Q. Is that your testimony?

8 A. Yes, and that was referring to the communities
9 within Congressional District 11.

10 Q. If you'll give me just a moment. Turning your
11 attention, Mr. Lavigna, to Pages 8 and 9 of your reply
12 report - if you could please look at that -- you refer
13 here to Jewish -- let me refer you specifically to the top
14 of Page 9 so there's no confusion. And you say: In the
15 2012 congressional map Jewish neighborhoods in Flatbush,
16 Midwood, Park Slope, and Kensington were connected,
17 wrapped around Prospect Park in District 9. And then you
18 go on to say that now those communities are located in
19 District 11, but in your report you indicated that those
20 communities were located elsewhere; is that correct?

21 A. Correct.

22 Q. And are you aware that the community of Borough
23 Park, which is a large and prominent community in
24 Brooklyn, was located and remains located in Congressional
25 District 10?

1 A. Yes.

2 Q. And the Jewish community in Midwood was
3 previously split between Districts 9 and 10; is that
4 correct?

5 A. Correct.

6 Q. And now it's located and united entirely in
7 District 9?

8 A. Yes.

9 Q. You would agree that the Jewish communities that
10 you describe in your report as cracked or split are
11 different from one another in significant ways; is that
12 correct?

13 A. Can you repeat that, please?

14 Q. That the Jewish communities in Brooklyn are
15 different from each other in many significant ways.

16 A. Yes.

17 Q. So, for example, the highly secular community of
18 Jews in Park Slope is very different than Hasidic or
19 ultra-Orthodox Jews in Borough Park; is that correct?

20 A. Correct.

21 Q. And ultra-Orthodox or Hasidic Jews in Borough
22 Park are very different in many respects than modern
23 Orthodox Jews in Midwood; is that correct?

24 A. Correct.

25 Q. In fact, one difference that separates these

1 communities is that they don't all even speak the same
2 language; is that correct?

3 A. Yes.

4 Q. And are you aware specifically that in Borough
5 Park there is a large population of Yiddish-speaking Jews?

6 A. I am not.

7 MR. GOLDENBERG: Okay. I'd like to mark an
8 exhibit as Exhibit S-10.

9 (Exhibit S-10 was marked for
10 identification.)

11 MR. GOLDENBERG: Your Honor, may I
12 approach?

13 THE COURT: You may. Thank you.

14 MR. GOLDENBERG: Your Honor, this is an
15 exhibit of concentration of Yiddish speakers in
16 Brooklyn that was prepared by our expert,
17 Dr. Ansolabehere. I am showing it to the witness
18 right now for demonstrative purposes only.

19 Dr. Ansolabehere can speak more specifically to how
20 he created the exhibit for purposes of seeking its
21 admission.

22 BY MR. GOLDENBERG:

23 Q. Mr. Lavigna, please take a moment to look at
24 this exhibit. Based on your knowledge of Brooklyn
25 communities, do you recognize that the area designated in

1 this exhibit as having a high concentration of
2 Yiddish-speaking people is in the Borough Park area?

3 A. Yes.

4 Q. And if you look to the east of Borough Park, in
5 Midwood, in fact, as shown in this exhibit, there is very
6 little, if any, Yiddish-speaking population, correct?

7 A. Correct.

8 Q. Now, at the top of Page 9 of your report where
9 we read a list of Jewish communities that you identify in
10 connection with the allegation that the Legislature did
11 something perhaps partisan-motivated in dividing
12 communities --

13 THE COURT: Are you referring to the
14 rebuttal report?

15 MR. GOLDENBERG: Yes, your Honor, top of
16 Page 9, rebuttal report.

17 Q. -- you're not suggesting in these reports that
18 Midwood, Borough Park, Park Slope, Bensonhurst, Flatbush,
19 and Kensington could all be put together in a single
20 district, are you?

21 A. No.

22 Q. And you're certainly not suggesting that all of
23 those communities could have been put together in a single
24 district with Russian speakers in neighborhoods like
25 Sheepshead Bay, Brighton Beach, Manhattan Beach, and Coney

1 Island, correct?

2 A. Correct.

3 Q. You state in each of your reports that the new
4 map enacted in 2022 divides the Asian community in Sunset
5 Park; is that correct, that you state that?

6 A. Yes.

7 MR. GOLDENBERG: I'd like to mark
8 Exhibit S-11.

9 (Exhibit 11 was marked for identification.)

10 MR. GOLDENBERG: May I approach, your
11 Honor?

12 THE COURT: You may.

13 BY MR. GOLDENBERG:

14 Q. Mr. Lavigna, the exhibit that we've just marked
15 for identification as S-11 is a map of Asian population in
16 2012 and 2022 Brooklyn neighborhoods. This exhibit was
17 prepared, again, by our expert, Dr. Ansolabehere, using
18 data from the census. And I would direct your attention
19 to this exhibit. Do you see -- strike that. Mr. Lavigna,
20 would you agree, looking on the right side of this exhibit
21 at the districts designated in green as 2022 congressional
22 districts, that, in fact, the area with a higher
23 concentration of Asian population is not cracked and split
24 between 10 and 11?

25 A. Yeah. Correct.

1 Q. And if you go further south within Brooklyn,
2 from the area of Sunset Park, which is where you see the
3 heaviest concentration, right where the number 11 is
4 marked on this map, and you go down from there through
5 District 11, this district continues to maintain
6 continuity of the Asian population in this part of
7 Brooklyn; is that correct?

8 A. On the 2022?

9 Q. Correct.

10 A. Except for that one portion where the 11 is in
11 red on the 2012 --

12 Q. Yes.

13 A. -- because that is in --

14 Q. I'll represent to you that's Bensonhurst and
15 Bath Beach.

16 A. Right.

17 Q. So let me ask you this, Mr. Lavigna: In the
18 2012 districts that you just referred to the southernmost
19 part of District 10 was bisected by District 11 and the
20 Asian communities in Bensonhurst and Bath Beach were
21 included in District 11; is that correct?

22 A. Yes. Yes.

23 Q. And in the 2022 map the community -- the Asian
24 population in these same areas is now united in
25 District 10; is that correct?

1 A. Correct.

2 MR. GOLDENBERG: I'd like to mark for
3 identification Exhibit S-12.

4 (Exhibit S-12 was marked for
5 identification.)

6 MR. GOLDENBERG: May I approach?

7 THE COURT: Yes.

8 BY MR. GOLDENBERG:

9 Q. At various points in your reports, and in
10 particular, in your reply report, you cite to testimony
11 that was submitted to the Independent Redistricting
12 Commission in connection with its public hearing and
13 testimony process; is that correct?

14 A. Correct.

15 Q. And on Page 9 of your report you specifically
16 cite the testimony submitted to the IRC by Dr. Wah Lee on
17 behalf of OCA New York, a community that advocates for
18 Asian-Pacific Americans; is that correct?

19 A. Yes.

20 Q. I will represent to you that we printed this
21 exhibit using the link that you provided in your report
22 for where to find the testimony, and I would ask you,
23 Mr. Lavigna, does this testimony look consistent with the
24 testimony that you cite in your report and for which you
25 provided a link for others to find it? And what I'm

1 asking specifically, Mr. Lavigna, is -- your report at
2 Page 9 quotes, quote, public comment of Dr. Wah Lee,
3 July 29, 2021, and I'm asking you whether the exhibit I've
4 given you, which is a written statement by Dr. Wah Lee
5 dated July 29, 2021, is the testimony that you refer to in
6 your report.

7 A. It was.

8 MR. GOLDENBERG: Your Honor, I would move
9 for the admission of this written statement which is
10 specifically cited and relied upon by Mr. Lavigna and
11 which was printed from a link that he provided in his
12 report.

13 THE COURT: Petitioner?

14 MR. BROWNE: No objection, your Honor.

15 THE COURT: It's admitted.

16 (Exhibit S-12 was received in evidence.)

17 BY MR. GOLDENBERG:

18 Q. I'd like to direct your attention to the second
19 page of this document where Mr. Wah states Position II:
20 Regarding Congressional Districts. The first sentence --
21 the first paragraph of that Position II states: CD 11
22 contains all of Staten Island and a small part of Brooklyn
23 which contains Bath Beach and divides Bensonhurst.
24 Bensonhurst and Bath Beach should not, all caps, be with
25 Staten Island. Rather, Bath Beach and the whole of

1 Bensonhurst should be kept together. Do you see where
2 Mr. Wah says that?

3 A. Yes.

4 Q. And did I correctly read the statement that he
5 submitted?

6 A. You did.

7 Q. The final paragraph of this section states,
8 quote, Staten Island does not share a similar
9 concentration of Asians nor the culture of Asian
10 businesses as Bath Beach/Bensonhurst nor do residents in
11 Bath Beach/Bensonhurst travel on a regular basis to
12 Staten Island and vice versa. Do you see where he says
13 that?

14 A. Yes.

15 Q. And in the last exhibit I showed you we confirm
16 that Bensonhurst and Bath Beach are now included with the
17 Chinese-American communities in the manner that Mr. Lee
18 recommends; is that correct?

19 A. Correct.

20 Q. In Position III, the final portion of text at
21 the bottom of this document, Mr. Wah advocates keeping the
22 Chinese-American community in Sunset Park in Brooklyn
23 together with the Chinatown community in Manhattan. Do
24 you see where he says that?

25 A. Yes.

1 Q. And, in fact, District 10, as drawn in the 2022
2 enacted plan, keeps Chinatown and Manhattan together with
3 Sunset Park as requested by Mr. Lee, correct?

4 A. Yes.

5 Q. You state --

6 THE COURT: Mr. Goldenberg, about how
7 much -- in about the next ten minutes. It's okay if
8 we go past that, but picking a place to take about a
9 ten-minute break.

10 MR. GOLDENBERG: I'm actually relatively
11 close, your Honor. I'd suggest that I power through
12 and then we take our break.

13 THE COURT: Very good.

14 Q. Mr. Lavigna, I'm going to mark for
15 identification S-13.

16 (Exhibit S-13 was marked for
17 identification.)

18 MR. GOLDENBERG: May I approach, your
19 Honor?

20 THE COURT: You may.

21 BY MR. GOLDENBERG:

22 Q. Mr. Lavigna, you state in both of your reports
23 that the enacted plan divides the Hispanic community in
24 Sunset Park; is that correct?

25 A. Yes.

1 Q. I'm showing you what's been marked for
2 identification as S-13. This is, again, an exhibit
3 prepared by our expert, Dr. Ansolabehere, of neighborhoods
4 in Brooklyn in a comparison between the 2012 and 2022
5 congressional districts. Again, he pulled this data from
6 United States census data. Mr. Lavigna, I would direct
7 your attention to the report -- rather, to the exhibit and
8 specifically to the portion of District 11 which runs
9 through Sunset Park. That is the area relatively close to
10 where 11 and 10 are marked on the right side of this
11 exhibit for 2022. Do you see that?

12 A. Yes.

13 Q. In fact, Mr. Lavigna, the Hispanic population
14 that had been united in Sunset Park 2012 remains united in
15 Sunset Park in 2022, correct?

16 A. Yes.

17 Q. On Page 13 of your reply report -- and I would
18 like to turn your attention to that page -- you have a
19 table with Upstate congressional districts, and you
20 compare old District 21 to new District 21, correct?

21 A. Yes.

22 Q. And you compare old District 22 to new
23 District 22, correct?

24 A. Yes.

25 Q. Same for 23, right?

1 A. Yep.

2 Q. And same for 24, right?

3 A. Yep.

4 Q. You would agree that using the numbers of
5 congressional districts as they were named in 2012 and as
6 they're named in 2022 only go so far, right?

7 A. Yes.

8 Q. And particularly for Upstate New York because
9 Upstate New York lost a congressional district, right?

10 A. Correct.

11 Q. So if you were to try to go all the way to 27,
12 you'd hit a roadblock because 27 doesn't exist, right?

13 A. Right.

14 Q. The new districts that were drawn in the area of
15 Upstate New York had to cover the same geographic area but
16 with fewer districts both because New York went from 27 to
17 26 and also because Downstate gained significantly more
18 population than Upstate; is that correct?

19 A. Correct.

20 Q. And so because of that, you can't accurately
21 compare old districts to new districts just by using the
22 same number as they're designated Upstate; is that
23 correct?

24 A. Correct.

25 Q. Congressional District 24 in 2012 was the

1 district anchored in Syracuse, right?

2 A. Yes.

3 Q. 24 in the new map is not anchored in Syracuse,
4 correct?

5 A. Correct.

6 Q. That's District 22, right?

7 A. Right.

8 Q. And would you agree that most of the population
9 in new District 22 comes from what was District 24, that
10 Syracuse-based district in the 2012 plan?

11 A. Yes.

12 Q. So when your chart compares District 22 in the
13 new plan to District 22 in the old plan, it's really
14 comparing apples and oranges; is that fair to say?

15 A. The way everything was split, yes.

16 THE COURT: I missed that answer.

17 THE WITNESS: The way everything was split,
18 the numbering on that is problematic. Yes.

19 Q. And the most equivalent numbering with respect
20 to new congressional District 22 would have been to
21 compare it to new -- to, rather, old congressional
22 District 24, correct?

23 A. Yes.

24 Q. And same issue with Congressional District 24,
25 correct?

1 A. Yes. 22 and 24, yes.

2 Q. Yeah. So what is Congressional District 24 in
3 2022, in fact, draws more population from old District 27
4 than any other district in the 2012 plan. Would you agree
5 with that?

6 A. Yes.

7 Q. But, again, that's not the comparison in your
8 chart?

9 A. Right.

10 Q. Congressional District 23 in the 2022 plan is a
11 Southern Tier district; is that a fair characterization?

12 A. Yes.

13 Q. And there was also a Southern Tier district in
14 2012, correct?

15 A. Yes.

16 Q. And we've discussed the fact that one of the
17 sources of information you rely on is testimony and
18 submissions to the Independent Redistricting Commission;
19 is that correct?

20 A. Correct.

21 Q. And there was substantial testimony and
22 submissions to the Redistricting Commission concerning a
23 desire to keep Congressional District 23 as a
24 Southern Tier district; is that correct?

25 A. Yes.

1 Q. One thing that you criticize in your report is
2 the fact that this Southern Tier district in 23 picks up a
3 piece of Erie County; is that correct?

4 A. Yes.

5 Q. Do you agree that CD 23 under the congressional
6 plan of 2012, which is fundamentally the same District 23
7 in the new plan, so we don't have any apples-to-apples
8 issue that we had with respect to 22 and 24, CD 23 as it
9 exists today is the most underpopulated congressional
10 district in the State of New York. Are you aware of that?

11 A. Yes.

12 Q. And so District 23 needed to add population to
13 comply with the Federal Constitution, correct?

14 A. Correct.

15 Q. And are you aware -- strike that. We discussed,
16 with respect to state legislative districts, state and
17 federal requirements regarding equal population, correct?

18 A. Correct.

19 Q. Are you aware that with respect to Congress, the
20 United States Supreme Court has established a stricter
21 standard for population equality?

22 A. Yes.

23 Q. So where you have a district like CD 23 under
24 the 2012 plan that is severely underpopulated, that
25 population has to be added from somewhere; it's not at the

1 discretion of the Legislature, correct?

2 A. Yes.

3 Q. Are you aware that both plans recommended by the
4 Independent Redistricting Commission to the New York State
5 Legislature include part of Erie County in their drawing
6 of Senate District 23?

7 A. I'm not aware of that.

8 Q. Do you have any reason to believe that is not
9 the case?

10 A. No.

11 Q. Did you look at the Independent Redistricting
12 Commission plans for Senate -- strike that -- for
13 congressional District 23 when you evaluated the
14 District 23 that was enacted?

15 A. I did not look at the IRC plans.

16 Q. You didn't look at them at all, correct?

17 A. Yeah, not for this report because they weren't
18 enacted; they weren't passed.

19 Q. Okay. So just to be clear, then, with respect
20 to my specific question, you did not look at either IRC
21 Plan A or Plan B as it pertained to Congressional
22 District 23, correct?

23 A. Correct.

24 Q. And in your report you criticize the Legislature
25 for putting Tompkins County in Congressional District 22

1 instead of 23, correct?

2 A. Yes.

3 Q. But, again, you did not look at the fact that
4 IRC Plan A and IRC Plan B also put Tompkins County in
5 Congressional District 22, correct?

6 A. Correct.

7 Q. And in Congressional District 22 Tompkins
8 County, which is home to Cornell University, Ithaca
9 College, and other educational institutions, is combined
10 with Onondaga County, which is home to Syracuse
11 University, correct?

12 A. Yes.

13 MR. GOLDENBERG: I have no further
14 questions, your Honor.

15 THE COURT: Thank you, Mr. Goldenberg.

16 All right. I think this is an appropriate
17 place to take a break. We'll continue when we come
18 back. Fifteen minutes. Thank you.

19 (A recess was taken.)

20 THE COURT: All right. Is there going to
21 be any cross-examination, Ms. McKay?

22 MS. MCKAY: No, nothing further.

23 THE COURT: Redirect?

24 MR. BROWNE: No, your Honor.

25 THE COURT: You can step down, sir.

1 MR. BROWNE: Your Honor, can we release
2 Mr. Lavigna from any further testimony? I don't
3 think any of the other parties have questions for
4 him.

5 MR. GOLDENBERG: No objection, your Honor.

6 MR. CHILL: No objection.

7 MS. MCKAY: No objection.

8 THE COURT: All right. You're released,
9 sir.

10 THE WITNESS: Thank you, sir. Thank you.
11 (The witness was excused.)

12 THE COURT: Petitioners, next witness?

13 MR. BROWNE: Your Honor, we don't have any
14 further witnesses to call.

15 THE COURT: Okay. Respondents? Mr. Bucki?

16 MR. BUCKI: Yes, your Honor. The Speaker
17 of the Assembly and the Assembly Majority call
18 Michael Barber to the stand.

19 THE COURT: Thank you.

20 MICHAEL BARBER,
21 called herein as a witness, having been first duly sworn,
22 was examined and testified as follows:

23 THE DEPUTY: Can I get you to state your
24 name and spell it for the Court, please?

25 THE WITNESS: Michael, M-i-c-h-a-e-l,

1 Barber, B-a-r-b-e-r.

2 THE COURT: I'll ask you to keep your voice
3 up, Mr. Barber. It helps me hear. I know Mr. Bucki
4 speaks loud enough. I could hear him before, so...

5 MR. BROWNE: Your Honor --

6 THE COURT: Yes.

7 MR. BROWNE: -- I apologize for
8 interrupting. Sorry, Mr. Bucki. And I think it's
9 already occurred, but I just want to make sure that
10 we exclude any witnesses that are going to testify
11 for the respondents who aren't responding to
12 testimony from the petitioners or anything like that.

13 THE COURT: Yes. Respondents' witnesses
14 should be outside the room at this time.

15 MR. GOLDENBERG: Your Honor, we've
16 instructed them accordingly and they're not present.

17 THE COURT: All right.

18 MR. BROWNE: Thank you, your Honor.

19 THE COURT: Any of your witnesses that you
20 would plan on calling for rebuttal are allowed to
21 listen in.

22 MR. BROWNE: Thank you, your Honor.

23 THE COURT: Okay. Mr. Bucki?

24 MR. BUCKI: Thank you, your Honor.

25 DIRECT EXAMINATION

1 BY MR. BUCKI:

2 Q. Could you please describe your educational
3 background for the Court?

4 A. Yes. I have a Bachelor of Arts in international
5 relations from Brigham Young University. I also have a
6 master's in political science -- or it's politics at
7 Princeton University and a PhD in American politics and
8 quantitative methods from Princeton University.

9 Q. So then I can call you Dr. Barber?

10 A. You can if you would like, yes.

11 Q. And where are you currently employed?

12 A. I'm an associate professor at Brigham Young
13 University in the Political Science Department.

14 Q. And could you describe for the Court the kind of
15 work that you do in the Political Science Department?

16 A. Sure. I teach a number of courses in American
17 politics as well as in statistics for use in the social
18 sciences. Beyond my teaching responsibilities I also
19 conduct research on a variety of topics in American
20 politics, topics related to elections, campaign finance,
21 representation, that sort of thing.

22 Q. Do you do any research with respect to
23 redistricting?

24 A. I include redistricting in many of the courses
25 that I teach. I have done research that uses legislative

1 districts. I have not published anything that is specific
2 to the topic of redistricting.

3 Q. But to what extent have you served as an expert
4 in the past in redistricting cases?

5 A. I've served as an expert in
6 redistricting-related cases in a variety of states, twice
7 in North Carolina, in the State of Ohio, and the State of
8 Pennsylvania, prior to this case.

9 Q. And could you describe for the Court your
10 background in statistics as well as political science?

11 A. Certainly. As part of my coursework in my PhD
12 program at Princeton, I was required to take what's known
13 as the quantitative methods sequence, which is a series of
14 courses in statistics and its application in the use of
15 social science data, required to pass a comprehensive exam
16 in that topic, and then I use those methods in my research
17 as a professor today.

18 I also teach our department's statistics course,
19 which takes students from basically no understanding of
20 statistics through a variety of topics that would allow
21 them to then proceed into a graduate -- you know, a
22 graduate program in statistics or social -- how would you
23 say it -- a data analysis program in the social sciences.

24 Q. How often have you published scholarly work?

25 A. I've published -- I think my CV lists around 20

1 peer-reviewed publications at this point.

2 Q. And to what extent do those peer-reviewed
3 publications rely upon statistical analysis?

4 A. I would say with near unanimity they all in some
5 way use quantitative methods.

6 Q. You were in court yesterday to hear the
7 testimony of Sean Trende, correct?

8 A. Yes, I was.

9 Q. Do you know Mr. Trende?

10 A. I do, yes.

11 Q. How do you know him?

12 A. He and I have been involved in redistricting
13 cases in other states, and so I've met him through those
14 interactions.

15 Q. And by "involved," what do you mean by involved?

16 A. We've both been experts in some of these cases.

17 Q. Do you recall how many of those cases?

18 A. I am reluctant to give the specific number
19 simply because there are some cases where I'm not entirely
20 aware of all of the experts that have been involved, but I
21 know of at least two.

22 Q. And those two cases are what?

23 A. A case that was recently finished in
24 North Carolina as well as a case in Ohio, and there was
25 actually the one in Pennsylvania. I know he also was an

1 expert in that case.

2 Q. So then that would make three cases, correct?

3 A. Yes, that's correct.

4 Q. And with respect to those three cases, were you
5 experts on the same side of the case or opposite sides of
6 the case?

7 A. In North Carolina and Ohio we were on the same
8 side, and in Pennsylvania we were representing different
9 parties.

10 Q. And in those cases where you were involved and
11 Mr. Trende was involved would it be possible to
12 characterize whether you were retained as an expert on
13 behalf of Democrats or Republicans in those cases?

14 A. In all three of those cases we were retained on
15 the side of a Republican-leaning organization or the state
16 Legislature in some of those cases.

17 Q. And how about Mr. Trende in those cases?

18 A. Also the same.

19 Q. Republican organizations?

20 A. Yes. That's correct.

21 Q. Now, with respect to this proceeding today, who
22 retained you and expert for this proceeding?

23 A. So in this case I have been retained by the
24 counsel for the New York General Assembly.

25 Q. And are you being paid for your testimony?

1 A. Yes.

2 Q. And the fact that you're being paid for your
3 testimony, does that have any kind of effect on the
4 opinions that you have with respect to this proceeding?

5 A. No, it does not.

6 MR. BUCKI: Your Honor, at this time I
7 would move the admission of Dr. Michael Barber as an
8 expert witness in the field of redistricting and
9 statistical analysis relating thereto.

10 THE COURT: I'm finding him qualified as an
11 expert.

12 MR. BUCKI: Now, as a matter of
13 housekeeping, your Honor, I do have before me a
14 document that has been marked as Respondent's
15 Exhibit B, and that was pre-marked before we began
16 testimony yesterday, but I understand that perhaps
17 now we are using a nomenclature whereby Senate
18 exhibits begin with S followed by a number and
19 Assembly exhibits begin with an A followed by a
20 number. Would the Court like this document to be
21 re-marked -- right now it says Respondent's
22 Exhibit B, but it could be re-marked, I believe, as
23 A-2.

24 THE COURT: There's been other As, has
25 there not?

1 MR. BUCKI: At least one A.

2 THE COURT: Let's keep it A, then.

3 MR. BUCKI: Okay.

4 THE COURT: This would be what, A-2?

5 MR. BUCKI: So if the court reporter would
6 kindly re-mark that as A-2.

7 (Exhibit A-2 was marked for
8 identification.)

9 MR. BUCKI: May I approach the witness,
10 your Honor?

11 THE COURT: You may.

12 BY MR. BUCKI:

13 Q. Mr. Barber, I'm now showing you what has been
14 marked as Respondent's Exhibit A-2 for identification. Do
15 you recognize this document?

16 A. Yes, I do.

17 Q. What is it?

18 A. It is a copy of the affidavit that I filed in
19 this case.

20 Q. In connection with your preparation of this
21 report, of this affidavit, so to speak, did you review the
22 expert report that was offered previously by Claude
23 Lavigna?

24 A. Yes, I did.

25 Q. And in connection with your preparation of this

1 affidavit, did you review the expert report of Sean
2 Trende?

3 A. Yes.

4 Q. And would you agree that this affidavit sets
5 forth your opinions, which we'll have some discussion
6 about, but that this sets forth your opinions that you're
7 rendering in this proceeding?

8 A. Yes.

9 MR. BUCKI: Your Honor, at this time I
10 would request that Respondent's Exhibit A-2 be
11 admitted into evidence.

12 THE COURT: Petitioners?

13 MS. DIRAGO: No objection, your Honor.

14 THE COURT: It's admitted.

15 (Exhibit A-2 was received in evidence.)

16 BY MR. BUCKI:

17 Q. Dr. Barber, I'd like you to refer to Exhibit A-2
18 from the respondents, Paragraph Number 7.

19 THE COURT: A-2, his --

20 MR. BUCKI: His report.

21 THE COURT: Page what?

22 MR. BUCKI: Paragraph 7, which is on

23 Page 4.

24 BY MR. BUCKI:

25 Q. I'd like to ask you specifically about the first

1 sentence wherein you write: Scholarship in political
2 science has noted that the spacial distribution of voters
3 throughout a state can have an impact on the partisan
4 outcomes of elections when a state is, by necessity,
5 divided into a number of legislative districts. Did I
6 read that correctly?

7 A. Yes.

8 Q. What do you mean by that statement?

9 A. I simply mean that voters in a state or in the
10 country as a whole are not evenly distributed, both -- in
11 terms of how many of them live in particular parts of the
12 state, but beyond that, the partisan preferences of those
13 voters can vary dramatically based on where they live.
14 This is, of course, not unique to the State of New York.
15 It's common in all states in the United States and outside
16 of the United States as well. Because in New York and in
17 other states we use single-member districts in which we
18 draw geographic boundaries in which voters then are
19 assigned to districts one way or the other, that uneven
20 distribution of voters across the state as well as the
21 uneven distribution of their partisan preferences can have
22 significant impacts on what those districts look like once
23 those boundaries are drawn.

24 Q. And how would the manner in which those
25 districts would look be impacted?

1 A. Well, as you draw the districts and you
2 incorporate certain types of voters and you, you know,
3 exclude other types of voters, as the district lines fall
4 on the map, you could end up with districts that are --
5 well, they could run the entire gamut of partisanship.
6 You can have districts that end up being extremely
7 concentrated with both Democratic voters or with
8 Republican voters. You could also end up with districts
9 that are incredibly competitive that have a more or less
10 even distribution of voters that prefer Republicans or
11 Democrats. It's incredibly idiosyncratic in that it
12 really depends on how voters in a particular state or even
13 region of the state are distributed.

14 Q. You mentioned that you had an opportunity to
15 review the expert report that was offered by Claude
16 Lavigna, and did you listen to his testimony here in this
17 proceeding also?

18 A. Yes.

19 Q. And based upon your review of Mr. Lavigna's
20 expert report and also having listened to his testimony,
21 what conclusion do you offer with respect to the opinions
22 that Mr. Lavigna has made?

23 A. Well, as I state in my report, it's incredibly
24 difficult to draw any conclusions from his report given
25 the lack of data or evidence to substantiate many of

1 the -- or all of the claims that are made in the report.
2 There's not -- there's not a lot to work with.

3 Q. So let me ask you a different question, then.
4 Would it be possible to characterize Mr. Lavigna's report
5 as a qualitative analysis rather than a quantitative
6 analysis?

7 A. Yes. I use that characterization in my report
8 in that a quantitative analysis uses data, whether those
9 are election data or voter registration data, whatever
10 data may be most appropriate for the question that we're
11 analyzing, and then lays out a systematic standard by
12 which those data will be evaluated ahead of time. At that
13 point the data are then analyzed using that standard, and
14 the results are then presented based on that analysis.

15 Q. Based on upon your review of Mr. Lavigna's
16 report, what kind of standard was used in his qualitative
17 analysis?

18 A. I could not identify any standard.

19 Q. Should a standard have been used as part of that
20 qualitative analysis?

21 A. Yes.

22 Q. And so how would you characterize Mr. Lavigna's
23 qualitative opinions in the absence of, as you said, the
24 standard that you think it should have had?

25 A. I believe in my report I describe it as a casual

1 observation.

2 Q. And what do you mean by "casual observation"?

3 A. I use that phrase to simply mean that given a
4 lack of particular standard or methodology by which the
5 evaluation is going to take place, there's -- it doesn't
6 meet the definition of social science.

7 Q. And what would that definition of social science
8 be?

9 A. It would be as I described earlier, a
10 predetermined standard by which an evaluation is going to
11 be made; the use of data of some form, qualitative or
12 quantitative, and evaluation of the data using that
13 standard; and then a description of the results given the
14 data and standard that had been outlined ahead of time.

15 Q. And in your view, does Mr. Lavigna's report have
16 any of this?

17 A. No.

18 Q. Now let's move on to Mr. Trende's report and his
19 testimony. You were present in court to hear the
20 testimony from Mr. Trende, correct?

21 A. Yes.

22 Q. Do you recall Mr. Trende's testimony that he ran
23 a variety of simulations on a computer with respect to
24 preparing his conclusions?

25 A. Yes.

1 Q. Did you run any simulations as part of your work
2 as an expert in this case?

3 A. Yes, I did.

4 Q. What kind of simulations did you do?

5 A. So I attempted to conduct a simulation analysis
6 that mirrored as closely as possible that which Mr. Trende
7 did using the same software program, similar data, that
8 sort of thing.

9 Q. And why did you try to replicate as closely as
10 possible the simulations that Mr. Trende said that he did?

11 A. Well, I was specifically asked to evaluate the
12 conclusions that Mr. Trende came to in his report. I was
13 not given the report that he filed and the information
14 contained in the report. I was unable to exactly
15 replicate the analysis that he had conducted, and so my
16 attempt in my report was to get as close as possible given
17 the information that was contained in his report.

18 Q. What computer program did you use to run your
19 simulations?

20 A. I used the software program R and specifically
21 the simulation program redist in the program R.

22 Q. And based on your having heard the testimony of
23 Mr. Trende and read his report, did he use R also?

24 A. Yes.

25 Q. Did he use redist?

1 A. Yes.

2 Q. We had some discussion yesterday about a
3 Professor Imai, I-m-a-i, and his role in working on
4 simulations. Can you tell us who Professor Imai is?

5 A. Professor Imai is currently a professor of
6 political science at Harvard University. Prior to that he
7 was a professor of political science at Princeton
8 University. He was an advisor on my dissertation
9 committee when I was a graduate student at Princeton.

10 Q. So how well would you say that you know
11 Mr. Imai?

12 A. I would say I know him quite well.

13 Q. And to what extent was he a teacher to you in
14 the course of your graduate program?

15 A. He was an incredibly influential impact -- he
16 had an incredibly influential impact on my graduate
17 education.

18 Q. Now, when you run these simulations, as we heard
19 yesterday, there's a variety of different maps that are
20 generated by the simulations, and sometimes the map that's
21 generated can be very similar to the map that is enacted
22 by the Legislature for redistricting, and sometimes the
23 simulation can turn out to be very different from the map
24 that is enacted by the Legislature. In a case in which
25 the simulation run ends up with a map very similar to the

1 map that's enacted by the Legislature what does that tell
2 you as an expert?

3 A. Well, it can indicate a number of things. The
4 first thing it could indicate is that the similarity
5 exists simply by random chance. There is always that
6 possibility. We shouldn't rule that out. Beyond that, it
7 could indicate that the decisions that were made in
8 programming the algorithm reflect very similarly the
9 decisions that were made in drawing the map that was not
10 drawn using the simulations. Beyond that, it could also
11 represent -- or reflect, I'm sorry, the geography of the
12 location that you're drawing the -- where you're drawing
13 the map. So if you're dealing with a location in which
14 there are very few voters or very few precincts and so, as
15 a result, the simulations don't have a lot of options, if
16 that makes sense, there's not a lot of different ways that
17 a map could be drawn, that might also lead to a similarity
18 between the simulations and the map that was drawn not
19 using simulations.

20 Q. Now, what about the case when the enacted map
21 ends up being very different from the simulation map that
22 you receive from the computer? What does that tell you?

23 A. So, again, it could be due to a number of
24 factors. As I said prior -- previously, the first thing
25 we should always consider is that it happened purely by

1 random chance. The other possibility is that there were
2 other factors that went into the drawing of the map that
3 did not use simulations that were not reflected in the
4 choices made in drawing the simulations. There's a whole
5 host of those factors that we could talk about.

6 Beyond that, again, it could reflect the
7 difficulty of the geography that you're using or that
8 you're working with in drawing the map. So if you have a
9 state or a -- sometimes these simulations are used in
10 other contexts, but in this case we're talking about a
11 state. If you have a state that contains a really large
12 number of precincts, that exponentially increases the
13 difficulty of drawing these maps, and so that could also
14 lead to the differences that you observe.

15 Q. How many possible maps could be drawn for 26
16 congressional districts in New York State?

17 A. I don't know that anyone could prove
18 mathematically the actual number. There are mathematical
19 proofs that show that the number of maps grows at a rate
20 so fast that when we're talking about thousands of
21 precincts into 26 districts, there's more possibilities
22 than there are atoms in the universe.

23 Q. So would that be billions of possibilities?

24 A. Billions would be a vast understatement.

25 Q. Trillions of possibilities?

1 A. Somewhere in that ballpark.

2 Q. So given these trillions of possibilities that
3 you could have in terms of how the map would look, how is
4 it determined which kinds of maps should be spit out when
5 the simulations are done?

6 A. So the user sets -- the user tells the computer
7 how many maps to produce. Obviously no one is going to
8 request the computer produce trillions of maps. The
9 computer would break. And so there's some number that is
10 chosen.

11 Once that number is determined, the user then
12 inputs a number of -- or the user then determines a number
13 of parameters that they want to tell the computer, more or
14 less, how to draw the maps, or which things to give
15 priority to, how to weight various factors and
16 considerations. All of those things go into the algorithm
17 that then determines the types of maps that are drawn.
18 And then at the end of the day the user is relying on the
19 program to produce a representative set, a representative
20 sample of maps, that would reflect that broader population
21 of maps that we discussed earlier.

22 Q. I'd like to refer you again to Respondent's
23 Exhibit A-2, your affidavit, Paragraph Number 14 on
24 Page 6. That paragraph begins: However , a major factor
25 in the validity of the simulated maps is whether or not

1 they constitute a representative sample of the trillions
2 of legally valid possible maps that could be drawn. Did I
3 read that correctly?

4 A. Yes.

5 Q. What do you mean by a "representative sample"?

6 A. So I think the best way to talk about this is
7 actually outside of the context of redistricting and in
8 the context of survey research. I think that's something
9 that people tend to be more familiar with. If you're
10 going to conduct a survey of the United States and you
11 want to understand the opinions of people who live in the
12 United States, you're obviously not going to speak to
13 every person in the country. That is just practically
14 impossible. And so you're going to draw a sample. That's
15 what surveys are. They're samples of the population.

16 But it's important that your sample reflect the
17 broader population that you're interested in studying. If
18 I conducted a survey entirely in the City of Bath,
19 New York, and then claimed that that survey was
20 representative of the broader population of New York
21 residents or even United States residents, no one would
22 take me seriously; you know, my survey wouldn't go very
23 far. So it's important that the sample that you're
24 dealing with is representative or looks like, reflects
25 broadly the population that you're interested in studying.

1 That same principle applies to the use of these
2 simulated maps. The sample that you're using, because we
3 never have the full population, we rely on that sample to
4 be representative of the broader population of maps that
5 we could draw.

6 Q. And when you were running your simulations which
7 you testified you were trying to make as close to
8 Mr. Trende's simulations as you possibly could, how did
9 you go about coming up with a representative sample?

10 A. In his report Mr. Trende outlines a number of
11 decisions that he made with regards to how he programmed
12 the algorithm, and so I tried to reflect or follow those
13 decisions as closely as possible in programming the
14 algorithm to produce the simulations that I used. And
15 those programming decisions, those parameters that are
16 chosen, are going to change the population that you're
17 looking at. So if you alter the -- if you alter the
18 program and tell it to do -- you know, give more weight to
19 a certain parameter, that's changing the population of
20 maps that you're going to draw from.

21 Q. I'd like to refer you to Paragraph 16 of your
22 affidavit on Page 7. You write at the beginning of
23 Paragraph 16: Generating a representative sample of maps
24 requires ensuring that the algorithm drawing the maps is
25 following the legal criteria that govern the redistricting

1 process. The Constitution of New York states that the
2 following redistricting criteria shall be considered.

3 Did I read that correctly?

4 A. Yes.

5 Q. And you agree with that statement?

6 A. Yes.

7 Q. So let's go through those criteria. So the
8 first criterion is that districts shall not be drawn to
9 have the purpose of nor shall they result in denial or
10 abridgment of racial or language minority voting rights.
11 How did you program the computer to account for that
12 required consideration?

13 A. So I did not see any indication that Mr. Trende
14 considered that factor in his simulations, and so I did
15 not also consider that in drawing my maps.

16 Q. And the reason for that was...

17 A. Again, I was trying to produce simulations that
18 reflected as closely as possible the decisions that
19 Mr. Trende had made.

20 Q. The second characteristic, that districts shall
21 contain an equal number of inhabitants, what, if anything,
22 did you do in your simulations to control for that
23 variable?

24 A. So in this case Mr. Trende indicated that he did
25 set the -- he did instruct the algorithm not to draw

1 districts in the -- I should be clear. I'm only referring
2 to the congressional --

3 Q. Yes.

4 A. -- map. He instructed the algorithm to draw
5 districts within, I believe, a 1 percent bound in terms
6 deviations from the target population, that is, the equal
7 population standard, and so I also programmed my
8 simulations -- in my case I instructed the computer to
9 allow for a 1/2 of 1 percent deviation on either side, so
10 that would lead to a total of 1 percent from the lowest
11 possible deviation to the highest possible deviation.

12 Q. And so just to be clear, with respect to the
13 state Senate maps, did you evaluate the state Senate maps
14 at all?

15 A. No, I made no evaluation of the Senate maps.

16 Q. So your evaluation is only with respect to the
17 purchased congressional map for New York for 2022?

18 A. Yes. That's correct.

19 Q. Next, the requirement that each district needs
20 to consist of contiguous territory, did Mr. Trende control
21 for that?

22 A. He did. The algorithm does -- actually does not
23 allow you to draw noncontiguous districts. That's hard --
24 it's the term hard coded into the program. It's not at
25 the discretion of the user.

1 Q. And so did your simulations have contiguous
2 districts also?

3 A. Yes.

4 Q. Next, the consideration of having each district
5 be as compact in form as practicable. How did you control
6 for compactness as far as practicable?

7 A. So the algorithm contains a parameter that the
8 user specifies that instructs the computer to draw
9 districts with greater or less weight to geographic
10 compactness. So we heard some testimony yesterday from
11 Mr. Trende about that choice. The user puts a number into
12 the algorithm, and that number -- higher numbers
13 indicate -- or instruct the computer to draw more compact
14 districts. Lower numbers instruct the computer to draw
15 less compact districts.

16 I chose the number 1 in my simulations, and I
17 don't know -- or, actually, no. I'm sorry. Mr. Trende
18 doesn't indicate in his original report the number that he
19 chose, so I chose the number 1 based on my experience in
20 using the algorithm in the past.

21 Q. And what in your experience told you that 1
22 would be a good number to choose rather than 1/2 or 1 1/2
23 or something else?

24 A. So the authors of the program recommend the use
25 of the parameter 1 because they -- I don't recall the

1 exact words that they use, but they basically indicate
2 that the algorithm will perform better if that number is
3 chosen. In my experience in using the algorithm that's
4 correct. Using a number aside from 1 tends to lead to the
5 algorithm struggling to draw districts in terms of the
6 amount of time it takes to complete the program as well as
7 in the ability of the program to sample a representative
8 set of maps as well.

9 THE COURT: Didn't Mr. Trende testify that
10 he used number 1 also? Were you listening?

11 THE WITNESS: I believe that's what he
12 said. Yes.

13 Q. The next characteristic, the districts shall not
14 be drawn to discourage competition or for the purpose of
15 favoring or disfavoring incumbents or other political
16 candidates or political parties. What did you do before
17 you ran your simulations, if anything, to control for that
18 characteristic?

19 A. So in this case the way to account for this is
20 by not giving the computer information about the
21 partisanship or voting behavior of voters when the
22 algorithm is conducted, and so the model does not know
23 about the partisan preferences of the precincts that it's
24 assigning to the different districts.

25 Q. So are you saying you did not include that in

1 your model before you ran the simulations?

2 A. Yes. That's correct.

3 Q. And did Mr. Trende do likewise?

4 A. I believe so. Yes.

5 Q. The next characteristic is that the Legislature
6 and the Commission are to consider the maintenance of
7 cores of existing districts. To what extent did your
8 simulations account for that?

9 A. So in my read of Mr. Trende's original report
10 there was not any consideration of that factor, and so I
11 likewise did not include any consideration in my
12 simulations.

13 Q. And then, finally, there's a characteristic that
14 it is necessary to consider preexisting political
15 subdivisions, including counties, cities and towns, and
16 communities of interest. What, if anything, did you do in
17 setting up your simulations to control for that variable?

18 A. So my understanding or my read of Mr. Trende's
19 report was that he instructed the algorithm to avoid
20 splitting county boundaries. I did not see any indication
21 of consideration of the other political subunits, cities,
22 towns, or communities of interest. The algorithm has a
23 variety of ways of accounting for political subdivision
24 boundaries, and so you can instruct the algorithm to split
25 whichever boundary you are dealing with. And so in this

1 case I instructed the algorithm to avoid splitting county
2 boundaries as -- or to avoid it as much as possible.
3 There's a little bit of slippage in that there are a few
4 ways to account for that in the algorithm. And so I was
5 uncertain as to how Mr. Trende exactly accounted for that
6 parameter, but I used one of the various options available
7 in the algorithm, to instruct it to avoid the division of
8 county boundaries as much as possible.

9 Q. But cities and towns, did Mr. Trende do anything
10 to try to avoid splitting those up?

11 A. Not from my read of his original report, no.

12 Q. And so did you do anything in your simulations
13 to try to avoid that?

14 A. No, I did not.

15 Q. How many simulations did you run?

16 A. I ran 50,000 simulations.

17 Q. Were you present in the court to hear Mr. Trende
18 say that he ran 5,000 simulations?

19 A. Yes.

20 Q. Why did you run 50,000 simulations?

21 A. The choice of the number of maps to draw is at
22 the discretion of the user. The algorithm is quite
23 efficient, and so, you know, it doesn't take -- it does
24 take a long time. In the kind of modern computer language
25 it takes a few hours to run. I chose 50,000 simply

1 because I wanted a set of maps that, you know, there could
2 be no question that we were drawing a very large number of
3 maps, and so 50,000, in my mind, meets that description.

4 Q. Do you think the 5,000 threshold doesn't
5 necessarily meet that description?

6 A. I mean, 5,000 is certainly many fewer than
7 50,000. Given the size of the state, given the number of
8 precincts that we're dealing with, New York is an
9 especially complex problem for the computer to deal with.
10 And my experience has been that the more, the better, and
11 so I've typically used 50,000 -- or I used 50,000 in this
12 case, and I've used 50,000 in other situations as well.

13 Q. So you said the computer ran for a couple of
14 hours and it produced these 50,000 simulations. Then what
15 did you do?

16 A. So at that point we have more or less 50,000
17 different maps each containing 26 districts that are
18 geographically contiguous of roughly equal population, so
19 on and so forth, all of those criteria that we just
20 discussed. At that point you can then analyze that set of
21 maps based on whatever criteria you are interested in
22 looking at. In this case we're looking at the
23 partisanship of the maps, and so at that point you
24 reintroduce partisanship by basically tallying up the
25 number of votes cast for Republicans and Democrats in a

1 particular set of elections that you choose.

2 You then aggregate those votes from the precinct
3 level up to the district based on what those districts
4 look like. Obviously each simulated map looks different,
5 and so you're aggregating those precincts together in a
6 different way for each of the 50,000 simulations. But at
7 the end of the day what that does is it gives you a
8 picture of the partisan lean of each of those 26 districts
9 in each of the 50,000 simulations.

10 Q. What election data did you rely upon in this
11 analysis?

12 A. I used a number of statewide election results
13 over the past several years aggregated together to measure
14 the partisanship of each of the districts.

15 Q. Do you recall which years those were?

16 A. I believe it's 2016, 2018, and 2020, are the
17 years. It's in my report if we need to look for sure.

18 Q. And so then, once you input this election data
19 from these statewide races -- before I ask that question,
20 why did you use data from statewide races rather than
21 from, say, down-ballot races for Congress, state Senate,
22 state Assembly, local races, and the like?

23 A. So there's a few reasons I did this. The first
24 is that it's the most -- it's the standard practice among
25 people who use these redistricting algorithms to use

1 statewide elections, and the reason is that when you're
2 drawing these districts, you're drawing districts that
3 span, you know, the entirety of the state and, as a
4 result, you want to account for or, if possible, eliminate
5 from the consideration the idiosyncrasies that may occur
6 in these down-ballot races.

7 So a congressional district -- if we were to use
8 congressional races in our analysis of these simulated
9 districts -- well, a congressional race is isolated to a
10 particular region of the state -- if we draw a bunch of
11 simulated districts, they're going to split that
12 congressional district up into a bunch of different
13 pieces, and so then all of the idiosyncrasies associated
14 with that congressional race, the candidates, the
15 fundraising, the issues they raise, you know, all of those
16 things, are going to then get dispersed across those
17 simulated districts unevenly, which is then going to make
18 the comparison across these simulated districts really
19 difficult. And so to avoid that, practitioners typically
20 use statewide races, and the virtue of these statewide
21 races is that the idiosyncrasies of the race are constant
22 throughout the geography, and so in that way we don't have
23 to worry about particular candidate features factoring
24 more into some of the simulated districts than the others
25 because the candidate is held constant across the

1 insulation.

2 Q. So you input the data from these statewide
3 races, and to what degree of detail do you input it? Do
4 you put it on a congressional level or a county level or
5 something smaller?

6 A. So the data are at the smallest level at the
7 precinct, measured at the precinct, and so you look at
8 each of the simulated districts and you take all of the
9 precincts contained in that district. You then add up the
10 number of votes cast for Republican candidates and then
11 the number of votes cast for Democratic candidates in
12 those statewide races in each of the districts.

13 Q. And then what calculations do you do after that?

14 A. At that point you conduct a simple average, and
15 that's a measure of the average partisan performance of
16 the statewide candidates in those districts.

17 Q. Now, in terms of calculating partisanship, you
18 said you used averages. Did you use a gerrymandering
19 index like what Mr. Trende described in his report and in
20 his testimony?

21 A. No, I did not.

22 Q. Why not?

23 A. There's a few reasons. The first is that I'm
24 unaware of any other cases in which this particular
25 gerrymandering index that Mr. Trende uses has been used.

1 I suspect the reason for that is that -- I don't find that
2 particular index to be especially helpful for a few
3 reasons. The first reason is that in generating this
4 aggregate index you lose any indication of where
5 differences from between the maps and -- the simulated
6 maps and the enacted map are coming from, and so as a
7 result, it doesn't really give much -- it doesn't provide
8 much information to the user.

9 Q. Are there any other reasons why you prefer
10 averaging to using the gerrymandering index that
11 Mr. Trende used?

12 A. The other reason is that the particular way in
13 which the index is constructed gives weight to larger
14 deviations than smaller deviations. My view is that a
15 deviation is a deviation. I don't think we should give
16 priority to larger deviations any more than -- they
17 already contain greater weight given that they're larger.

18 Q. Since we're on the subject of deviations, you
19 said that you reviewed Mr. Trende's report in anticipation
20 of your testimony?

21 A. Yes.

22 Q. I'd like to refer to Mr. Trende's report which
23 has been admitted into evidence. If you could open it up,
24 please. And in particular, I would direct you to Page 12
25 of the report, Footnote Number 2. That footnote begins:

1 There are any number of ways to calculate partisanship.
2 The simulation approach tends not to be as sensitive to
3 the choice of elections as other metrics unless political
4 coalitions in a state vary radically from election to
5 election.

6 So would you agree that the measure of
7 partisanship can differ based upon the election data that
8 you are choosing?

9 A. Yes.

10 Q. And would you have any comment or opinion as to
11 whether elections in New York can vary radically from
12 election to election?

13 A. I certainly think that it's the case that
14 elections in New York do tend to vary pretty substantially
15 or can.

16 Q. How so?

17 A. Republicans and Democrats in New York, there
18 tends to be a pretty large, in comparison to other states,
19 swing between particular races and how Republicans and
20 Democrats perform in New York.

21 Q. I'd like to refer specifically to the
22 gubernatorial election in 2018 in the State of New York.
23 And isn't it true you used that as one of the elections
24 that provided the data for your partisanship analysis?

25 A. Yes. That's correct.

1 Q. And that was the election involving Democrat
2 Andrew Cuomo and Republican Marc Molinaro, correct?

3 A. Yes.

4 Q. Did you do any analysis that would bear upon
5 whether in a given congressional district the Democrat did
6 better or the Republican did better?

7 A. Yes. So as I said, you aggregate these election
8 results at the precinct level up to the district level
9 after the simulations are finished. At that point you can
10 look at them either all together in a kind of average or
11 you could look at them at a kind of race-by-race level as
12 well if you wanted to.

13 Q. Would you know or are you aware -- and if you
14 don't, say that you don't. Are you aware, in how many of
15 New York's congressional districts did Andrew Cuomo, the
16 Democrat, outperform Marc Molinaro, the Republican, in
17 2018?

18 A. I believe it was 20, I think is the number.

19 Q. And that's out of 27?

20 A. Out of -- yes. That would be the case.

21 Q. Now, you said you also relied upon statewide
22 election data from 2016, correct?

23 A. That's correct.

24 Q. And isn't it true that there was a United States
25 Senate race in New York in 2016?

1 A. Yes.

2 Q. And did you evaluate based upon that data how
3 well, the Democrat, Chuck Schumer, performed in the
4 congressional districts versus his Republican opponent?

5 A. So in that case he won the majority in all of
6 the -- all 26, because in this case I was drawing 26
7 simulated districts. So in all 26 of the districts he won
8 the majority.

9 Q. So in other words, we have a 2018 statewide
10 election where the Democrat won in 20 districts, but we
11 also have a 2016 statewide election where the Democrat won
12 in all 26 districts?

13 A. Yes. That's correct.

14 Q. Would you say that this encapsulates the kind of
15 variation that you were just describing?

16 A. Yes. That's correct.

17 Q. And so in view of this variation why is it that
18 using an average would be preferable to using a
19 gerrymandering index to measure partisanship?

20 A. Well, as we can see, there can be substantial
21 variation in how these candidates perform. By averaging
22 their performance across all of the different races, that
23 helps to, again, remove these idiosyncrasies that we're
24 not particularly interested in. We don't want the
25 idiosyncrasies of particular candidates to go into these

1 analyzes because these statewide races are acting as
2 proxies; they're acting as our best estimate of how these
3 districts are going to perform going forward. And so the
4 average tends to place as -- you know, the average places
5 less weight on any one of the particular elections that
6 are included in that average.

7 Q. So you input your data. You run the
8 simulations. You come up with your 50,000 simulated maps
9 that are compared with the actual congressional map that
10 was enacted by the Legislature. Then what did you do in
11 your analysis?

12 A. So at that point I simply look to see how many
13 of the districts in the enacted plan were carried by
14 Democrats. And when I say "carried," I mean how many of
15 those districts contained a majority of votes for
16 Democrats across -- in this average of these statewide
17 races. I then do the same analysis for each of the 50,000
18 simulations. Of course, across those 50,000 simulations
19 the number of districts that are carried by Democrats is
20 going to vary, and so that produces a distribution, and so
21 I then compare the distribution of those simulations to
22 the number in the enacted map.

23 Q. And so would it be correct to say that you would
24 characterize a Democratic district as one in which the
25 Democrat, over the course of your averages, achieves 50

1 percent of the vote plus 1?

2 A. That's correct.

3 Q. And a Republican district would be one in which,
4 as a result of the averages among all of these seven
5 statewide races, the Republican captures 50 percent plus 1
6 of the vote?

7 A. Well, it would be 49 percent -- 49.9 percent or
8 less.

9 Q. Or less?

10 A. Less, yeah.

11 Q. Now, do you recall testimony from Mr. Trende in
12 which he made reference to not using a number at 50
13 percent to determine whether a district is Democratic or
14 Republican but rather using a number that would be more
15 like 55 percent, I seem to recall?

16 A. Yes, I do remember that.

17 Q. And what would be your opinion concerning his
18 methodology?

19 A. Well, I wouldn't -- I would not use 55 or any
20 other number aside from 50. 50 percent is pretty
21 conventional. This is, you know, the majority of the
22 votes for one party I'm going to label that as the party
23 carried that district. So it has the virtue of reflecting
24 more or less the way in which we elect candidates in real
25 life.

1 Beyond that, what's really happening is we're
2 really -- the discussion yesterday and what we're talking
3 about right now is really a reflection of the fact that
4 these simulations and these measures of partisanship,
5 they're really acting as proxies. They're our best
6 estimates of what's going to happen, and I really want to
7 emphasize estimate. We are not making perfect
8 predictions. If we were, we wouldn't be in here; we'd --
9 you know, we'd be advising candidates and making lots of
10 money because our predictions would be perfect. But
11 that's not the case. We're making estimates based on
12 previous election results to project future election
13 results.

14 Q. Now, according to this metric of determining
15 whether a Democrat or Republican would carry a
16 congressional district based upon the statewide election
17 results from 2016, 2018, 2020, how many of the 26
18 districts in your various simulations would have been
19 carried by a Democrat rather than a Republican?

20 A. So if we turn in my report, we can look and see
21 that distribution. The specific numbers are not something
22 I have committed to memory.

23 Q. Would this be Paragraph 33 on Page 12?

24 A. It would. It might be helpful to simply look at
25 the picture on Page 13 --

1 Q. Certainly.

2 A. -- as well, which is -- they're talking about
3 the same thing.

4 Q. Certainly.

5 A. So this --

6 Q. So what did you find?

7 A. Oh, I'm sorry.

8 Q. What did you find?

9 A. So this figure displays what I've been
10 discussing, which is the distribution a district carried
11 by the Democrat candidates in the simulations. So the
12 gray -- the very thick gray bars show the number of
13 districts carried by Democrats, and so we can see that in
14 17 percent of the simulations Democrats carried 22
15 districts, in 40 percent of the simulations Democrats
16 carried 23 districts, in 36.1 percent of the simulations
17 Democrats carried 24 districts and in 6.7 percent of the
18 simulations Democrats carried 25 percent of the
19 simulations, and in less than 1/2 a percent of the time
20 Democrats carried all 26 of the simulated districts.

21 Q. So then what would be the most frequent number,
22 or the mode, in terms of your simulations, as to how many
23 of the 26 districts would have been carried by Democrats?

24 A. So the most frequent outcome in the simulations
25 was 23 districts.

1 Q. And pursuant to the enacted plan, how many
2 congressional districts would a Democrat carry?

3 A. 22.

4 Q. And 22 is fewer than 23?

5 A. It is.

6 Q. So with respect to the plan that was enacted,
7 would you call that plan an outlier or representative of
8 the kind of simulated maps that you would expect?

9 A. I would not call it an outlier. I would --
10 there's a variety of definitions that a person could use
11 as to what constitutes an outlier or not. By none of
12 those definitions would I call this an outlier.

13 Q. And so this result with 22 districts out of 26
14 carried by a Democrat, there was likewise the same result
15 in 17 percent of your simulations, correct?

16 A. That's correct.

17 Q. And, in fact, is it true, am I reading the graph
18 correctly, that in the remaining 83 percent of the 50,000
19 simulated maps actually the Democrat would have carried
20 even more than 22 congressional districts out of 26?

21 A. Yes. That's correct.

22 Q. Do we know based upon Mr. Trende's testimony and
23 his report how many of the districts in his 5,000
24 simulations would have been carried by Democrats or
25 Republicans?

1 A. There's no chart that looks like the chart that
2 I have put in my report, but we can draw very similar
3 inferences based on the chart that he included in his
4 report.

5 Q. And by "similar inferences," what do you mean?

6 A. I mean that we can look at the chart. He draws
7 a line across the chart at 50 percent. We can then look
8 across the 26 districts at the number of times the
9 simulations generate a district that is above the 50
10 percent line or below the 50 percent line, and then we can
11 add those up across the chart.

12 Q. So then what can we extrapolate from the data he
13 does give us with respect to whether the 26 districts in
14 his simulations would have been carried by Democrats in 22
15 or 26 instances or more than that?

16 A. It looks very similar to what I presented here
17 in my report.

18 Q. You'll recall that there was a requirement in
19 the state Constitution about maintaining the old cores of
20 previous districts in accomplishing the redistricting to
21 the extent that that would be practicable. Did Mr. Trende
22 consider the need to evaluate keeping the cores of old
23 districts together, as far as you can tell?

24 A. In the original report, no. In his reply report
25 Mr. Trende indicates that he did something in the

1 algorithm to account for previous district cores, but I'm
2 not aware of the specifics of how that is implemented.

3 Q. How about Mr. Lavigna? Can you tell if he
4 considered that criterion?

5 A. No, I don't believe he did.

6 Q. Now, did you do a comparison of the 2012
7 districts versus the proposed 2022 districts in view of
8 the extent to which the 2022 proposed map that was enacted
9 maintains the cores of old districts under the 2012 map?

10 A. Yes.

11 Q. And what did your analysis entail?

12 A. So basically I'm comparing the old districts
13 used in the previous decade to the new districts and
14 simply allocating population from the old districts into
15 the new districts. And so there's been a number of --
16 people have talked about this today. And, oh, you know,
17 given the fact that we're moving from 27 districts to 26
18 districts and the fact that the population has shifted
19 throughout the state in the last decade, the old districts
20 are not going to perfectly reflect the new districts. As
21 a result, you can imagine kind of overlaying those two
22 maps on top of one another and simply allocating people
23 based on where they lived in their old districts into the
24 new districts and what proportion go between each of those
25 maps, those two maps.

1 Q. With respect to the 2022 plan, to what extent --
2 if you were able to measure it quantitatively, to what
3 extent did the 2022 map that was enacted maintain the
4 cores of old districts from the 2012 congressional map?

5 A. I believe that in all but one case a majority of
6 people are kept from an old district into a new district.

7 Q. Can you comment about the one case where that
8 did not happen?

9 A. My understanding is because, again, as the state
10 is losing a district, that's going to be incredibly
11 disruptive in terms of how the boundaries are drawn. That
12 old district is gone, and as a result, you have to
13 reallocate all of those people into new districts, and so
14 in that one case you're going to end up with quite a bit
15 of disruption as opposed to the other situations where
16 that's not the case.

17 Q. So is that something you would expect to see
18 when you're losing a district from one plan to the next?

19 A. Yes. I think in states where the number of
20 districts is changing you would expect to find places
21 where it's especially large; numbers of people are being
22 shifted from one district to another because in that case
23 you have a pretty radical disruption in terms of how the
24 districts are going to be drawn in that region.

25 Q. And so given all of this analysis concerning the

1 2022 congressional map that was enacted, do you have an
2 opinion to a reasonable degree of your professional
3 certainty with respect to its compliance with the
4 requirements that had to be considered?

5 A. Yes, I do.

6 Q. And what is your opinion?

7 A. It is my opinion that it does not qualify as a
8 partisan gerrymander.

9 Q. And why is that?

10 A. I think that in terms of the partisanship of the
11 enacted plan, it aligns with the partisanship that we
12 observe in the simulations even though the simulations, as
13 we've noted, are not extensively considering all of the
14 criteria that are required to be considered in the
15 Constitution on top of that the fact that we have a lot of
16 population moving over the last decade on top of the fact
17 that we're losing a district in New York. All of those
18 things combined suggest to me that it just does not
19 qualify as a partisan gerrymander.

20 MR. BUCKI: May I have a brief moment, your
21 Honor?

22 THE COURT: Yes. I'd like you to pick a
23 spot. I don't know if you're just about done,
24 Mr. Bucki, but in the next ten minutes I'd like to
25 break for lunch.

1 MR. BUCKI: My hope is that I can be done
2 in the next ten minutes.

3 THE COURT: Okay.

4 BY MR. BUCKI:

5 Q. One last set of questions to clarify some
6 testimony that you had earlier: You talked about how you
7 used statewide elections from 2016, 2018, and 2020 in
8 terms of doing your analysis of the partisanship of the
9 various districts in the simulations on the enacted
10 congressional plan. Why did you use those statewide races
11 rather than, say, others from 2014 or 2012 or other years?

12 A. The further back in time you go the less
13 reflective these elections are going to be of the
14 contemporary political landscape. And so as I noted, the
15 statewide races, again, they're acting as best estimates,
16 they're acting as proxies for how voters might behave in
17 the future. And so as a result, you would want to give
18 priority to more recent elections. You wouldn't, of
19 course, only want to use 2020 because then you're subject
20 to the problem of having the idiosyncrasies of a
21 particular election cycle or even a particular election
22 itself. So there's some balance there in terms of using
23 past elections to help account for that, but you don't
24 want to go too far back because that point those elections
25 kind of lose their relevance in terms of, you know, being

1 a good reflection of the contemporary politics of the
2 state.

3 Q. How did the statewide election data that you
4 used for your analysis compare to the statewide election
5 data that Mr. Trende used for his?

6 A. So I believe we used the same elections with the
7 exception of -- I think there are two additional elections
8 in my analysis that are not included in Mr. Trendy's.

9 Q. Do you recall what those?

10 A. I believe they're the state comptroller
11 elections.

12 Q. But otherwise they were the same?

13 A. But otherwise they are the same.

14 Q. And then I have a further clarifying question
15 about the line of demarcation that you use at 50 percent
16 to determine whether a district is carried by a Democrat
17 or carried by a Republican. Is this the line of
18 demarcation that's used only by you, or is it used by
19 other people in the political science field who study
20 redistricting?

21 A. So it's -- this is the, I would say, most common
22 practice in terms of displaying how simulations produce or
23 how to interpret the results of these simulations.
24 Additionally, I chose 50 percent, I think as I said
25 earlier, because it reflects the reality of how elections

1 are conducted, you know, in our country.

2 And then beyond that, as I said, I was trying to
3 reflect as closely as possible the decisions that
4 Mr. Trende used in his analysis. In looking at the figure
5 in his chart we can see that he also demarcates 50 percent
6 as the cut point at which something becomes a
7 Democratic-leaning versus a Republican-leaning district.

8 Q. And that's true notwithstanding the discussion
9 he had in his testimony about going up to 55 percent or
10 some other number different from 50 percent?

11 A. That's correct.

12 MR. BUCKI: I have nothing further at this
13 time, your Honor.

14 THE COURT: Thank you, Mr. Bucki.

15 This is an appropriate place to stop for
16 lunch. We'll start at twenty to 2:00. Okay. Twenty
17 to 2:00.

18 You can step down, sir. Thank you.

19 THE WITNESS: Thank you.

20 (A recess was taken.)

21 THE COURT: Dr. Barber, you're still under
22 oath.

23 And I have a note that Attorney Reich and
24 Attorney Chill will be leaving around 2:30. Is that
25 correct? But Mr. Bucki will hold the fort; is that

1 correct?

2 MR. CHILL: Thank you, your Honor.

3 MS. REICH: Thank you, your Honor.

4 MR. BUCKI: Yes, your Honor.

5 THE COURT: All right. Very good.

6 Then you'll probably be going right out

7 that door --

8 MR. CHILL: Thank you, your Honor.

9 MS. REICH: Thank you, your Honor.

10 THE COURT: -- or wherever the security
11 will guide you.

12 All right. Who's going to be doing
13 cross-examination of Dr. Barber?

14 MS. DiRAGO: I will, your Honor.

15 THE COURT: Ms. DiRago?

16 MS. DiRAGO: DiRago.

17 THE COURT: DiRago. I'm sorry.

18 MS. DiRAGO: Yep. No N. That's okay.

19 THE COURT: How do you spell that?

20 MS. DiRAGO: D-i-R-a-g-o.

21 THE COURT: Thank you.

22 MS. DiRAGO: You're welcome.

23 CROSS-EXAMINATION

24 BY MS. DiRAGO:

25 Q. Okay. So, Dr. Barber --

1 MS. DiRAGO: Oh, and, Judge, if you can't
2 hear me, let me know. I guess this is working well.

3 THE COURT: Will do.

4 MS. DiRAGO: I don't have a booming voice
5 like some of my predecessors up here.

6 Q. So, Dr. Barber, you just heard me introduce
7 myself. My name's Molly DiRago. I am an attorney for the
8 petitioners.

9 I'm just going to sort of jump right into your
10 testimony. So -- and from your report you used what you
11 refer to as simulated districting analyses, right?

12 A. That's right.

13 Q. Okay. So you created your own ensemble of
14 simulated maps for that, right?

15 A. Correct.

16 Q. And you used some -- the same program and
17 statistical software as Mr. Trende?

18 A. That's correct.

19 Q. And in so doing, to the best of your ability,
20 you used Mr. Trende's programming decisions, right?

21 A. Correct.

22 Q. So that the simulation methodology used in
23 creating your ensemble very closely mirrors that of
24 Mr. Trende's, correct?

25 A. Correct.

1 Q. But you had created 50,000 simulated maps using
2 this methodology, correct?

3 A. That's correct.

4 Q. And in generating your simulated maps you took
5 into -- I'm sorry. Strike that, please. Your report
6 explains that any conclusions about the enacted map
7 depends on the validity of the simulations produced,
8 right?

9 A. Correct.

10 Q. But I didn't see anywhere in your report where
11 you opine that Mr. Trende's simulations were invalid. Is
12 that right?

13 A. I don't believe that I make that exact
14 statement.

15 Q. Okay. And the result of your 50,000 simulations
16 align with the results of Mr. Trende's simulations, right?

17 A. That's correct given that I was choosing to
18 mimic the parameters that he had chosen.

19 Q. Right. And 50,000 was, what you said in your
20 testimony, a large number of simulations?

21 A. That's correct.

22 Q. Your expert opinion is that according to your
23 approach and Mr. Trende's approach, the enacted
24 congressional map is not the product of gerrymandering
25 and, if anything, leans slightly to the Republican party,

1 right?

2 A. Correct.

3 Q. And your reasoning is that the enacted map gives
4 more seats to the Republicans than some or even most of
5 the ensemble maps, right?

6 A. Correct.

7 Q. Nothing else is taken into consideration when
8 you make that expert conclusion, correct?

9 A. I'm not sure what you mean exactly by that.

10 Q. Well, you're looking at the number of seats
11 generated by the ensemble maps for Republicans, and then
12 you're comparing that to the number of seats generated by
13 the enacted map, and you're comparing just that number of
14 seats?

15 A. In my report, yes. That's correct.

16 Q. Right, and in making your conclusion that the
17 enacted map is not a statistical outlier?

18 A. Correct.

19 Q. So whether a seat is classified as Democrat or
20 Republican is based on what you call the partisan index,
21 right?

22 A. Yes. That's correct.

23 Q. And according to you, this partisan index is the
24 proportion of the two-party vote share cast for the
25 Democratic candidate across all of these seven statewide

1 elections that you analyzed, and you talked about those
2 statewide elections, so I'm not going to go over that
3 again right now.

4 A. Yes. That's correct.

5 Q. And it's averaged across those elections?

6 A. That's correct.

7 Q. Okay. So if a district has a partisan index
8 greater than 50 percent, you call it Democrat, and if it
9 has a partisan index less than 50 percent, you call it
10 Republican, right?

11 A. Yes.

12 Q. Okay. So in using that approach a seat that is
13 50.1 percent is Democrat and a seat that is 49.9 percent
14 is Republican, right?

15 A. Yes. That's correct.

16 Q. But there's just a miniscule difference there
17 using the statewide average of those seven elections,
18 correct?

19 A. That's correct, yes.

20 Q. And so under this binary view a seat that is,
21 say, 70 percent Democrat is the same as a seat that is
22 50.1 percent Democrat, correct?

23 A. Yes. So as I said in my direct testimony, we
24 have to make some sort of decision as to where to classify
25 a district, and that reflects the reality of how people

1 are elected in congressional districts.

2 Q. Right. So that's a common way to compare the
3 results, I guess, right?

4 A. That's correct. It's very common, yes.

5 Q. But you also said in your testimony that you're
6 not really predicting who's going to win the seat, right?

7 A. I believe you're referring to where I said these
8 are proxies -- proxy measures of how a district is going
9 to likely perform in the future.

10 Q. Right. Right, and you said something about if
11 you could predict it, you'd be making a lot more money
12 and, you know, the other witnesses --

13 A. Right.

14 Q. Right. Okay. So I remember that because of
15 that colorful explanation and that was helpful.

16 So I -- you know, so you're saying this is a
17 good way to compare the seats, but you're not actually
18 predicting who's going to win, right?

19 A. I'm not predicting that nor do I think anyone
20 can, with any great amount of certainty, make those
21 predictions.

22 Q. Okay. So let's go back to this Democrat versus
23 Republican because that label is obviously very important
24 to your conclusion. So a map that had, let's say, five
25 seats that were 49.9 percent Democrat, so that means just

1 under the 50 percent line, five of those seats, and then
2 had four seats that were, say, 70 percent Democratic, so,
3 you know, way over that 50 percent line. According to
4 your logic, that would be five Republican seats and four
5 Democrat seats, right?

6 A. That's correct. Yes.

7 Q. So a map like that would also lean Republican,
8 right?

9 A. Yes. That's correct.

10 Q. Okay. I don't want to repeat anything that's
11 already been said, so I'm just looking through this for a
12 minute. And you don't really believe that a seat that is
13 at the 50.1 percent mark is just as likely to elect a
14 Democrat as a seat that is at that 70 percent mark, right?

15 A. No.

16 Q. And you don't agree that a seat that's at the
17 50.1 percent mark -- I'm sorry. Strike that. You would
18 agree that a seat at the 50.1 mark would be more
19 competitive than a seat at the 70 percent mark, right?

20 A. Yes.

21 Q. And actually the closer you get to that 50
22 percent line the more competitive the seat is, right?

23 A. Yes. That's correct.

24 Q. So the partisan index that you discuss in your
25 report does not take into account how far above or below

1 the 50 percent line the seat is, right?

2 A. So the index does because it's a continuous
3 measure. Is that what you're asking?

4 Q. That makes sense. I understand, yeah. I
5 understand what you're saying.

6 So -- but the label you put, Democrat or
7 Republican, does not depend on how far above or below the
8 50 percent line it is?

9 A. That's correct. It's a dichotomous measure.

10 Q. Okay. So your expert opinion does not take into
11 account the competitive of any districts in the enacted
12 map, right?

13 A. Correct.

14 Q. And you actually didn't analyze the
15 competitiveness of any of those seats in the enacted map,
16 right?

17 A. Correct.

18 Q. But you're aware that the New York Constitution
19 expressly states that maps shall be drawn to -- I'm
20 sorry -- shall not be drawn to discourage competition,
21 right?

22 A. Yes.

23 Q. And that -- and you looked at that, and I can
24 tell because on your report at Page 8 you actually cite,
25 you know, the Constitution where it states that districts

1 shall not be drawn to discourage competition.

2 A. Correct.

3 Q. So for this New York constitutional requirement
4 on whether the enacted maps discourage competition you
5 don't have an expert opinion, do you?

6 A. I'm not offering an opinion on that particular
7 point.

8 Q. And you did say that you were asked to evaluate
9 Mr. Trende's conclusions, but you didn't evaluate his
10 conclusions that some of the seats were made less
11 competitive by gerrymandering, right?

12 A. As I said, I did not evaluate the
13 competitiveness of particular districts.

14 Q. And you didn't evaluate the dot plot analysis at
15 all that Mr. Trende created, right?

16 A. So I do believe that in my report I make
17 reference to that figure, so I want to just be accurate,
18 that I do think there is a reference to that figure in my
19 report.

20 Q. I believe you referenced it, but you didn't
21 analyze it using your expert opinion, right?

22 A. I mean, we would have to go look at what exactly
23 I had to say about it. I just don't want to say that I
24 didn't consider it if it is, in fact, a part of the
25 report.

1 Q. Okay. I understand.

2 You didn't create your own dot plot index,
3 though?

4 A. That's correct.

5 Q. And so because you don't have an expert opinion
6 on this constitutional requirement of discouraging
7 competition, you really cannot say whether or not the
8 enacted map favors Democrats due to discouraging
9 competition, can you?

10 MR. BUCKI: Your Honor, I would object. I
11 disagree with the characterization that Counsel makes
12 at the start of her question.

13 THE COURT: Overruled.

14 You can answer.

15 THE WITNESS: I'm sorry. Could you state
16 the question?

17 MS. DiRAGO: Can you repeat it?

18 (The record was read back by the court
19 reporter.)

20 BY MS. DiRAGO:

21 A. I would not characterize it in that way because
22 I think that discouraging competition is a different
23 concept than favoring one party or the other, and so I
24 don't think that one necessarily leads to the other. I
25 think they are two separate things that could, in fact, be

1 very different from one another.

2 Q. Okay. So you've told me here today that you do
3 not have an expert opinion on whether competition was
4 discouraged, but I guess I'm -- if I understand you
5 correctly, you're saying that you cannot extrapolate from
6 that to say whether it was favoring Democrats or not?

7 A. I think that's --

8 Q. I'm just not understanding your answer.

9 A. Let me restate.

10 Q. Thank you.

11 A. I think that you could look at a variety of
12 maps, not even in New York, but you could be presented
13 with a variety of maps and you could say, well, this map
14 is less competitive than this other map, but it could also
15 favor one party or the other. You could also have a map
16 that encourages competition, that's highly competitive,
17 but still favors one party or the other. So all I'm
18 saying is that competition and partisan favoritism are
19 discrete concepts that could be orthogonal to one another.

20 Q. Okay. But what I'm asking you is that, you
21 cannot say whether or not the map favors Democrats based
22 on a reduction of competition within certain seats, right?

23 A. I think I understand what you're asking. I
24 think you can make evaluations of whether the map favors
25 one party or the other separately from --

1 Q. But I'm asking, you are not offering that
2 opinion; you're not refuting that opinion?

3 A. I'm sorry. When you say "that opinion," what
4 exactly do you mean?

5 Q. The thesis that -- the map favors Democrats
6 because it reduces competition in certain seats is the
7 thesis, and because you didn't look at competition within
8 certain seats, you can't refute that thesis?

9 A. Insofar as we're talking only about competition,
10 that is correct. I was simply saying I think there are
11 other ways to evaluate the partisan fairness of a map
12 outside of a question solely isolated on the question of
13 competition.

14 Q. Okay. Right. So there's other ways, but
15 competitiveness is one of those ways, right?

16 A. It's certainly one of a variety of factors you
17 could consider.

18 Q. Okay. We're in alignment. That's good.

19 Okay. Can you look at Mr. Trende's chart on
20 Page 15 of his report?

21 THE COURT: His original report?

22 MS. DiRAGO: Yes.

23 Q. And I think I asked you this: You didn't make a
24 chart showing the partisan index for each district in the
25 simulation maps that you used, right -- or that you

1 created? I'm sorry.

2 A. That's correct.

3 Q. Okay. And so looking at this chart, it shows
4 that the enacted map has four Republican seats and using
5 Republican under your definition. Do you see that?

6 A. Yes.

7 Q. Would you agree that this chart shows that the
8 four Republican seats contain a higher percentage of
9 Republican voters than any of those seats in the ensemble
10 congressional maps?

11 A. Yes. That's correct.

12 Q. Okay. And then let's look at the next five
13 seats. So this is districts numbered 5 through 9. And I
14 recognize this is not the actual district, but it's how
15 they're labeled on this chart, so I'm going to refer to
16 them as how they're labeled on the chart. So districts 5
17 through 9, you would label these seats, 5 through 9, as
18 Democrat seats, right?

19 A. Yes. That's correct.

20 Q. And that's because they fall above the 50
21 percent partisan index line, right?

22 A. Yes. That dashed line that runs across the
23 figure that changes the color of the dots, yes.

24 Q. Okay. And you would agree that this chart shows
25 that those five Democrat seats have a higher percentage of

1 Democrat voters than any of those districts do in any of
2 those ensemble maps, right?

3 A. Yes.

4 Q. And then let's look at the next four seats,
5 Districts 10 through 13. Now, you would agree that the
6 chart shows that these seats, while matching some ensemble
7 congressional maps, are still at the very high end of the
8 percentage of Democratic votes vis-à-vis the ensemble
9 congressional maps, right?

10 A. They are at the higher end, yes.

11 Q. Okay. So let's look at District Number 5, for
12 example. You agree that this district in the enacted map
13 is less competitive than any district in any of the
14 ensemble maps, right?

15 A. Correct.

16 Q. The same is true for District 6. This district
17 is less competitive than any of the districts in any of
18 the ensemble maps -- I'm sorry. Let me start over.
19 District Number 6 is less competitive in the enacted map
20 as in any of the ensemble maps?

21 A. I'm sorry. We were talking about District 6 --

22 Q. Yes.

23 A. -- or, I'm sorry, ordered District 6?

24 Q. Yes, ordered District 6.

25 A. Yes. That looks like that's the case.

1 Q. The same as true for Number 7, District 7,
2 right?

3 A. Correct.

4 Q. The same is true for District 8, right?

5 A. Correct.

6 Q. The same is true for District 9, right?

7 A. Correct.

8 Q. And then looking at the Republican seats, the
9 same is true for District 1?

10 A. Correct.

11 Q. The same is --

12 A. I'm sorry. Just to note, in the opposite
13 direction.

14 Q. Right. But it's made less competitive?

15 A. Less -- oh, I'm sorry. I thought -- yes. I
16 thought we had -- you were asking me about less
17 Democratic --

18 Q. Okay.

19 A. -- but it's in the opposite direction --

20 Q. Right.

21 A. -- so that would be --

22 Q. Okay. And so Number 2 is less -- the enacted
23 map is less competitive than any of the maps in the
24 ensemble, right?

25 A. Correct, in this case now in the Republican

1 direction. Yes.

2 Q. Right. And same for number 3?

3 A. Correct.

4 Q. And same for Number 4?

5 A. Correct.

6 Q. But then an interesting thing happens because
7 after you get past these Districts 1 through, you know, 11
8 or 12 or so, now the enacted map dots fall pretty much
9 within -- and there's a little bit of variance -- but fall
10 pretty much within the range of the ensemble maps; is that
11 right?

12 A. I think that in some cases, yes. However, there
13 are districts in which the enacted map falls at the edge
14 of the simulations even in some of these higher numbers in
15 the ordered districts. So, for example, I'm looking at
16 District 22 or District 18.

17 Q. Now, for Number 22 -- I need my glasses -- and
18 even 18, they're still within the ensemble maps, the range
19 that the ensemble maps created, right?

20 A. That's correct. I maybe misunderstood you. I
21 just thought you were asking about being at the edge of
22 the ensemble.

23 Q. Okay. Yeah. No, that's okay.

24 So the only places where the enacted map is an
25 outlier from the ensemble maps is Districts 1 through 9,

1 right?

2 A. That's correct. Yes.

3 Q. Okay. And would you characterize those that are
4 closer to the 50 percent line as more competitive seats?

5 A. Yes.

6 Q. Do you know what packing means in the
7 gerrymandering context?

8 A. Yes. I've heard the term. I'm very familiar
9 with it.

10 Q. Yeah. I would imagine.

11 So this is my definition, and you can tell me if
12 you disagree with my definition: It's concentrating the
13 opposing party's voting power in one district to reduce
14 their voting power in another district -- in other
15 districts, plural. Do you agree with that as a definition
16 for packing?

17 A. Yeah, I think that's a serviceable definition.

18 Q. And you didn't analyze whether the enacted
19 congressional map shows evidence of packing, did you?

20 A. No. I don't think that packing -- and I imagine
21 we might move on to cracking -- are necessarily very
22 useful terms when it comes to analyzing maps because
23 packing is in some degree a matter of perspective.
24 Packing can also happen independently of the map drawer.
25 I have made note in my report of geographic packing that

1 can occur simply by virtue of where voters live. So it's
2 a term that gets used a lot. I think often it loses its
3 meaning because it gets used so frequently to mean so many
4 different things.

5 Q. Okay. So you don't have an expert opinion,
6 then, as to whether Republican voters were packed into
7 those first four districts in order to reduce their voting
8 power in the other districts, namely, you know, 5 through
9 13, right?

10 A. No, I don't know that that's the case.

11 Q. And you don't refute that thesis either?

12 A. Correct.

13 MS. DIRAGO: Thank you. That's it.

14 THE COURT: Redirect?

15 MR. HECKER: A few questions. Yeah.

16 CROSS-EXAMINATION

17 BY MR. HECKER:

18 Q. Good afternoon, Dr. Barber. Eric Hecker from
19 Cuti Hecker Wang. How are you?

20 A. I'm doing well.

21 Q. I only have a few questions, I believe. On your
22 direct you mentioned that you served as an expert in the
23 North Carolina cases recently?

24 A. Yes.

25 Q. I just -- one of them was Harper v. Hall?

1 A. That's correct. Yes.

2 Q. I want to read you a quote. It's a reasonably
3 long quote, three or four sentences, from the trial
4 Court's opinion dated January 11th of this year in that
5 case. I'm going to ask you if you take issue with any of
6 it or if you agree with it. The court in that case held
7 Dr. Barber's method is not without limitations. Because
8 it is impossible for a redistricting algorithm to account
9 for all nonpartisan redistricting goals, dash, which can
10 be idiosyncratic and district-specific, differences
11 between the range of his simulated plans and the 2021
12 plans may be the result of nonpartisan goals the algorithm
13 failed to account for rather than of partisan goals. In
14 Dr. Barber's opinion, there is no way, then, to be sure
15 that differences in partisan effects from simulated plans
16 versus legislatively enacted plans result from partisan
17 intent rather than from nonpartisan goals the algorithm
18 was not programmed to achieve. This means that the
19 simulation method can be indicative on the question of
20 partisan intent but not necessarily dispositive, and under
21 Dr. Barber's analysis it is plausible that the 2021 plans
22 were prepared without partisan data or considerations.

23 Do you recall the trial Court saying that in its
24 opinion?

25 A. I do, yes.

1 Q. Do you agree with that, or do you take issue
2 with it?

3 A. No, I agree with that. The very first sentence
4 that says, Dr. Barber's method, just to be clear, they're
5 referring to a set of simulated districts that I performed
6 in North Carolina. And in that case as well as in this
7 case I think it's important that recognize that the
8 simulations only get you so far. They only get what you
9 put in them. And we've heard lots of people today and
10 yesterday talking about a whole host of factors that are
11 important in redistricting. We heard about mountain
12 ranges and watersheds and all sorts of other factors that
13 are legitimate considerations that aren't present in the
14 simulations. And so it's important to recognize these are
15 useful tools, but they aren't the only tool and they can
16 only go so far.

17 Q. And in this case you have at least some general
18 familiarity with the redistricting criteria information
19 that Mr. Trende did and did not run through the
20 simulations, correct?

21 A. That's correct, yes.

22 Q. You know that he used compactness but just with
23 a single-number setting, right?

24 A. Yes. That's probably the case -- the parameter
25 that we know the most about because we know he used the

1 number 1, but there were other parameters that I think I
2 stated in my direct that I'm not completely certain what
3 he did.

4 Q. And, well, you know because he told you he
5 didn't take into account communities of interest at all
6 right?

7 A. Correct. Yes.

8 Q. It came out on your cross-examination that you
9 did say in your report that you don't endorse Mr. Trende's
10 methodology necessarily, right?

11 A. I believe so. Can you say that again? I want
12 to make sure you don't get a double negative.

13 Q. I'll just ask you this way: You don't
14 necessarily endorse his methodology, right?

15 A. I -- that's correct.

16 Q. And opposing Counsel asked you a couple minutes
17 ago if you said in your report affirmatively that you
18 don't, right?

19 A. I see. Yes. That's correct.

20 Q. So let me just ask you the question that she
21 didn't then follow up with. Given the redistricting
22 criteria information that Mr. Trende did and did not run
23 through his simulations in this case, in your professional
24 opinion, can Mr. Trende's simulations enable us to infer
25 whether the actual map drawers did or did not draw the

1 lines in 2022 with partisan intent?

2 A. I do not believe that we can make that inference
3 from the information we have.

4 Q. And same question about the competitiveness of
5 any of the districts.

6 A. The answer would be the same.

7 Q. And so a few minutes ago when opposing Counsel
8 was taking you through the chart on Page 15 of
9 Dr. Trende's original report, were you opining on what
10 Mr. Trende's charts show about each district or what they
11 purport to show based upon the inputs that he used?

12 A. So my statements to opposing Counsel were simply
13 reflections of what the chart says, not why the chart
14 looks the way it does.

15 MR. HECKER: Okay. Thank you. I have
16 nothing further.

17 THE COURT: Doctor, let me ask you a
18 question. Are you -- I'm trying to get to whether
19 you're saying that it's Mr. Trende's methodology or
20 his interpretation of the results of his methodology
21 that you don't believe in. Can you answer that?

22 THE WITNESS: Yeah. Yeah. Absolutely. So
23 the analogy that I would use is that these
24 redistricting simulations are very powerful, and
25 they're in some ways like driving a very -- a very

1 high-powered expensive car. If you put me in that
2 car, I could probably drive it but probably not very
3 well and I wouldn't know how to use all the various
4 features that are in that car and all the buttons and
5 things that you could do.

6 And these redistricting insulations are
7 very similar. There are a whole host of parameters
8 that the user has to select when running them, and
9 those parameters can really change how the program
10 runs or how well it runs. We just don't know what
11 choices were made in many of these cases, the choices
12 Mr. Trende made in making -- in running these models,
13 and so there's just a very high degree of uncertainty
14 as to how those choices impacted the outcome or the
15 output of the models.

16 THE COURT: So I don't know if that answers
17 my question. I think I gleaned from what you said
18 that you question the methodology, the input into the
19 methodology.

20 THE WITNESS: The methodology -- whether or
21 not the methodology was used correctly.

22 THE COURT: Well, your ensemble came fairly
23 close to Mr. Trende's?

24 THE WITNESS: That's correct. I
25 deliberately chose to try and mirror the choices that

1 he made as closely as possible.

2 THE COURT: Okay. Well, that similarity,
3 does that mean you and he were somewhat on the same
4 track? You were able to mirror pretty much what he
5 did.

6 THE WITNESS: I think it shows that I was
7 able to infer the choices he made in most of the
8 situations. It doesn't necessarily mean that those
9 are the choices that I would have used if I was asked
10 from the beginning to create a set of redistricting
11 simulations that mirrored the requirements set
12 forward in the New York Constitution.

13 THE COURT: All right. So if you used
14 basically the same inputs into the algorithm and came
15 up with similar to Dr. Trende's ensemble -- I'm still
16 not quite sure if you're challenging the methodology
17 or the interpretation of the results of the
18 methodology.

19 THE WITNESS: I think what I'm saying is if
20 you were to use different choices that perhaps better
21 reflected the constitutional requirements in the
22 state, that you could get very different results than
23 what Mr. Trende produced, and I chose to follow the
24 choices that he made so that we were looking at the
25 same or at least a similar set of simulations. But

1 that does not answer the question of how using a
2 different choice in terms of these parameters that
3 are designed to mimic the requirements of the state
4 Constitution how making different choices would lead
5 to very different results.

6 THE COURT: Redirect?

7 MS. DiRAGO: Yes, I do have one question on
8 redirect --

9 MR. BUCKI: Actually, your Honor --

10 MS. DiRAGO: -- I mean on recross.

11 MR. BUCKI: -- wouldn't I have an
12 opportunity to redirect first?

13 THE COURT: Oh, I'm sorry. I thought
14 Mr. Hecker was doing redirect.

15 MR. HECKER: Your Honor, it's not my
16 witness, so Mr. Bucki will redirect.

17 THE COURT: Go ahead, Mr. Bucki.

18 MR. BUCKI: Thank you, your Honor.

19 REDIRECT EXAMINATION

20 BY MR. BUCKI:

21 Q. So, Dr. Barber, jumping off the questions that
22 Justice McAllister had for you, what was it that you were
23 asked to do in undertaking this engagement on behalf of
24 the Assembly Majority?

25 A. So I was specifically asked to consider the

1 simulation results conducted by Dr. -- or, I'm sorry,
2 Mr. Trende and to evaluate whether those simulation
3 results produced an outcome that reflected -- you know,
4 how well they reflected the question of partisan fairness.

5 Q. So was your assignment to try to create your own
6 simulation using your own parameters that you chose based
7 upon your value judgment, or was your assignment to try to
8 create simulations that would replicate as nearly as
9 possible what Mr. Trende had done?

10 A. The latter. In many cases experts exchange data
11 and code and we're able to exactly replicate one another's
12 results. That's not the process that is being used here,
13 and so because of that I needed to more or less start from
14 scratch following his report to produce something that
15 would resemble his report as closely as possible.

16 Q. And to be clear, you do not -- do you purport
17 that any of the simulations that you did were intended to
18 insert your own value judgments for how different
19 parameters should be calculated?

20 A. No.

21 Q. Are there other ways to measure partisanship
22 besides the method of doing these simulations?

23 A. Yes. There are as many ways as there are
24 political scientists.

25 Q. Could you give some examples?

1 A. So sometimes people look at voter registration
2 information. Sometimes people look at not only statewide
3 races, but you could look at a variety of other election
4 results. Sometimes people look at the -- rather than
5 taking the average of the votes, you could take the
6 average of who won the election, so just looking at
7 outcomes as opposed to vote totals. You could look at --
8 I mean, I could go on and on. There's a lot of ways to
9 measure partisanship in American politics.

10 Q. Were you asked to use any of these other
11 measures of partisanship aside from performing simulations
12 as close as possible to what Dr. Trende performed?

13 A. No.

14 Q. And if another expert were to come here and say
15 that that expert would prefer to use one of these other
16 mechanisms other than simulations, would you agree that
17 there's more than one way to measure the partisanship,
18 depending on what the expert prefers?

19 A. Yes. Absolutely. Each of them have their
20 virtues and shed light on different aspects of
21 partisanship and partisan competition.

22 Q. So with respect to the simulations that you did
23 run, you acknowledged on cross-examination that the
24 analysis of whether a district leans Democrat or leans
25 Republican is a dichotomous choice. I think that's the

1 word that you used.

2 A. Yes.

3 Q. And why is it that you use that dichotomous
4 choice rather than some other that would permit more than
5 one choice than just two?

6 A. So the first reason is that it's the -- I would
7 say the common -- the most common method in which experts
8 in redistricting have done this. And so, you know, I've
9 done this in prior litigation. Other experts in these
10 cases have done the same thing, the cases that I've been
11 involved in in North Carolina and Ohio and Pennsylvania.
12 I can't speak to other locations. But it's a very common
13 practice, first of all. And then, secondly, it reflects
14 the reality of the way in which we elect representatives,
15 which is through a first-past-the-post system. And so,
16 you know, at the end of the day we elect a Republican or
17 Democrat to each of these districts.

18 Q. Now, you mentioned that Professor Imai was your
19 doctoral advisor and you've had quite a bit of
20 experiencing learning his methods and techniques, correct?

21 A. That's correct.

22 Q. Are you aware, when Professor Imai does this
23 analysis of going through the simulations, does he use
24 likewise the same dichotomous choice between districts
25 that lean Democrat versus districts that lean Republican

1 or are carried Democrat versus carried Republican?

2 A. Yes. So he and I were involved in a case in
3 Pennsylvania in which he -- both he and I -- we were on
4 opposite sides. We presented our results in the same way.

5 Q. And what is his line of demarcation to determine
6 whether a district is carried by a Democrat versus carried
7 by a Republican?

8 A. So, again, it was the aggregate or the average
9 of statewide elections. Obviously the particular
10 elections are going to differ between Pennsylvania and
11 New York but, again, the average of a variety of statewide
12 elections and then which party carried the majority of the
13 votes in each of those districts.

14 Q. So is 50 percent the line of demarcation?

15 A. Yes, the majority of the two-party vote share.

16 Q. The same one that you used here?

17 A. Yes.

18 Q. I'd like to refer again to the chart that is
19 produced on Mr. Trende's initial report dated February 14,
20 2021 (sic), at Page 15. Do you have that chart in front
21 of you?

22 A. Yes.

23 Q. And opposing Counsel for the petitioners went
24 into detail in terms of asking you whether or not
25 particular districts, based upon your reviewing of this

1 graph -- this dot plot, were competitive or not, correct?

2 A. Correct.

3 Q. Was that -- were your answers to those questions
4 based upon what you see here in this chart, or were they
5 based on an objective matter, as in, it must be that this
6 district is competitive or not?

7 A. My answers are simply in response to what we see
8 in the chart. Is the dot closer or farther from the line?
9 It's simply a statement of what we objectively observe on
10 the page.

11 Q. And if the person running the simulations
12 inputted a parameter that was incorrect or forgot to
13 account for a certain parameter, would it not be true that
14 the data that you would get on the chart would then change
15 prospectively?

16 A. Yes. That's exactly right. So all of the
17 smaller dots, the blue and red dots, reflect the results
18 of the simulations. However, as I said, changing the
19 parameters in the model could drastically change the
20 results of where those through and red dots fall on the
21 page.

22 Q. So, for example, Mr. Hecker noted on his brief
23 cross-examination that Mr. -- you acknowledge that
24 Mr. Trende did not control for considering communities of
25 interest in terms of how the maps were to be drawn; is

1 that correct?

2 A. Yes. That's correct.

3 Q. And if Mr. Trende had controlled for that
4 constitutional requirement of taking into account
5 communities of interest, how would the data that appears
6 on the graph have changed?

7 A. Aside from saying that it most certainly would
8 change, I don't know that we can really say one way or
9 another what would happen until we observed it.

10 Q. But the data would have changed, would it not?

11 A. Yes, it would have changed. The algorithm would
12 have changed. What we would see on the page as a result,
13 we don't know until we are actually able to conduct that
14 exercise.

15 Q. And wouldn't it be true also that the measure of
16 alleged competitiveness in a particular district would
17 change as the data would change?

18 A. Yes. Absolutely. The measure of
19 competitiveness is entirely based on the data, where the
20 data fall.

21 Q. So would you agree with me or not that this
22 particular chart -- if communities of interest or other
23 parameters that needed to be considered had been
24 considered that there would be a change not only in the
25 dots that you see on the chart but also in the measure of

1 competitiveness that would apply to any particular
2 district?

3 A. Yes.

4 Q. So in other words, would it be accurate that
5 this chart, in view of determining competitiveness, is
6 limited by the data that was used to determine that
7 measure?

8 A. Yes. Absolutely. The conclusions you draw are
9 entirely based on the validity of the data you're using.

10 MR. BUCKI: Nothing further at this time,
11 your Honor.

12 THE COURT: Thank you, Mr. Bucki.

13 Ms. DiRago?

14 MS. DiRAGO: Yes. Thank you.

15 RECROSS EXAMINATION

16 BY MS. DiRAGO:

17 Q. Okay. So you've spent a lot of time talking
18 about whether, you know, changing the parameters affect --
19 would affect the results of the ensemble maps, right?

20 A. That's correct.

21 Q. And I heard you say that changing those
22 parameters would affect the results of the ensemble maps,
23 correct?

24 A. That's correct.

25 Q. And you said that you created ensemble maps, but

1 you were using Mr. Trende's methodology, right?

2 A. When you say "methodology," are you talking
3 about the particular program, or are you talking about the
4 parameter choices in the program itself?

5 Q. Well, I think both are true, are they not?

6 A. Well, I know for certainty we used the same
7 program, the redist program.

8 Q. Okay. So I should have qualified it. You tried
9 the best as you can to try to replicate his methodology?

10 A. That's correct.

11 Q. But you didn't create your own ensemble maps
12 using a methodology that you would believe is more valid,
13 did you?

14 A. No. I was not asked to do that.

15 Q. Okay. So all these parameters that opposing
16 Counsel was saying, oh, that would have affected the
17 results, that would have affected the results, you didn't
18 create your own ensemble using the results that you think
19 are right, did you?

20 A. Correct. I was not asked to do that.

21 MS. DIRAGO: Okay. Thank you.

22 THE COURT: You can step down, sir.

23 THE WITNESS: Thank you.

24 THE COURT: Thank you.

25 (The witness was excused.)

1 THE COURT: Okay, Mr. Chill. Thank you.

2 MS. REICH: Thank you, your Honor. I
3 appreciate it.

4 THE COURT: Thank you, Ms. Reich.
5 We'll wait one second while they exit.

6 (Mr. Chill and Ms. Reich left the room.)

7 MR. CUTI: Your Honor, can we take five
8 minutes? We need to file papers, and we're having
9 some technical problems.

10 THE COURT: We can.

11 MR. CUTI: Thank you, your Honor.

12 (A recess was taken.)

13 THE COURT: Respondents' next witness?

14 MS. REITER: Your Honor, the Senate
15 respondents call Stephen Ansolabehere.

16 STEPHEN D. ANSOLABEHERE,

17 called herein as a witness, having been first duly sworn,
18 was examined and testified as follows:

19 THE DEPUTY: Thank you. Have a seat, and
20 please state and spell your name for the Court.

21 THE WITNESS: Good afternoon. My name is
22 Stephen Daniel Ansolabehere. My last name is spelled
23 A-n-s-o-l-a-b-e-h-e-r-e.

24 THE COURT: Ms. Reiter?

25 MS. REITER: Good afternoon.

1 DIRECT EXAMINATION

2 BY MS. REITER:

3 Q. Good afternoon, Dr. Ansolabehere.

4 Have you ever been to New York?

5 A. Yes. Many times.

6 Q. Approximately how many?

7 A. I can't count. It's thousands.

8 Q. Do you have any family in New York?

9 A. Yes. My wife's entire family is from New York.

10 She was born in Queens, Flushing, and grew up in Ossining.

11 Q. Have you ever lived in New York?

12 A. Yeah. I've done sabbatical in 2011 and 2012 and

13 lived in New York that year.

14 Q. Do you pay taxes in New York?

15 A. I do.

16 Q. Can you tell us a little bit about your
17 educational background?

18 A. I went to the University of Minnesota, received
19 my BS in economics and BA in political science and then
20 went to Harvard University for PhD in government and
21 completed that in 1989.

22 Q. And following your PhD can you tell us a bit
23 about your academic employment background?

24 A. My first job I was an assistant professor at
25 UCLA; had a postdoctoral fellowship at the Hoover

1 Institution; moved to MIT, was a professor of political
2 science there, held the Elting Morison Chair in political
3 science; and then moved to Harvard 2007, 2008, where I
4 hold the Frank G. Thompson Chair in government.

5 Q. Can you describe some of the classes that you
6 teach relating to redistricting and election analysis?

7 A. I teach an undergraduate class on elections and
8 a PhD-level class on elections. I've taught both at NYU
9 Law School and in Harvard Law School courses on election
10 law that mainly focus on the interplay between social
11 sciences and the law. I'm not trained as a lawyer, so I
12 don't really teach them how to be lawyers in that regard.
13 I teach graduate and undergraduate classes in American
14 government generally, and a lot of that errs on elections,
15 democracy, representation.

16 Q. And approximately how many peer-reviewed
17 publications have you authored or coauthored, if you can
18 estimate?

19 A. A hundred.

20 Q. And what -- in particular, can you name a few
21 peer-reviewed articles relating to the issues in this
22 case, redistricting, apportionment, elections analysis,
23 that you've published?

24 A. I've done work on redistricting, per se, and
25 specifically on the effects of redistricting on electoral

1 competition. I've done work on voting rights, minority
2 representation both in law reviews and in social science
3 journals. I've done work on statistical analyses
4 pertaining to the tools we use in cases like this and
5 other situations. I guess the most prominent piece I've
6 published is in the Journal of the Royal Statistic
7 Society, which is the chief journal in the field of
8 statistics. I can keep going but...

9 Q. No. I think that's sufficient for now.

10 In addition to your academic work, do you engage
11 in other work that involves elections analysis?

12 A. I'm a consultant to CBS News on election night,
13 and we call the elections every election, primary and
14 general election, in the US.

15 Q. How long have you been doing that?

16 A. I started doing that in 2006.

17 Q. So how many cycles have you been a CBS election
18 night analyst?

19 A. Every election -- every federal election since
20 2006.

21 Q. Okay. So --

22 A. So some of them are not on cycle. If there's a
23 special election in Georgia, for example, it'll cover that
24 too, so...

25 Q. Understood. So at least --

1 A. Ten or -- yeah.

2 Q. So at least eight?

3 A. Yeah.

4 Q. Sorry. Go ahead.

5 A. Go ahead.

6 Q. Have you ever been tasked with calling New York
7 elections for CBS?

8 A. Yeah. We rotate through the states on our team,
9 and half the time I'll get New York just by way of how
10 things are assigned.

11 Q. And what was the most recent one or two -- what
12 were the most recent one or two elections you've called
13 for New York?

14 A. I called the New York elections in 2020 and
15 2018.

16 Q. And what goes into that? How do you prepare to
17 call a New York election?

18 A. We have a set of facts that we collect about
19 every district and every race that's being run, so if it's
20 a Senate election, a governor election, and so forth.
21 Those facts include things like the demographics of the
22 state, past voting behavior. We construct a kind of
23 normal voting score, the normal partisan division in the
24 jurisdiction we're looking at, either a House district or
25 a governor election or a Senate district.

1 Q. How many times have you testified as an expert
2 in a case like this?

3 A. Fifteen or so.

4 Q. Have you ever not been qualified as an expert?

5 A. No.

6 Q. Have you been retained for your testimony in
7 this case?

8 A. I have.

9 Q. And by whom have you been retained?

10 A. By Counsel.

11 Q. For the Senate Majority Leader?

12 A. Senate Majority.

13 Q. And are you being paid for this retention?

14 A. I am.

15 Q. Does your compensation rely in any way on the
16 outcome of this case?

17 A. No.

18 MS. REITER: The Senate -- Respondent
19 Senate Majority Leader tenders Stephen Ansolabehere
20 as an expert witness in the fields of political
21 science, election analysis, and reapportionment.

22 THE COURT: I'm qualifying him as an
23 expert.

24 MR. BROWNE: Your Honor, Petitioners would
25 just ask that the Court note the objection we raised

1 in the reply brief to the petition about him not
2 being -- I'm objecting to his qualification not on
3 what he's been qualified -- or what was offered that
4 he be qualified for but in terms of testifying as to
5 any type of expertise on New York political geography
6 or political landscape.

7 THE COURT: You're objecting to his
8 qualifications to testify on New York elections?

9 MR. BROWNE: New York political geography
10 and landscape, not elections. Geography and
11 landscape.

12 MS. REITER: I think we did just establish,
13 your Honor, that Dr. Ansolabehere has extensive
14 experience in learning about and studying and
15 analyzing New York's political geography and
16 landscape.

17 THE COURT: He testified the 2020, 2022 --
18 or two elections in New York. I'm qualifying him,
19 sir.

20 MR. BROWNE: Thank you, your Honor.

21 THE COURT: Your objection is noted,
22 though.

23 BY MS. REITER:

24 Q. Dr. Ansolabehere, I'd like to show you what has
25 previously been marked for identification as Exhibit S-7.

1 I think it should be there on your table. Do you
2 recognize this document? Take a moment to review it.

3 A. Yes.

4 Q. What is it?

5 A. This is my expert report in this case responding
6 to Mr. Lavigna and Mr. Trende.

7 Q. Were you able to notarize this report at the
8 time that it was submitted on February 24th?

9 A. No.

10 Q. Do you swear now that its contents are entirely
11 truthful and accurate?

12 A. I do.

13 MS. REITER: Your Honor, I'd like to offer
14 Exhibit S-7 into the record.

15 THE COURT: Petitioners?

16 MR. BROWNE: No objection, your Honor.

17 THE COURT: It's admitted.

18 (Exhibit S-7 was received in evidence.)

19 BY MS. REITER:

20 Q. Dr. Ansolabehere, have you seen any of the maps
21 generated by Mr. Trende's simulations in this case?

22 A. No, I have not.

23 Q. Why is that?

24 A. To my knowledge, they're not public. They're
25 not posted on any websites that I've seen reference to.

1 Q. Are you aware if they have been entered into the
2 record in this case?

3 A. I am not aware of that.

4 Q. What would you do if you were able to look at
5 them?

6 A. Well, I'd look to see how closely they align to,
7 say, the past map core retention, whether districts like
8 CD 10 that were created by a federal district court in the
9 past were retained, and so forth.

10 Q. Is it unusual to be in a case like this where
11 simulations are being offered and the maps are not in the
12 record and you can't look at them?

13 A. The two other cases where simulations have been
14 offered, Florida and Wisconsin, were cases where maps were
15 in the record from the simulators.

16 Q. In in those cases what kind of analysis was
17 available to you because the maps were included?

18 A. Anything we could do to one of the official maps
19 we did to all the simulated maps.

20 Q. And what is your opinion of the usefulness of
21 using simulations to try to infer the intent of the people
22 who actually draw maps?

23 A. Simulations can be used to help to understand
24 what the effect of a map is. This is a fairly new
25 science. Like simulations didn't really exist before the

1 2010 election cycle in the academic sphere. The science
2 hadn't really been vetted thoroughly. Over the past
3 decade there have been a lot of advances in the technology
4 for demonstrating simulations and improvements in the
5 accessibility and availability of that technology, but
6 it's still an area that's evolving, and there's still a
7 lot of disputes about what the right way to do this is.
8 So it's something we use as a guide for judging effects
9 and -- but -- or to establish -- unless you're inferring
10 intent from effect.

11 Q. Understood.

12 And are there -- because this is an evolving
13 area of research, as you say, are there limitations to
14 what we can use it for?

15 A. Yeah. The simulator's very dependent and very
16 sensitive to what the inputs are. And if you have a
17 complicated constitutional set of criteria like New York
18 does, you have to program all those inputs, and if you
19 don't program all those inputs, you're essentially saying
20 that the value assigned to that input is 0 and the
21 simulator will just ignore it. And that's one of the
22 things that happened, for example, in the Wisconsin case.
23 Simulators didn't have all the criteria, and it looked
24 really bad on some of those things that were not
25 programmed in.

1 So it's very important to get the -- a real
2 close fit between the criteria in the law and the inputs
3 you're using, and that's one piece that's very difficult
4 to get right. So it requires understanding what the
5 criteria are, what the metrics are, like something like
6 compactness. There are multiple measures of what
7 compactness constitutes, and using the metric that's
8 accepted in that state's courts is very important to
9 getting just compactness right. And then when you get to
10 things like communities of interest, it can be very
11 complicated to get that piece of it square.

12 Q. So is it fair to say that not only is choosing
13 the inputs important, but the relative weight that a
14 simulator gives to a similar input is significant in
15 whatever effects might be shown by its simulations?

16 A. Right. So a simulator might have a default of
17 all things you checked are equally valued, but state law,
18 like in Florida, might have Tier 1 and Tier 2 criteria,
19 the Tier 1 criteria predominant, and you'd have to make a
20 judgment as to what predominance means and so forth. It's
21 a bit of like the cart before the horse sometimes because
22 those value judgments we think are ultimately made by,
23 say, a court or state Legislature and the analyst has got
24 to make value judgments about those, what's the relative
25 weight. So it's very difficult to get it trained just

1 right.

2 Q. I want to hone in on something you just said,
3 which is, I think, that by putting a particular value into
4 a simulation, the analyst is, in effect, I think, is it
5 fair to say, putting his or her thumb on the scale of what
6 balance and weight to attribute to a particular value for
7 that criterion?

8 A. Yeah. The most extreme example would be if you
9 don't include something. You're essentially giving zero
10 weight to it. But even if it's like something should be
11 weighted more, if you create an equal weight, that'll
12 greatly shape the set of plans that are generated by the
13 simulator. They wouldn't look like the set of plans that
14 you'd generate with a simulator had you given a different
15 weight or a different set of inputs. If you'd given
16 something that was not included in the simulation some
17 weight, suddenly you'd get a completely different set of
18 maps.

19 Q. And is it unusual to have generated simulations
20 produced and then subsequently assign an ex-post
21 adjustment to the conclusions drawn from those
22 simulations?

23 A. No. Usually you do the simulations and those
24 are your inputs. Like if you're using partisan fairness
25 as an input, you've got a metric of what that is and you

1 put that in there and you wouldn't do an adjustment
2 afterward. I've never seen any academic research that
3 does ex-post adjustments to the set of maps that are
4 generated in simulations.

5 Q. Are you familiar with the regression analysis
6 that Mr. Trende has used in this case?

7 A. I am.

8 Q. What's your view of it?

9 A. So this is a kind of analysis one might
10 hypothetically imagine doing in, say, predicting an
11 election, which is, I think, the exercise that he's
12 engaged in, like what do we predict the next set of
13 congressional elections to be given the underlying voting
14 patterns? At CBS we try out lots of different models to
15 see what works, and this is a kind of model that doesn't
16 work. It doesn't work for predicting future elections
17 because it does something that statisticians call
18 overfitting; that is, as a forecast of what the next
19 election's going to be, it's too dependent on what
20 happened in the past elections and the congressional
21 elections. So it's too dependent on who ran, how much
22 money they spent, who was in a scandal, all these other
23 things, and so it's not going to be a good predictor of
24 future elections.

25 The specification itself has some obvious

1 problems when you just look at the -- when you look at the
2 formula. The formula is for a straight line. Nothing
3 wrong with a straight line. I use them all the time in my
4 work. But if you just look at the formula, it doesn't
5 actually make sense on its face. This formula has a slope
6 of 1.1 and an intercept of minus .06. So if you just draw
7 that line out, that means that if you're in a district
8 that's 100 percent Democratic -- and you've got some
9 districts that are pretty close to that -- if you're in a
10 district that's 100 percent democratic, you plug in 100
11 percent times 1.1 and then subtract off .06, it predicts
12 that the Democrat's going to win 104 percent of the vote
13 in that district, which is an impossible number. So we
14 know it's an impossible regression. It can't be the true
15 line that describes the underlying voting behavior.

16 Now, it might be some other specifications could
17 fit that better, but that's not the specification that was
18 used. And it's notable because being off by 4 percent is
19 roughly the magnitude of the adjustment that Mr. Trende's
20 applying to the data ex-post, so I'd be very, very careful
21 using -- this is just not something we'd want to do.

22 In addition, the specification -- when we study
23 congressional elections, we traditionally put in a few
24 variables to capture what we know happens in congressional
25 elections. One of the most important is incumbency. We

1 know that incumbents tend to run better when there's an
2 incumbent running than -- the party runs better when
3 there's an incumbent running than when there's an open
4 seat.

5 We also tend to weight by turnout or size. So
6 if there's a district that has no turnout in it and I
7 treat it the same as a district that has a lot of turnout,
8 I'm giving that district a lot of weight in trying to
9 apply a kind of statewide correction, which is what is
10 being done here, or correction across all districts. So
11 I'm saying what happened in that really low-turnout
12 district is informing what's happening in this really
13 high-turnout district, and in this particular case that's
14 a concern because the problem with the last election in
15 New York in 2020 was that you had a lot of
16 malapportionment. In other words, you had some districts
17 that had a lot of people in them; some districts that had
18 relatively few people in them, and that malapportionment's
19 going to kind of knock the adjustment off. So it's giving
20 all the -- it's not weighting for the size of the
21 populations or the size of the turnout across the
22 districts properly.

23 Q. Are there limitations to the ability of this
24 retrogression analysis -- regression analysis, my
25 apologies, that Mr. Trende has used to provide a basis to

1 infer alleged partisan intent?

2 A. So -- well, first of all, I wouldn't use this
3 ex-post adjustment. But the limitation is you're
4 inferring from one district what's happening in another
5 district assuming that there's no change in the districts.
6 And we know the districts are about to change based on
7 their populations, so it's going to have to be adjusted
8 upward, and the lack of that adjustment means he's
9 probably getting the magnitude of the adjustment wrong,
10 whatever the adjustment is.

11 Q. So is it fair to say that as a result of that,
12 Mr. Trende's regression analysis overstates the Republican
13 vote?

14 A. So looking at the correction, I know that the
15 line is wrong and it's an impossible line. And the
16 question is, why is the line off that much? And one
17 hypothesis would be, you know, the different sizes of the
18 districts.

19 So I just calculated what percentage of the vote
20 statewide was won by Democrats in congressional elections
21 of the Democratic plus Republican vote, and that's across
22 the three elections, 2016, 2018, 2020, so three elections
23 he's using as the inputs. That's 65.8 percent. So
24 Democrats won 65.8 percent of the two-party vote, and the
25 statewide election data across all those is 64.9 percent,

1 so they're pretty close each other. As opposed to 3
2 points off, it's 1 point and in the other direction. So
3 that suggested to me there was a size or weighting problem
4 that's skewing the regression away from a prediction that
5 would be consistent with the actual election results.

6 Q. I'd like to talk for a bit about population.

7 A. Okay.

8 Q. Did New York populations change between the 2010
9 census and 2020 census?

10 A. The State of New York grew about 4 percent over
11 the course of the decade, and it cleared 20 million
12 people.

13 Q. And can you explain a little bit about how that
14 population growth was distributed across the state?

15 A. So there are two aspects to this. One is the
16 population growth in the State of New York across
17 different areas and also the population of the State of
18 New York relative to the nation. The nation grew much
19 faster than that, and as a result, New York lost a
20 district. So in the reapportionment it's going to need to
21 do some correction somewhere, and so the question is,
22 where would you correct? And wherever you have the
23 biggest population deficit, if it's sufficiently large, is
24 where you're going to need to correct.

25 Upstate New York, so the counties above Ulster

1 to the north and all the way to the west, to Buffalo and
2 so forth, are underpopulated, taking the totality of those
3 districts, by about 540,000 people. That's 70 percent of
4 the district. So that's where your district loss is
5 likely to come. The other three regions of the state that
6 we typically use as strata when we call elections are
7 what's conventionally referred to as the different regions
8 of the state politically.

9 The Mid-Hudson Valley or the north suburb -- we
10 call it the north suburb at CBS -- Long Island, and the
11 City are also in a population deficit relative to what is
12 needed to have equal populations in the congressional
13 districts. The biggest deficits, the four districts in
14 Long Island, 1, 2, 3 and 4 in the old map and in the new
15 map, and those are under by about 150,000. That's a
16 considerable amount to make up, so those boundaries are
17 going to need to move a lot to take up the slack.

18 The north suburban or Mid-Hudson districts are
19 also underpopulated about -- those three districts, 16, 17
20 and 18, are underpopulated by 48,000, so those are going
21 to need to move as well. The 11 City districts are
22 underpopulated by 40,000 total. Now, some of them are
23 overpopulated, and some of them are underpopulated, so
24 there's going to need to be a lot of movement inside the
25 City to accommodate that.

1 Q. You mentioned the approximately 540,000 fewer
2 people Upstate that led to -- well, and that you concluded
3 that was where the district would come from. What is the
4 effect of eliminating a district where there's that
5 deficit?

6 A. So if you eliminate a district or rearrange
7 boundaries to make up that deficit, it's going to have an
8 immediate effect on the neighboring districts. So it's
9 going to have a pretty big affect on those neighboring
10 districts, but it'll have ripple effects throughout.

11 In this case there are two ripple effects. One
12 is how the boundaries of all the surrounding districts are
13 going to be changed to accommodate the loss of a district.
14 The other ripple effect is that you kind of
15 counterintuitively get a surplus.

16 So the district size here is 776,000 people.
17 You're short 539,000 in this area, so you make up that by
18 taking apart a district. In this case old CD 22 gets
19 taken apart. Okay. Now you've taken care of 539,000 of
20 the 776,000. Oh. Now I've got a surplus of over 200,000
21 voters that somehow needs to get absorbed elsewhere in the
22 state. But since all the other areas in the state are in
23 deficit, we have to shift the boundaries and kind of shift
24 the population. We're not moving people. We're just
25 moving the boundaries to accommodate those.

1 There are two ways you could go to kind of grab
2 the population and accommodate it and put it into
3 districts to the south of Upstate. Well, 16, 17, and 18
4 need 50,000 of those voters. They don't need all of them.
5 Those districts need to shift northward just to get the
6 population that's required under the Constitution.

7 But somehow you need to change the boundaries of
8 the Long Island districts so they get 150,000 of those
9 extra people, but those people are north of the City.
10 They're up in the northern part of the City. So the two
11 routes you can go are through the City or around the
12 outside around like where the Legislature put 3. So they
13 moved 3 up to accomplish that population shift.

14 THE COURT: Into Westchester?

15 THE WITNESS: Into Westchester, yeah.

16 A. So the other way is to go through the City,
17 which doesn't really have a big deficit. Total it's only
18 a 40,000-person deficit. Going through the City has got a
19 lot of complications because you've got districts that
20 were created, like CD 10, for some other purpose, like
21 another kind of community, and it would involve a lot more
22 shuffling around. Those are the two big -- at a macro
23 level those are the two big choices the Legislature faced
24 for making up for the deficit on Long Island, either go
25 around Westchester or go up through the City.

1 Q. I'd like to show you what's been marked for
2 identification as S-14.

3 (Exhibit S-14 was marked for
4 identification.)

5 MS. REITER: May I approach, your Honor?

6 THE COURT: Yes.

7 BY MS. REITER:

8 Q. Dr. Ansolabehere, do you recognize this table?

9 A. I do.

10 Q. What is it?

11 A. This is a table of the district populations
12 under the new lines and the district -- the census 2020
13 population under the old lines.

14 Q. And did you create this document?

15 A. I did.

16 Q. How did you do that?

17 A. I took the data from LATFOR.

18 THE COURT: Mr. Browne?

19 MR. BROWNE: Your Honor, I would object to
20 this whole line of questioning. This was nowhere in
21 Dr. Ansolabehere's report. It's an entirely newly
22 created document, has not been submitted to the Court
23 or to the petitioners. I would object to the whole
24 line of questioning on this document.

25 MS. REITER: Your Honor, first of all,

1 there were many references to population deficits in
2 Dr. Ansolabehere's report. This is a table that
3 shows the census numbers for the districts, for each
4 district, in an easy to read and clear way.
5 Dr. Ansolabehere has just testified to various
6 numbers of deficit and surplus in various districts.
7 We thought it would be useful and helpful for the
8 Court to see this data in this way, and it relates
9 entirely and directly to the information included in
10 his report.

11 THE COURT: Well, is it new information,
12 though?

13 MS. REITER: It's data taken from public
14 sources.

15 THE COURT: Is it in his report?

16 MS. REITER: The table is not in his
17 report, but the information was referenced in his
18 report and clearly establishes the position and what
19 we're discussing in response to the testimony of
20 other experts that have testified.

21 THE COURT: Are you saying that all the
22 information on here is in his report?

23 MS. REITER: Not every single number, but
24 it's census data taken from a public website.

25 THE COURT: Objection sustained.

1 BY MS. REITER:

2 Q. Dr. Ansolabehere, when you analyzed the enacted
3 congressional plan, what data -- did you use data?

4 A. Yes, I did.

5 Q. And what data did you use?

6 A. I used the census and election data available on
7 LATFOR. I used data from the census itself, data from the
8 ALARM Project. I used information from the City of
9 New York on neighborhood boundary definitions.

10 Q. And you said you've used election data. So
11 what -- did you choose particular race to -- or elections
12 to include in your dataset?

13 A. I analyzed the 2016 and 2020 presidential
14 elections, the 2016 and 2018 Senate elections, and the
15 governor and attorney general elections from 2018.

16 Q. And why did you choose these particular
17 elections?

18 A. These are the standard elections we look at when
19 we do election analysis for New York but also for
20 virtually every state.

21 Q. Is it reliable, these elections that you've put
22 in your dataset?

23 A. Yes. These are the indicators we use to measure
24 kind of the underlying partisan orientation of districts.

25 Q. Is there a reason that you didn't include

1 congressional elections in your collection of elections?

2 A. A couple reasons. One is congressional
3 elections are not always complete. There are a lot of
4 uncontested races, so you'd have missing data problems.
5 Another problem with using congressional elections is that
6 incorporating members of Congress' own election
7 performance in somehow factoring incumbency in, and the
8 state's Constitution has a principle regarding
9 protection -- or not favoring or disfavoring incumbents.

10 Q. And why did you chose -- actually I should ask,
11 did you -- how do you use these elections? How do you
12 incorporate the data and analyze it?

13 A. These elections set a baseline of what you'd
14 expect the election to be in an average year with an
15 average set of candidates. Some years are better for one
16 party or the other. Some candidates do worse or better
17 than expected. But on average this is about where we
18 expect elections to come out. So this sets an
19 expectation, and that's kind of -- in doing election
20 analyses in academic journals or on election night this is
21 the baseline that we start with.

22 Q. Are you familiar with the Cook Partisan Voting
23 Index?

24 A. I am.

25 Q. And do you know what data they use to formulate

1 their index?

2 A. They use the two most recent presidential
3 elections, depending on what we're you're looking at. So
4 for 2022 they're looking at the 2016 and 2020 presidential
5 elections.

6 Q. And is there any data that the CPVI includes
7 that is not included in your analysis?

8 A. No.

9 Q. Are statewide elections useful for predicting
10 the partisan character of a newly drawn congressional
11 district?

12 A. Yes, for a couple reasons. One is that the
13 presidential elections in the CPVI don't include any
14 information about what happens in midterm elections, and
15 midterm elections are half of all the congressional
16 elections. So the statewides, which are midterms, are
17 helpful to understand, like how much the presidential year
18 is going to differ typically from the midterm election.
19 Also the statewide elections often have correlates with
20 kind of local political factors that are -- that surface
21 when it's no national ticket. Like sometimes turnout
22 drops substantially in some communities and not in others.
23 And that's all going to be reflected in the state
24 elections.

25 Q. Can you explain in a little bit more detail the

1 purpose, as you understand it, of the Cook Partisan Voting
2 Index?

3 A. So I consult a bit with David Wasserman and
4 Charlie Cook, who do this, and David Wasserman is an
5 advisor to the Cooperative Election Study that I run, and
6 so we talk a lot about how they do this, what they might
7 do better or differently. And the Cook Partisan Voting
8 Index, their interpretation, as I understand it, is this
9 is their starting point for the election season, so this
10 is like their baseline.

11 And they use the presidential because it sets a
12 national comparable number because that's -- in every
13 district the presidential election happened. This
14 particular Senate race didn't happen in that state, right,
15 this governor's election didn't happen in that other
16 state, and so forth, so they view that as the comparable
17 number across states. When we're looking at one state, we
18 can go deeper into looking at the statewide elections and
19 so forth. So that's their starting point.

20 And then over the course of the election cycle
21 they reclassify races based on what's happening in the
22 election, like is there a strong challenger, did the
23 incumbent retire, was there a scandal, and all that, and
24 that's how they start to classify things as leaning one
25 way or another over the course of the election cycle. But

1 this is their prediction before any papers have been filed
2 before candidacy, before any primary elections have
3 happened. This is your expectation or what's going to
4 happen in the election.

5 And the Cook Political Report classification
6 says their rough -- based on their own personal
7 experience, the rough indicator is +5D to +5R is a swing
8 district. That means that it can go either way in the
9 elections, depending on what the tides are and who's shown
10 up for elections. And then outside of that they classify
11 as D or R, depending on how big the surplus is.

12 Q. So your understanding -- well, first let me ask,
13 have you used the CPVI previously in any work that you've
14 done?

15 A. We've used it occasionally. We use it as
16 actually part of the input to thinking about the election
17 process at CBS. We refer to it. It's a little hard to
18 use for our purposes, for figuring out which elections are
19 going to go which way, because the number itself is
20 calibrated to the national vote.

21 It's not like -- +5D doesn't mean that the
22 Democrats won by 5 percent in that district. It means
23 that in that district the Democrats ran 5 points ahead of
24 the national Democratic ticket. So if the Democrats won
25 the election nationally by 5 points like Biden did, that

1 means it's actually a 0 district -- or it's a +10 district
2 in that election, and an R+5 would be a 0. So it's a hard
3 number to use to get an expectation about what this is
4 going to be because it depends on past election outcomes.
5 It depends on how -- what happened in the national
6 election last time. So like if it was a landslide like
7 Reagan in 1980, that's really, you know, way off, right,
8 because that's like almost a 20-point win for -- or is
9 12-point win for Reagan. So a D+5 would actually be a D-7
10 in terms of the actual election outcome.

11 Q. And so just to go back to something you said a
12 moment ago about the way the Cook report or Cook
13 characterizes Cook's index, a number that -- a CPVI number
14 between D+5 and R+5, I think I heard you say, constitutes
15 generally a swing district. And what does that mean?

16 A. That's Cook's classification, and it's on their
17 website. It's in all their documentation of what they
18 consider -- how they treat this index. Practically
19 speaking, when we watch elections when there's a wave
20 year, any district that's in that interval and the wave is
21 moving away from that party, they're going to lose a lot
22 of seats. Like maybe they'll lose 60 percent of their
23 seats in this interval. They're not going to lose all of
24 them. They're going to lose a lot of them. And if it
25 goes back the other direction, the other party's going to

1 lose a lot. So these are the most vulnerable seats. This
2 is like -- we don't know -- any party can win these seats.
3 So it's kind of a toss-up, but it's a loose
4 classification. It's not like a firm prediction that
5 you'd put probability number on.

6 Q. Are there limitations in using the CPVI alone to
7 infer partisan intent in a drawing of an actual map?

8 A. Yeah. It's very easy to misclassify districts
9 in terms of which party is actually winning the majority
10 of the votes in that district because it's relative to the
11 national vote and it's not going to capture the midterms;
12 it's not going to capture other local factors like turnout
13 of swings in local areas.

14 Q. And I think you testified that the CPVI includes
15 two elections, two presidential elections. Is there a
16 limitation inherent in using only two races?

17 A. Well, our preference as analysts at CBS and my
18 preference in my scholarship is to use as many elections
19 as are available where I've got comparable candidates
20 across all the districts. So six elections is preferable
21 to two because there's just less random factors factoring
22 in. The stuff like a scandal or popular -- visited this
23 part of the state, didn't visit that part of the state,
24 that all just gets averaged without when you include more
25 elections rather than fewer.

1 Q. I'm going to move on for a bit to core
2 retention, which is a topic that you discuss in your
3 expert report. Can you explain its importance in
4 redistricting generally?

5 A. Traditionally it's an important principle, one
6 of the traditional conventional principles. It's kind of
7 an unstated principle. It's also the starting point.
8 Legislatures, commissions, they don't usually start with a
9 blank slate the way, say, a simulator does. They start
10 with the old map, and they make adjustments from that.
11 Many states, in fact, include this as a principle
12 explicitly in their Constitution, and the State of
13 New York does as well.

14 Q. Are there different metrics used to assess a
15 particular map's level of core preservation?

16 A. There are a variety of metrics. The traditional
17 one is what I've used here, which is to say, what
18 percentage of the old districts remains in the analogous
19 district, both its area and its population?

20 Q. And in your opinion, how does the enacted
21 congressional map fair in terms of maintaining the cores
22 of existing districts?

23 A. It's quite a stable map. It has a -- it
24 maintains -- I think 75 percent of the old districts'
25 population remain in that analogous district and 77

1 percent of the area of the old districts remain in the new
2 district. Just as a baseline, like last time New York
3 was -- maintained about 68 percent of its population in
4 area from the old districts into the new districts, so
5 this is considerably higher than that.

6 Q. Have you observed any relationship between the
7 districts in the enacted congressional plan that may have
8 a relatively low core number in relation to the 75 and 77
9 percent averages you mentioned and the nature of the
10 change in partisan character of those districts?

11 A. So the districts that are on the lowest end of
12 that are, I think -- 19, I think, is the lowest -- 1, 27,
13 2 -- I'm just going up the list in my head -- 10, 7.
14 Those are all like in the 50s and -- 50 percent, 53 or 62
15 percent range. And which way they go, half of them go --
16 shift towards the Democrats; half of them shift towards
17 the Republicans. There's no pattern. There's no
18 correlation here between being underpopulated -- or having
19 -- sorry -- having low population retention and being
20 shifted toward the Ds or toward Rs.

21 Q. I think it's time to get a little bit more
22 specific in terms of going through some of the district
23 changes given the population shifts you described earlier.
24 So let's begin Upstate as you did with the population
25 deficit that led to the loss of a district. Can you just

1 describe again or in further detail generally what the
2 effect on the Upstate districts was of this population --
3 of the population changes since the 2010 census?

4 A. So Upstate, the set of Upstate districts, lost
5 about 539-, 540,000 people, and the population loss was
6 disproportionately in the rural areas. Almost all the
7 counties were losing population up north but especially
8 the rural areas. And so there needed to be shifting of
9 the districts to accommodate that. The district that the
10 Legislature's map took apart was CD 22. To accommodate
11 that change, it left in place the Buffalo district, the
12 Rochester district, the Syracuse district, and an Albany
13 district, so it left kind of these urban-anchored
14 districts in place. But even those -- some of those were
15 underpopulated and needed to expand somewhat to account
16 for that.

17 It left the Southern Tier district, CD 23, in
18 place. And when you -- once you put in the Buffalo
19 Rochester and Syracuse districts and you keep the
20 Southern Tier, there's only one place to put another
21 district, which is along Lake Ontario in a rural area, so
22 that's what they did, because you can't take half that
23 district and change it unless you're going to cut the
24 Southern Tier district in half. So if you preserve the
25 Southern Tier district, you're going to have to put what's

1 now CD 24 where it is. And once you've done that, that
2 kind of defines where the other two districts goes. CD 19
3 is roughly where it was. It had to change its location to
4 accommodate both the collapse of 22 but also the need to
5 shift population elsewhere in the state.

6 Q. I'd like to ask you about -- well, are you
7 familiar with the CPVI numbers assigned by Mr. Lavigna in
8 his report to the various changes across districts
9 Upstate?

10 A. I am, yeah.

11 Q. So for CD 21, for instance, are you familiar
12 with the core retention, roughly? I know I'm putting you
13 on the spot.

14 A. I have to remember what 21 was, what its core
15 retention was.

16 Q. Well, let me put it another way. I will
17 represent to you that in his chart Mr. Lavigna assigns a
18 change of CPVI from R+8 to R+12 for CD 21. How would Cook
19 characterize these CPVI numbers?

20 A. As Republican districts.

21 Q. And for, of course, the -- and I'm happy to show
22 you. I think you have it there. Just to refer, I think
23 it's Petitioner's Exhibit 4. Page 13 is a chart that I
24 would say attempts to show CPVI changes Upstate. Not all
25 the districts are there. And I would ask you to explain

1 to us what the loss of a district does to the numbering of
2 the districts Upstate.

3 A. So we're looking at Petitioner Exhibit 4?

4 Q. Uh-huh. Page 13.

5 A. Page 13.

6 Q. So I will restate the question, which is, can
7 you just explain how losing a congressional district might
8 affect the numbering of the districts?

9 A. So the population from which a district draws a
10 majority of its population is what I consider the
11 analogous district. So by virtue of losing a district the
12 districts actually get renumbered. So old CD 22 is the
13 one that gets dismantled, and old CD 24 becomes new CD 22.
14 That is -- 75 percent of old CD 24's population ends up in
15 what is now numbered CD 22.

16 So it's -- one effect is just the districts
17 shift their numbering. The effect on partisanship, then,
18 can be read kind of diagonally, according to Cook, going
19 from D+2, which would be a swing district, to D+6, which
20 would be -- Cook would call that either a swing or a D.

21 Q. So just to go back for a moment to what you said
22 about CD 19, did CD 19 adjoin old 22?

23 A. Yes.

24 Q. So is it fair to say that the elimination of
25 CD 22, a neighboring district, would have a significant

1 affect on what CD 19 needs to look like?

2 A. Yes. Also CD 19 was one of the three most
3 underpopulated districts in the state. And if you look at
4 the core retention numbers throughout and the
5 underpopulation numbers, the districts that change the
6 most in terms of core retention are the underpopulated
7 districts. So wherever you had severe underpopulation,
8 that's where you have core retention -- low core
9 retention, and that generally explains the flow of core
10 retention.

11 Q. Moving just a bit south to the Mid-Hudson
12 region -- for your reference, you can look at the same
13 exhibit, Page 10 -- Mr. Lavigna chose to divide the
14 districts a little bit differently than we have, but you
15 can see the three districts that you define as the
16 Mid-Hudson Valley. 16, 17, and 18 are in this table. Can
17 you just describe in a bit further detail how the
18 constraints you started to explain about the population
19 shifts in New York and the loss of a congressional
20 district framed what the map drawers had to do in drawing
21 Congressional Districts 16, 17, and 18?

22 A. So the population decreased in this region -- or
23 it didn't grow as fast as it needed to in order to
24 maintain parity with an equal population standard, so none
25 of these districts were overpopulated. All of them needed

1 to grab territory in order to get population. They could
2 have gone south, but that wouldn't have helped because
3 that would have been going into the City, so they went
4 north. So all of Ulster gets included here. They move up
5 into Dutchess and so forth. So the line shifts north
6 across the board in these districts. There were also
7 neighboring districts that were minority districts to the
8 south, 13, 14, 15, where they also couldn't shift in that
9 direction to avoid disrupting or diminishing minority
10 representation.

11 Q. And according to -- so a lot had to shift. And
12 can you comment on the geographic constraints that also
13 exist particularly in this area?

14 A. This is the funnel. This is the neck that's
15 coming down into the City, so it's pretty constrained by
16 the state boundary with New York and Connecticut and
17 New York and New Jersey, so we don't have a lot of room to
18 maneuver. And you can either go into the City or take
19 Westchester toward Long Island in order to accomplish that
20 population shift that's needed for Long Island.

21 Q. And as you testified before, New York City
22 itself was slightly underpopulated overall and Upstate
23 districts, once the district was lost, are moving
24 downward; is that right? The population needs to move
25 downward; is that right?

1 A. Right, in the sense that you're expanding the
2 border of the district to capture population. That's how
3 you shift the population. You can't move people.

4 Q. Yes, and that is a better way of explaining it.

5 Sp on this table on Page 10 in Mr. Lavigna's
6 report let's just go through what the numbers are for CPVI
7 and how Cook would characterize them. So for CD 16 can
8 you tell us what the table reads for the change in CPVI?

9 A. 16 was a Democratic district and remains a
10 Democratic district.

11 Q. That's according to what Cook characterized?

12 A. According to the Cook characterization.

13 Q. How about for District 17?

14 A. It's a Democratic district and it goes to a
15 swing district or +5, -5 -- +5, +5, that interval. D+5,
16 R+5 is the swing interval.

17 Q. So according to your testimony about what Cook's
18 different classifications mean, that went from a more sure
19 Democratic district to a more competitive district; is
20 that right?

21 A. Yeah.

22 Q. And what about for District 18?

23 A. That's a swing district in both.

24 Q. Okay. So in your opinion, what is the -- if
25 you're looking at the Mid-Hudson region, 16, 17, and 18,

1 what is the overall partisan effect, if any, of the
2 enacted plans on the districts in this region?

3 A. You have a Democratic district that remains
4 Democratic, you have a Democratic district that goes to a
5 swing district, and you have a swing district that goes to
6 swing district, so there's an increase in competition.

7 Q. Moving, as we have been, Downstate and towards
8 Long Island, where the most significant remaining
9 population deficit exists, can you just tell us what
10 needed to happen in these districts based on their
11 populations?

12 A. In Long Island?

13 Q. Yes.

14 A. So Long Island, all of the districts are
15 underpopulated, each one of them. 4 is the closest to the
16 exact population. It's, again, geographically highly
17 constrained by the shape of the Island and the boundaries
18 of the state, and also it's politically constrained by the
19 minority districts that they -- like 3 and 4 but several
20 minority districts, 6, 5, 15, 14.

21 And so all of these -- these four districts need
22 to somehow shift. If you leave 4 alone, which is what the
23 Legislature did -- and it's the most stable of all the
24 districts on the map in terms of population retention --
25 if you shift, you've got to go kind of to the northwest

1 into Westchester or into Bronx, and that would mean
2 splitting up an Asian district, 6, or a black district, 5,
3 or Hispanic district into Yonkers.

4 So it's like there are only so many places you
5 can go if you're going to diminish -- you can diminish
6 minorities or go up to Westchester, which is the route
7 that they took. And I think the Legislature saw that
8 there was a coherent community to be reflected or coherent
9 interest to be reflected in 3, which is you got this big
10 coastal region that's got a set of common ecological,
11 governmental reasons for existing, which is to manage
12 things like the Bronx watershed and so forth. So that's
13 where they place CD 3. So CD 3 becomes this kind of north
14 coast of the Long Island island and up into the bend in
15 Westchester where the Bronx River and other watersheds
16 are, so it's got this kind of ecological purpose and
17 environmental purpose.

18 So then what do you do with 1 and 2? Now you've
19 got this population vacuum. You keep 2 reasonably stable.
20 In fact, the areas of these two districts are very stable.
21 The populations shift a bunch because the area between 1
22 and 2 has the highest-density population. 1 could either
23 go along the coast to the north or it could go through the
24 center of the Island. Those are the only two paths. If
25 it goes along the coast, it's disrupting 3, which you just

1 put in place as kind of one interest, so it extends
2 through the center, and then 2 is reoriented accordingly.

3 So that's roughly what the options were. You
4 could take one along the coast or in the center of the
5 Island or you could run 1 right into 2, but that would
6 then be disrupting 2's area as well as its population.

7 Q. And looking to the table on Page 5 of
8 Mr. Lavigna's reply, that does correspond to the districts
9 that we're talking about sort of, except, I guess, 4 isn't
10 there. Can you just run us through? So for Congressional
11 District 1 what is the change in CPVI numbers?

12 A. 1 goes from a Republican district to a swing
13 district.

14 Q. Is that how Cook would characterize it in his
15 CPVI?

16 A. Yes, that's how Cook would characterize it.

17 Q. And for CD 2 can you tell us what Cook would
18 characterize the change as?

19 A. He would characterize that as a swing district
20 to a Republican district.

21 Q. And for CD 3 how would Cook characterize the
22 change from D+2 to D+5?

23 A. As a swing district to a swing district.

24 Q. So overall what is the partisan effect, if any,
25 of the changes to the districts on Long Island?

1 A. The net effect is nothing. One district goes
2 from R to swing; one district goes from swing to R; the
3 other district remains swing, so it's kind of a net zero
4 change in terms of partisanship.

5 Q. Now moving on to the last of the strata, as you
6 mentioned, New York City, you've testified about several
7 of the issues that -- or constraints that arise with
8 respect to New York City districts in particular. With
9 respect to CD 10, which you've also mentioned, what needed
10 to happen population-wise for CD 10?

11 A. CD 10's overpopulated. It's got over 800,000
12 people, so it's going to go down by about 30,000. So it's
13 got to shed population somehow just at a minimum, but you
14 might have other things that need to happen with 10.

15 Q. Such as what?

16 A. 10 was drawn by a federal district court in
17 2012, and it's the least compact district in the map.
18 It's really quite un-compact by most of our measures, and
19 it goes from the west side of Manhattan and then cuts
20 across and cuts through Bay Ridge in Brooklyn and grabs
21 the Hasidic community in the middle of Brooklyn, so it's
22 like connecting these two regions. In doing so it cuts
23 through the Asian population that spans Sunset Park to
24 Bensonhurst and Bath Beach, so it's chopping through the
25 middle of Chinatown. It's drawn for a purpose, which is

1 to respect a particular community, but it does have this
2 other effect.

3 Q. I'm going to show you what was previously marked
4 for identification only as S-11.

5 MS. REITER: Your Honor, may I approach?

6 THE COURT: Yes. What was that labeled,
7 11?

8 THE WITNESS: Yes, your Honor.

9 MR. BROWNE: Your Honor, the petitions are
10 objecting to this. The document is -- I know it's
11 not been offered into evidence yet, but if he's going
12 to testify about it, this was not in the report.
13 Again, the same situation as before. It wasn't
14 disclosed, hasn't been disclosed to the Court, and I
15 think any testimony about the document or from it
16 elicited by Counsel should not --

17 THE COURT: The cat's already out of the
18 bag, isn't it?

19 MS. REITER: It is, your Honor, and I
20 believe the objection's a bit premature. I was
21 actually going to ask Dr. Ansolabehere to
22 authenticate this exhibit, not to testify about it.

23 THE COURT: Go ahead.

24 BY MS. REITER:

25 Q. Dr. Ansolabehere, did you create this document?

1 A. I did.

2 Q. And how did you do that?

3 A. I used the 2020 census data, which asks people's
4 racial identifications, Asian, white, black, Native
5 American, other, and map that into the census blocks and
6 created a heat map showing the density. So the darker
7 color -- the shading is the higher-percentage Asian in
8 each census block there.

9 Q. Is the data you used to create this map -- these
10 two maps, is the data reliable, and is it used by experts
11 in the field to form a professional opinion?

12 A. Yes. This is the data we used for doing all
13 manner of work with the census, including understanding
14 minority and other cultural group patterns and the
15 demographics of different areas.

16 Q. And is the method you used to convert that data
17 you took into these maps standard and reliable?

18 A. Yes. We use the census as definitions of how to
19 do that translation.

20 MS. REITER: So, your Honor, I would offer
21 this exhibit into evidence.

22 THE COURT: Petitioners?

23 MR. BROWNE: Your Honor, we would object.
24 This is new. It's it like a do-over. They're
25 submitting documents that were not in the original

1 report. He's offering testimony that wasn't in the
2 original report. We would object and ask that it be
3 stricken.

4 THE COURT: I'll let you, Ms. Reiter, talk
5 to him about what's been marked, but it isn't in his
6 report.

7 MS. REITER: Your Honor, may I reply
8 with --

9 THE COURT: Go ahead.

10 MS. REITER: -- just that he put in a
11 report in response to reports from experts that were
12 dramatically changed and included an un-reply. And
13 so un-reply -- Petitioner's experts put in reports
14 that included new formulations, new information, and
15 this is a hearing, an opportunity to for us to
16 present --

17 THE COURT: But you had notice of it,
18 didn't you?

19 MS. REITER: Excuse me?

20 THE COURT: You had notice of it.

21 MS. REITER: And we're responding to it.
22 That's what this opportunity is, is for Respondents
23 to respond to the information and the arguments that
24 Petitioners have put forward.

25 THE COURT: The objection's sustained.

1 BY MS. REITER:

2 Q. Dr. Ansolabehere, let's wrap up our discussion
3 with Brooklyn with CD 11. You've just explained what
4 CD 10 needed to do and did, in fact, do based on the
5 court-drawn map that was in existence that needed to be
6 respected and the -- this demonstrative that shows --
7 well, may I ask you, what does this demonstrative show in
8 terms of what CD 10 does for the Asian communities?

9 A. It keeps the Asian community whole in this area.

10 Q. So what about CD 11? Does CD 11 adjoin CD 10?

11 A. Yeah. CD 11 is Staten Island and parts of -- it
12 has to take parts of this area to become a complete
13 district.

14 Q. And so can you explain a little bit about what
15 the options would have been for CD 11 when CD 10 might
16 have been -- was drawn the way it was in this map?

17 A. Given the location of CD 4 and the minority
18 districts in the area, the only direction to go is up,
19 keeping Bay Ridge whole, up through Sunset Park and to
20 Park Slope. It's the only direction it can go.

21 Q. So based on all the evidence you've read of
22 Dr. -- of Mr. Lavigna's report and Mr. Trende's multiple
23 reports, do you have an opinion, a professional opinion,
24 on whether the enacted map demonstrates partisan bias?

25 A. Well, based on the simulations that Sean Trende

1 ran, there is no evidence of partisan bias because the
2 number of districts created that are Republican districts
3 is the same as the number that would be generated through
4 that approach. So based on all the evidence present, the
5 only evidence present, that's it, so that would indicate
6 that there's no partisan bias here.

7 MS. REITER: Your Honor, if I might just
8 have a moment to consult with my colleagues?

9 THE COURT: Yes.

10 Q. A couple more housekeeping items.

11 Dr. Ansolabehere, I would like for you, if you could, to
12 help me authenticate the other two exhibits that were
13 marked for identification only, so that's S-13 and S-10.
14 We can take them one by one.

15 MS. REITER: I'm authenticating these. I'm
16 not seeking to put them into the record, but I want
17 to have in the record the evidence of their
18 authentication by Dr. Ansolabehere.

19 Q. For S-10, Dr. Ansolabehere, did you create this
20 document?

21 A. I did.

22 Q. And how did you do that?

23 A. This is a heat map of Yiddish-speaking people in
24 Brooklyn, where the data come from the American Community
25 Survey, which is a census-conducted survey. It's the

1 five-year average of the data for the most recent
2 five-year average that's available ending in 2019. And
3 the census asks what language is spoken at home, and it
4 takes Yiddish as one of the indicators, so this is the
5 percent Yiddish-speaking in the area, and it shows where
6 there's the highest density of those people according to
7 ACS.

8 Q. And is the ACS data used by others in the field
9 to form their professional opinion? Is it a standard form
10 of data?

11 A. Yes. The ACS replaced what was called the long
12 form of the census, which is where we got more detailed
13 information. The long form was last used in 2000, and
14 then the ACS starts in 2005. So things like citizenship
15 numbers and so forth are used, and it's used in every
16 court where there's a question about citizenship.

17 Q. And is the method with which you used that ACS
18 data to convert it into this map also reliable?

19 A. Yes. We use the census data, the census files
20 for identifying which population goes into which census
21 areas.

22 Q. Moving on to what has been marked as S-13, can
23 you take a look at this and tell me what this document is?

24 A. This is a heat map showing Spanish --
25 Hispanic-identifying people. The census asks the

1 question, do you identify as Hispanic, separate from the
2 racial question, so this is a tabulation of the number of
3 people who identify as Hispanic, according to the census,
4 mapped into the local areas using the census files for
5 matching census areas to populations.

6 Q. And so similar to the document that was marked
7 S-11 for the Asian population data that also used census
8 data, is the data you used to create Document S-13 of a
9 reliable form that others in your field used to perform
10 professional opinions?

11 A. Yes, it is.

12 Q. And is the way that you -- the method that you
13 used to convert that data into this map also reliable?

14 A. Yes, it is.

15 MS. REITER: Your Honor, I heard -- I would
16 like to offer both of these exhibits into the record,
17 S-10 and S-13.

18 THE COURT: Mr. Browne?

19 MR. BROWNE: Your Honor, again, the same
20 objection. We're being sandbagged here. We didn't
21 have any notice of this. We didn't get a chance to
22 review it. It's being offered today. It's not
23 appropriate.

24 THE COURT: Sustained.

25 MS. REITER: Your Honor, I would just seek

1 to reiterate both that Petitioners had an opportunity
2 to put in their reply papers, to which this is our
3 opportunity to respond. They have a
4 cross-examination opportunity that they can ask
5 Dr. Ansolabehere any questions they would like both
6 about these exhibits and any of his testimony.
7 Dr. Ansolabehere has already established that his
8 conclusion on partisanship is in part based on his
9 response to Mr. Trende's report. And so, you know, I
10 offer that the newness of the information is the
11 opportunity to respond to the arguments that have
12 previously been made and that Respondents are
13 entitled to their opportunity to rebut reply
14 arguments made by Petitioners in this hearing.
15 That's it.

16 THE COURT: I already ruled. Thank you,
17 Ms. Reiter.

18 BY MS. REITER:

19 Q. Dr. Ansolabehere, one question: You had said
20 that your conclusion is based on -- your partisanship
21 conclusion is based on Mr. Trende's report; is that right?

22 A. Yes.

23 Q. Is your opinion about whether the enacted map
24 demonstrates partisan bias also informed by your review of
25 the population shifts, core retention, and other election

1 data in this case?

2 A. Yes, because I was trying to understand what
3 drove the configuration of the districts as they were
4 configured, and what appears to be the predominant factor
5 is the need to equalize population and the difficulty of
6 doing that across a pretty vast geography.

7 MS. REITER: No further questions, your
8 Honor.

9 THE COURT: Cross?

10 MR. BROWNE: Your Honor, could I make a
11 suggestion just to take a few-minute break just so I
12 can get organized? And, honestly --

13 THE COURT: In ten minutes we'll start.

14 MR. BROWNE: Thank you, your Honor.

15 (A recess was taken.)

16 THE COURT: Mr. Browne?

17 MR. BROWNE: Thank you, your Honor.

18 CROSS-EXAMINATION

19 BY MR. BROWNE:

20 Q. Professor, my name is Robert Browne. I'm an
21 attorney on behalf of the petitioners.

22 I want to talk to you quickly today. I honestly
23 don't have a lot, but I want to ask you a couple quick
24 questions about your experience in your CV. You worked as
25 a consultant for the Brennan Center; is that correct?

1 A. Correct.

2 Q. Are you aware that an attorney for the Brennan
3 Center opined about the 2022 congressional district maps
4 that it's not good for democracy and, because it's a
5 master class in gerrymandering, taking out a number of
6 Republican incumbents very strategically. Are you aware
7 of that?

8 A. No.

9 Q. And I'd also like to have you look at
10 Petitioner's Exhibit 1, which is Mr. Trende's report, if
11 you could. Before you were testifying with Counsel about
12 Mr. Wasserman, I believe.

13 A. Yeah, David Wasserman.

14 Q. And you're familiar with him, that's correct?

15 A. Yeah.

16 Q. And do you know him personally?

17 A. I do.

18 Q. Okay. Could you look on Page 10 of the Trende
19 report? Do you see that?

20 A. Page 10, yes.

21 Q. Yeah. And, Professor, could you look at the
22 bottom? And there's a bullet point at the bottom.

23 A. Yes.

24 Q. Could you read that out loud to everyone?

25 A. After the Assembly passed the map, David

1 Wasserman, US House editor of the Cook Political Report
2 and one of the premier elections analysts in the country,
3 called it a, quote, first step towards NY Democrats
4 passing their 22D-4R gerrymander.

5 <https://twitter/redist/status/1488940238177> --

6 Q. That's fine. Thank you.

7 And that's the same David Wasserman you
8 testified about earlier; is that right?

9 A. Yep.

10 Q. And that's someone you respect their opinion?

11 A. Of course.

12 Q. And there's some further language -- well,
13 actually let me back up. It says the 22D-4R gerrymander.
14 Do you see that?

15 A. Correct.

16 Q. Is that the same conclusion that Mr. Trende came
17 to in his report?

18 A. I believe so.

19 Q. Thank you.

20 And if you could look a little further in that
21 bullet point, there's another quote from Mr. Wasserman.
22 Could you read that as well?

23 A. How far down?

24 Q. It says: Upon its signature. It's the last
25 sentence in that bullet point.

1 A. Upon its signature into law, he observed
2 New York becomes the 30th state to adopt a new
3 congressional map, and Dems' gerrymander could lead to the
4 single biggest seat shift in the country (19D-8R to
5 22D-4R).

6 Q. Thank you.

7 And, again, that's Dr. Wasserman that you're
8 familiar with?

9 A. Yeah. That's his assessment, yeah.

10 Q. Also in your CV, Professor, you state you have a
11 particular expertise in statistical methods and social
12 science and survey research methods; is that correct?

13 A. Correct.

14 Q. I want to talk to you about your report a little
15 bit. In your report starting at Paragraph 77, if you want
16 to turn to that.

17 A. Hang on for a second.

18 Q. And it was S-7, was the exhibit.

19 A. Paragraph what?

20 Q. 77, please. And actually -- I'm sorry to do
21 this -- just back up to Paragraph 65. There's no page
22 numbers, which makes it difficult.

23 THE COURT: 65?

24 MR. BROWNE: Yeah, Paragraph 65.

25 Q. And I want you to acknowledge that this section

1 starting on -- right above Paragraph 65 is discussing
2 communities of interest. Is that correct?

3 A. Correct.

4 Q. Okay. Thank you.

5 And let's turn to Page -- or Paragraph 77. Do
6 you have it?

7 A. Yes.

8 Q. Thank you.

9 Paragraph 77 of your report you state: Jewish
10 communities in this part of Brooklyn are concentrated in
11 Borough Park and Midwood. Is that correct?

12 A. Correct.

13 Q. And you cite -- have a citation there at the end
14 of that sentence; is that right?

15 A. Correct.

16 Q. And it's -- the first part of the citation is to
17 an article in The New York Times; is that right?

18 A. Correct.

19 Q. Did you read this article?

20 A. I did. It's been a while since I looked at it.

21 Q. And the article's entitled New York Threatens
22 Orthodox Jewish Areas With Lockdown Over Virus, correct?

23 A. Correct.

24 Q. Isn't it true that this article doesn't identify
25 that the Jewish communities in this part of Brooklyn are

1 concentrated in Borough Park?

2 A. I don't recall.

3 Q. Additionally, you cite another article in that
4 footnote, another New York Times article, to support your
5 contention that Midwood is a concentrated Jewish area?

6 A. Correct.

7 Q. Did you read the article that you cite there?

8 A. I did.

9 Q. And the article is entitled Where Prosperity
10 Breeds Proximity, correct?

11 A. Correct.

12 Q. And it's an article on the real estate market in
13 Midwood, correct?

14 A. Correct.

15 Q. The article's actually over 12 years old, right?

16 A. Right.

17 Q. It was from 2009?

18 A. Yes.

19 Q. Okay. Is that the kind of data that you
20 typically support an expert opinion with?

21 A. It's describing that Midwood is a historically
22 Jewish community, so it's --

23 Q. But is it saying it's a concentrated Jewish
24 community?

25 A. My reading of the article said it was a

1 historically Jewish community.

2 Q. If we could turn to Paragraph 49 in your report.
3 And just for clarity, this portion of your report, is it
4 talking about Mr. Lavigna's claims?

5 A. Specific partisan claims?

6 Q. Yes.

7 A. Yes.

8 Q. Thank you.

9 Let's look at Paragraph 49, and it states -- and
10 tell me if I get this right -- first, 2022 (sic) CD 1 is
11 not a strong Republican district.

12 A. In quotes, yes.

13 Q. Yes, and then you conclude that sentence: If
14 anything -- or that paragraph. Sorry -- If anything, CD 1
15 has a slight lean to the Democrats. Is that correct?

16 A. Correct.

17 Q. The support for your conclusion in this
18 paragraph that CD 1 has a slight lean to the Democrats is
19 data from the statewide races that you analyzed and then
20 aggregated -- or averaged. Excuse me. Is that right?

21 A. Correct, and the conclusion is if anything. I'm
22 not saying there is much of a lean here at all.

23 Q. But you said there's a lean?

24 A. If anything, CD 1 has a slight lean.

25 Q. And that's for the 2022 CD 1; is that correct?

1 A. Correct.

2 Q. And are you -- I'm sorry. Were you going to say
3 something?

4 A. Sorry. Is it the 2022 or the 2012? The 2012
5 CD.

6 Q. Sorry. That was my confusion. I apologize.
7 So 2012 CD 1 had a slight Democratic lean?

8 A. Correct.

9 Q. And the 2022 CD 1 has a Democratic lean now; is
10 that correct?

11 A. This is just characterizing the Lavigna claim
12 that there's a strong Republican district, CD 1.

13 Q. Right, but I'm asking about the 2022 CD 1. Is
14 there a Democratic lean in that district now?

15 A. I think that is -- I don't remember what the
16 number is, but it's more Democratic than it was.

17 Q. Thank you.

18 And you're aware that a Republican has been the
19 representative of CD 1 since 2015; is that correct?

20 A. Correct.

21 Q. Let's go to Paragraph 50. Do you see that?

22 A. Yes.

23 Q. Okay. And it states there -- or you state in
24 your report: 2012 CD 2 is not a sure Republican district.

25 A. Correct.

1 Q. CD 2 was a Democrat-leaning district; is that
2 correct?

3 A. Correct.

4 Q. And that's referring to the 2012 CD 2?

5 A. Correct.

6 Q. Again, you use statewide races, average them,
7 and determine that there was a Democratic lean to that
8 district; is that correct?

9 A. Correct.

10 Q. And would you agree that 2022 -- the 2022 CD 2
11 leans more Democratic now?

12 A. 2022 CD 2, I believe that shifts towards the
13 Republicans.

14 Q. And are you aware that the Republican -- that a
15 Republican holds that seat in CD 2 and has held that seat
16 since 2013?

17 A. Yes.

18 Q. And Paragraph 55, let's move to that. And in
19 that paragraph you state: In 2012 CD 11 Democrats on
20 average won 51.1 percent of the vote and Republicans won
21 47.1 percent of the vote and Democrats won the majority of
22 the vote in four out the six statewide elections in the
23 precincts in the 2012 version of CD 11. Is that correct?

24 A. Correct.

25 Q. And you state: None of these are Republican

1 districts. Is that correct?

2 A. Correct.

3 Q. Again, you used statewide races and averaged
4 them to come to that conclusion; is that correct?

5 A. Correct.

6 Q. And would you agree that CD 22 -- or, excuse me,
7 the 2022 CD 11 now leans more Democratic in the 2022 map?

8 A. Correct.

9 Q. And you're aware that a Republican has been the
10 representative from CD 11 for the last seven out of the
11 nine years; is that right?

12 A. Correct.

13 Q. And then Paragraph 59 of your report, do you see
14 that?

15 A. I do.

16 Q. You state there that: CD 19 was a
17 lean-Democratic district in the 2012 map and remains so in
18 the 2022 map?

19 A. Correct.

20 Q. And, again, you used statewide races and
21 averaged them to come to that conclusion; is that correct?

22 A. Yes.

23 Q. And you would agree that the 2022 CD 19, as you
24 said, leans more Democratic?

25 A. Correct.

1 Q. And you're aware that a Republican has been the
2 representative for CD 19 for the last six out of the nine
3 years; is correct?

4 A. Correct.

5 Q. And then Paragraph 61, do you see that?

6 A. Yes.

7 Q. In Paragraph 61 you state that: Comparing the
8 election results in 2012 CD 24 to those of 2022 CD 22
9 reveals that, in fact, there was very little change in the
10 electoral performance of the Syracuse district in both
11 maps; is that correct?

12 A. Correct.

13 Q. And the district is a Democratic district?

14 A. Correct.

15 Q. And, again, you used the statewide races and
16 averaged them out to come to that conclusion?

17 A. Exactly.

18 Q. And you're aware that a Republican has held the
19 CD 22 seat for the last seven out of nine years?

20 A. Correct.

21 Q. Professor, I want to talk a little bit about
22 your analysis of Mr. Trende's report for a few minutes.
23 You responded to Mr. Trende's report in your analysis; is
24 that right?

25 A. I did.

1 Q. And if we could look specifically at Paragraphs
2 41 through 47. Do you see that, sir?

3 A. I do.

4 Q. You critique Mr. Trende's simulations in these
5 paragraphs; is that correct?

6 A. Yes. Some of its recounting what the
7 simulations do, so yeah.

8 Q. Sure. But the point of those paragraphs is that
9 you critiqued his simulations; is that correct?

10 A. Part of it's critique, and part of it's
11 interpretation, yeah.

12 Q. Understood.

13 Did you run your own simulations?

14 A. No.

15 Q. Why not?

16 A. I didn't -- like there was -- I wasn't asked to.
17 It wasn't something that was directed by Counsel to do,
18 and I didn't -- the question was like, what do we make of
19 these simulations? I generally don't run simulations when
20 I analyze elections. It's not my approach.

21 Q. But you were asked to respond to Mr. Trende's
22 report; is that right?

23 A. That's correct.

24 Q. You told us earlier that you have particular
25 expertise in statistical methods in social science; is

1 that right?

2 A. Yes.

3 Q. So you're capable of running these types of
4 simulations?

5 A. Yes, and I have for other purposes.

6 Q. Thank you.

7 But, again, you didn't run the simulation; is
8 that right?

9 A. No.

10 MR. BROWNE: Can I have just a minute, your
11 Honor.

12 THE COURT: Yes.

13 Q. Just one last question.

14 A. Sure.

15 Q. Professor, is it your professional opinion that
16 the Democratic party of the Legislature did not use
17 partisan gerrymandering, especially in the Long Island
18 area, Districts 1, 2, 3, 4, to favor Democrats in this
19 2022 map?

20 A. I don't see any evidence that indicates that
21 there's a systematic shift in Long Island toward the
22 Democrats that would be consistent with that claim, so I
23 don't see an effect. I don't know anything about intent
24 in the sense of like having read through the record or
25 anything like that. So just based on the effect, I don't

1 see any evidence of an effect that would justify
2 concluding there was an intent.

3 MR. BROWNE: Thank you.

4 THE COURT: Redirect?

5 MS. REITER: No, your Honor.

6 THE COURT: Thank you. You can step down,
7 sir.

8 THE WITNESS: Thank you very much.

9 (The witness was excused.)

10 THE COURT: I'm trying to figure out if
11 this would be an appropriate place. Do you have
12 another witness ready?

13 MR. MULLKOFF: We do. We could begin
14 qualifying Kristopher Tapp.

15 THE COURT: We can at least qualify him and
16 take it from there. I'd like to end around 4:30 if
17 we can.

18 MR. MULLKOFF: That's fine, to do the
19 initial.

20 THE COURT: Mr. Hecker?

21 MR. HECKER: I was just going to say, can
22 we take five minutes to get our exhibits ready, and
23 then --

24 THE COURT: Let's do that.

25 MR. HECKER: -- we can qualify him?

1 THE COURT: Five minutes.

2 MR. HECKER: Yes. Thank you.

3 (A recess was taken.)

4 (Exhibit S-15 was marked for
5 identification.)

6 THE COURT: Next witness?

7 MR. MULLKOFF: Your Honor, the Senate
8 respondents call Kristopher Tapp.

9 KRISTOPHER R. TAPP,

10 called herein as a witness, having been first duly sworn,
11 was examined and testified as follows:

12 THE DEPUTY: State your name and spell it
13 for the Court, please.

14 THE WITNESS: Kristopher Tapp. Kristopher
15 is spelled with a K, K-r-i-s-t-o-p-h-e-r, and Tapp is
16 T-a-p-p.

17 THE DEPUTY: Have a seat right here, sir.

18 THE COURT: Dr. Tapp, have a seat.

19 MR. TSEYTLIN: Your Honor, briefly --

20 THE COURT: Yes.

21 MR. TSEYTLIN: -- just to note for the
22 record, we do have a motion to strike a portion of --

23 THE COURT: I understand.

24 MR. TSEYTLIN: I know we're arguing it
25 tomorrow morning, but I just wanted to --

1 THE COURT: We will argue it in the
2 morning. I'm going to at least let them --

3 MR. TSEYTLIN: Of course.

4 THE COURT: -- qualify him, and we'll argue
5 that in the morning.

6 MR. MULLKOFF: Thank you, your Honor.

7 DIRECT EXAMINATION

8 BY MR. MULLKOFF:

9 Q. Good afternoon, Dr. Tapp.

10 A. Good afternoon.

11 Q. Could you please give us a sense of your
12 educational background?

13 A. Yes. I got my Bachelor's of Arts from Grinnell
14 College, and I got my PhD in mathematics from the
15 University of Pennsylvania.

16 Q. After you received your PhD, what has your
17 economic employment consisted of?

18 A. I have taught at a variety of universities. I
19 taught at Haverford College and SUNY Stony Brook and
20 Williams College and Bryn Mawr College and University of
21 Pennsylvania and Suffolk University and now Saint Joseph's
22 University.

23 Q. How long have you been a professor at Saint
24 Joseph's University?

25 A. About 12 years.

1 Q. What is your current title there?

2 A. I am a full professor and the chair of the
3 Mathematics Department.

4 Q. When did you become the chair of the Mathematics
5 Department?

6 A. This is my fourth year.

7 Q. And how did you come to have that role?

8 A. It's a position that's voted on by members of
9 the department and approved by the provost.

10 Q. In your capacity as a math professor at Saint
11 Joseph's, what are some of the classes you've taught in
12 recent years?

13 A. I've taught a large variety of upper-level and
14 lower-level classes, all mathematics. I have very
15 recently taught actuarial probability. It's an
16 upper-level class for actuary students preparing for a
17 probability standardized exam. I've taught Calc 1,
18 Calc 2, Calc 3. I recently taught Real Analysis, which is
19 a math major class that is designed to really make
20 calculus more rigorous. I've taught lower-level stuff --
21 I love expository stuff -- so math classes to introduce
22 non-math majors, non-STEM majors to the beauty of
23 mathematical thinking.

24 Q. Have you published any books?

25 A. Yes. I've published three books, and two of

1 them are in second edition.

2 Q. What books are those?

3 A. My first book, Matrix Groups for Undergraduates,
4 is like a topic that is right between advanced
5 undergraduate mathematics and beginning graduate school
6 mathematics. It is an attempt to basically take a
7 graduate school topic and make it a little bit more
8 accessible at the undergraduate level. And the second
9 book about differential geometry is really the same thing,
10 taking a beginning graduate-level topic and making it
11 accessible to the advanced undergraduate student.

12 Q. And what about the third book?

13 A. The third book, Symmetry, is for non-STEM
14 majors. I use it for a class in which I just try to
15 inspire history majors and English majors to love
16 mathematics and to appreciate mathematical thought.

17 Q. Have you presented your work in any conferences
18 or other forums in different locations?

19 A. Yes. I've been invited to speak at a long list
20 of conferences in many countries.

21 Q. Approximately how many times, if you had to
22 estimate?

23 A. Maybe 50.

24 Q. Have you published articles in peer-reviewed
25 journals?

1 A. Yes. I think I have 24 publications in
2 peer-reviewed journals.

3 Q. What types of topics have publications those
4 involved?

5 A. Most of my career I worked in Riemannian
6 geometry, which is an abstract field of mathematics that's
7 related to physics. And just within the last about four
8 years, I pivoted and just got really excited about the
9 mathematics that relates to redistricting.

10 Q. How did you come to be interested in that topic?

11 A. I read some recent papers and I found them
12 fascinating and I just got sucked in and read more and
13 more and more papers. I think it was ready for a change.

14 Q. And have you specifically published articles
15 regarding redistricting?

16 A. Yes. I have three papers I've written related
17 to redistricting. The first was mostly about the
18 efficiency gap, and it was published in the American
19 Mathematical Monthly, which is the most widely read math
20 journal in the world.

21 And then the second is about clustering. It was
22 essentially using ensemble methods that we've been talking
23 about this week to quantify the idea of clustering, how a
24 particular political party is clustering, like, for
25 example, Democrats packed into cities and so on, and how

1 that affects election outcome and to do it in a rigorous
2 enough way that you can prove that certain levels of
3 clustering imply certain things about how the elections
4 will turn out.

5 And then my third and most recent paper is
6 really a peer math paper in the area of graph theory, but
7 it has an important application to redistricting. In some
8 sense it explains why the algorithms that are currently in
9 use, including the ones we talked about this week, spit
10 out maps with compact districts without needing to be
11 directed to do so.

12 Q. So that paper discusses simulation algorithms or
13 different types?

14 A. No. My second paper did. That paper's not so
15 much about simulations, at least not centrally. But, yes,
16 the application of redistricting, it intertwines with
17 that.

18 Q. So when you were talking about the application
19 of redistricting, are simulation algorithms what you were
20 referring to?

21 A. Yeah, exactly. It's a paper about spanning
22 trees, but spanning trees are the mathematical heart of
23 the algorithms.

24 Q. Would it be accurate to say that paper touched
25 on the mathematics behind simulation algorithms?

1 A. Yeah, exactly. What I'm most interested in is
2 the mathematics that sort of is underneath the hood of
3 these algorithms that have been used by Trende and Barber
4 this week and others in redistricting litigation.

5 MR. MULLKOFF: Your Honor, may I approach
6 the witness?

7 THE COURT: You may.

8 MR. MULLKOFF: I am handing the witness,
9 for identification, an exhibit that's been pre-marked
10 as S-15. It's already been filed in this case. It's
11 Dr. Tapp's curriculum vitae.

12 Q. Dr. Tapp, do you recognize this document?

13 A. Yes.

14 Q. What is it?

15 A. This is my CV.

16 Q. Is this up to date?

17 A. Yes. I believe so.

18 Q. Does it accurately describe the progression of
19 your career and disclose your publications up to date?

20 A. Yes.

21 Q. Dr. Tapp, are you being compensated for your
22 work in this case?

23 A. Yes.

24 Q. Does your compensation depend in any way on what
25 expert opinion or testimony you provide?

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SUPREME COURT OF THE STATE OF NEW YORK

COUNTY OF STEUBEN : SUPREME CALENDAR

-----X

TIM HARKENRIDER, GUY C. BROUGHT,
LAWRENCE CANNING, PATRICIA CLARINO,
GEORGE DOOHER, JR., STEPHEN EVANS,
LINDA FANTON, JERRY FISHMAN, JAY
FRANTZ, LAWRENCE GARVEY, ALAN NEPHEW,
SUSAN ROWLEY, JOSEPHINE THOMAS, and
MARIANNE VIOLANTE,

Petitioners,

-versus-

GOVERNOR KATHY HOCHUL, LIEUTENANT
GOVERNOR AND PRESIDENT OF THE SENATE
BRIAN A. BENJAMIN, SENATE MAJORITY
LEADER AND PRESIDENT PRO TEMPORE OF THE
SENATE ANDREA STEWART-COUSINS, CARL
HEASTIE, NEW YORK STATE BOARD OF
ELECTIONS, and THE NEW YORK STATE
LEGISLATIVE TASK FORCE ON DEMOGRAPHIC
RESEARCH AND REAPPORTIONMENT,

Respondents.

Index No:
E2022-0116CV

BENCH TRIAL

-----X

Steuben County Courthouse
Bath, New York
March 16, 2022

P r e s i d i n g :

THE HONORABLE PATRICK F. McALLISTER
Judge

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Attorney for Petitioners

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I N D E X T O W I T N E S S E S

<u>For the Senate Majority:</u>	<u>D</u>	<u>X</u>	<u>RD</u>	<u>RX</u>
Kristopher R. Tapp				
Jonathan N. Katz				
Todd A. Breitbart				

I N D E X T O E X H I B I T S

<u>For the Senate Majority:</u>		<u>ID</u>	<u>EVD</u>
S-15 Tapp CV		--	71
S-16 Tapp initial report		67	73
S-17 Tapp second report		67	73
S-18 Katz CV		146	151
S-19 Katz report		149	151
S-20 Breitbart report (affidavit)		207	207
S-21 Exhibits to Breitbart report		207	207

1 THE COURT: Let's note appearances for the
2 day.

3 Petitioner?

4 MS. DiRAGO: Molly DiRago on behalf of
5 Petitioners.

6 MR. BROWNE: Your Honor, Robert Browne on
7 behalf of Petitioners.

8 MR. WINNER: George Winner on behalf of
9 Petitioners.

10 MR. TSEYTLIN: Misha Tseytlin on behalf of
11 Petitioners.

12 THE COURT: On behalf of the Governor and
13 Lieutenant Governor?

14 MS. McKAY: Yes. Heather McKay and Muditha
15 Halliyadde from the New York State Attorney General's
16 Office.

17 THE COURT: Thank you.

18 On behalf of the Majority Leader, Senate
19 Majority Leader?

20 MR. HECKER: Eric Hecker from Cuti Hecker
21 Wang.

22 THE COURT: Thank you, Mr. Hecker.

23 MR. CUTI: John Cuti from the same firm.

24 MR. GOLDENBERG: Alexander Goldenberg, Cuti
25 Hecker Wang.

1 MS. REITER: Alice Reiter, Cuti Hecker
2 Wang.

3 THE COURT: On behalf of the Speaker of the
4 Assembly?

5 MR. MULLKOFF: Daniel Mullkoff, Cuti Hecker
6 Wang.

7 THE COURT: Thank you.
8 On behalf of the Speaker of the Assembly?

9 MR. BUCKI: Craig Bucki from Phillips Lytle
10 LLP in Buffalo on behalf of the speaker.

11 THE COURT: Thank you, Mr. Bucki.

12 All right. First thing this morning, we're
13 going to address the three orders to show cause
14 brought by the petitioners. I think the best way to
15 handle this is have all three argued at the same time
16 and then responses.

17 Who'd like to start? Mr. Tseytlin? Just
18 All I ask you to do is tell me when you're switching
19 gears from one to the next order to show cause.

20 MR. TSEYTLIN: Thank you, your Honor. I'm
21 going to talk this morning about our motion to strike
22 a portion of the expert report submitted by Dr. Katz
23 and Dr. Tapp, and I will then talk about our motion
24 for supplemental briefing. My colleague,
25 Senator Winner, will talk about the discovery

1 sanctions portion, so I'll just discuss those first
2 two motions here.

3 Our motion to strike these two expert
4 reports involve a pretty clear effort by the
5 respondents to sandbag us by adding expert reports on
6 the congressional maps well after this Court had set
7 a deadline for them to respond with regard to the
8 congressional maps. As a threshold matter, both
9 these reports should be just struck as a matter of
10 the Court's rules. Their expert reports were due on
11 February 24th. They submitted them two weeks after.

12 But to the extent this Court wants to
13 inquire beyond just noncompliance with this Court's
14 orders -- and I didn't even see them in their
15 responsive papers say that they were complying with
16 the Court's orders with regards to submitting those
17 two and were to look into prejudice -- I'll talk
18 briefly about the prejudice from the Tapp second
19 report, and then I'll talk in a little bit greater
20 length of the prejudice from the Katz second report.

21 THE COURT: Okay.

22 MR. TSEYTLIN: With regard the Tapp second
23 report, their only justification for doing it this
24 way is, they said, they wanted to respond to the
25 regression analysis that Mr. Trende offered in his

1 rebuttal report.

2 THE COURT: Was that new by Dr. Trende?

3 MR. TSEYTLIN: The regression analysis was
4 new, but the rest of the stuff in the second Tapp
5 report that responds to the regressional stuff was
6 not new at all. He asked stuff about how the 5,000
7 maps are too redundant in his view, about county
8 splits, this kind of thing. There's nothing in the
9 lion's share of that second Tapp report with regard
10 to the congressional districts that even mentions the
11 Trende rebuttal report, so I think at least those
12 portions clearly need to be struck.

13 With regard to whether your Honor wants to
14 strike the portion that rebuts only the regression
15 analysis, you know, we don't have a strong view on
16 that. My friends already had multiple experts opine
17 upon that yesterday. That's only a minor aspect of
18 Mr. Trende's report that doesn't go to his core
19 conclusions, and I didn't see anything in Mr. Tapp's
20 second report about regression in particular that's
21 really any different from what your Honor heard from
22 the other side's experts before. But everything he
23 says about redundancy, splits, communities of
24 interest, that plainly needs to be struck since
25 that's not responsive at all to the rebuttal report.

1 Now, turning to the Katz report, that, I
2 would submit, is far, far more problematic. Now, I
3 think in order to understand why that is so
4 problematic, I'd like to explain the battle lines
5 between the parties after the briefing in the expert
6 reports had been submitted. The battle of the lines,
7 as I understand it, were as follows: Mr. Trende
8 submitted a report that did 5,000 and then 10,000
9 maps and said, this is the most pro-Democrat map out
10 of any of those 5,000, 10,000. And he did this
11 through his dot plot analysis, which showed
12 Republicans packed into those four districts much
13 more than any of the ensemble maps and then cracked
14 over the next six or so districts making those far
15 more Democratic and noncompetitive.

16 As I think your Honor saw with the
17 testimony, especially of Mr. -- Dr. Barber yesterday,
18 their primary response to this is, well, Republicans
19 got those four districts, those are now solid four
20 Republican districts. And the rest of the districts,
21 they're just going to call them Democrat because
22 they're 50 percent plus 1 under the statewide metrics
23 and therefore it's a pro-Republican map. Your Honor
24 has that in front of him -- in front of the Court.
25 You've heard lots of testimony about that. You'll

1 hear, I'm sure, a little bit more from Dr. Tapp
2 today. There's been lots of briefing on that. That
3 issue is fairly short.

4 The Katz report that was put in doesn't
5 have anything to say about any of that. It talks
6 about the notion of partisan fairness based on an
7 esoteric version of a concept known as partisan
8 symmetry. It proceeds on the notion that even if
9 this is the most pro-Democrat map that could possibly
10 have been drawn, we're going to score this on a
11 social science view of fairness and say, well, is it
12 under the social science view of fairness,
13 nevertheless score kind of well? So it doesn't --
14 it's completely -- to borrow great phrase from
15 Dr. Barber yesterday, it's completely orthogonal to
16 everything the parties have been discussing before
17 your Honor, everything that was submitted in the
18 expert reports, everything in the briefing.

19 You know, I've litigated cases involving
20 other, more standard forms of partisan symmetry. And
21 what happens at every one of those cases, if a party
22 submits an expert report on their particular view of
23 partisan symmetry, you'll, of course, bring in your
24 own expert on partisan symmetry, and those experts
25 will do one of two things, usually both. One,

1 they'll present a different partisan symmetry metric
2 often reflecting a different view of social science
3 fairness of that map; and, two, the expert will
4 explain to the Court why partisan symmetry doesn't
5 work and doesn't make sense in this context or why
6 their multi-simulation approach is better.

7 Here, because my friend sandbagged us, we
8 had no opportunity to do any of that. They have this
9 new approach. We don't have an opportunity to --

10 THE COURT: They're sort of saying you
11 sandbagged them by Trende's second reply report that
12 they never had a chance to reply to.

13 MR. TSEYTLIN: Well, they have submitted
14 testimony on that. They have experts on that. You
15 know, if your Honor doesn't want to strike that
16 portion of the Tapp report that deals with the
17 rebuttal report of Mr. Trende, you know, I'm happy to
18 withdraw that aspect of our motion. But here they
19 have an entirely new approach. We have no experts
20 before the Court on that approach. It has nothing to
21 do with anything in any of the briefing this court
22 has. It's just kind of lobbed in there two business
23 days before the evidentiary hearing here.

24 Now, their only two defenses for this, as
25 far as I can tell from their briefing submitted

1 yesterday -- and, again, they don't even claim that
2 this was procedurally proper -- one is they say we
3 have the opportunity to cross-examine. Well, your
4 Honor, I'll give it the old college try, but I don't
5 have an expert report to rely upon. I can ask some
6 questions based on my experience in other cases with
7 partisan symmetry metrics that were done differently
8 to give it a shot, but that's not any notion of due
9 process or fairness. I don't have -- you know, I'll
10 ask -- I'm sure I'll ask Dr. Katz questions and he'll
11 rely on his expertise and I got nothing to point to
12 on the other side.

13 Their other defense for what they did is
14 they said, well, we could submit Dr. Katz on the
15 Senate map, and so shouldn't you hear him on both?

16 THE COURT: Well, it was timely on the
17 Senate map.

18 MR. TSEYTLIN: It was timely on the Senate
19 map. But, your Honor, there's different criticisms
20 that could be lodged on congressional versus the
21 Senate.

22 THE COURT: But isn't the issue the same in
23 both? I mean, does it make sense to consider it on
24 the Senate and not on the congressional?

25 MR. TSEYTLIN: Well, so if your Honor wants

1 to consider it -- consider it or not in both, I think
2 your Honor should not consider it on both because
3 there's been so adversarial process. There was no
4 briefing on this even on the Senate stuff. But I
5 think that at minimum, if we're going to be
6 prejudiced by what happened on the Senate stuff --
7 and we really were -- they could have let us know a
8 little bit further in advance so we could have
9 retained our own partisan symmetry expert. They made
10 it impossible for us on the Senate. I understand
11 that, you know, it may be, you know, sharp-elbowed
12 litigation, all that.

13 But at least with regard to the
14 congressional, they should have submitted Dr. Katz on
15 February 24th. We surely would have retained an
16 expert on partisan symmetry, as happens in every one
17 of the cases. I'm sure Dr. Katz has testified about
18 partisan symmetry in many, many cases. I would
19 venture to say where it will be the first time where
20 his partisan symmetry approach would go entirely
21 un-responded to by any expert. That's just not --
22 that's as not any notion of fundamental fairness or
23 due process.

24 At minimum, your Honor, if they wanted to
25 submit a brand new approach to this Court, they

1 should have filed a motion. This Court could have
2 decided if it wanted to hear an entirely different
3 take on partisan fairness from what we've been
4 hearing, but instead they engaged in self-help
5 lobbying in these reports, especially the Katz report,
6 hoping to ring a bell that can't be un-rung. I think
7 that's fundamentally unfair to us.

8 And this brings me, then -- your Honor,
9 does your Honor have any other questions on that
10 before I talk about the other motion?

11 THE COURT: No.

12 MR. TSEYTLIN: And I think that brings me,
13 well, to the other motion I'd like to talk about,
14 which is our motion to submit supplemental briefing
15 on the remedy here, and I think our approach to this
16 contrasts very significantly with their self-help
17 approach with regard to the expert reports. We came
18 to this Court, and we said, we they think there are
19 some additional considerations this Court may want to
20 look to in deciding what the final remedy in this
21 case will be, not the interim relief that we asked
22 for at the prior hearing but the final remedy, and we
23 just listed the issues that we wanted to brief. We
24 didn't try to un-ring any bells that can't be
25 un-rung. We just came to your Honor and said, if you

1 want to hear about these issues, we'd like to put
2 this before the Court.

3 My friends were in the middle of trial.
4 Fair enough. I assume and hope the trial will be
5 finished today, if not early tomorrow. The briefing
6 on supplemental briefing would take place thereafter.
7 And really we want to put -- we want to brief two
8 issues before your Honor: One, whether other the
9 notion of having special elections next year if the
10 Court determines these maps are unconstitutional is
11 itself constitutional. Certainly we've all heard of
12 special elections, but those take place in situations
13 where a congresswoman passes away or retires and then
14 a seat needs to be filled. The US Constitution says
15 that the members are elected every two years. So we
16 think it should be at least briefed, whether it would
17 be constitutional to yank a member off of Congress
18 based on a special election after they've won.

19 THE COURT: So you're saying I may have
20 been mistaken in saying I could set next year as --
21 if I ruled in your favor in this case, that next year
22 is not feasible for the United States congressional
23 election?

24 MR. TSEYTLIN: It may well not be, your
25 Honor. We haven't fully briefed that for your Honor.

1 We suspect that it's not. Maybe my friends will find
2 authority on this side. But that's why -- and I
3 would also note that the issue of the 23 special
4 elections wasn't raised by either of the parties, so
5 I think it's fair for us to ask your Honor to put
6 that before the Court.

7 The second issue we wanted to brief,
8 especially in light of the first if your Honor
9 concludes that at least with regard to the
10 congressional elections, the 23 option isn't
11 feasible, well, there is a feasible option not to
12 have a congressman elected under an unconstitutional
13 map, sitting there for two full years. And there we
14 wanted to brief the feasibility of, for example,
15 moving the primary date.

16 I will note, for example, just yesterday
17 the Maryland Court of Appeals, which is the highest
18 court in Maryland, moved the primary date in Maryland
19 because, considering a partisan gerrymandering
20 challenge which is strikingly similar to this one,
21 similar number of districts, packing, cracking, you
22 know, that kind of thing, they're also considering
23 the state legislative districts. So those -- I don't
24 want to misspeak. They're considering the state
25 legislative districts. They're not the congressional

1 districts. And they have moved the primary there.

2 And so what we wanted to brief is, is it
3 feasible for this Court to order relief that would be
4 effective in 2022? I know my friends are going to
5 say it's not. We'll say it is. Your Honor will make
6 the decision. But the only thing that we asked for
7 was just a modest submission to put this before the
8 Court, and the Court can do with this additional
9 briefing what the Court will. The Court can order it
10 or not.

11 THE COURT: Didn't the Supreme Court of the
12 United States in the recent Alabama case say it was
13 too late to do new maps in their state?

14 MR. TSEYTLIN: That's certainly true, what
15 the US Supreme Court said as a matter of federalism,
16 with federal courts interfering with state elections.
17 As the actions yesterday by the Maryland Court of
18 Appeals show and the actions by the Pennsylvania
19 Supreme Court that we referenced in our prior
20 briefing, state courts are not so constrict. Here
21 the issue is that the maps that my friends enacted
22 are unconstitutional under the state Constitution.
23 There's no federalism principle barring state courts
24 from remedying this election cycle.

25 And as we're seeing in states all over the

1 country at the state level, state courts are moving
2 election deadlines, moving primary dates. In fact,
3 I'm not aware -- and maybe my friends in their
4 briefing will tell me otherwise. I'm not aware of
5 any state court this election cycle that has reached
6 anything like the Supreme Court's decision in
7 Alabama, which, again, was based on the US Supreme
8 Court's consideration of federalism, which obviously
9 don't apply in a state court proceeding under a state
10 Constitution.

11 THE COURT: Anything further, Mr. Tseytlin?

12 MR. TSEYTLIN: No, your Honor.

13 THE COURT: Thank you.

14 MR. HECKER: Your Honor, may I make a
15 suggestion, respectfully? It just turns out I'm
16 going to be arguing those two motions and Mr. Cuti's
17 going to be arguing the third motion. Might it make
18 more sense for me to address things while they're
19 fresh in the Court's mind?

20 THE COURT: All right. Let's do that. I'm
21 fine with that.

22 Any objection to that?

23 MR. TSEYTLIN: No, your Honor.

24 THE COURT: All right. Mr. Hecker?

25 MR. HECKER: Good morning, your Honor.

1 THE COURT: Good morning.

2 MR. HECKER: Eric Hecker, Cuti Hecker Wang.

3 Like Mr. Tseytlin, I'll start with the motion to
4 strike. I honestly don't even understand the
5 argument, and the best way for me to explain why I
6 don't understand what they're even saying -- well,
7 I'll start with Mr. Tapp -- Dr. Tapp. Mr. Trende.
8 Dr. Tapp. I'll start with Dr. Tapp, just like
9 Mr. Tseytlin did, and I want to work backwards from
10 the end.

11 Obviously this is a trial, and what we're
12 doing is we're engaging in the proverbial battle of
13 the experts. And to paraphrase your Honor, as you
14 put it, the whole point is to put the people on the
15 stand so you could see them and you could determine
16 for yourself where the truth lies. Your Honor
17 decided to exclude experts who are on the same side
18 as the testifying expert for basic fundamental
19 fairness reasons, but your Honor expressly declined
20 to exclude from the room opposing experts precisely
21 so that each opposing expert can see what the
22 expert's saying on the stand and have a full and fair
23 opportunity to respond in order to give your Honor a
24 full and fair opportunity to evaluate what
25 everybody's saying.

1 So what is going to happen today is
2 Dr. Tapp is going to address everything that
3 Mr. Trende said, and he said things in three places.
4 He said things in his first report, in his second
5 report, and on the stand, and what he said on the
6 stand, with Dr. Tapp here precisely so that he could
7 respond today, was all about his first report and his
8 second report, so they can't possibly be saying that
9 Dr. Tapp can't talk today about what Mr. Trende said
10 on the stand about what Mr. Trende said in his second
11 report. That would be preposterous. They're not
12 saying that.

13 What they are saying with their heeded,
14 inappropriate invective is that we cynically
15 sandbagged them by giving your Honor and Mr. Tseytlin
16 the courtesy of advance notice before the trial under
17 oath of some of the things that Dr. Tapp disagrees
18 with Mr. Trende about in his report. There was
19 nothing remotely improper about that, and it was far
20 closer to a courtesy than sandbagging and cynical
21 litigation conduct. And honestly, we're not going to
22 play games, but just to show you what the games would
23 look like, if you struck the report, couldn't
24 Dr. Tapp just read it into the record today as part
25 of his direct? Dr. Tapp, would you just read into

1 the record what you said in this report, you said
2 that, didn't you? We could play that game. It just
3 doesn't make any sense, what they're saying. They're
4 the ones who are trying to squirm out of things, not
5 us.

6 With respect to Dr. Katz, to understand why
7 what they're saying makes no sense, it actually, I
8 think, makes sense to start from the beginning. The
9 congressional and Senate lines were enacted. Then
10 they filed this case. They chose to only challenge
11 the congressional lines, not the Senate lines. We
12 don't know why.

13 THE COURT: Initially. Initially.

14 MR. HECKER: Initially, yes. And after
15 appropriate procedure your Honor ruled,
16 understandably, that they would have leave to serve
17 their amended petition, and the Senate part of the
18 case, which was not in the case, became part of the
19 case. Fair and square. And your Honor then set a
20 schedule. You gave us until last Thursday to put in
21 our response papers, and you set a trial for a couple
22 of days later, and you didn't give them an
23 opportunity to reply. And I don't want to put words
24 in your Honor's mouth, but the way I understood that,
25 to have been a very fair and reasonable schedule, is

1 that it's on them that the Senate schedule was so
2 late.

3 And the Constitution says what it says
4 about the deadline for a decision, and your Honor
5 apparently will have dark days next week and needs
6 time to render a decision, so the trial had to be
7 this week, which we get, and the answer date had to
8 be the Thursday before, which we get, and we complied
9 with both. We put all of our Senate papers in on
10 time fair and square, and we showed up here Monday
11 morning ready to try the case. So what did we do
12 wrong by putting in Dr. Katz's affidavit at least
13 with respect to the Senate?

14 If you read their papers, they are not
15 moving to strike Katz with respect to the Senate.
16 They can't. They caused the delay. We complied with
17 the deadline. They are trying to prove beyond a
18 reasonable doubt that this Senate and congressional
19 plan are unconstitutional and infected with invidious
20 intent. So we, of course, availed ourselves of the
21 opportunity to put in a partisan symmetry expert, a
22 Caltech professor who's testified 50 times mostly on
23 behalf of Republicans, who is going to cogently
24 explain to you today or tomorrow why there is no
25 asymmetry at least in the Senate plan.

1 THE COURT: But that's a new methodology
2 that was introduced?

3 MR. HECKER: Not on the Senate side. It
4 was the first methodology that was introduced. We
5 didn't have an opportunity to respond to the Senate
6 before last Thursday because it wasn't part of the
7 case. Now, it's new in that it wasn't part of the
8 congressional case, and I'll get to that, but there's
9 no new or old with respect to the Senate. The first
10 time and the only time we've ever spoken about the
11 Senate in papers was the Thursday deadline that you
12 set, and we complied with it fair and square.

13 And, again, I understand why your Honor set
14 that tight schedule. You needed to give us a week to
15 respond. Honestly, it would have been nice to have
16 more. If we really thought we couldn't do it, we
17 would have moved, respectfully, and said we can't do
18 it, your Honor. But we burned the midnight oil. We
19 got it done. Dr. Katz did a lot of work. Our other
20 experts did a lot of work. Everybody's tired. Some
21 people are a little cranky. We're all doing our
22 best. And we met the deadline, and we put in
23 Dr. Katz's report at least with respect to the Senate
24 fair and square. And read their papers. They're not
25 claiming otherwise.

1 They're only moving to strike the papers
2 that refer to Congress, so let's get to that. Should
3 you hear both? Look, on that front I do get it.
4 That is the only part of their argument that even
5 makes sense. But what I would say, respectfully, is
6 that once you hear from Dr. Katz, you will see that
7 there is absolutely no difference between his
8 methodology on the Senate side and on the
9 congressional side.

10 Moreover, what you'll hear from him is that
11 his particularly comprehensive way of looking at
12 things, which he'll get into, inherently involves
13 analyzing all relevant Senate and congressional races
14 in addition to general election races. And we'll get
15 into all of that, and he'll explain his reasons why
16 he does it that way. He could not have, as he'll
17 explain, analyze the Senate without also analyzing
18 Congress because they're hand-in-glove the way he
19 does things.

20 So the only question is, after Mr. Tseytlin
21 gives it the old college try with Dr. Katz and
22 cross-examines him to the best of his ability and
23 your Honor decides whether Dr. Katz is or isn't
24 persuasive in telling you unequivocally, to a degree
25 of reasonable professional certainty, that he is sure

1 that there is no asymmetry at all in the Senate plan,
2 are you or not going to apply the very same
3 conclusion on the congressional side?

4 And that's where we come back to the
5 standard of review. This is a beyond a reasonable
6 doubt case. So, I mean, your Honor is going to
7 decide what your Honor's going to do, but I would
8 respectfully ask, are you going to say that you can't
9 find beyond a reasonable doubt that the Senate plan
10 is unconstitutional in part because of what Dr. Katz
11 said but then not consider it and hold that the
12 congressional plan is unconstitutional beyond a
13 reasonable doubt because you're not listening to
14 Dr. Katz because we sandbagged them? It doesn't make
15 any sense in the context of this case.

16 What Mr. Tseytlin should have done if he
17 thought the schedule your Honor set, we get to
18 respond to the Senate on Thursday and everybody show
19 up in Bath Monday morning, they could have requested
20 a continuance. They could have requested for leave
21 to serve a supplemental expert report. And, you
22 know, we'll never know the extent to which we would
23 have consented or not, but I have no problem saying
24 that would be a reasonable request to have made.
25 Your Honor, Dr. Katz just put this in on Thursday, I

1 know we're on a tight schedule, put the trial off for
2 a couple of days, let us put in an expert report on
3 Wednesday and testify Thursday. They didn't do any
4 of that. And we sandbagged them? It doesn't make
5 any sense, your Honor.

6 Last point on that: This is a bench trial.
7 Prejudice? What does prejudice mean? Your Honor
8 knows how to call balls and strikes about what
9 evidence is fair, and your Honor is not going to
10 consider evidence that your Honor doesn't think it
11 fair. So you're going to hear from Dr. Katz,
12 Mr. Tseytlin is going to give it the old college try,
13 and your Honor will consider what he's going to
14 consider when he decides this very important case.
15 There's no reason to strike anything.

16 With respect to the remedy briefing, you
17 know, I told you when we first spoke on March 3rd
18 that I normally don't argue against amendment because
19 leave to amend is freely granted. I normally don't
20 try to stop somebody from submitting a brief. You
21 want to submit a brief, submit a brief. I love
22 writing briefs. But this is really the cart before
23 the horse. We're in the middle of a trial. Your
24 Honor hasn't decided anything. Once your Honor
25 decides whatever your Honor is going to decide --

1 THE COURT: We're on an expedited schedule
2 here. That's just going to put it off further if I
3 grant it at the end.

4 MR. HECKER: Fair enough, your Honor.
5 Well, your Honor already stated on the record --
6 clearly reserving wiggle room to do something
7 different later, but your Honor already stated on the
8 record on March 3rd that it would be, in the Court's
9 view, problematic to disrupt this election. It's now
10 March 16th. Candidates in the State of New York have
11 been petitioning in the existing --

12 THE COURT: They were petitioning before we
13 even got in here on the -- early. The first time in
14 here, two or three days they had been passing --

15 MR. HECKER: And now it's been 16 days.
16 We're more -- we're approximately halfway through the
17 petitioning period. So your Honor's going to rule
18 against us and disrupt this election cycle. The
19 Board of Education -- Board of Elections is not even
20 here. You've had no evidence or testimony about what
21 any such ruling would to. Candidates who have money
22 in their coffers have been spending that money
23 getting petitions in the districts that are under
24 this map. You're going to hit the reset button and
25 make that start over?

1 THE COURT: I don't know how I'm going to
2 rule yet, Mr. Hecker. However, might I be negligent
3 in not -- I mean, maybe I'm going to be forced to
4 cancel this election if I rule in the petitioners'
5 favor. Maybe that's the better choice between the
6 two. I don't know.

7 MR. HECKER: I don't know either, your
8 Honor. I don't know either, your Honor. But I would
9 say, respectfully -- and this is my last point --
10 with no disrespect to this Court, just like in every
11 redistricting case that there's ever been for the
12 last 200 years, if the trial court strikes down the
13 plan for any reason, there's a stay and we go up.
14 That's the way it works, and that's not in any way to
15 undermine this Court's authority. It's just the way
16 it works.

17 So the notion that there's anything to talk
18 about with respect to remedy, forget about today.
19 Anytime soon the Fourth Department has to weigh in,
20 perhaps the Court of Appeals has to weigh in, and
21 then down the line, if there's anything to talk about
22 remedy, we'll look at the calendar. I just don't
23 think there's anything to talk about here.

24 And, you know, we haven't yet had the
25 conversation about where we're going to go from here

1 after today or tomorrow when the evidence is done.
2 We don't know what kind of briefing, if any, the
3 Court will ask for. You know, if they want to
4 address remedies at some point sooner rather than
5 later, that's fine. It's just premature right now.

6 THE COURT: Thank you, Mr. Hecker.

7 MR. HECKER: Thank you.

8 THE COURT: Anybody else on behalf of
9 Respondents?

10 Mr. Bucki, for the Assembly?

11 MR. BUCKI: Good morning, your Honor. We
12 would certainly second all the arguments that
13 Mr. Hecker has made. I think that the origin of the
14 dispute on these matters between the petitioners and
15 the respondents really has to deal with what I would
16 submit is a misapprehension by the petitioners with
17 respect to some basic rules of civil practice that
18 apply in special proceedings.

19 There was a motion for leave to amend that
20 was made. The motion was granted. There was an
21 opportunity for the parties to answer. Now, granted
22 the Assembly did not serve any new expert reports
23 when the Assembly answered, but we would have had the
24 right to do so in a special proceeding because when
25 you answer you're not just serving your answer as a

1 pleading that responds to an amended petition; that
2 also entails the opportunity to serve other
3 affidavits that may oppose that amended petition as
4 well. And so the additional affidavit, such as
5 Dr. Katz's affidavit, that was served on behalf of
6 the Senate, that was perfectly fair game and
7 consistent with the rules with respect to timing that
8 would apply in a special proceeding.

9 With respect to the issue of further
10 briefing, I would submit further that Petitioners
11 have had multiple opportunities to serve whatever
12 briefs they have wanted to concerning the remedy
13 issue. They had their initial brief. They had
14 their -- an additional opportunity for reply before
15 we were here on March 3rd. They served another
16 letter. And now they couldn't get it right three
17 times, and now they want a fourth opportunity to say
18 what they could have said the first three times, and
19 we would submit that that's simply inimical to the
20 summary nature of a special proceeding in which
21 CPLR 403, 404, and 405 set a rigorous schedule for
22 briefing to be done.

23 There's a petition. There's an answer.
24 There's a reply. They had their opportunity, and
25 they frittered away that opportunity. And we would

1 submit that now is not the time for further briefing
2 on something that they could have briefed already.

3 And, furthermore, we did include a copy of
4 the transcript from the proceedings before this Court
5 March 3rd. We certainly construed, and I think
6 reasonably so, that the Court was very much clear
7 that it perceived that it was probably too late to
8 hold off 2022 elections and that perhaps there would
9 need to be further elections in 2023. And if the
10 respondent's (sic) had any issue with that, I would
11 submit further they could have made a motion for
12 leave to reargue under CPL 2221(d). A motion for
13 leave to reargue needs to set forth satisfaction of
14 certain requirements, and that isn't what they've
15 done. That was an option that was available to them,
16 and they chose not to exercise that. And we would
17 submit, again, that the time for briefing has passed
18 on the remedy issue and that the Court's decision in
19 the colloquy on March 3rd on that issue was sound and
20 there's no need for it to be revisited.

21 THE COURT: Thank you, Mr. Bucki.

22 Anybody else on behalf of the Governor,
23 Lieutenant Governor? Ms. McKay?

24 MS. MCKAY: Yes, your Honor. The only
25 proposed order to show cause that related to the

1 Governor's and Lieutenant Governor's case is the
2 final one -- I believe it's Motion Number 9 --
3 regarding the supplemental briefing, and I would
4 certainly join in my colleagues' arguments with
5 respect to that motion.

6 I would also like to point out -- I mean, I
7 think it's plain and simple -- Your Honor had ruled
8 on that issue. I believe Mr. Tseytlin today tried to
9 construe that as some kind of motion for interim
10 relief. Well, my question would be, where was that
11 motion? We know what that would have looked like.
12 It would have been a TRO application or an
13 application for a preliminary injunction, and there
14 wasn't one filed. The issue --

15 THE COURT: I think some of the paperwork
16 asked for it, though, didn't it?

17 MS. MCKAY: It certainly asked for it, but
18 what that would mean is that they were seeking that
19 relief in their petition and that your Honor was not
20 ruling on an application for interim relief. Your
21 Honor was ruling on the claim that was sought in the
22 petition, so I think that your Honor has already been
23 quite clear with respect to disrupting the current
24 election process, which is already underway. And to
25 the extent that they want -- Petitioners wanted to

1 reargue that decision, I believe that they would
2 absolutely have needed to file a motion to reargue in
3 that in order to do the proper procedure. So that's
4 all that I'll add in addition to joining with my
5 Senate and Assembly colleagues. Thank you, your
6 Honor.

7 THE COURT: Thank you, Ms. McKay.

8 Anyone else?

9 (No response.)

10 THE COURT: All right. Regarding the
11 motion by Petitioners for the expert reports of
12 Jonathan Katz and Dr. Tapp to be stricken at least in
13 part, I'm going to reserve for the moment on Dr. --
14 Professor Katz. I want to look at something, but it
15 won't be long. As regards to Dr. Tapp, I'm going to
16 rule that Dr. Tapp's report will be considered in
17 response any new material in Trende's reply report
18 and may testify as such. That's really what I'm
19 ruling. The rest of it would be stricken.

20 As regards to leave to submit supplemental
21 briefing, I'm going to allow both parties to submit
22 supplemental briefing. It in no way indicates how
23 I'm going to rule on the case. But I will grant both
24 parties the right to submit supplemental briefing,
25 and I know we're on a tight schedule. I'm directing

1 that those be submitted by Friday, the 18th at 4:00
2 p.m. That's on those two motions.

3 Let's move to the motion by Petitioner
4 asking for an adverse inference to be drawn from the
5 respondents and their failure to appear for noticed
6 depositions.

7 MR. WINNER: Good morning, your Honor.

8 THE COURT: Good morning, Mr. Winner.

9 MR. WINNER: Thank you. Your Honor, on
10 March 3rd Petitioners sought leave to amend -- or
11 leave to conduct discovery, and that discovery was
12 limited and was ordered -- or decided that it would
13 be able to be conducted to allow to be determined
14 whether or not the maps that were adopted by the
15 Legislature were directed and controlled by one party
16 and whether the Republicans had any opportunity to
17 participate and was the IRC process constitutionally
18 undermined.

19 Important in that order were two other
20 very, very important factors in that decision, your
21 Honor. The Court pointed out that the matter needed
22 to be provided with the highest priority and all
23 other matters be aside. In addition, your Honor
24 pointed out the deadline of the 60-day issue and the
25 fact that March 12th was the deadline to proceed with

1 respect to concluding that discovery.

2 So faced with those two particular
3 deadlines, we went forward, and your Honor filed the
4 decision, and thereupon a notice of appeal was taken,
5 whereupon the Respondents felt that that notice of
6 appeal constituted an automatic stay of the
7 proceeding with regard to any discovery. We believe
8 that that was the beginning of an effort to thwart
9 your Honor's order -- or decision, and as such we
10 moved immediately for an application to vacate the
11 automatic stay, which was vigorously opposed by the
12 respondents.

13 Justice Lindley then ruled that the
14 decision did not constitute an order and, therefore,
15 there was no automatic stay. However, he pointed out
16 that in the event that it was an order under
17 5519(a)(1), that it did not prevent discovery from
18 going forward once an order was filed. On March 9th
19 your Honor filed an order granting expedited
20 discovery pursuant to your March 3rd decision, and
21 that order referenced your Honor's review of the
22 papers presented in that case, which included notices
23 of deposition.

24 THE COURT: And that was immediately
25 appealed, wasn't it, my order?

1 MR. WINNER: Your order was not -- that
2 March 9th order was not appealed.

3 THE COURT: But I got a notice of appeal.

4 MR. CUTI: It was, your Honor.

5 MR. WINNER: Excuse me, your Honor. That
6 was immediately appealed. However, the automatic
7 stay does not preclude us from going forward and
8 filing our notices of deposition and proceeding to
9 take notice that the discovery process would
10 continue.

11 THE COURT: You're saying there's no
12 automatic stay, Mr. Winner, once I ruled -- or issued
13 an order after the decision and they appeal it?
14 You're saying there's no automatic stay?

15 MR. WINNER: Yes, your Honor, I'm saying
16 that there is no automatic stay. As Justice
17 Lindsey -- Lindley pointed out, that discovery could
18 go forward once the order was filed; and, therefore,
19 we went forward immediately with notices to take
20 deposition testimony by subpoena. The respondents
21 objected and said that the subpoenas were not proper
22 and that we needed to file notices of deposition,
23 which we promptly did. Both of the subpoenas and the
24 notices of depositions were aimed at Phillip --
25 LATFOR members Phillip Chonigman, Michael Gianaris,

1 Eric Katz, and the IRC David Imamura. And both the
2 subpoena and the notices set forth the same date and
3 time and place for the deponents to appear.

4 The objections that the petitioners -- or
5 the respondents filed or proffered with respect to
6 the deposition notices were the same litigated issues
7 of legislative privilege. They also contended that
8 depositions were not authorized under your Honor's
9 order and decision of March 3rd, and yet those orders
10 authorized discovery without limitations as to form,
11 and the depositions are certainly a form of
12 discovery. See Lopez versus Imperial. But here's
13 the strategy --

14 THE COURT: But in a special proceeding,
15 Mr. Winner, the discovery rules are a little
16 different than your normal case, and my understanding
17 is discovery -- no discovery unless it's authorized
18 and maybe with some particularity as to what you're
19 seeking in discovery.

20 MR. WINNER: You're right, your Honor, and
21 that's what you particularly noted in your March 3rd
22 decision.

23 THE COURT: I think my order just said
24 discovery, discovery is granted. I mean, there was
25 no grant of depositions in particular or subpoena

1 duces tecum.

2 MR. WINNER: Well, your Honor, your -- this
3 March 9th order referenced discovery to proceed
4 pursuant to your decision of March 3rd, and your
5 decision of March 3rd specifically authorized the
6 petitioners to seek discovery as to whether or not
7 the map-drawing process was controlled by one party;
8 whether there was any participation of the Republican
9 party; and, additionally, whether or not the IRC's
10 process was interfered with. Those were your
11 specific directives in the decision of March 3rd.

12 And so -- but where the respondents'
13 determination to prevent any kind of discovery fell
14 down was that when the notices to produce -- or
15 notices for deposition were served. Then it was
16 incumbent upon the respondents to move to a -- for a
17 protective order. And under 3107 McKinney's
18 commentary points out very, you know, distinctly --
19 and I'll quote that -- if the disclosure is sought
20 for any reason unwarranted or improper, the resisting
21 party or witness has a remedy in the motion for a
22 protective order under CPLR 3103(a). The resisting
23 person should make the motion promptly and, in any
24 event, before the day scheduled for the examination.
25 The respondents made no such protective order

1 application, thumbed their noses at your Honor's
2 order and authorization to seek discovery, and as
3 such subjected themselves to the potential sanction
4 under 3126 of the CPLR.

5 And had the deponents appeared in our
6 judgment and answered proffered questions under oath,
7 they would have acknowledged that the process
8 directed and controlled by one political party was
9 done with no Republican participation and that the
10 political data was used to favor the Democratic party
11 and that the IRC process was undermined by
12 Respondents. And so as a result, your Honor, we
13 would therefore request the Court, per 3126, to draw
14 an adverse inferences against each of the deposed
15 deponents for their failure to appear and answer
16 questions at the duly scheduled time and place for
17 their deposition.

18 THE COURT: What was the reason that they
19 gave for not complying with the -- whether it was the
20 depositions or subpoenas, what was the reason they
21 gave for not --

22 MR. WINNER: Well, the primary reason that
23 the respondents have raised is that the issue of
24 legislative privilege in the Speech or Debate Clause
25 of the Constitution precludes legislators and the

1 legislative staff from appearing to answer questions
2 outside the Legislature.

3 THE COURT: Isn't it there -- I mean, we
4 argued about this one other time here. Isn't that a
5 legitimate issue?

6 MR. WINNER: Well, it was a legitimate
7 issue to raise, your Honor. However, your Honor
8 ruled against them with respect to authorizing the
9 discovery -- limited discovery based upon those three
10 provisions; and, therefore, they did not proceed to
11 present themselves for the properly noticed
12 depositions to answer the questions that your Honor
13 specifically authorized to be raised in the March 3rd
14 decision and the March 9th order.

15 THE COURT: Anything further, Mr. Winner?

16 MR. WINNER: No, your Honor.

17 THE COURT: Thank you.

18 MR. WINNER: Thank you.

19 MR. CUTI: Your Honor, if I may.

20 THE COURT: Mr. Cuti?

21 MR. CUTI: Good morning, your Honor.

22 THE COURT: Good morning.

23 MR. CUTI: I just want to start with
24 legislative privilege because that's where Senator
25 Winner just ended, and I'd like to read a paragraph

1 from a brief that I did not write, but let me read it
2 into the record. The Speech or Debate Clause is
3 designed to protect the individual members from being
4 called to answer for their actions in any other place
5 than the legislative body of which they are a member,
6 internal quote. The immunities of the Speech or
7 Debate Clause were not written into the Constitution
8 simply for the personal or private benefit of members
9 of Congress but to protect the integrity of the
10 legislative process by ensuring the independence of
11 individual legislators, close internal quote, United
12 States versus Brewster, 408 US 501, 507 (1972). The
13 individual members act through various vehicles,
14 including committee work. Committees are themselves
15 protected by the privilege. The privilege is unique
16 in that it serves both individual and structural
17 purposes and insulates both the person of the
18 Legislature as well as the legislative acts of a
19 legislator, particularly in service to the
20 legislators informing function. To that end there
21 are structural limits unique to members of the
22 Legislature and the legislative process, close quote.

23 Now, I'll tell you who wrote that brief, a
24 very fine lawyer taught me cross-examination back in
25 1992. His name is David Lewis. And you know who his

1 client was? It was Senator Winter (sic) who
2 submitted that brief in a case called In the Matter
3 of the Governor of the State of New York versus State
4 Senator George H. Winner. They know that the
5 privilege is absolute. Senator Winner's counsel
6 cited the United States Supreme Court broadly
7 construing the federal Speech or Debate Clause, the
8 same exact clause I told your Honor that the New York
9 Constitution provides at least as much protection as.

10 Now let me turn to the motion for
11 sanctions. We were here on March 3rd. The
12 petitioners moved, as they were required to in this
13 special proceeding, for permission even to serve
14 requests for disclosure. Now, I remember the oral
15 argument well -- it wasn't that long ago -- and I
16 read the transcript a few times. Mr. Tseytlin never
17 once mentioned an intention to seek deposition
18 testimony during that oral argument. Your Honor --

19 THE COURT: Was it part of their paperwork?

20 MR. CUTI: It was. Your Honor then asked a
21 question solely about the discovery demands for
22 documents. Mr. Tseytlin responded only to that
23 question and said, your Honor, we're happy to narrow
24 our five requests. There were five requests for
25 documents in the proposed document demand. I got up

1 a few minutes later -- and this is all in my
2 affirmation that was filed yesterday afternoon.

3 THE COURT: I read it.

4 MR. CUTI, -- okay, and I only focused on
5 the document demands.

6 So when I was in the car heading back and
7 read the decision that was posted pretty shortly
8 after the argument, I interpreted it to allow them to
9 serve discovery demands, which, as my papers reflect,
10 is a term of art that means demands for inspection
11 and production of documents.

12 Now let me talk briefly about the automatic
13 stay. I believe Mr. Bucki may have mentioned
14 something about that on March 3rd, but I never did
15 because I understand what CPLR 5519(a) means. A
16 government actor does not get an automatic stay no
17 matter what the nature of the underlying order is.
18 The automatic stay arises only if the lower court's
19 order directs the government to take affirmative
20 action. Your decision didn't direct the Senate
21 Majority Leader or any other respondent to take any
22 action at all. You just granted Petitioners' leave
23 to do something.

24 So I knew there was not an automatic stay,
25 and we directed our clients on March 3rd to begin

1 collecting and reviewing documents because I knew
2 that your decision was in effect, and nothing stopped
3 Mr. Tseytlin and his many colleagues who have flown
4 in here from Ohio and from the City. Nothing stopped
5 them from narrowing their demands and serving them on
6 March 3rd.

7 Now, they misunderstood the CPLR and
8 mistakes happen. Now, Senator Winner just said they
9 immediately went up to the Fourth Department -- this
10 was four days later -- to vacate a nonexistent stay.
11 We were up all night submitting papers and surreply
12 papers, and then we had a long argument before
13 Justice Lindley, and then he issued his ruling by
14 e-mail given the exigency of the time. And he held
15 that your Honor's decision on March 3rd was not an
16 order, but even had it been, it didn't direct the
17 respondents to do anything, so there was no automatic
18 stay, and then he outlined what was supposed to
19 happen next. He said if the petitioners serve
20 demands for discovery, Respondents will object,
21 Petitioners move to compel, and your Honor will rule.

22 THE COURT: That was in his decision?

23 MR. CUTI: It was. I know what CPLR 3107
24 means, and in an ordinary case one would move for a
25 protective order. By the way, had we done so,

1 3107(b) gives you a stay of the requested deposition.
2 I wasn't looking to play games. I wrote three or
3 four or five letters saying we're asserting an
4 absolute privilege, make a motion to compel, we'll
5 oppose it. They never bothered.

6 Discovery sanctions are very rarely ordered
7 unless there's a violation of a court order, and
8 there was no order from your Honor directing us to do
9 anything. Now, had they moved to compel and for the
10 first time expressly asked your Honor, by the way, we
11 want to take depositions of legislative actors about
12 their legislative conduct, well, we would have had to
13 appeal or comply or both.

14 But they didn't do that, and so we didn't
15 violate any order. And that's so clear because they
16 conceded it in their argument before Justice Lindley
17 that you hadn't ordered us to do anything, and that's
18 the whole reason there wasn't an automatic stay. If
19 you had ordered us to do something on March 3rd by
20 your decision or by your subsequent codification in
21 that decision in your March 9th order from which we
22 appealed, if that order directed us to provide X or
23 to sit for Y depositions, well, then we would have
24 appealed it, had a stay; things would have unfolded
25 differently. It's just not what happened.

1 Now, if I misunderstood the scope of the
2 decision and order you entered after the oral
3 argument on March 3rd, I represent to you that I
4 believe that the only thing you granted leave for
5 them to do was serve document demands because that's
6 all that was discussed at the oral argument that I
7 prepared rigorously for and paid close attention to.
8 But let's assume that I was wrong, because I'm wrong
9 like everybody else once in a while. I certainly
10 acted in good faith.

11 And so when you have a situation where
12 there's not even arguably a violation of an order of
13 the Court, the only -- and we cite these cases in the
14 papers. You can't sanction a party unless there's
15 deliberate repeated flouting of legitimate discovery
16 demands. And we didn't do that. They served
17 subpoenas on -- your Honor, can I get a sip of water?

18 THE COURT: Pardon me?

19 MR. CUTI: Can I get a sip of water?

20 THE COURT: Absolutely.

21 MR. CUTI: Pardon me. They purported to
22 serve subpoenas on Senator Gianaris and the counsel
23 to the Majority Leader, Mr. Katz, and to Phillip
24 Chonigman, who is the could executive director of
25 LATFOR. Now, LATFOR, L-A-T-O-R -- LATFOR is a

1 respondent in this proceeding. And if they had read
2 the CPLR a little more carefully, they would have
3 realized that members and agents and employees and
4 directors of a party are construed to be parties for
5 purposes of Article 31 of the CPLR. And as I imagine
6 your Honor knows, you don't serve subpoenas on
7 parties. You serve subpoenas on nonparties.

8 Now, they served subpoenas that were
9 defective on their face. And so if I was acting --
10 if I was using sharp-elbowed litigation, as
11 Mr. Tseytlin referred to before, I would have just
12 ignored them, and when they came to your Honor to
13 say, they ignored these subpoenas, I would have
14 embarrassed them by saying they had no right to serve
15 subpoenas, but I didn't do that. I let them know by
16 letter, and in that letter I said, these are invalid
17 on their face; you're not supposed to be sending
18 process servers to represented parties; if you want
19 to seek this deposition testimony, which I put in the
20 letter they didn't have the right even to seek, as I
21 read your Honor's decision, they needed to serve
22 notices of deposition.

23 So I gave them a heads-up, which is
24 professional, which was courteous, and which was
25 evidence of my complete good faith. And when they

1 served the notices of deposition, I did what I told
2 them I was going to do. I asserted the absolute
3 legislative privilege pursuant to what Justice
4 Lindley recommended was the procedure to be followed
5 going forward. That is the opposite of willful,
6 contumacious, bad-faith behavior.

7 We produced -- even though this is the
8 middle of budget season and Senator Gianaris and the
9 counsel to the Leader are consumed in the annual
10 process of enacting the budget for this enormous,
11 complicated state, they set matters aside because you
12 told me to tell them to do that. And they gathered
13 documents, and we produced them not on the last day,
14 on the day they asked us to produce them. They made
15 their document demands returnable on the 12th, yet
16 they only gave us 17 hours to show up for the
17 deposition on Friday morning.

18 And Senator Winner got up this morning and
19 said, we -- they deprived us of evidence of showing
20 there was no Republican involvement in the process.
21 Well, maybe they haven't reviewed the 388 pages of
22 documents we produced because the answer to that
23 question is in those documents. They haven't been
24 deprived of that evidence, your Honor.

25 Let me turn now to one of my favorite

1 subjects, which is the federal common law of
2 qualified privilege. Your Honor's decision
3 compared -- I was going to say equated, but I will
4 say compared -- members of LATFOR to lobbyists, and
5 that section of your Honor's opinion was very, very
6 close to verbatim with Petitioners' reply brief that
7 we did not have an opportunity to respond to before
8 the oral argument. And the case they cite, Rodriguez
9 versus Pataki, the decision of the magistrate judge
10 in that case --

11 MR. TSEYTLIN: Your Honor --

12 MR. CUTI: I'm right in the middle of an
13 argument, sir. You can wait for me to finish if you
14 don't mind.

15 THE COURT: I'll let you have a chance
16 afterwards, Mr. Tseytlin.

17 MR. TSEYTLIN: Sorry, your Honor.

18 MR. CUTI: As you may know, in the federal
19 system the magistrate judge is lower than the
20 district court judge and parties have the right to
21 appeal a magistrate judge's decision to the district
22 court, somewhat like the parties here can appeal to
23 the Fourth Department.

24 I'm referring now to Exhibit O to the
25 affirmation I filed yesterday in opposition to this

1 motion, which is some of the papers that we filed in
2 the Fourth Department, and I'm referring specifically
3 to Paragraphs 87 and 88 and 89 and 90 and 91 of that
4 submission. And it explains that the language that
5 your Honor quoted from the magistrate judge, that
6 language exists, but there were subsequent decisions
7 in that litigation, and the magistrate judge later
8 ruled that the qualified privilege applied to LATFOR
9 as it did to other legislative actors with respect
10 to, quote, the reasons why [they] and others in the
11 Senate Majority redistricting office drew the lines
12 for particular Senate district in the ways they did.

13 And that's the information they seek here,
14 and even under the qualified privilege the magistrate
15 judge in Rodriguez held it was privileged. There was
16 an appeal from that. It went up to the district
17 court, and the district court emphasized, quote, the
18 rather narrow circumstances, close quote, addressed
19 in the magistrate judge's order and emphasize that
20 there was no authorization to conduct, quote, any
21 depositions of legislators or their staffs, close
22 quote, and that no discovery of any LATFOR official
23 was permitted, close quote, where LATFOR was acting
24 solely as the surrogate of [the Majority Leader] or
25 other individuals members of the Legislature, close

1 quote, 293 F. Supp. 2d 305.

2 I knew that law, and I knew that it didn't
3 apply, but I also knew that even if it did, they
4 didn't have a right to depose these legislative
5 officials about their motivations and their
6 legislative conduct. Petitioners are asking your
7 Honor to do something that no Court has ever done,
8 and that is to draw an adverse inference against the
9 Legislature because a legislator did not provide
10 testimony. It's never been done.

11 In the case of North Carolina State
12 Conference of NAACP versus McCrory,
13 997 F. Supp. 2d 322 (2014), the Court noted in
14 Footnote 47: Plaintiffs argue that the hearing that
15 the Court should draw an adverse inference from the
16 fact that Defendants have asserted legislative
17 privilege and refuse to disclose certain
18 communications that Plaintiffs argue might be
19 probative of intent. This would be inappropriate.
20 Drawing such an inference would be tantamount to
21 punishing a party for asserting a privilege --
22 especially one that as of yet had not been determined
23 to be unavailable, period. It would also be contrary
24 to the Court's prior discovery ruling.

25 In the case of Florida versus United

1 States, 885 F. Supp. 2d 299, the Court also refused
2 to -- let me just read it to you. This is at
3 Footnote 65: The defendants maintain that we should
4 not weigh these contemporaneous statements in
5 Florida's favor but should instead draw an adverse
6 inference against the state because Florida
7 deliberately chose not to put forward any legislator
8 deposition testimony and actively opposed the United
9 States' and interveners' efforts to compel such
10 testimony.

11 During the discovery phase of this case,
12 the interveners moved to compel deposition testimony
13 from four Florida legislators and two legislative
14 staff members, but a federal court in Florida denied
15 the motion on the grounds of legislative privilege,
16 refusing to draw any adverse inference.

17 The only case -- up pretty late last night.
18 The only case that I can find where a Court entered
19 discovery sanctions in a redistricting case against a
20 government actor was in the Detzner litigation in
21 Florida in 2015. Now, Florida does not have a Speech
22 or Debate Clause in its Constitution, and that's not
23 even actually that relevant, but I just want to make
24 sure the record's clear on that. Sanctions were
25 imposed in that case because the Court found that

1 members of the Legislature had, quote, systemically
2 deleted almost all of their e-mails and other
3 documentation relating to redistricting, close quote.
4 Now, that's your classic case for sanctions,
5 spoliation of material evidence. There's no
6 allegation of that here nor could there be. I simply
7 told my clients, not waiving any privileges here -- I
8 simply told my clients, you have an absolute
9 privilege, and if you go down there and you answer,
10 you can't un-ring the bell.

11 I hope your Honor does not enter any
12 sanction in this case, but if you do, I just want to
13 make a technical point. The three persons that they
14 serve notices of deposition on are agents of LATFOR.
15 Now, LATFOR is a party here, but at most you could
16 draw an inference -- and I hope you don't because
17 there's no basis for it -- but at most it would be
18 against LATFOR, not the Senate Majority Leader, not
19 the Speaker of the Assembly, and not the Governor.
20 But this case, one of fundamental constitutional
21 importance, should be decided on the merits, not
22 based on an inference that is simply not supported by
23 the law.

24 Do you have any questions, your Honor?

25 THE COURT: No. Thank you, Mr. Cuti.

1 MR. CUTI: Thank you so much.

2 THE COURT: Before we get to Mr. Tseytlin,
3 is there anyone else?

4 Mr. Bucki?

5 MR. BUCKI: Good morning again, your Honor.
6 We began the morning with the charge of sandbagging
7 from the petitioners, and I would submit that this
8 motion concerning discovery really is the sandbagging
9 that's going on. We went in front of Justice Lindley
10 a week ago Tuesday after this Court entered what all
11 of us actually thought was an order authorizing leave
12 for discovery to be engaged in. And, in fact, when
13 one goes to the NYSCEF docket, it reads decision and
14 order on motion. It was uploaded. It was entered as
15 an order. And, in fact, I guess all of us got it
16 wrong, construing that as an order, because then
17 Justice Lindley said, you know what, it wasn't an
18 order after all. And so as a consequence there was
19 nothing for him to rule upon.

20 Justice Lindley did set forth in great
21 detail a process that the parties should follow with
22 respect to discovery disputes forthcoming, and that
23 process is laid out in Exhibit B to Mr. Cuti's
24 affirmation, and the process went like this: that,
25 first of all, there needed to be an actual order, in

1 Justice Lindley's view, that would come from your
2 Honor. And, in fact, your Honor did issue that order
3 pretty promptly after we brought the issue -- after
4 the petitioners, rather, brought the issue to your
5 Honor's attention. Then there would need to be
6 service of discovery demands.

7 And, in fact, those demands were served by
8 the petitioners, and those demands included some
9 deposition notices, which were much narrower than the
10 initial deposition notices and subpoenas that had
11 been proposed originally by the petitioners, narrowed
12 to the extent that now my client, the Speaker of the
13 Assembly, was no longer sought for a deposition.
14 And, in fact, no one from the Assembly was sought for
15 a deposition. Everyone who was sought to be deposed
16 was either under the control of the Senate, namely,
17 Senator Gianaris himself, and some employees of
18 LATFOR that are on the Senate side of LATFOR and
19 then, in addition, a commissioner of the Independent
20 Redistricting Commission, which is not a party to
21 this case. Those were the depositions that were
22 sought by the petitioners.

23 So all that the Assembly had before it was
24 a document demand. And notwithstanding the position
25 that we took on March 3rd with respect to

1 CPLR 5519(a)(1), which it turned out Justice Lindley
2 didn't even think that there was an order in place --
3 so no wonder it was determined that there was, in
4 fact, no stay -- notwithstanding that we, too,
5 encouraged the Assembly in the event that any
6 documents would need to be produced, to start
7 compiling them so that we would be able to comply by
8 the March 12th deadline that the Court set on
9 March 3rd.

10 And Justice Lindley went on to say that
11 once these discovery demands would be served, if
12 there was any kind of objection that was made to them
13 or if the petitioners thought that the respondents
14 were not complying with their discovery obligations,
15 the response would be a motion to compel. And, in
16 fact, I would like to read from Justice Lindley's
17 decision what he said on this matter. He said,
18 quote, of course, if Respondents object to those
19 demands, being discovery demands that would be served
20 subsequent to last Tuesday, Petitioners may file a
21 motion to compel and the trial court will then be
22 called upon to resolve the discovery dispute.

23 Here there is no motion to compel. Justice
24 Lindley from the Fourth Department, whose rulings are
25 binding upon this Court, set forth the process, and

1 the petitioners didn't follow it, and I would submit
2 that the reason that they haven't followed it is that
3 they don't really care about getting any discovery in
4 this case.

5 What they care about is getting this
6 adverse inference that they're asking for. So in
7 reality it's not that the petitioners are looking to
8 get to the truth or looking to get information from
9 the Assembly or the Senate. They want to get all the
10 benefit without doing any of the work. And we would
11 submit, particularly with respect to the Assembly,
12 that that would be patently unfair because, number
13 one, no one from the Assembly was sought to be
14 deposed. We have no control over the people who were
15 sought to be deposed, and the Fourth Department was
16 clear back in 2018 in the matter of Estate of Lewis
17 that when a party is not -- who is sought to be
18 deposed -- any individual who is sought to be deposed
19 is not under the control of a party, no adverse
20 inference can be taken against that party.

21 And when one looks at the motion that was
22 made by order to show cause by the petitioners for an
23 adverse inference, they asked for an adverse
24 inference to be taken not only against the Senate
25 Majority and the Leader but also against the Speaker

1 and all of the respondents, and we would submit that
2 that is simply impossible given the fact that the
3 Assembly had nothing to do with the so-called willful
4 and contumacious conduct, which I would submit was
5 not willful or contumacious at all given what
6 Mr. Cuti so eloquently said. But we had nothing to
7 do with who was going to appear for a deposition and
8 who wasn't.

9 And notwithstanding that, the best that the
10 petitioners can do is drop a footnote in their
11 memorandum of law in support of the adverse inference
12 request to say that they have a generalized grievance
13 with the way that the Speaker of the Assembly
14 responded to the discovery demands that the Speaker
15 did get, and I would submit that we absolutely
16 complied with our discovery obligations because, in
17 fact, we did serve 131 pages of responsive documents
18 and we served a document response that set forth the
19 Bates-numbered pages that were applicable to
20 particular requests.

21 We did raise some objections, but I cannot
22 recall a single time that I've ever seen a response
23 to a document demand that doesn't set forth some
24 kinds of objections. And if the petitioners have any
25 problems with any objections that we've asserted or

1 what the Majority Leader of the Senate has asserted
2 or any respondent has asserted, they've been given a
3 procedure by Justice Lindley to follow, and they
4 haven't followed it. And, further, the reason why
5 they haven't followed it is that Justice Lindley also
6 said that if a motion to compel were made and this
7 Court were to issue an order compelling disclosure
8 and then if any of the respondents were to file a
9 notice of appeal that that action clearly would give
10 rise to a stay under CPLR 5519(a)(1).

11 And so in reality what the petitioners are
12 also trying to do in their motion is to evade
13 appellate review that would be meaningful with
14 respect to the legislative privilege, which, once
15 documents are produced, the privilege bell cannot be
16 un-rung. And, further, what they're trying to do is
17 to evade our right under CPLR 5519 to get that stay
18 so that we can seek meaningful appellate review, and
19 that stay would not exist in response to necessarily
20 a motion for a protective order that would be on
21 appeal, depending upon what your Honor's order would
22 say.

23 So we would submit, number one, there is no
24 basis at all to take an adverse inference against the
25 speaker of the Assembly and, even if there were, we

1 have complied with our discovery obligations. The
2 petitioners had a means to object if they had any
3 problem with the discovery that we produced. They
4 have not taken those steps, and there is no reason to
5 take an adverse inference. If they want to make a
6 motion, they certainly can. We submit it would be
7 unsuccessful. But let's follow the process that
8 Justice Lindley laid out if there are any kinds of
9 issues pertaining to discovery.

10 THE COURT: Thank you, Mr. Bucki.

11 MS. MCKAY: Your Honor --

12 THE COURT: Ms. McKay?

13 MS. MCKAY: -- may I briefly be heard?

14 For the purposes of the record, I just want
15 to make clear I hadn't planned on presenting any
16 argument with respect to this order to show cause. I
17 do not interpret that order as seeking sanctions
18 against the Governor or the Lieutenant Governor.
19 However, for the purposes of the record, I want to
20 make it clear that the only discovery that was served
21 on the Governor and Lieutenant Governor were document
22 demands to which we did fully respond and that that
23 does not appear to be any subject of the order to
24 show cause that is before your Honor. And if that's
25 an improper interpretation of it, I would

1 respectfully request an opportunity to very briefly
2 provide papers to the Court explaining why any kind
3 of an adverse inference with respect to my clients
4 would be absolutely inappropriate.

5 THE COURT: Thank you, Ms. McKay.

6 MS. MCKAY: Thank you, your Honor.

7 THE COURT: Mr. Tseytlin?

8 MR. CUTI: Your Honor, I object to somebody
9 who didn't argue the motion getting up to do the
10 reply.

11 THE COURT: I'm going to get him do it, but
12 I'll let you reply to his reply.

13 MR. CUTI: Thank you, your Honor.

14 MR. TSEYTLIN: Just I'll be very quick.

15 The reason I was standing up -- I apologize. I
16 should have waited until my fellow counsel
17 finished -- is I thought that he was basically orally
18 arguing a motion for reconsideration of your Honor's
19 decision, explaining why he thought that was wrong,
20 and I thought that was inappropriate, but I do
21 apologize. I should have waited until after he
22 finished.

23 With regard to Justice Lindley's statement,
24 he said there needed to be objections. The way that
25 objections are done to deposition notices is by

1 motion for a protective order. They didn't file
2 that, and because they didn't file that, even though
3 the CPLR requires that, they had to show up.
4 Certainly if they had filed that, that would have
5 been the objection. There are different ways to
6 object to different discovery requests. The way you
7 object to a deposition notice or a subpoena is by
8 filing a protective order.

9 There was a comment from my friend here
10 that said, oh, we're not really trying to get
11 questions answered. We read all our questions into
12 the record. Those are the questions we had intended
13 to ask. Those questions are really by far the best
14 way to get at the issues that we're trying to get at.
15 Those questions are before your Honor. You know, I
16 think it would have been hard for anyone to, under
17 penalty of perjury, say that political data wasn't
18 used in drawing these maps. But, I mean, I guess if
19 they had showed up, we would see if they were willing
20 to say something like that.

21 Now, in terms of the inferences, I do want
22 to clarify. We're asking for adverse inferences
23 against LATFOR and the individuals that didn't show
24 up, not asking for adverse inferences against the
25 Governor or Lieutenant Governor, not asking for

1 adverse inferences against your client. It is often
2 the case in a redistricting litigation that if the
3 map drawer, which is here LATFOR, used political
4 data, got improper communications, that's seen as
5 important evidence. You know, an admission at a
6 deposition about that is seen as important evidence
7 because they are the map drawer.

8 We're not asking for an actual finding of
9 legislative partisan intent or the Governor's intent
10 on signing it. We're saying the map drawers, they
11 use political data. I mean, everyone knows they use
12 political data, but this was the way we were going to
13 get that admission because they would have been under
14 oath, but they didn't show up.

15 And then, finally, this documents thing,
16 you know, they've basically gave us no meaningful
17 documents. They print out a bunch of pages from the
18 public debates over the maps and some tweets.

19 THE COURT: Maybe there aren't any.

20 MR. TSEYTLIN: Maybe there aren't any.

21 Maybe there are. If there aren't any, that's exactly
22 why a deposition was so important, because we have
23 the right to inquire, did you take political data
24 into account in drawing this notorious gerrymander?
25 Under oath, you know, everyone knows the answer to

1 that if they were going to answer it. Did you
2 interfere with the IRC process? We suspect they did.
3 I'm not going to say it with as much confidence as I
4 do about the political data as to what their answer
5 might have been. Did you cut Republicans out of the
6 process? We have a sworn affidavit saying
7 Republicans were not part of the process. I assume
8 they would have conceded to that, but we'll never
9 know because they didn't show up.

10 THE COURT: Didn't Mr. Cuti object to your
11 discovery requests for LATFOR?

12 MR. TSEYTLIN: He objected to our
13 deposition notice, and the way you object to a
14 deposition notice under the CPLR is by filing a
15 protective order. He didn't do that. You know, to
16 be frank, I expected them to file a protective order.
17 We would have been immediately opposed. We were
18 hoping to convince your Honor to deny that, and they
19 would have taken their appeal.

20 They, for reasons passing our
21 understanding, didn't do the typical thing, which is
22 file for a protective order. They just didn't show
23 up. We had a bunch of attorneys that read the
24 question into the record, which we wouldn't have done
25 if they had filed for the protective order and had

1 been granted it. So they made those choices. You
2 know, as Mr. Cuti says, people make mistakes. They
3 made a mistake by not seeking a protective order, and
4 so they had the obligation to show up, and they
5 didn't do so, and the only effective relief is an
6 adverse inference because discovery, of course, was
7 closed.

8 THE COURT: Thank you.

9 Mr. Cuti?

10 MR. CUTI: Thank you, your Honor. That
11 argument is a great example of elevating form over
12 substance. I know how to make a motion for a
13 protective order. I was following what an appellate
14 judge told me to do, which was object. Now -- but
15 let's play out their scenario. If --

16 THE COURT: Is there a more formal way to
17 object?

18 MR. CUTI: A motion for a protective order
19 is what one generally would do. Now, even if I
20 hadn't done that and even if I could have gotten the
21 Senator and the counsel to the Majority Leader and
22 Dr. Chonigman together on 17 hours' notice and
23 absented myself and two of my colleagues from trial
24 prep -- remember now, this is three or four days
25 before trial. 17 hours' notice that they want

1 sanctions for -- when we got to the deposition, I
2 would have instructed them not to answer every
3 question about their motivation or their intent. So
4 is this just an exercise in playing games? I don't
5 know. I don't like to play games in litigation. I
6 like to get to the point.

7 The complaint that they were deprived of
8 evidence about whether Republicans were cut out of
9 the process I've already addressed. If they look at
10 the documents carefully, maybe they could find
11 something.

12 Now, with respect to -- and I know your
13 Honor raised some concerns about this at the
14 March 3rd argument, about whether there was
15 Democratic interference with the process of the IRC.
16 I'll just note that in our answer to the amended
17 petition, which is verified -- none of their
18 pleadings was verified -- there is a specific sworn
19 representation that the respondents did not interfere
20 with the IRC. That hasn't been rebutted. I'll
21 represent to you that there was no information to
22 share about that because none exists. Thank you,
23 your Honor.

24 THE COURT: Thank you.

25 Mr. Bucki, one last -- one minute and I

1 want to move on.

2 MR. BUCKI: The only thing I would like to
3 add on behalf of the speaker, your Honor, is, with
4 respect to LATFOR, Mr. Tseytlin says, oh, we're
5 looking for an adverse inference against LATFOR. I
6 think what's important to acknowledge is that the way
7 LATFOR is set up, there's an Assembly side of LATFOR
8 and a Senate side of LATFOR. And the only people who
9 were sought for a deposition were people who work on
10 the Senate side of LATFOR, no one on the Assembly
11 side of LATFOR, and so to take the proposed adverse
12 inference against LATFOR, in effect, would be taking
13 an adverse inference against the Assembly and people
14 under the control of the Assembly and the Speaker,
15 and for the reasons I've already stated, that would
16 not be appropriate.

17 THE COURT: Thank you, Mr. Bucki.

18 MR. TSEYTLIN: Your Honor, I apologize. I
19 want to clarify the record on what was just said. We
20 did a notice of deposition on LATFOR as an entity,
21 and no one showed up for that, so just to clarify
22 that.

23 THE COURT: Thank you.

24 I'm denying the adverse inference. I think
25 Judge Lindley did set forth a process and I

1 understand, but I think the petitioners did know that
2 there was objections lodged, and they could have come
3 in to me to be more specific as to -- and actually
4 order the respondents to provide certain kinds of
5 discovery. Therefore, I'm denying that motion.

6 I'll get back to you on -- I'm going to
7 take a ten-minute break. I'll get back to you on my
8 reservation on the Katz report -- or affidavit.
9 We'll take ten minutes. Thank you.

10 (A recess was taken.)

11 (Respondents' Exhibits S-16 and S-17 were
12 marked for identification.)

13 MS. MCKAY: May I be heard on something?

14 THE COURT: Pardon me?

15 MS. MCKAY: May I be heard on something?

16 THE COURT: Yes.

17 MS. MCKAY: Okay. With respect to the
18 supplemental briefing deadline, I would request --
19 first of all, it seems like this is supplemental
20 briefing that's on a remedy that is sought by
21 Petitioners here, so I would request that the
22 deadlines for the briefing be staggered. I'm also
23 doing that in part because of my own personal
24 schedule. I have depositions all day on Friday, so
25 there's no way that I can comply with the deadline.

1 I don't believe -- I'm not at a big firm. I don't
2 have a lot of other people at my disposal, so I would
3 request that that deadline for Respondents be pushed
4 to Monday or Tuesday.

5 I did approach Mr. Tseytlin about this. He
6 indicated he's amenable, and he can speak to this to
7 this too, to pushing everyone's deadline perhaps, if
8 your Honor feels that you would have enough time, to
9 the following week. However, I want to put on the
10 record my request that it be staggered because as of
11 right now I don't know what I'm briefing. I don't
12 know what they'd like to brief and what they'd like
13 to argue in favor of their remedy, so --

14 THE COURT: I think everybody knows what
15 they're seeking. I'm assuming they're seeking, you
16 know, suspending the current election.

17 MS. MCKAY: Well, I think, you know, in
18 terms of -- I'd like to see their arguments to
19 understand what arguments they're making in support
20 of their remedy that they're seeking. So that's my
21 request, is that it be staggered, but at the very
22 least I would request that your Honor do put it off a
23 little.

24 THE COURT: Mr. Hecker?

25 MR. HECKER: Your Honor, I would strongly

1 join Ms. McKay. I can't imagine a bolder request
2 than for this Court to suspend the ongoing election
3 processes, and we'd like to see with specificity what
4 their arguments are and what cases and other
5 authorities they're citing so we can respond to them.
6 I don't think it would be a good idea for your Honor
7 to consider enjoining an election without allowing us
8 to respond to the specific cases they cite.

9 THE COURT: Mr. Tseytlin?

10 MR. TSEYTLIN: We would to be helpful to
11 your Honor. If you would to do simultaneous briefing
12 Friday, Monday, we're fine. If we're to do staggered
13 briefing, then the traditional staggered briefing is
14 opening brief, responsive brief, reply brief. So I
15 think the only thing that we would oppose is an
16 opening brief and a response brief with no reply.
17 We're happy with staggered opening, response, reply,
18 and we're happy with moving the schedule back from
19 Friday to Monday to accommodate the schedule of my
20 friend.

21 THE COURT: Is that enough time for you to
22 put in your initial?

23 MR. TSEYTLIN: Yes, your Honor.

24 THE COURT: Is Monday enough time at 4:00
25 o'clock for you to reply --

1 MS. MCKAY: Yeah.

2 THE COURT: -- to answer that?

3 MS. MCKAY: Yeah. Thank you.

4 THE COURT: And then you want an additional
5 day beyond that?

6 MR. TSEYTLIN: We could file a reply
7 Tuesday. Yes, your Honor.

8 THE COURT: All right. So Friday at 4:00,
9 Monday at 4:00, Tuesday at 4:00.

10 MR. TSEYTLIN: Fine.

11 THE COURT: Let's leave it like that.
12 Everybody agree?

13 MR. HECKER: Yes, your Honor.

14 MS. MCKAY: Yes, your Honor. Thank you.

15 THE COURT: With regard to Professor Katz's
16 expert report, I'm going to allow his testimony and
17 expert report as it pertains to the Senate but not
18 the congressional.

19 Okay. So I think we left off -- Mr. Tapp
20 was on the stand, and I think we're resuming direct
21 examination. I'll ask that he be re-sworn.

22 KRISTOPHER R. TAPP,

23 called herein as a witness, having been first duly sworn,
24 was examined and testified as follows:

25 THE DEPUTY: State and spell your name

1 again for the Court. Thank you.

2 THE WITNESS: Kristopher Tapp. Last name
3 T-a-p-p.

4 DIRECT EXAMINATION (CONT'D).

5 BY MR. MULLKOFF:

6 Q. Good morning, Dr. Tapp.

7 THE COURT: Mr. Mullkoff?

8 MR. MULLKOFF: Good morning, your Honor.

9 As a very preliminary housekeeping matter, yesterday
10 afternoon we marked Dr. Tapp's CV as Exhibit S-15. I
11 don't believe we entered it into evidence. I would
12 move at this time to enter S-15 into evidence.

13 THE COURT: Petitioners?

14 MS. DiRAGO: Sorry. That was his CV?

15 MR. MULLKOFF: Correct.

16 MS. DiRAGO: Yeah. No objection.

17 THE COURT: It's admitted.

18 (Respondents' Exhibit S-15 was received in
19 evidence.)

20 BY MR. MULLKOFF:

21 Q. Dr. Tapp, yesterday afternoon we established
22 that you are a math professor at Saint Joseph's
23 University, correct?

24 A. Yes.

25 Q. And your recent work has focused on mathematics

1 relating to elections and redistricting specifically?

2 A. Yes.

3 Q. Have you ever served as an expert witness
4 before?

5 A. No.

6 Q. Have you ever testified in a trial before?

7 A. No.

8 Q. In any context?

9 A. Nope.

10 Q. Are you a little nervous today?

11 A. Very nervous.

12 Q. Did you submit affidavits in connection with
13 this case?

14 A. Yes. Two of them.

15 MR. MULLKOFF: Permission to approach, your
16 Honor?

17 THE COURT: You may.

18 MR. MULLKOFF: I've handed the witness two
19 exhibits that have been pre-marked as S-16 and S-17,
20 which are the two affidavits submitted by Dr. Tapp
21 and filed in this case.

22 Q. Dr. Tapp, do you recognize these two documents?

23 A. Yes.

24 Q. Beginning with S-16, what is that?

25 A. This is the first affidavit I submitted.

1 Q. And S-17, what is that?

2 A. The second.

3 Q. These are the affidavits containing your expert
4 opinions submitted in this case?

5 A. Yes.

6 MR. MULLKOFF: At this time we would move
7 to admit those two documents into evidence.

8 THE COURT: Petitioners?

9 MS. DiRAGO: No objection.

10 THE COURT: They're admitted.

11 (Respondents' Exhibits S-16 and S-17 were
12 received in evidence.)

13 BY MR. MULLKOFF:

14 Q. Dr. Tapp --

15 MS. DiRAGO: I'm sorry. Your Honor, I'm so
16 sorry. We have one objection just to the extent that
17 your order just a few minutes earlier -- that
18 Dr. Tapp's second report, that is not a rebuttal to
19 Mr. Trende's second report. To the extent, you know,
20 his report addresses that, we would like to have it
21 excluded from evidence.

22 MR. MULLKOFF: Your Honor, just briefly.
23 Your Honor's order speaks for itself. My
24 understanding of Dr. Tapp's second report is there is
25 not anything that is about Congress in the second

1 report that is not responding to Mr. Trende's reply
2 report.

3 MS. DiRAGO: And we would disagree.

4 MR. MULLKOFF: But to the extent there is,
5 the judge's order speaks for itself. We don't object
6 to applying the ruling.

7 MS. DiRAGO: So then that portion will not
8 be admitted into evidence?

9 MR. MULLKOFF: To the extent it exists.
10 Are you pointing to particular portions?

11 MS. DiRAGO: If your Honor wants me to.

12 THE COURT: Go ahead.

13 MS. DiRAGO: Sure. So I know, for example,
14 in Page 48 --

15 MR. MULLKOFF: Paragraph 48?

16 MS. DiRAGO: I'm sorry. Yes -- or, no,
17 it's Paragraph 49 on Page 21. Dr. Katz -- sorry.
18 Dr. Tapp talks about the ensemble. The Senate
19 ensemble is very likely to be infected with a level
20 of redundancy that renders them statistically useless
21 and that his congressional ensemble may well suffer
22 from the same deficiency. And that's sort of an
23 example of how he treats this information throughout,
24 so this redundancy issue, he talks about it with
25 respect to the Senate map but then often concludes

1 that it also applies to the congressional map.

2 THE COURT: I understand, but I can parse
3 that when I'm --

4 MS. DiRAGO: Okay.

5 THE COURT: Okay.

6 MS. DiRAGO: That's fine, then, your Honor.
7 Thank you.

8 THE COURT: Go ahead, Mr. Mullkoff.

9 MR. MULLKOFF: So just to confirm, those
10 exhibits have been admitted?

11 THE COURT: They've been admitted except as
12 I determine it shouldn't be considered in my
13 decision.

14 MS. DiRAGO: Can I get the exhibit numbers
15 for those?

16 THE COURT: 16 -- S-16 and S-17.

17 MS. DiRAGO: Thank you.

18 BY MR. MULLKOFF:

19 Q. Dr. Tapp, what was the scope of your analysis in
20 your reports?

21 A. I was retained to weigh in on the methodology
22 and conclusions of Mr. Trende's two affidavits.

23 Q. What materials did you review in conducting that
24 analysis?

25 A. I reviewed his two affidavits; and I reviewed

1 the paper by McCartan and Imai, the preprint; and I looked
2 at the ALARM website, where the proposed algorithm from
3 that paper is made publicly available.

4 Q. I've placed in front of the witness the
5 previously admitted exhibit, P-1. What exhibit is that,
6 Dr. Tapp? I believe it's one of the blue exhibits there.

7 A. The reply of Mr. Trende is -- I'm not positive
8 how to read this.

9 MR. MULLKOFF: I believe, for the record,
10 that P-1 is Mr. Trende's first report and P-2 is
11 Mr. Trende's reply report.

12 Q. Are those Mr. Trende's reports that you
13 reviewed?

14 A. Yes. Exactly.

15 Q. And also in front of you is an exhibit that's
16 been marked as S-1 --

17 A. Yes.

18 Q. -- which is a draft paper by Dr. McCartan and
19 Imai?

20 A. Yes.

21 Q. Is that the document that you referred to
22 reviewing?

23 A. Yes.

24 Q. Did you form opinions regarding Mr. Trende's
25 analysis in this case to a reasonable degree of

1 professional certainty?

2 A. Yes.

3 Q. Generally speaking, what were your conclusions?

4 A. I have severe concerns about both his
5 methodology and his conclusions.

6 Q. So first I'd like to talk about Mr. Trende's
7 methodology. Can ensembles be reliable tools in
8 redistricting?

9 A. Yes. They are standard tools.

10 Q. When we say "ensembles," is that the same as
11 saying simulated maps?

12 A. Yes.

13 Q. What is necessary for an ensemble analysis to be
14 reliable in analyzing a redistricting plan?

15 A. So the overall idea is to have a computer
16 generate an ensemble of thousands of random maps and then
17 compare how those behave on average the enacted map, and
18 for that comparison to be valid, I'd say several things
19 are absolutely essential. One, the random maps have to
20 follow the same rules as the enacted map. So, in
21 particular, they have to be compliant with all of the
22 congressionally mandated rules governing redistricting.
23 Two, I'd say there has to be a large enough ensemble but,
24 more specifically, enough diversity within the ensemble,
25 and that's one of my major concerns that I'll get into.

1 And, three, I think it's crucial that the modeler
2 transparently and clearly specifies what balance of maps
3 the algorithm is spitting out.

4 Q. What do you know about the methodology that
5 Mr. Trende used?

6 A. I think very little is described in the two
7 affidavits, and I learned a little bit more from his
8 testimony on the stand.

9 Q. What is your understanding of which algorithm
10 Mr. Trende used to conduct his analysis?

11 A. He used the sequential Monte Carlo algorithm
12 that is proposed in this McCartan and Imai paper.

13 Q. What is the sequential Monte Carlo algorithm,
14 generally speaking?

15 A. It is a very new algorithm that is based on the
16 some of the same underlying mathematics as the
17 more-established Markov chain algorithms, but it does it
18 in a very, very different way but with the same goal of
19 producing a large ensemble of random maps.

20 Q. What is the current state-of-the art algorithm
21 for redistricting analysis to the extent there is one?

22 A. There are a few slight variations on the idea of
23 Markov chain Monte Carlo algorithms. I would consider
24 those the state of the art.

25 Q. With respect to the sequential Monte Carlo

1 algorithm that Mr. Trende used, do you have an opinion
2 regarding using that algorithm in analyzing a
3 redistricting plan?

4 A. I think it is very new, and I think that there
5 are issues with redundancy creeping into the ensemble
6 that, in my mind, are severe enough that, going forward,
7 anybody using this algorithm should do very careful checks
8 to make sure that the algorithm is structurally -- that
9 the ensemble is structurally intact and isn't suffering
10 from redundancy.

11 Q. Dr. Tapp, a moment ago -- a ago you mentioned
12 the term "balance of maps." What do you mean by that?

13 A. I mean it's not enough just to have a computer
14 algorithm spit out maps. In fact, it's not even enough to
15 have the algorithm spit out maps in a way that avoids
16 looking at partisan data. Unintentional bias can creep in
17 if it's not a well-defined algorithm. So in my opinion,
18 it's extremely essential for the modeler to specify
19 exactly what balance of maps -- the more precise term is
20 target distribution -- is being drawn from.

21 Q. Why is that important?

22 A. Because otherwise there's no way to evaluate
23 whether it's doing the job at an intuitive level, creating
24 maps that are what a nonpartisan human, who knows all the
25 congressional rules, would create.

1 Q. If the target distribution is not clearly
2 defined, does that have an effect on the reliability of
3 conclusions that can be drawn in comparing the ensemble to
4 an enacted map?

5 A. Yes. Absolutely.

6 Q. What type of effect?

7 A. It's -- the whole point of ensemble analysis is
8 to compare apples to apples or compare one apple, namely,
9 the enacted map, to an ensemble of apples, a bushel of
10 apples, the random outputs of the computer. And if the
11 ensemble doesn't follow the same congressional rules or if
12 the ensemble is sampled from a not clearly specified
13 algorithm and we don't know what it's doing, then you're
14 not comparing apples to apples; you're comparing apples to
15 oranges, and an apple's not supposed to look like a bushel
16 of oranges.

17 Q. Do you know if Dr. Imai and Dr. McCartan
18 expressed a view about the relevance of the target
19 distribution in conducting an ensemble analysis?

20 A. Yeah. It's central to their paper from the
21 abstract all the way through. That's the whole point of
22 the complicated mathematical machinery that they're using,
23 is to create an algorithm that is capable of drawing from
24 a specified target distribution. If they weren't trying
25 to do that, they could have used a much, much simpler

1 algorithm, one that's faster, one that requires much less
2 memory in the computer, and essentially one that has no
3 issues with redundancy.

4 Q. Is that related to your apples-to-apples
5 analogy?

6 A. It shows that they are very conscious of the
7 importance of having a modeler know what kind of ensemble
8 the algorithm is spitting out, know that it's a targeting
9 a specific balance of maps, a specific target
10 distribution, that can be defended or criticized in court.

11 Q. I'd like to direct you to the previously
12 admitted exhibit, S-1, which is in front of you, the
13 McCartan-Imai draft paper. On the second page of the
14 exhibit, which has Page Number 1, I'd like to direct your
15 attention to the fourth paragraph down that begins
16 optimization-based.

17 A. Yes.

18 Q. I'm going to read that paragraph without reading
19 the internal citations to academic articles.
20 Optimization-based and constructive Monte Carlo methods
21 can be made scalable and incorporate many constraints, but
22 they are not designed to sample from any specific target
23 distribution. As a result, the resulting plans tend to
24 differ systematically, for example, from a uniform
25 distribution under certain constraints. The absence of an

1 explicit target distribution makes it difficult to
2 interpret the ensembles generated by these methods and use
3 them for statistical outlier analysis to detect
4 gerrymandering.

5 Dr. Tapp, what is your understanding of what
6 Dr. Imai and Dr. McCartan are saying in that paragraph?

7 A. They're pointing out a major problem with some
8 of the previous methods used to construct ensembles, and
9 if those methods aren't clearly and transparently
10 specifying a target distribution and aren't provably
11 targeting that distribution, then the statistical analysis
12 is weakened.

13 Q. Do you agree with their view on that topic?

14 A. Yes, I do.

15 Q. Does that concern also apply to the proposed new
16 model of sequential Monte Carlo?

17 A. It depends how it's used. The main advertised
18 feature in this paper is that it is capable of drawing
19 from a specified balance of plans, target distribution,
20 but it only does that if it's used in exactly the right
21 way.

22 Q. I'd like to talk now about Mr. Trende's specific
23 methodology to the extent you understand it. What is your
24 understanding of what target distribution or balance of
25 maps Mr. Trende used in his models?

1 A. He says very little about that. Like, for
2 example, he mentioned that he told the algorithm to try to
3 preserve counties, and in his testimony he described that
4 as just a toggle switch in the algorithm, yes or no, and
5 there's no clear specification of what that means. Like
6 to preserve counties might mean that you're asking the
7 algorithm to only produce maps that have between 16 and 25
8 county splits or it might mean that you're asking the map
9 to just preferentially be more -- probabilistically more
10 likely to spit out a map with fewer county splits, almost
11 as if it's drawing maps from a hat, but the ones with
12 fewer county splits are to rise to the top of the hat.
13 They're weighted. And either of those would be okay, but
14 neither is specified, and they would result in different
15 kinds of distributions.

16 And then it gets more concerning when added
17 criteria are layered onto the county-splitting criteria.
18 So he -- especially in the second report. He's not only
19 asking the algorithm to spit out maps that preserve
20 counties but also preserve cities and towns and have core
21 retention and other things, and I think it's crucial -- I
22 mean, obviously a human drawing a map would need to know
23 which of those things to prioritize more, what balance to
24 put on the different things you're prioritizing, and I
25 think that's essential to specify how the map is doing

1 that, not just to say, oh, I clicked the toggle that said
2 my maps are going to retain cores, or, I clicked the
3 toggle that says they're going to try to avoid county
4 splits, but to specify the relative weight, the relative
5 importance, that are put on the different competing
6 criteria because these criteria do compete.

7 Q. Based on the information Mr. Trende has provided
8 in his reports and in his testimony earlier this week, are
9 you able to tell which maps his model considers to be
10 included in his sample?

11 A. I can tell very little. I definitely can't tell
12 a clearly specified target distribution. I know a few of
13 the criteria that he considered -- or that he told the
14 algorithm to consider.

15 Q. Based on the information Mr. Trende has provided
16 in his reports and in his testimony, are you able to tell
17 which maps are more or less likely to be chosen for his
18 ensemble?

19 A. No.

20 Q. What does that -- strike that question. What
21 does the information Mr. Trende has provided about his
22 target distribution indicate about the reliability of
23 results drawn from Mr. Trende's ensemble analysis?

24 A. I think it undermines the reliability. I think
25 he's claiming to be producing random maps that are

1 representative of what humans would draw, but it's more
2 like he's producing random maps that are outputs of a
3 computer program that only he knows the parameters he set
4 for.

5 Q. Are you able to tell if Mr. Trende is comparing
6 apples to apples?

7 A. There's a few cases in which you can guess what
8 he did. Like I mentioned, there's different ways of
9 telling the algorithm to maintain counties, and it looks
10 like he did the second, where he sort of severely weights
11 maps that have fewer county splits. Overall, no. Overall
12 I would say he's comparing apples to oranges.

13 Q. With respect to the redistricting criteria
14 contained in the New York Constitution, what do you know
15 about how Mr. Trende applied those criteria?

16 A. In his first report he considered a very short
17 list of the criteria, really just compactness, which was
18 quantified in a very specific way, and continuity is
19 guaranteed because that's how the algorithms work, and
20 county preservation was considered. And I think that's
21 the full list in the both the congressional and Senate
22 case in his first report. And then in his second report
23 he added some congressional criteria to not his Senate
24 ensemble but his congressional ensemble.

25 Q. The fact that those are the criteria that

1 Mr. Trende chose to use in his ensembles, does that have
2 relevance to the results Mr. Trende draws?

3 A. Yes.

4 Q. What, in your opinion, is the relevance?

5 A. Well, it's important to have the random maps
6 follow the same rules as the enacted map. His main punch
7 line is that the enacted map differs from the random
8 outputs. And if it's following different rules, if it's
9 obeying different constitutional requirements, then that's
10 a possible explanation of why there's a difference.

11 Q. What information do you have with respect to how
12 Mr. Trende instructed his models to balance the different
13 constitutional redistricting criteria?

14 A. Absolutely none, and even in his oral testimony
15 he did not seem to clarify that. He just talked about
16 turning on toggles.

17 Q. What relevance does that have to Mr. Trende's
18 results?

19 A. It's sort of the opposite of what a modeler
20 should do of starting with a clearly specified balance of
21 maps that you're choosing to draw from so that all of us
22 can decide whether we agree with the sort of intuitive
23 idea that it's drawing the kinds of maps that humans would
24 draw -- nonpartisan humans.

25 Q. Do you know if Mr. Trende took into

1 consideration the "town on border" with respect to his
2 Senate ensemble?

3 A. He doesn't report taking into account any rules
4 other than just county splitting and compactness and
5 contiguity.

6 Q. What about the "block on border" rule with
7 respect to a Senate ensemble?

8 A. The same.

9 Q. With respect to splitting towns, do you know if
10 Mr. Trendy addressed that in his Senate ensemble?

11 A. I believe he did not.

12 Q. What effect would those omissions have on
13 Mr. Trende's results?

14 A. Again, there are -- those are just more ways in
15 which the enacted map differs from the random outputs and
16 more reasons why, therefore, the partisan statistics of
17 the random maps might differ from that of the enacted
18 plan.

19 Q. With respect to the criterion of preserving the
20 cores of prior districts, maintaining the cores, what
21 information do you have about whether and how Mr. Trende
22 addressed that factor?

23 A. Very little. I believe he said in his report
24 that he told the algorithm to maintain cores. I have no
25 idea what that means. I have no idea what relative weight

1 he gave the preserving of cores compared to the other
2 criteria that he was balancing, and I have no idea how he
3 even operationalized and defined the preservation of
4 cores.

5 Q. Would there be multiple ways to instruct the
6 algorithm with respect to maintaining cores?

7 A. Yeah, especially in a situation where the number
8 of congressional districts change is between the decade.
9 Core preservation is a subtle thing. I think algorithms
10 that measure how much a random map is preserving cores is
11 a little bit subtle because even matching old districts to
12 new districts can be sort of a hard problem.

13 Q. Would -- the choice that Mr. Trende made as to
14 how to instruct the model to preserve cores, would that
15 affect the maps that were chosen in his sample?

16 A. Yes.

17 Q. How so?

18 A. Well, his sample maps would obviously be
19 instructed to either be more likely to preserve cores or
20 to have some core preservation metric between two bounds,
21 depending on how he set that up, and I have no idea which
22 of those he did. Of course it would determine what his
23 random maps look like.

24 Q. Would it have an effect on how maintaining cores
25 was balanced relative to other constitutional criteria?

1 A. Yes.

2 Q. With respect to communities of interest, do you
3 know if Mr. Trende instructed his model to take those into
4 account?

5 A. He said that he did not.

6 Q. I believe Mr. Trende in his second report -- I
7 don't think we need to go into it for efficiency -- says
8 that communities of interest are, quote, difficult to
9 encode. Do you recall that?

10 A. Yes.

11 Q. Do you agree with that statement by Mr. Trende?

12 A. I do agree, yes.

13 Q. Could you explain why?

14 A. Well, in New York there's no agreed-upon
15 specification of which communities should be maintained.
16 I think it would be hard for any modeler to find an
17 accurate way that everybody could agree is correct to
18 program the computer to maintain communities of interest.

19 Q. What effect does not including communities of
20 interest have on the reliability of the model?

21 A. Well, it's another sense in which the random
22 outputs are not following the same rules that the enacted
23 map was required to, so even if we grant that there was no
24 obvious way for him to program the computer to make the
25 random outputs follow that rule, it's still the case that

1 that missing constitutional requirement could undermine
2 the validity of his statistical conclusions.

3 Q. Based on what you've described about the target
4 distribution and the constitutional criteria that
5 Mr. Trende included in his model, do you have an opinion
6 as to whether one can reliably conclude that differences
7 between the enacted congressional and Senate maps and
8 Mr. Trende's ensembles are due to partisan bias?

9 A. I believe there are many other possible
10 explanations.

11 Q. Could you give an example?

12 A. Well, we've talked about many differences
13 between the enacted map -- the rules followed by the
14 enacted map and rules followed by the random maps,
15 including communities of interest.

16 Q. Based on what Mr. Trende -- strike that. Based
17 on your understanding of how Mr. Trende instructed his
18 ensemble with respect to the target distribution and the
19 constitutional criteria and how those criteria are to be
20 balanced, do you have an opinion as to what differences
21 between Mr. Trende's ensembles and the enacted maps can
22 tell us with respect to reliable statistical conclusions?

23 A. I think the failure to specify what balance of
24 maps he's drawing from, the failure to specify a target
25 distribution, kind of makes it a moot point. It makes it

1 almost silly to compare his ensemble to an enacted map
2 because we don't know -- we don't know what his ensemble
3 represents.

4 Q. Is his ensemble an apples-to-apples comparison,
5 in your opinion?

6 A. I don't consider it so.

7 Q. In your first affidavit you refer to sample
8 size.

9 A. Yes.

10 Q. What is the relative sample size to an ensemble
11 analysis?

12 A. The sample -- like, for example, he used a
13 sample size of 5,000, so he has 5,000 random maps. And
14 that has to be big enough to really -- big enough and
15 diverse enough to really yield valid statistical
16 conclusions.

17 Q. In the draft paper by Dr. McCartan and Dr. Imai
18 that we discussed earlier, do they include any validation
19 regarding an appropriate sample size?

20 A. Yes. There is a validation study in which I
21 think they used an ensemble of 10,000 maps to study a
22 state with 50 precincts to be divided into three or four
23 districts.

24 Q. What is your understanding of what sample size
25 Mr. Trende used again?

1 A. Mr. Trende used an ensemble of 5,000 maps to
2 study New York, which has over 15,000 precincts and is to
3 be broken into 26 congressional districts or 63 Senate
4 districts.

5 Q. In Mr. Trende's reply did he use a higher sample
6 size for congressional ensemble?

7 A. For portions of what he did, he increased it
8 from 5,000 to 10,000.

9 Q. Did Mr. Trende do any validation, to your
10 knowledge, to ensure that his sample size was sufficient?

11 A. Not to my knowledge.

12 Q. The hypothetical jurisdiction you referred to in
13 the McCartan-Imai draft paper with 50 precincts --

14 A. Yes.

15 Q. -- how does that relate to applying the
16 sequential Monte Carlo algorithm to New York?

17 A. It definitely doesn't validate that the same
18 sample size would work in the much bigger size of
19 New York.

20 Q. Is it your opinion that additional validations
21 would be necessary?

22 A. Yes.

23 Q. Why is that?

24 A. I think the algorithm is new and I think people
25 are just bumping into how severe the redundancy problem

1 can be, so I think it's crucial to do several validations.
2 Like validations could include running the same thing ten
3 times and making sure that some of the key graphs, like
4 the ordered district graphs, don't change, aren't
5 defective, like look the same in all ten cases, or
6 doubling your ensemble size and making sure the key graphs
7 are unaffected, don't change. And maybe even more
8 crucially in measuring the redundancy, there are ways of
9 measuring the redundancy of the ensemble, and I think
10 that's an important validation to do moving forward.

11 Q. What does redundancy mean?

12 A. So like an extreme case of redundancy would be
13 if all 5,000 of the maps just happened to be exactly
14 identical or maybe just exactly identical copies of just
15 two maps or slight variations on just one single map or
16 slight variations on just two single maps.

17 Q. In those example hypothetical situations you
18 gave, what effect would those levels of redundancy have on
19 the reliability of the ensemble analysis?

20 A. It would completely destroy the ability to make
21 statistical conclusions because -- so why in the first
22 place don't we take just an ensemble of a single random
23 map? And the reason is that would be subject to way too
24 much random variability. A single map just by pure chance
25 might come out being extremely Republican-leaning or

1 extremely Democratic-leaning or extremely competitive or
2 extremely anticompetitive. There's just a lot of wild,
3 random variability into one map. So the reason of using
4 5,000 maps is because extreme qualities of one sort of get
5 averaged and washed out. But if there's too much
6 redundancy, then extreme qualities of one map get
7 amplified.

8 Q. Do you believe redundancy was a risk with the
9 approach that Mr. Trende used in this case?

10 A. Yes.

11 Q. Why?

12 A. There's actually evidence within his report that
13 a severe problem with redundancy did affect his Senate
14 ensemble.

15 Q. Before we get to that, I'd like to ask you about
16 something you discuss on Page 13 of your second report
17 where you use hypothetical people named Amy and Bob.

18 THE COURT: What page is that?

19 MR. MULLKOFF: Page 13 of Dr. Tapp's second
20 report, second affidavit.

21 Q. Could you explain --

22 MR. MULLKOFF: We'll wait for your Honor.

23 THE COURT: Go ahead.

24 Q. Dr. Tapp, could you explain what this example of
25 Amy and Bob -- what you mean in this section?

1 A. Yes. This was an example -- this was sort of a
2 hypothetical example of the sort of redundancy that one
3 might worry would creep into an ensemble using this
4 algorithm and using these methods. So I asked the reader
5 to imagine that Amy and Bob each create a partially
6 finished Senate map, so each of them just draw the first
7 50 districts of the 63 leaving 13 left to be finished. So
8 both Amy and Bob create that. A determination of how the
9 first 50 of the Senate districts are formed. And then,
10 say, a computer just randomly finishes them, so maybe a
11 computer randomly chooses how to create those last 13
12 districts and does that 2,500 times for Amy and 2,500
13 times Bob. And that would result in an ensemble of 5,000
14 maps, but they would all be slight variations on just two
15 maps, Amy's and Bob's.

16 Q. Is this related to the concept of redundancy
17 that you were talking about?

18 A. Exactly. This is an example of the kind of
19 redundancy that could creep into an ensemble because of
20 the way the algorithm works.

21 Q. And let's come back to what you said a couple
22 minutes ago about Mr. Trende's results. Do you believe
23 there was evidence of redundancy in Mr. Trende's results?

24 A. Yes. The histogram in which he shows the
25 Polsby-Popper scores --

1 Q. Let's just look at the histogram, not to
2 interrupt. I believe you're referring to Mr. Trende's
3 first report on Exhibit P-1. What is -- first off, let's
4 take a step back. What does this chart purport to show?

5 A. For his Senate ensemble of 5,000 maps, the black
6 histogram portion is showing the Polsby-Popper scores of
7 all of those maps in the ensemble. And Polsby-Popper
8 scores is one of several compactness measurements one
9 could use.

10 Q. What does the horizontal axis shows?

11 A. That is the Polsby-Popper score. So among the
12 5,000 maps in his Senate ensemble, it looks like the
13 Polsby-Popper scores vary from something like .22 to .27.

14 Q. And what does the vertical axis show?

15 A. That's just the density axis. So when the bump
16 comes up higher, that means more of the maps in his
17 ensemble are in the corresponding range of values on the
18 x-axis.

19 Q. What is your interpretation of what the results
20 are depicted on this chart?

21 A. My interpretation is that the only good
22 explanation for why you would get this crazy, unexpected
23 shape, namely, a bimodal distribution with just two sharp
24 spikes, is that the ensemble is broken, that the kind of
25 redundancy I described with that Amy-Bob hypothetical

1 scenario is similar to what actually happened in his
2 Senate ensemble. I don't believe there's anything about
3 the geography of New York or any state that would make
4 this particular graph come out bimodal like that, and I
5 asked around to several other experts, and they just sort
6 of laughed and said, no way.

7 MS. DIRAGO: Objection.

8 THE COURT: Sustained.

9 Q. Just to be clear, on this chart what do the
10 black bars represent?

11 A. So this is a histogram. And like if you wanted
12 to know in his ensemble what portion of his 5,000 maps
13 have a Polsby-Popper score between .22 and .24, you would
14 just measure the area of the corresponding black shaded
15 region. So this is showing that a good portion of them
16 have Polsby-Popper scores in that range, between .22 and
17 .24, almost none of them have Polsby-Popper scores in the
18 next range, but then, again, a good portion of them have
19 Polsby-Popper scores in a range around .26.

20 Q. And is there any explanation for that clustering
21 in two areas, in your opinion?

22 A. In my opinion, it means the ensemble's broken
23 and it means it's broken because of redundancy. I think
24 that's the only reasonable explanation I can come up with.

25 Q. For example, the set -- the cluster of bars on

1 the left, what is your understanding of what that likely
2 represents?

3 A. For example, that would be similar to the bunch
4 of random maps that are just slight variations on Bob's
5 partially finished map, whereas the bunch on the right
6 would be -- would sort of correspond to the bunch of
7 random maps that are slight variations on Amy's random
8 map.

9 Q. Did you hear Mr. Trende testify about this chart
10 on Monday?

11 A. Yes.

12 Q. I will paraphrase. I don't know if I'll get his
13 exact words right, but I believe on cross-examination he
14 was asked effectively, does anything about this chart look
15 strange to you? And he responded no. Does that surprise
16 you?

17 A. That did surprise me, yes.

18 Q. Why is that?

19 A. It just needs explained. There's no way anybody
20 would expect this graph to look like that. I don't think
21 anybody has seen a bimodal Palsby-Popper histogram and
22 that needs explained.

23 Q. If you were conducting an analysis and a bimodal
24 distribution like this occurred in your results, what
25 would you do?

1 A. When I first read the report, that jumped out at
2 me as that's just wrong, that needs explained.

3 Q. What would you do if it were you?

4 A. I would dig deeper. My first guess would have
5 been what I'm now saying, is that there's redundancy in
6 the ensemble, and I would have analyzed that.

7 Q. Would you have performed validations?

8 A. Yes. I mean, I would have access to the
9 ensemble, so you can actually break it in parts and see
10 what the two parts -- basically this is saying that the
11 whole ensemble of 5,000 maps breaks into two camps. And
12 you could actually look at those two camps and see what
13 properties they have and see how much redundancy there is
14 between the two camps and see how they compare to each
15 other.

16 Q. Do you have access to the maps that Mr. Trende
17 generated in his ensembles?

18 A. I do not.

19 Q. In your second report you refer to a replication
20 that you did. Could you explain what you refer to in
21 there?

22 A. This is exactly because I do not have access to
23 Mr. Trende's data. So I did a replication in which,
24 together with a research assistant, I used exactly the
25 same algorithm, the McCartan-Imai algorithm, downloaded

1 from the same site and built an ensemble of 5,000 maps
2 just like he did. And since -- because of his testimony,
3 I now know that he used a compactness setting of 1. But I
4 didn't know that at the time, so I tried several choices
5 for a compactness setting because I was aware from the
6 start that that would be the parameter -- the compactness
7 parameter that most severely affects how much redundancy
8 you expect to have in your ensemble.

9 Q. I believe you say in your report that the
10 compactness setting of 1 has the least concerns about
11 redundancy of any compactness setting; is that accurate?

12 A. Exactly. Yes.

13 Q. And that we now know that is what Mr. Trende
14 used, right?

15 A. Exactly. Yes.

16 Q. Do you still have concerns about redundancy when
17 the compactness setting is 1?

18 A. Yes. My replication study showed th at there's
19 still severe concerns. I was surprised by that.

20 Q. Could you explain, please?

21 A. Yes. So we created a Senate ensemble of 5,000
22 maps, and we looked at the redundancy carefully, and the
23 level of redundancy was shocking. It turned out to be
24 that about half of the districts appear in exactly the
25 same configuration in over half of the maps, so that's

1 crucial. Let me say that in a different way. You can
2 take the ensemble of 5,000 maps --

3 Q. Let me just pause. Are you referring to
4 Paragraph 47 of your second report, Page 19?

5 A. Yes.

6 Q. Okay. I apologize for interrupting.

7 So what did you find when you looked at your
8 replication of Mr. Trende's ensemble?

9 A. So basically the 5,000 maps, you can take a
10 subcollection of more than half of them, over 3,000 of
11 them, and within that subcollection they all have in
12 common the way their first 31 districts are drawn, exactly
13 in common.

14 Q. What effect does that have on the reliability of
15 the ensemble?

16 A. It could have a huge effect because the way that
17 those first 31 districts were drawn, that just happened
18 one time, so that could be subject to wild-chance
19 variability. Just by pure chance that -- let's call it
20 half of a map -- the specification of the way those first
21 31 districts were drawn, that could be extremely
22 Republican-leaning; it could be extremely
23 Democrat-leaning; it could be extremely anticompetitive or
24 competitive, and that single choice of half a map that was
25 supposed to be -- just appear once in the ensemble, its

1 importance gets amplified because it appears in half of
2 the maps of the ensemble, and that could have very extreme
3 effects on the partisan statistics of the resulting
4 ensemble.

5 Q. A Senate ensemble of 5,000 maps in which 31
6 districts are the same in 3,219 of those maps --

7 A. Yes.

8 Q. -- in your opinion, does that constitute a
9 representative sample of actual maps that would be drawn
10 by actual map drawers?

11 A. No.

12 Q. Why is that?

13 A. It's more as if the 5,000 map drawers mostly
14 just copied each other.

15 Q. With respect to the compactness setting of 0 --
16 I want to ask also about the county preservation --

17 A. Yes.

18 Q. -- mode that Mr. Trende chose. Do you have a
19 further understanding of what Mr. Trende did with
20 instructing his model about preserving counties now?

21 A. Yes. He did testify to that, so my new
22 understanding is that he's basically using just the
23 built-in switch that's yes or no, do you want the model to
24 preserve counties. And the way that that's done under the
25 hood is described in the McCartan-Imai paper.

1 Q. What effect would it have for Mr. Trende to have
2 used that -- what effect did it have that Mr. Trende used
3 that instruction with respect to preserving counties?

4 A. I think it undermines the ability of any of us
5 to really know and understand the target distribution. I
6 mean, I've mentioned that McCartan and Imai's algorithm is
7 capable of drawing from any specified target distribution,
8 but that combination of settings is at the exact opposite
9 extreme. When you use a compactness to 1 and you turn on
10 county splitting, it's drawing from a distribution that
11 nobody really understands. I call that the hierarchical
12 spanning tree distribution. I don't think that's common
13 language yet because it's not commonly discussed yet.
14 It's a distribution that needs to be understood but isn't
15 yet.

16 Q. What effect would the hierarchical spanning tree
17 distribution being implicated have on the reliability of
18 the results?

19 A. It basically means we would need to understand
20 that in order to understand what sort of maps are in his
21 ensemble and we don't.

22 Q. Did Mr. Trende provide any information about
23 that concept in his reports or his testimony?

24 A. No.

25 Q. Taking a step back and talking about all of

1 Mr. Trende's methodology to the extent you understand it,
2 in your opinion, does Mr. Trende's ensemble of the
3 congressional map provide a representative sample of
4 actual maps that could be drawn by actual people without
5 partisan consideration?

6 A. No, I do not believe it does.

7 Q. What about the Senate ensemble?

8 A. I do not believe it does.

9 Q. In your opinion, what does comparing
10 Mr. Trende's congressional and Senate ensembles to the
11 enacted maps tell us?

12 A. There's so many explanations for what could
13 cause the difference, it's hard to attribute differences
14 to partisan intent.

15 Q. Does Mr. Trende -- do Dr. Trende's ensembles
16 provide apples-to-apples comparisons of maps -- of actual
17 maps that would be drawn by actual map drawers?

18 A. I don't believe so. No.

19 Q. Do you hold these opinions to a reasonable
20 degree of professional certainty?

21 A. Yes.

22 Q. Dr. Tapp, what is the gerrymandering index that
23 Mr. Trende refers to?

24 A. It is a single number that attempts to measure
25 how close the enacted map is to the random maps in the

1 ensemble basically with respect to what their ordered
2 district's plot looks like.

3 Q. What does it show?

4 A. Since it's a single number, it's hard to say
5 what it shows because that single number can be high for a
6 variety of reasons. It can be high because the map favors
7 one party or favors the other. It can be high because the
8 map, relative to the ensemble, is very competitive or very
9 noncompetitive. It can be high because of what happens in
10 districts that are so noncompetitive that they don't
11 affect the number of seats won by either party. It can be
12 high for a variety of reasons, so its limitation is that
13 it's just one single number that has a lot packed into it.

14 Q. Does the gerrymandering index provide any
15 information about which party an enacted map favors?

16 A. No.

17 Q. Does the gerrymandering index provide any
18 information about whether an enacted map discourages
19 competition?

20 A. No.

21 Q. Do you believe the term gerrymandering index is
22 an accurate title for what information the index provides?

23 A. It has some issues.

24 Q. And I'd like to turn your attention to
25 Mr. Trende's first report on Page 15, Exhibit P-1.

1 Dr. Tapp, what does this chart that Mr. Trende provided
2 show?

3 A. This is a standard ordered districts plot. So
4 along the horizontal axis are just the numbers 1 through
5 26 because there are 26 congressional districts. And if
6 you first look at the dots, those are just the Democratic
7 seats/chairs in those districts, and they're guaranteed to
8 go uphill because they're ordered from the most Republican
9 district on the left to the most Democratic district on
10 the right.

11 So like, for example, the leftmost dot over the
12 ordered District Number 1 looks like it's at about 42
13 percent. That means that in the most Republican-leaning
14 of the districts, the Democratic vote share was 42
15 percent, and then those go all the way up to the far
16 right. It's in the 90s. So that's what the dots mean.
17 And then you imagine doing the exact same thing, creating
18 those dots for every one of the 5,000 maps in the
19 ensemble, and that gives you your clouds of dots that are
20 colored blue when they are above the 50 percent line and
21 red when they're below the 50 percent line.

22 Q. And the red and blue dots, are those the results
23 of the simulated maps Mr. Trende created?

24 A. Yes.

25 Q. To be clear, do you believe those red and blue

1 dots are an accurate representation of actual maps actual
2 map drawers would draw?

3 A. No.

4 Q. On the left side where it says percent
5 Democratic, what is that number based on?

6 A. That's based on the partisan index that
7 Mr. Trende chose which came from partisan data from a list
8 of elections that happened between 2016 and 2020 averaged
9 together.

10 Q. In your opinion, does this chart show anything
11 with respect to the partisan lean of the enacted
12 congressional map in comparison with Mr. Trende's
13 ensemble?

14 A. When you look at it carefully, it shows that the
15 enacted map has a slight Republican lean relative to the
16 maps in the ensemble.

17 Q. Why do you say that?

18 A. The easiest way is to really create the picture
19 that Mr. Trende should have shown, sort of the standard
20 picture, which is a histogram that shows the number of
21 seats predicted to be won by the Democrats in the enacted
22 maps and also in all of the maps in the ensemble.

23 Q. Did you create that?

24 A. Yes, I did.

25 MR. MULLKOFF: Let's turn to Page 7 of

1 Mr. -- of Dr. Tapp's second affidavit.

2 Q. Dr. Tapp, with respect to the chart on the top
3 of this page, what is that?

4 A. This is a histogram showing the predicted number
5 of Democratic seats won by the enacted maps. So the blue
6 vertical line shows that the prediction is that the
7 Democrats would win 22 seats, and it also shows it for all
8 of the 5,000 maps in the ensemble. That's what the shaded
9 light blue area is. So, for example, the shaded area
10 comes up highest over the number 23. That means that's
11 the most commonly occurring number among the many, many
12 maps in the ensemble. Like a large number of them elect
13 23 Democrats, and some also elect 24, and a few even elect
14 25, and a smaller number elect 21.

15 Q. What information did you use to create this
16 histogram?

17 A. I used the chart that we were looking at just
18 previously, the ordered district chart on a Page 15 of
19 Mr. Trende's first report, and I pretty much just
20 approximated for each one of those rectangular clouds what
21 portion of it was red and what portion of it was blue.

22 Q. Were you able to count exactly how many of
23 Mr. Trende's dots were each color?

24 A. No. There was some estimation, but it didn't
25 affect the overall shape and the overall conclusion.

1 Q. When it says "Democratic seats" on this
2 histogram, what does that refer to?

3 A. That refers to the prediction using the partisan
4 index that Mr. Trende used to create his graph of how many
5 Democrat -- how many districts will be won by the
6 Democratic party.

7 Q. Are you saying that for any district that is
8 above 50 percent in Mr. Trende's partnership index, a
9 Democrat candidate will always win?

10 A. No. These are predictions for what's going to
11 happen in future elections starting in 2022. So nobody
12 could possibly know that. I'm just using this -- I'm sort
13 of doing the simplest approximation, which is exactly what
14 Mr. Trende did in coloring the dots red and blue, sort of
15 using the 50 percent as the baseline.

16 Q. What is your conclusion -- do you have any
17 conclusions from this histogram regarding the partisan
18 lean of the enacted map in comparison with Mr. Trende's
19 congressional ensemble?

20 A. Yeah. It exactly shows the enacted map has a
21 slight Republican lean compared to the maps in the
22 ensemble. It elects slightly fewer Democrats than on
23 average to the maps in the ensemble.

24 Q. According to this chart, how many Democratic
25 seats does the enacted map have?

1 A. 22.

2 Q. According to this chart, which is based on
3 Mr. Trende's data, what is the most common number of
4 Democratic seats in Mr. Trende's congressional ensemble?

5 A. 23.

6 Q. What's the next most common number?

7 A. 24.

8 Q. I would like to turn your attention to
9 Mr. Trende's chart on Page 21 of his first report.

10 A. Yes.

11 Q. What is this -- what does this chart show?

12 A. I think I'm looking at the wrong report. One
13 second.

14 Q. It's Exhibit P-1.

15 A. This is exactly the same thing except for for
16 the Senate ensemble instead of the congressional ensemble.

17 Q. Do you have any -- do you have any opinions
18 regarding whether this chart shows anything with respect
19 to the partisan lean of the enacted Senate map in
20 comparison to Mr. Trende's Senate ensemble?

21 A. Again, it shows that the enacted map is
22 Republican-favoring relative to the maps on average in the
23 ensemble, and in this case the Republican lean is more
24 extreme.

25 Q. What makes you say that?

1 A. Well, I did the same activity of creating the
2 histogram that Mr. Trende should have shown.

3 Q. Where is your histogram?

4 A. That's Page 7, Paragraph 13, of my second
5 report, right underneath the congressional one that we
6 just looked at.

7 Q. In your lower histogram on Page 7 of
8 Exhibit S-17, what does that chart show?

9 A. It's very similar. So for the Senate case the
10 enacted map would be predicted to elect 49 Democrats,
11 whereas all of the 5,000 maps in his ensemble elect at
12 least 51, and the most common number for them to elect is
13 53.

14 Q. What information did you use to create this
15 histogram?

16 A. It was the same. I counted dots. I
17 approximated what portion of each one of those bars was
18 red and what portion was blue. So there was some
19 estimation, but it doesn't affect the overall shape and
20 the overall conclusions.

21 Q. When you use the term "Democratic seats" in this
22 chart, what does that refer to?

23 A. It means the number of seats that would be
24 predicted to be won by Democrats using the partisan index
25 that Mr. Trende used. And by -- "won" means won with over

1 50 percent of the vote share.

2 Q. Are you saying that for any district that is
3 above 50 percent in Mr. Trende's partisanship index, a
4 Democrat will always win that seat?

5 A. No. It's a prediction for the future elections
6 based on past partisan data, so nobody can know that for
7 sure.

8 Q. Looking at your Senate histogram, the lower part
9 of Page 7, which is based on Mr. Trende's ensemble
10 results, what does it indicate about how many Democratic
11 seats the enacted map contains?

12 A. It predicts 49 for the enacted map.

13 Q. What is the most common number of Democratic
14 seats in Mr. Trende's Senate ensemble?

15 A. 53.

16 Q. What is the next most common number in Mr.
17 Trende's Senate ensembles?

18 A. Probably 54, but it could be 55. There's some
19 approximation, so I don't want to say that I know for sure
20 when the bars are close.

21 Q. Is it accurate to say that the second and third
22 highest numbers -- the second and third most common
23 numbers of Democratic seats in Mr. Trende's Senate
24 ensemble are 54 and 55?

25 A. Yes.

1 Q. What are the fourth and fifth most common
2 numbers of Democratic seats in Mr. Trende's ensemble?

3 A. 51 and 52.

4 Q. What is the sixth most common?

5 A. There's a very small portion that have 56.

6 Q. Was there any one of Mr. Trende's 5,000 Senate
7 ensembles in which Democrats -- in which there are fewer
8 than 51 Democratic seats?

9 A. No.

10 Q. Dr. Tapp, in Mr. Trende's second report, he
11 refers to a figure of 53 percent.

12 A. Yes.

13 Q. And I believe he also testified about that on
14 Monday.

15 A. Yes.

16 Q. Do you recall that?

17 A. Yes.

18 Q. What is your understanding regarding what
19 Mr. Trende is saying about the 53 percent number?

20 A. I think he's moving the goalpost. I think he
21 chose his partisan index, which was based on blended
22 election data, and he's now arguing that compared to his
23 partisan index in congressional elections, Republicans do
24 a little bit better. So he wants to move from the
25 standard baseline, that 50 percent is parity between the

1 parties, to this 53 percent number that I consider weakly
2 justified and ad hoc.

3 Q. Is it common, in your experience in mathematical
4 and statistical research, to apply a different measure in
5 the second stage of a two-stage experiment?

6 A. I've never seen anything like that. In fact, it
7 undermines mines the value. When you do have a two-stage
8 experiment in which see how the first stage comes out
9 before you set the bar for the second stage, then there's
10 all kinds of statistical issues with that.

11 Q. Does that have an effect on the reliability of
12 the results one reaches?

13 A. Yes.

14 Q. I'd like to turn your attention to Mr. Trende's
15 second report, Page 10, Exhibit P-2. Dr. Tapp, do you see
16 the chart on Page 10 of Mr. Trende's report?

17 A. Yes.

18 Q. What is your understanding of what this chart
19 shows, generally speaking?

20 A. This is showing for the congressional elections
21 in 2016, 2018, and 2020, the actual Democratic vote share
22 in all those elections, and it's being compared to the
23 partisan index, which is like what the predicted
24 Democratic vote share would be according to the partisan
25 index he chose using statewide election data.

1 Q. By "he" do you mean Mr. Trende?

2 A. Yes.

3 Q. Is it your understanding that Mr. Trende used
4 this chart in reaching his 53 percent figure?

5 A. Yes.

6 Q. In your opinion, is Mr. Trende's method of
7 reaching 53 percent using this chart reliable?

8 A. No. It's ad hoc and not reliable.

9 Q. Why is that?

10 A. There's several reasons. But, I mean, just
11 looking at the chart, his argument seems to be that 53
12 percent is about the place that you would draw a
13 horizontal line across the chart so that it's mostly blue
14 below your line and mostly red above the line, but even
15 that's not exactly the case. Like when I looked at it
16 carefully, it's more like 52 is where you have to draw the
17 line so that the number of exceptions are balanced. It's
18 mostly blue except for, say, five red below the line and
19 it's mostly red except for, say, five blue above the line.
20 To get that balance, you have to move the line to about
21 52.

22 And, furthermore, if you ignore Katko's
23 district, which is exceptional and is somebody who's
24 retiring and, hence, is an effect that couldn't possibly
25 affect the next decade, the line moves to more like 51.

1 But I don't want to argue for 51 instead of 53. I think
2 the moral of this is that when you do this kind of
3 activity of trying to figure out where to draw the line,
4 you realize that the only thing you're measuring is
5 incumbent effects from the past decade, Katko and other
6 incumbents.

7 Q. To be clear, which district is representative of
8 Katko?

9 A. 24. So this sort of activity of figuring out
10 the right place to draw the line, is it 50 percent, or is
11 it something above, is purely based on incumbent effects.
12 I mean, there's districts that his partisan index would
13 predict would go red but instead went blue and vice versa,
14 and it's all -- like the reason that happens is because of
15 particular incumbents who are popular or unpopular or
16 controversial. That's why statewide election information
17 sort of differs from congressional election information.
18 So these -- where you put the bar, this number we're
19 arguing about is purely about nothing other than the last
20 decade's incumbent effects, and I think it would have no
21 predictive value on the next decade's incumbents because
22 the whole point is a whole new set of lines will be drawn.

23 Q. As a mathematician, is the method Mr. Trende
24 employs using the chart on Page 10 a method you would use
25 to reach a reliable conclusion?

1 A. No.

2 Q. I'd like to turn our attention to the next page,
3 Page 11, of Mr. Trende's reply report.

4 A. Yes.

5 Q. Mr. Trende refers to a regression analysis,
6 correct?

7 A. Yes.

8 Q. What is your -- do you have an opinion as to
9 whether Mr. Trende's regression analysis supports his
10 conclusion regarding 53 percent?

11 A. I don't believe it does. I have some issues
12 with it. For one thing, it's very sensitive to data that
13 just doesn't matter. If you look at a district where the
14 partisan index is very high, like 90 percent, it doesn't
15 make a bit of difference to the election outcome, whether
16 the congressional vote share was 70 percent or 100
17 percent. That doesn't change the election, but it does
18 change his punch line of the analysis. So that's one
19 issue.

20 But my deeper issue is that it's just the wrong
21 activity to do. Like he's running a regression, and
22 reporting these statistical things, confidence intervals,
23 and p-values, and I don't think this is a setting in which
24 that statistical language is even appropriate. You use
25 that language when you're trying to decide whether some

1 effect could have been caused by chance.

2 Like so the standard example in statistics is a
3 clinical trial where you have 100 participants that need
4 to be broken into maybe half of them in a control group
5 and half of them in an experiment group, and if in the end
6 the experimental group that got the drug ends up
7 healthier, you ask, well, is that because of the drug, or
8 could have been caused by chance? And there was chance in
9 that experience, the chance of how they were broken into
10 two groups. So the language of confidence intervals in
11 statistics is exactly designed to answer the question,
12 could this have been done by chance?

13 But he's applying this to a table where there's
14 no chance. This is just exactly how elections turned out
15 in the previous decade. I don't see a chance element. I
16 just don't see the appropriateness of using this language
17 at all. So I did say in my report that the 50 percent
18 standard baseline does fall within his confidence
19 intervals, but that's almost silly because I don't believe
20 that the language of confidence intervals is relevant.

21 Q. With respect to that comment about 50 percent
22 falling within Mr. Trende's confidence intervals, what
23 does that mean with respect to whether Mr. Trende's
24 conclusion believes that 50 percent as a marker of
25 Democrat or Republican would or would not be a reasonable

1 conclusion?

2 A. Personally I think 50 percent is the only
3 reasonable baseline. That's just what people use. And I
4 did point out that it falls within his confidence
5 interval.

6 Q. And what does that mean that it fell within his
7 confidence interval?

8 A. It means according to his calculations, it's
9 within the realm of reasonable.

10 THE COURT: Mr. Mullkoff, within the next
11 five or so minutes, can you pick a spot, or are you
12 almost done?

13 MR. MULLKOFF: I actually will finish
14 probably within five minutes.

15 THE COURT: Okay. Very good.

16 MR. MULLKOFF: Good timing.

17 BY MR. MULLKOFF:

18 Q. Did Mr. Trende take into account any other
19 variables in his regression?

20 A. It's nothing but regression based on the numbers
21 in this table. He didn't into account incumbency, and I
22 would say it's measuring nothing except incumbency. The
23 whole point is this sort of analysis is measuring nothing
24 except incumbency in the last decade, and that's not what
25 you want to be measuring if your goal is to predict what's

1 going to happen in future elections.

2 Q. In your opinion, is it important to account for
3 incumbency?

4 A. I would more say it's important not to do this
5 kind of two-step experiment at all.

6 Q. If one is doing the type of regression
7 Mr. Trende is of comparing congressional election results
8 to statewide averages, in your opinion, is it important to
9 control for incumbency?

10 A. Yes, controlling for incumbency or acknowledging
11 that it's not measuring anything much other than
12 incumbency. Yes.

13 Q. Do you have an opinion as to whether the
14 regression Mr. Trende performs on Page 11 provides a
15 reliable forecast of what the results are likely to be in
16 future elections in new districts?

17 A. I do not find it reliable.

18 Q. Why is that?

19 A. I think overall it's ad hoc and just a
20 non-convincing attempt to move the goalpost from the
21 standard 50 percent to 53 percent.

22 Q. On Page 11 Mr. Trende also uses the number 55.6
23 percent.

24 A. Yes.

25 Q. And in the interest of efficiency, I'll quote.

1 He says: As the point at which Republicans have no chance
2 at winning whatsoever. To the best of your understanding
3 of what Mr. Trende is doing, what is that 55.6 percent
4 number based on?

5 A. That seems purely from the row corresponding to
6 District 24, which is John Katko's district. So, again, I
7 think that number has no predictive value for what's going
8 to happen in congressional elections in the next decade
9 under a new set of lines. It's just a statement about
10 what happened in the past decade.

11 Q. In your opinion, is the 55.6 percent figure that
12 Mr. Trende arrived on a reliable way to determine the
13 point at which a Republican candidate has no chance at
14 winning in a future district?

15 A. No. It's just a statement about what happened
16 in a collection of elections from the past decade.

17 Q. In your opinion, are the methods that Mr. Trende
18 uses on Pages 10 and 11 of his reply statistically
19 reliable ways to predict future election results?

20 A. No.

21 Q. In your opinion, is there any basis to apply the
22 53 percent figure Mr. Trende uses to the Senate map that
23 was enacted?

24 A. That's even weaker because he derived that
25 number in a non-convincing way purely by looking at

1 congressional data. I don't see any basis for assuming
2 anything would work out the same way if he looked at
3 Senate data.

4 MR. MULLKOFF: I have no further questions.

5 THE COURT: Thank you. You can step down
6 for the moment until after lunch, Doctor.

7 And we'll pick up again at ten minutes to
8 2:00. Okay. That gives everybody about an hour and
9 20 minutes. Okay? Thank you.

10 (A recess was taken.)

11 THE COURT: Bring the witness up.
12 You're still under oath, sir. Okay?

13 THE WITNESS: I understand.

14 THE COURT: All right. Where we,
15 cross-examination?

16 CROSS-EXAMINATION

17 BY MS. DiRAGO:

18 Q. Hello, Dr. Tapp.

19 A. Good afternoon.

20 Q. My name is Molly DiRago, and I am an attorney
21 for Petitioners. How are you?

22 A. I'm well.

23 Q. So your opinion is that Mr. Trende's methodology
24 that he used to create his ensemble maps did not yield
25 statistically valid results, correct?

1 A. Correct.

2 Q. But you didn't create your own ensemble of
3 simulated maps using what you would consider a valid
4 methodology, did you?

5 A. I did not.

6 Q. Weren't you even curious to see if they would
7 yield the results you think they would?

8 A. It's not a quick and easy thing.

9 Q. So you were not curious to even see what they
10 would yield?

11 A. Not curious enough to spend all the tens of
12 hours it would take to do it correctly.

13 Q. You were asked to opine on the validity of
14 Mr. Trende's analyses, right?

15 A. Correct.

16 Q. Wouldn't it have been quite persuasive to create
17 your own ensemble and demonstrate conclusively that
18 Mr. Trende's ensemble has different results than your more
19 valid ensemble?

20 A. That's just not within the parameters of what I
21 was retained to do.

22 Q. But it would have been more persuasive, correct?

23 A. I'll leave that to the Court.

24 Q. In fact, none of Respondents' five experts
25 created their own ensemble of maps using a valid

1 methodology, did they? I'm sorry. Let me strike that.
2 None of the respondents five experts created their own
3 ensemble maps using what they would consider valid
4 methodologies, right?

5 A. I was not allowed to be in the room for
6 Dr. Barber's report, so I'm not sure what he did. And
7 aside from that, you're correct.

8 Q. Okay. So you didn't calculate your own
9 gerrymandering index for any of the enacted maps, did you?

10 A. The gerrymandering index can only be calculated
11 once you have an ensemble, and no.

12 Q. Okay. Thank you.

13 So then I guess we'll look at Dr. Trende's
14 gerrymandering index, which is -- well, let's look at the
15 congressional exacted map gerrymandering index, which is
16 on Page 14 of his first report. And I just want to ask
17 you before we really look at this, you take issue with
18 Mr. Trende's sample size with his ensemble maps, correct?

19 A. Yes.

20 Q. But did you know that Dr. Barber created 50,000
21 ensemble maps using Mr. Trende's analysis?

22 A. I only ever looked at a rough draft early report
23 of Dr. Barber's affidavit which I don't think match very
24 well with the final report, so I'm honestly not sure what
25 he did.

1 Q. So it wouldn't surprise you if you heard that he
2 said his results aligned with Mr. Trende's results, would
3 it?

4 A. I have no basis for knowing.

5 Q. Okay. So you agree generally that a
6 gerrymandering index tells us how much the enacted map
7 vectors vary from the average of the ensemble maps
8 vectors, correct?

9 A. Yes. Exactly.

10 Q. And the larger the gerrymandering index, the
11 more variance there is, correct?

12 A. Yes.

13 Q. And you would agree that Mr. Trende's calculated
14 gerrymandering index shown on this chart is large, right?

15 A. Yes.

16 Q. In fact, the average gerrymandering index on the
17 congressional ensemble maps is around 7.5, correct?

18 A. Yes, percent. You're converting it to a
19 percent, right?

20 Q. I am. I am. Thank you.

21 A. Sure.

22 Q. And the absolute highest gerrymandering index of
23 the ensemble maps is 14.3 percent, correct, or
24 thereabouts?

25 A. That looks correct.

1 Q. And so even that 14.3 percent is a statistical
2 outlier, right?

3 A. Probably.

4 Q. And yet the enacted map, congressional map, has
5 a gerrymandering index of 17 percent; is that right?

6 A. Looks about right.

7 Q. So you agree that 17 percent is a great
8 statistical outlier compared to those ensemble maps,
9 right?

10 A. I would guess that it's enough standard
11 deviation from the average to qualify as an outlier. Yes.

12 Q. Okay. Thank you.

13 And I understand from your report that the
14 gerrymandering index doesn't tell us why there is a
15 various, just that it's there, right?

16 A. Correct.

17 Q. But one possible reason for a large
18 gerrymandering index is that the map systematically is
19 biased towards the Democratic party, right?

20 A. That is a possibility, yes.

21 Q. And your report does not provide a reason as to
22 what is actually causing this large gerrymandering index
23 here, does it?

24 A. It does not.

25 Q. Okay. Let's take a look at the enacted Senate

1 map gerrymandering index, which is Page 20. So just like
2 the gerrymandering index in the enacted congressional map,
3 this gerrymandering index is very large, right?

4 A. Correct.

5 Q. And you did not render an opinion as to why this
6 one is large either, did you?

7 A. I did not.

8 Q. The enacted Senate maps gerrymandering index is
9 much larger than any of the Senate ensemble maps
10 gerrymandering indices, right?

11 A. That is correct. I assume.

12 Q. And one possible reason for a large
13 gerrymandering index for the Senate map is that it is
14 systematically biased towards the Democratic party, right?

15 A. It is possible.

16 Q. I want to briefly touch on the Polsby-Popper
17 scores that you talked about on your direct examination.
18 That's Page 22 of Mr. Trende's first report. So you
19 discussed on direct examination that this is sort of a
20 bimodal pattern, and you said that you see any reason why
21 that would occur except if the ensemble is broken; is that
22 correct?

23 A. Correct.

24 Q. But you really have no basis for evaluating that
25 because you're not an expert in political geography, are

1 you?

2 A. I'm not an expert in political geography, but
3 the Polsby-Popper score is exactly based on differential
4 geometry, which is the field of math that I worked on
5 before pivoting to the mathematics of redistricting.

6 Q. But you don't know why the bimodal pattern is
7 created? I mean, you know nothing about New York's
8 political geography to say that that wouldn't occur
9 naturally, right?

10 A. I think it's very, very, very unlikely to have
11 occurred for reasons that have to do with the geography of
12 New York. I think by far the most likely explanation is
13 redundancy in the ensemble.

14 Q. Did you test it with your own ensemble maps?

15 A. Yeah. I exactly described doing a reenactment
16 and finding this sort of same kind of level of redundancy.

17 Q. Right. So you reenacted what Mr. Trende did,
18 but I'm saying, did you create your own ensemble maps to
19 show that this the Polsby-Popper score here is unnaturally
20 occurring?

21 A. I did create my own ensemble just as part of the
22 recreation that I described, and I just took it for
23 granted, just based on common sense, that an ensemble
24 that's diverse would not show these characteristics in its
25 Polsby-Popper histogram.

1 Q. Okay. So you just took it for granted on common
2 sense, but what I am asking you is, as an expert, you
3 cannot say that you know for sure whether this bimodal
4 pattern would not occur naturally, right?

5 A. I find it very unlikely.

6 Q. Okay. And you didn't create your own ensemble
7 maps using a methodology that you believed is valid to
8 show that this bimodal pattern is unnatural, did you?

9 A. I did not.

10 Q. In fact, you said in your testimony on direct
11 examination that the first time you looked at this, you
12 just thought this is wrong?

13 A. Correct.

14 Q. But you did not address this in your first
15 report, did you?

16 A. I did not, and that was because Counsel asked me
17 to only address the congressional story in my first report
18 and not the Senate story.

19 Q. All right. Let's move on to -- okay. So your
20 expert opinion is that Mr. Trende's data actually shows
21 that the enacted maps favor the Republican party, right?

22 A. Yes, with respect to his chosen partisan index.
23 Yes.

24 Q. And your reasoning for that is that both enacted
25 maps give more seats to Republicans than their ensemble

1 counterparts, right?

2 A. On average, yes.

3 Q. And according to you, the congressional enacted
4 map gives Democrats 22 seats out of 26, whereas some of
5 the ensemble maps give Democrats at least 23 or 24 or even
6 25, right?

7 A. Yes, relative to his ensemble and using his
8 partisan index. Yes.

9 Q. And according to the Senate map enacted, it
10 gives Democrats 49 seats, whereas every single one of the
11 Senate ensemble maps give Democrats at least 51 seats, and
12 actually the majority have 53, right?

13 A. That sounds right. Yes.

14 Q. So your conclusion that these maps favor the
15 Republican party, when you're providing that expert
16 opinion, is simply based on the number of seats that
17 you've counted Republican or Democrat, right?

18 A. Yes. Exactly. That's the standard analysis.

19 Q. Okay. And nothing else goes into your
20 consideration when you're making that expert conclusion,
21 right?

22 A. I made that purely from the two charts in
23 Trende's reports that show the ordered seats. So, yes,
24 nothing that wasn't in those reports went to my
25 histograms.

1 Q. But I guess what I'm asking is, your expert
2 opinion that those maps favor Republicans is based solely
3 on your conclusion of how many seats there are in the
4 enacted maps versus the seats in the ensemble maps, right?

5 A. Yes.

6 Q. So let's then -- we have to discuss these
7 labels, Democrat and Republican. So to label a seat
8 Democrat, you decided that any seat above the 50 percent
9 Democratic line for the partisan index line is Democrat
10 and any seat below that 50 percent line is Republican,
11 right?

12 A. I can't predict what's going to happen in
13 elections in the next decade. I mean, this is sort of the
14 standard baseline for forming a prediction. And, of
15 course, it could turn out differently. I did the same
16 thing Mr. Trende did when he colored the dots red and blue
17 according to exactly that characterization.

18 Q. Okay. I'm glad to hear you say that because
19 that cuts out a lot of my questions.

20 All right. So it sounds like you will agree
21 with me, but I'm not sure. So under the binary view that
22 you were just discussing, a seat that is, say, 70 percent,
23 you know, in the partisan index would be labeled the same
24 as a seat that's at the 50.1 percent index, right?

25 A. In the way that those histograms were

1 constructed, yes. Yeah, they're treated the same.

2 Q. Okay. And so a map that's had, say, five seats
3 that were 49.9 percent, so just under that 50 percent
4 line, and four seats that were, say, 70 percent, so way
5 above the 50 percent line, would be a map that had five
6 Republican seats and four Democratic seats, right?

7 A. That sounds right.

8 Q. Okay. And so according to you, that map would
9 favor Republicans, right?

10 A. I did not say that. But that kind of
11 consideration you're getting into is not factored into the
12 histograms, so that is correct.

13 Q. But a map with five seats that would be
14 Republican and four seats that would be Democrat would
15 favor Republicans, right, under your definitions?

16 A. There's 26 seats. I'm actually confused by the
17 question.

18 Q. It's just a hypothetical map. You can make it
19 any number. But what I'm saying is that it's simply
20 counting which seats favor Republicans above that line or
21 which -- below that line or which favor Democrats above
22 that line, and how high or far above that line is not
23 taken into consideration?

24 A. Right. The competitiveness of the elections are
25 not taken into consideration in that first analysis. Yes.

1 Q. You actually didn't look at the competitiveness
2 of the seats at all, did you?

3 A. I did not.

4 Q. And you don't render an expert conclusion about
5 the competitiveness of any of the seats in the enacted
6 map, right?

7 A. I did not.

8 Q. So when you were asked -- I'll just tell you.
9 You say on Page 3 of your report that you're asked to
10 opine on Mr. Trende's conclusions. You do not opine on
11 his conclusion that the enacted map renders some seats
12 less -- a lot of seats less competitive due to
13 gerrymandering, did you?

14 A. I did not address that.

15 Q. Let's turn to Page 15 of Mr. Trende's report, if
16 you don't mind.

17 A. The first report?

18 Q. Yeah. I'm sorry. Yes.

19 THE COURT: What page are you on?

20 MS. DIRAGO: 15 of his first report.

21 THE COURT: Thank you.

22 Q. And before I get to this, really quickly I want
23 to just ask you one more thing about the competitiveness.
24 You do understand that the New York Constitution states
25 that the maps shall not be drawn to discourage

1 competition, right?

2 A. Yes.

3 Q. Okay. So let's look at the chart, like I
4 mentioned, on Page 15, and this refers to the enacted
5 congressional map. So according to your definitions, this
6 chart shows that the enacted congressional map has four
7 Republican seats, right?

8 A. Correct.

9 Q. And that would be Districts -- ordered Districts
10 1 through 4, right?

11 A. Correct.

12 Q. And you agree that this chart show those four
13 Republican seats contain a higher percentage of
14 Republicans in the enacted map than any of the districts
15 in the ensemble congressional maps, right?

16 A. Correct. In fact, the fourth seat in the
17 ensemble maps most likely goes to -- in most of the
18 ensemble maps goes to the Democrats instead of the
19 Republicans.

20 Q. Well, remember you're not predicting who it'll
21 go for. But just using this comparison, it shows that,
22 yes.

23 Okay. And then the next five seats, so
24 Districts 5 through 9, sort of the same thing but the
25 opposite. All of these -- for 5 through 9 the enacted map

1 shows many more Democrats -- Democratic voters than any of
2 the ensemble maps, right?

3 A. Correct.

4 Q. And then let's look at the next four seats,
5 Districts 10 through 13. These seats you would label
6 Democrat seats, right?

7 A. Right.

8 Q. And you would agree that the chart shows that
9 these seats, while matching some ensemble congressional
10 maps, are at the very high end of the percentage of
11 Democratic votes vis-à-vis the ensemble congressional
12 maps, right?

13 A. They are at the high end relative to the
14 ensemble.

15 Q. And your report did not address this pattern at
16 all, where the Republican seats were made essentially more
17 Republican and the competitive Democratic seats were made
18 essentially more Democrat, did you?

19 A. Relative to an ensemble that has many issues and
20 I did not.

21 Q. But you would agree that a seat that is 50
22 percent Democrat is more competitive than a seat that is
23 55 percent Democrat, right?

24 A. Correct.

25 Q. Okay. So let's look at District Number 5. You

1 agree that District Number 5 in the enacted map is more
2 competitive than in any of the ensemble maps, right?

3 A. I believe you meant to say less competitive.

4 Q. I did mean that say that.

5 A. Yes.

6 Q. Thank you.

7 And you agree that District Number 6 is less
8 competitive than any of the ensemble maps, right?

9 A. It looks that way. Yes.

10 Q. Looks like it.

11 And you agree that Number 7 is made -- is less
12 competitive than any of the ensemble maps?

13 A. Correct.

14 Q. Okay. And I don't have to go through all of
15 them, but 8 and 9 are the same, correct?

16 A. Correct.

17 Q. And then the same is true actually for
18 Districts 1 through 4. They're made less competitive but
19 just in the other way, right?

20 A. Correct. I don't know how they're made. But
21 compared to the ensemble maps, they are less competitive
22 than the maps in the ensemble.

23 Q. That's fair. Okay.

24 And, in fact, as you go bluer there are some
25 seats on sort of the end of the spectrum but not one seat

1 in these really blue seats falls outside the spectrum for
2 the ensemble maps, right, so Districts 10 through 26?

3 A. 10 is barely within the spectrum as are others,
4 but I think you're technically correct.

5 Q. And let's look at the Senate map chart on
6 Page 21 of the Trende report, the first report. I mean, I
7 don't want to belabor this, but we see sort of the same
8 pattern. So if we look at the Districts 1 through 14,
9 those are all on the very low end of -- the enacted map
10 for Districts 1 through 14 falls on the very low end and
11 in some cases are outliers compared to the ensemble Senate
12 maps, right?

13 A. At least 2 through 14, yes.

14 Q. Okay. And then let's look at 16 through 25
15 because there the opposite is true. Those districts have
16 significantly more Democratic voters in the enacted map
17 than they do in the ensemble maps, right?

18 A. Correct.

19 Q. Dr. Tapp, do you know what the term packing
20 means?

21 A. Yes.

22 Q. So I have a definition, and you can tell me if
23 you agree with it or not. My definition that I found is
24 concentrating the opposing parties' voting power in one
25 district to reduce their voting power in other districts.

1 Do you agree with that definition?

2 A. Yes. That sounds reasonable.

3 Q. I'm sorry. What did you say?

4 A. Yes. That sounds reasonable.

5 Q. And actually if we could turn to Page 10 of your
6 second report, Paragraph 22. You state something that I
7 thought sort of illustrates why packing even works as a
8 gerrymandering. You state: For example, in a district
9 with a partisan index of 85 percent, it would make no
10 difference to the election outcome whether the Democrat
11 congressional vote share is 75 percent or 95 percent. Is
12 that right?

13 A. That's what I wrote, yes.

14 Q. And you still agree with that, don't you?

15 A. Yes. It would make no difference to the number
16 that resulted from Mr. Trende's linear regression, which
17 was 53 percent -- or, sorry, let me -- so the point I was
18 making in this paragraph, yeah, is that anything in the
19 range of 75 percent, 95 percent, that would affect the
20 number that Mr. Trende arrives at, that 53 percent number,
21 but it would really make no difference for election
22 outcome. I think I misspoke.

23 Q. So you didn't analyze either of the enacted maps
24 to determine if there was evidence of packing, right?

25 A. I did not.

1 Q. So you don't have an expert opinion as to
2 whether Republican voters were packed into certain
3 districts in order to reduce their voting power in other
4 districts, right?

5 A. Correct.

6 Q. You made a statement -- and I want to know if
7 you still agree with this -- that if the enacted map is a
8 statistical outlier, this is taken as evidence that the
9 enacted map was drawn with partisan intent. Do you still
10 agree with that?

11 A. If the ensemble is truly representative of
12 maps -- of legally compliant maps that are nonpartisan and
13 are the kind that humans would draw, then, yes, that's how
14 you -- yes.

15 Q. And so nothing your analysis refutes the thesis
16 that the enacted congressional map was drawn so that
17 Republicans were packed into four districts, thereby
18 giving them less of a chance to win any of the other 22
19 districts, correct?

20 A. I think that statement is mostly outside of what
21 I addressed.

22 Q. Right. So you can't refute that thesis, right?

23 A. I did not refute that thesis.

24 Q. Okay. And you cannot refute the thesis that the
25 enacted Senate map was drawn so that the Republicans were

1 packed into 14 districts, thereby giving them less of a
2 chance to win any of the other 49 seats, right?

3 A. I did not address that.

4 MS. DiRAGO: That's it. I'm done.

5 MR. MULLKOFF: Very brief redirect.

6 THE COURT: Mr. Mullkoff?

7 REDIRECT EXAMINATION

8 BY MR. MULLKOFF:

9 Q. Dr. Tapp, when you were discussing Mr. Trende's
10 charts on Pages 15 and 21 --

11 A. Yes.

12 Q. -- of his report with Ms. DiRago and you made
13 observations about where the black dots were compared to
14 the blue and red dots --

15 A. Yes.

16 Q. -- were you providing your opinion regarding how
17 the enacted map compares to a representative sample of
18 simulated maps?

19 A. I was not. I was providing my opinion about
20 where dots were relative to other dots.

21 Q. Is it accurate to say you were only providing
22 your opinion about what Mr. Trende's chart purports to
23 show based on the ensemble results he generated?

24 A. Right. I was only providing an opinion about
25 how the enacted map and these charts differ from the maps

1 in his ensemble.

2 Q. Is it your -- do you have an opinion as to
3 whether where the blue and red dots on Mr. Trende's charts
4 that would represent his simulated maps are flawed due to
5 his methodology?

6 A. Yeah. In detail under direct exam I talked
7 about many concerns about his methodology and, therefore,
8 concerns about the integrity of his ensemble.

9 Q. What relationship would there be between
10 concerns about Mr. Trende's methodology and where the blue
11 and red dots are on the charts on Pages 15 and 21?

12 A. So that whole discussion was about how the
13 enacted map differs from the ensemble in various ways, and
14 if ensemble is not representative, it becomes a largely
15 moot point.

16 Q. Given what you've testified about Mr. Trende's
17 methodology, does comparing the blue and red dots on
18 Mr. Trende's charts to the enacted map provide any
19 reliable conclusions regarding whether the enacted maps
20 disfavor competition?

21 A. I think the conclusions are made much less
22 reliable because of problems in the methodology.

23 Q. Given what you've testified about Mr. Trende's
24 methodology, can any reliable conclusions be drawn from
25 comparing Mr. Trende's ensembles to the enacted maps about

1 whether Republicans were packed into some districts?

2 A. Again, I have enough concerns about structural
3 problems with the ensemble that I think the ability to
4 draw conclusions is severely weakened.

5 Q. Is it accurate to say that any conclusions that
6 one could draw from the charts on Pages 15 and 21 of
7 Mr. Trende's report are entirely dependent on whether
8 Mr. Trende's ensemble was provided an accurate -- a
9 reliable sample?

10 A. Yes.

11 MR. MULLKOFF: No further questions.

12 THE COURT: Recross?

13 MS. DiRAGO: No.

14 THE COURT: No?

15 MS. DiRAGO: Thank you.

16 THE COURT: You can step down, sir.

17 THE WITNESS: Thank you.

18 THE COURT: Thank you.

19 (The witness was excused.)

20 THE COURT: Respondents' next witness?

21 MR. MULLKOFF: Your Honor, we -- the Senate
22 respondents call Jonathan Katz.

23 JONATHAN N. KATZ,

24 called herein as a witness, having been first duly sworn,
25 was examined and testified as follows:

1 THE DEPUTY: State your name and spell it
2 for the Court, please.

3 THE WITNESS: Jonathan Neil Katz,
4 J-o-n-a-t-h-a-n, Neil, N-e-i-l, Katz, K-a-t-z.

5 THE COURT: I'll ask you to keep your voice
6 loud so I can hear you. Thank you.

7 Mr. Mullkoff?

8 DIRECT EXAMINATION

9 BY MR. MULLKOFF:

10 Q. Good afternoon, Dr. Katz.

11 A. Good afternoon.

12 Q. Where are you from originally?

13 A. I grew up in New York City.

14 Q. How long did you live in New York City?

15 A. Until I was 18 years old.

16 Q. What is your educational background?

17 A. I did my undergraduate degree at MIT in applied
18 mathematics, my graduate degree in economics and political
19 science at UC San Diego. I was a postdoctoral fellow at
20 Harvard University, and I have been in an assistant -- I
21 have been with Caltech since 1995 with a short hiatus when
22 I was on the faculty at the University of Chicago.

23 Q. What is your current position at Caltech?

24 A. I am the Kay Sugahara. So that's K-a-y,
25 S-u-g-a-h-a-r-a, professor of social sciences and

1 statistics.

2 Q. Did you previously serve as the chair of a
3 division at Caltech?

4 A. Yes. I was the division chair for humanities
5 and social sciences at Caltech, which is equivalent to a
6 dean of arts and sciences at most universities.

7 Q. And how did you come to hold that title?

8 A. Like most academic administrative appointments,
9 there was a faculty search committee, and I was eventually
10 appointed by the provost.

11 Q. How long did you serve as the chair?

12 A. I did that for seven years.

13 Q. In the past few years at Caltech, what types of
14 classes have you taught?

15 A. To undergraduates I teach an applied data
16 analysis course in our new information and data sciences
17 major to graduate students. I teach both the required
18 political economy sequence, and I advanced courses in
19 political methodology, which is applied statistics in
20 social sciences.

21 Q. Have you published material in peer-reviewed
22 journals?

23 A. I published one book and about thirty-five
24 articles.

25 Q. Have you published books or articles about

1 elections and redistricting?

2 A. Yes. About half my portfolio is on studies of
3 elections and redistricting in particular. I've developed
4 statistical techniques in advanced -- the sort of the
5 standard models that are used to study elections and
6 American politics, and then I wrote a book with Gary Cox
7 on the impact of the Reapportionment Revolution on
8 congressional elections.

9 Q. The subject of that book was about
10 redistricting?

11 A. Yes. It was how redistricting shaped
12 congressional elections.

13 Q. Have you received any awards for your
14 professional work?

15 A. Yes. The two most prominent, I'm an elected
16 fellow of the American Society of Arts and Sciences, which
17 is one of the highest honors that a US academic can
18 receive, and I'm also a fellow -- elected fellow of the
19 Society for Political Methodology, which is the
20 organization of people who do statistics in political
21 science.

22 Q. Do you have involvement with Science Advances?

23 A. Yes. I am the -- one of the deputy editors for
24 Social Sciences at Science Advances. Science Advances is
25 the open-access journal of the American Association for

1 the Advancement of Science. We're sometimes better known
2 for the Journal of Science, which is one of the leading
3 science journals. Science Advances is the open access,
4 that is, it's free for anyone to -- any one of you can go
5 to the internet and download the articles.

6 Q. And were you previously involved with Political
7 Analysis?

8 A. Yes. I was the coeditor and chief for Political
9 Analysis for eight years.

10 Q. What is Political Analysis?

11 A. Political Analysis is the journal of the Society
12 for Political Methodology. It's the premier outlet for
13 development of statistical tools in political science.

14 Q. Have you been involved with the Caltech/MIT
15 Voting Technology Project?

16 A. Yes. I've been a member of it for many years.
17 I forgot how long. And I served briefly as its director.
18 And it was -- we study various aspects of election
19 administration and technology.

20 (Respondents' Exhibit S-18 was marked for
21 identification.)

22 MR. MULLKOFF: Your Honor, I believe that
23 Dr. Katz's CV has been marked as Exhibit S-18. I
24 would --

25 THE COURT: S-18?

1 MR. MULLKOFF: S-18. Permission to hand it
2 to the witness, please.

3 THE COURT: Please do.

4 BY MR. MULLKOFF:

5 Q. Do you recognize this document I've handed to
6 you that's marked S-18?

7 A. Yes, I do.

8 Q. What is this document?

9 A. It's my curriculum vitae.

10 Q. Does this document accurately reflect the
11 progression of your career and your publications to this
12 date?

13 A. It does.

14 Q. Dr. Katz, have you ever been an expert before?

15 A. Yes. I've been an expert in many election law
16 cases over the last 24 years.

17 Q. Have you been accepted by courts as an expert in
18 those cases?

19 A. I have.

20 Q. In those cases has that been on behalf of
21 Democrats or Republicans or something else?

22 A. I work for both Democrats, Republicans. I do
23 also a fair bit of work in California, which is mostly for
24 nonpartisan local election officials.

25 Q. Is there one party you've worked for more than

1 the other?

2 A. By happenstance I do a slight bit more work for
3 the Republicans than for the Democrats. I think supply
4 and demand. There are more academics who are willing to
5 serve as expert witnesses for the Democrats, fewer for the
6 Republicans.

7 Q. Is there a recent example of work you've done on
8 behalf of Republicans that you can provide?

9 A. Certainly. I was retained in two cases by the
10 Attorney General's Office of the State of Texas, and I
11 also served in a case prior to that for the Attorney
12 General's Office of New Hampshire.

13 Q. Have you ever been asked to be an expert witness
14 in a case and declined to do so?

15 A. Yes. As early as last week.

16 Q. And why do you do that in such cases?

17 A. For two main reasons: One, for timing but also
18 if I don't believe my analysis will likely be acceptable
19 or helpful for the client asking me to do the work.

20 Q. Are you being compensated for your expert work
21 in this case?

22 A. I am. I'm being paid \$600 an hour.

23 Q. Does your compensation depend in any way on the
24 expert opinions or testimony that you provide?

25 A. Most definitely not.

1 Q. Does your compensation depend in any way on the
2 outcome of the case?

3 A. No.

4 MR. MULLKOFF: At this time the Senate
5 respondents tender Dr. Jonathan Katz as an expert
6 witness in the field of political science and
7 statistical analysis of redistricting and elections.

8 THE COURT: Any objections?

9 MS. DiRAGO: No objection.

10 THE COURT: Yes. I'm qualifying him as a
11 witness as such.

12 Proceed.

13 BY MR. MULLKOFF:

14 Q. Dr. Katz, did you prepare an expert report in
15 this case?

16 A. I did.

17 (Respondents' Exhibit S-19 was marked for
18 identification.)

19 MR. MULLKOFF: Permission to approach, your
20 Honor.

21 THE COURT: You may.

22 BY MR. MULLKOFF:

23 Q. I've handed you a document that's been
24 pre-marked as Exhibit S-19. Do you recognize this
25 document?

1 A. I do.

2 Q. What is this document?

3 A. It's my expert report I prepared for this case.

4 MR. MULLKOFF: Your Honor, I would move to
5 enter Exhibit S-19 into the record.

6 THE COURT: Petitioners?

7 MR. TSEYTLIN: Your Honor, pursuant to your
8 ruling earlier today, I think everything after --
9 Page 19 and after as well as the summary on Page 1
10 that relates to the congressional maps should not be
11 in the record.

12 THE COURT: Mr. Hecker?

13 MR. HECKER: Your Honor, I think your
14 ruling speaks for itself. I trust Mr. Tseytlin that
15 those are the pages that deal with the congressional
16 map. We obviously disagree with the Court's ruling,
17 but we respect it.

18 THE COURT: Understand.

19 MR. MULLKOFF: And just to clarify, I
20 assume that other side is not striking Page 28, the
21 references page of the report.

22 MR. TSEYTLIN: Right, except to the extent
23 it's making references in the objection.

24 THE COURT: References to the Senate.

25 MR. TSEYTLIN: Yeah.

1 MR. MULLKOFF: We understand that the
2 Court's ruling speaks for itself.

3 THE COURT: Okay.

4 MR. MULLKOFF: And I'd also at this time
5 move to enter Dr. Katz's CV, Exhibit S-18, into the
6 record.

7 THE COURT: Any objection?

8 MR. TSEYTLIN: No objection.

9 THE COURT: Admitted.

10 (Respondents' Exhibits S-18 and S-19 were
11 received in evidence.)

12 BY MR. MULLKOFF:

13 Q. Dr. Katz, what was the scope of your expert
14 report in this case with the understanding that we will
15 only be discussing it with respect to the Senate today?

16 A. I was asked to examine the potential political
17 partisan impact of the newly enacted Senate plan.

18 Q. Did you form opinions on that subject to a
19 reasonable degree of professional certainty?

20 A. I did.

21 Q. Generally speaking, what conclusions did you
22 come to?

23 A. Using historical election data, I found that the
24 enacted 2022 Senate plan shows no statistically
25 significant partisan bias in favor of either party.

1 Q. Dr. Katz, what is the concept of partisan
2 fairness?

3 A. So the idea of partisan fairness in analyzing an
4 election map or other set of electoral rules is asking,
5 does it treat in this case the two parties the same or
6 fairly? We'll say -- if it treats them symmetrically,
7 we'll call it fair. So, for example, if the Democrats win
8 80 percent of the seats with 65 percent of the vote, we'll
9 call that fair as long as if the situation were reversed
10 and the Republicans won 65 percent of the vote; they too
11 would receive 80 percent of the seats.

12 Q. You would consider that a fair map?

13 A. Yes. The idea of partisan symmetry is well
14 established going back almost a century.

15 Q. Is partisan fairness the same as
16 proportionality?

17 A. No. Proportionality, although it's -- often
18 people think of election outcomes being proportional,
19 that's actually a separate electoral system. The
20 single-member district system that we use -- and I say it
21 typically does not lead to proportional outcomes.

22 And it's probably easiest to think about that by
23 a simple thought experiment. Suppose that, again, the
24 Democrats were getting 65 percent of votes statewide in
25 New York and that every district was an exact partisan

1 representation of that, so 65 percent of the votes in
2 every district were Democratic. That would give you an
3 average of 65 across the state. There -- in that map then
4 they would win every district.

5 Now, that's not probable because, as we know,
6 partisans aren't uniformly distributed across the State of
7 New York or any state that I'm aware of. You know,
8 there's more Democrats in New York City and in other
9 cities in the state, more Republicans in this area, for
10 example, and so that difference will mean that you
11 probably won't win exactly 100 percent of the seats, but
12 you're going to win a very large number of them because
13 that's the only way your average vote share can be 65
14 percent.

15 Q. In a state in which a party received 65 percent
16 of the statewide vote, would you expect the party to
17 receive 65 percent of the seats?

18 A. Again, no. That would be a sort of knife-edge
19 case. That's proportionality. Single-member district
20 systems are well known to give a bonus or extra seats to
21 the party that wins more than the majority of the votes.
22 So typically they would get significantly more than 65
23 percent of the seats.

24 Q. Would it reflect partisan bias if the Democrats
25 in New York received 65 percent of the statewide vote but

1 won substantially more than 65 percent of the seats?

2 A. Again, returning to the notion of partisan
3 fairness that's established in the political science
4 literature, that's fair as long as, were the situation
5 reversed and Republicans were getting 65 percent of the
6 statewide vote, they too would be receiving about the same
7 seat share as the Democrats in that situation.

8 Q. I want to direct your attention to the exhibit
9 that's been admitted as Petitioners' 2. I believe it's in
10 front of you open with the chart. If you could look at
11 Page 6 of that exhibit, please, and I just want to read
12 you one sentence from Mr. Trende's reply report. Quote,
13 the conclusion that independent analysts on the left,
14 right, and center are all incorrect about the fairness of
15 a map that would appear to limit Republicans to 15 percent
16 of the seats in a state where they routinely win around
17 1/3 of the vote is one that can only be reached through a
18 misapplication of methods and a naive interpretation of
19 data, end quote.

20 Dr. Katz, do you agree with that sentence?

21 A. No. It's incorrect. It's the mere problem. So
22 if the Democrats are the majority party and they're
23 getting more than their share -- a larger share of the
24 seats than their votes, that has to come at the expense of
25 the minority party winning fewer share of the seats than

1 their votes. In fact, this is a very well-known result
2 going back to Duvergere in the 1950s, a French lawyer and
3 sociologist, and is well established in other cites, in
4 Kendall and Stuart in my report.

5 Q. Do you agree with Mr. Trende insofar as he's
6 adjusting a map with that percent of the statewide vote
7 and that percent of the seats would necessarily be unfair
8 to the Republican party?

9 A. You can't say what's fair without knowing how
10 many seats the Democrats would receive at 15 -- at 30
11 percent of the vote. If they too would receive 15 percent
12 of the seats, then that would be fair.

13 Q. Did you conduct an analysis with respect to
14 New York's Senate map about partisan symmetry?

15 A. I did.

16 Q. How do you measure partisan symmetry?

17 A. One second. I need some more water.

18 THE COURT: Take your time.

19 A. The idea of partisan symmetry, we have to figure
20 out what's the vote distribution in the new map since we
21 haven't observed any elections yet under the 2022 map. So
22 the first part of the -- the starting point of this
23 analysis is to use historical election results, in this
24 case the election results from the last election decade,
25 2012 to 2020, to relate those results in the

1 congressional, Senate, and Assembly districts in the State
2 of New York to characteristics of the districts, such as a
3 measure of partisanship by looking at average statewide
4 vote share that the Democrats do, whether or not an
5 incumbent's running because we know incumbents do better
6 than non-incumbents in elections, and the demographic
7 makeup up that election.

8 Q. Let me ask you about one of those things, and
9 please say anything else you'd like. With respect to
10 incumbents, how does your model take that into account?

11 A. We include a set of indicator variables that
12 indicate whether or not the seat at hand in a particular
13 district in a particular election has a Democratic
14 incumbent, a Republican incumbent, or an open seat, and
15 that's just because of the fact that we know on average in
16 New York State and from my analysis incumbents do better
17 by about 3 percentage points. So if you compare an
18 incumbent Republican to the Republican candidate's vote
19 share in an open seat, the incumbent Republican member
20 does about 3 percentage points better.

21 Q. Does your model take took the variations from
22 one election to another?

23 A. Of course, because elections vary over time. So
24 what we do is we estimate the overall variability in
25 elections over the last decade, and we use that as our

1 benchmark or as our calibrated value to think about what
2 variability should be in the future.

3 The model also controls for the fact -- since we
4 have repeated observations of districts over time, so we
5 observed elections in 2012, 2014, 2016, 2018, 2020, we can
6 look at some districts, and some districts just outperform
7 their fundamental factors. So, for example, it could be
8 because there's a very popular incumbent who does better
9 than their party co-patriots, and so the model allows for
10 that systematic overperformance to be accounted for as
11 something we wouldn't want to forecast in a new map
12 because we don't know if that incumbent is going to run
13 again or if the situation in that district will change
14 again.

15 Q. I want to look at Page 7 of your report, which
16 is Exhibit S-19. Just to point to Footnote 7, you used
17 the phrase systematic. I'll read the footnote. The full
18 model also controls for systemic unobserved
19 characteristics, end quote.

20 Is that what you're talking about?

21 A. That's exactly what I was talking about, this
22 idea that some districts routinely overperform given their
23 characteristics; some routinely underperform given their
24 characteristics, and so we have repeated observations.
25 There are some technical statistical tools that allow to

1 control for that fact.

2 Q. So what is the -- in plain English what is the
3 model doing with those types of results?

4 A. In plain English. Okay. It's just saying this
5 there's -- we allow -- if you think about it, there's a --
6 in each of those districts, we would estimate this
7 district effect, and it says, you know, in District 25 the
8 Democrats are doing way better than we expect, and so it
9 just puts a little positive value, that when we forecast
10 in the future, we're going to assume it's 0 because we
11 don't know that it's going to continue in the future, but
12 in the historical map District 25 overperformed the map.

13 Q. Are you aware of an example in New York that
14 would fall within this control for systematic and observed
15 characteristics?

16 A. Yeah. For example, Representative Katko from
17 this area, I know that he's a very popular incumbent. In
18 fact, he looks like he does better than, for example, the
19 statewide vote share for Republicans in his district.

20 MR. TSEYTLIN: Your Honor, objection.
21 That's talking about congressional --

22 MR. MULLKOFF: Your Honor, if I may
23 explain. This is not about Dr. Katz's congressional
24 analysis.

25 THE COURT: And I won't consider it for

1 such.

2 MR. MULLKOFF: Dr. Katz's model --

3 THE COURT: I think he's trying to give an
4 example.

5 MR. MULLKOFF: Well, just to be clear,
6 Dr. Katz's model uses congressional, Senate, and
7 Assembly election history in order to accurately
8 forecast the Senate --

9 THE COURT: I understand.

10 MR. MULLKOFF: -- and so we're not --

11 THE COURT: I'm going to allow it, but I'm
12 not going to consider it for the purposes of the
13 congressional maps.

14 BY MR. MULLKOFF:

15 Q. So with respect to Representative Katko's
16 performance in past elections, what would your model do
17 with that information?

18 A. Again, it would -- if he was overperforming
19 Republicans, that is, so actually models in terms of
20 Democratic vote share, that is, the Democratic vote share
21 is lower than we would otherwise expect, given the
22 characteristics, the estimated indicator or fudge factor,
23 if you like, would say that there's a little bit
24 negative -- there's a negative turn that we control for as
25 an extra error.

1 Q. Is one way of describing that that it would not
2 give as much weight to the outcome of Representative
3 Katko's election, or is it something different?

4 A. Something -- more like it corrects the outcome.
5 It says, he's doing too well, so we're going to estimate
6 the separate effect; that's going to just be netted out.
7 So we're sort of handicapping it as opposed to
8 downweighting it.

9 Q. With respect to your overall model and for
10 purpose of forecasting, why does it do that effect on
11 Representative Katko's results?

12 A. Because, again, in a future election we assume,
13 absent any additional information, that in the new map all
14 districts are identical, that all these fudge factors, all
15 these indicator variables are 0 because we don't know who
16 will be running or what the exact circumstances will be.

17 Q. You mentioned that your model takes into
18 consideration a variety of past elections, including
19 Assembly elections and Senate elections in addition to
20 congressional and statewide elections, correct?

21 A. That's correct. So what we do is what's
22 formally called in statistical literature partial pooling,
23 again, to have more data points. As we get more data
24 points, our statistical estimates become more certain, so
25 we jointly model all three elections over the last

1 election decade just to give us a bigger set of
2 observations to use in generating our forecasting model.

3 Q. Does having that bigger set of observations have
4 an effect on the accuracy of the model?

5 A. Right. It makes the model more accurate. More
6 data leads to more accurate forecasts and more stable
7 estimates.

8 Q. This model you've been describing, have you used
9 it in the past?

10 A. Yes. I use it -- the model is based on work by
11 coauthors of mine, Andrew Gelman and Gary King, from 1994,
12 and it is the model that everyone uses who studies
13 legislative elections.

14 Q. Is it accurate to say this model is commonly
15 used by others?

16 A. Yes, very commonly used.

17 Q. Do you believe it to be effective?

18 A. Yes. And, in fact, I've done work with Gary
19 king expanding this to other cases, for example,
20 multiparty elections, more-than-two-candidate elections.

21 Q. Have you ever engaged in validation efforts to
22 examine how accurate the model is?

23 A. I and others have done this repeatedly over the
24 last three decades. Looking at forecasts of -- using it
25 on historical data and then comparing to see how it does

1 on future, it does very, very well on average.

2 Q. Do you mean that it accurately forecasts what
3 the elections would do or something else?

4 A. Yes, the forecasts on average. Of course, it's
5 a forecasting model. So, for example, if there was an
6 election that had a candidate who suddenly found
7 themselves in a scandal, they might underperform. The
8 model doesn't account for that, so there are some errors.
9 It's not a -- it's a statistical model, but on average the
10 model systematically characterizes congressional --
11 legislative elections.

12 Q. So it won't predict the correct result every
13 time; is that right?

14 A. Not every time, but on average it will.

15 Q. Do you have a great deal of confidence in the
16 reliability of the forecasts?

17 A. Yes, I do. I would -- if we were betting, I'd
18 be happy to bet on a portfolio of elections for the -- in
19 the new Senate -- in the new map.

20 Q. Did you apply this model for forecasting
21 election results to New York?

22 A. I did. That's presented in -- for example, the
23 first part of it is presented in Table 2 of my report on
24 Page 8.

25 Q. Are you referring to Page 8 of Exhibit S-19?

1 What does this chart show?

2 A. So as I told you, the first part of the analysis
3 is we generate our forecasting regression model. We then
4 use that, so now in the new map -- a new map is -- usually
5 you think about a new map as just being lines on a grid;
6 you know, you go down East -- you go down Main Street, take
7 a left on Davidson, take a right on whatever the next
8 street is. That's not -- in our world a map is just a new
9 set of these characteristics. What's the average vote
10 share for gubernatorial, Senatorial, so forth elections in
11 the district in the new map as we add up the precincts?
12 What's the demographic, characteristics? Given that and
13 the statistical model that we fit, we can forecast what
14 the vote -- we can forecast various aspects of elections
15 in that map. So, for example, we can predict what's the
16 expected or average vote share for the Democratic
17 candidate in that election in this case assuming that
18 there are no incumbents running.

19 Q. Why do you assume that no incumbents are
20 running?

21 A. Of course, in any real election incumbents run.
22 The problem is is that whether or not incumbents run is
23 partly a function of the map, that is, it's endogenous to
24 the map. So you might think about in districts that are
25 very supportive of Democrats, you might likely see in

1 future elections Democrats running as incumbents. In
2 districts that are Republican, you might see Republican
3 incumbents running.

4 But the problem is we might have good guesses
5 about who the incumbents are going to be, say, in the 2022
6 election, but let's think it out. This map's going to be
7 in place until 2030. Do we know what incumbent is going
8 to run in every district? People have, unfortunately,
9 health issues. People choose to run for higher office.
10 We don't know those things, so we don't actually know what
11 incumbents are going to run in future elections, so the
12 benchmark is done with the -- assuming the map is all open
13 seats.

14 THE COURT: So could it be 3 percent off if
15 you don't take incumbency into consideration?

16 THE WITNESS: It would be -- yes. You're
17 right. So it's about a 3 percent fudge factor.

18 A. If you just wanted to go through it or, your
19 Honor, if you want to, you could turn to my analysis on
20 Page 14, which looks at the Senate map assuming a
21 reasonable guess about what incumbents are going to run if
22 this map is allowed to be used.

23 Q. So, Dr. Katz, is it accurate to say that you
24 first did the calculations for the Senate map assuming no
25 incumbents?

1 A. That's correct.

2 Q. And then for the second you did the same
3 calculations using what the public knows currently about
4 which incumbents are likely to run in each Senate
5 district?

6 A. Right. I do that as like a robustness check,
7 let's see how -- do things change wildly?

8 Q. All right. So I would like to talk about that
9 in a few minutes, but if we could talk about this chart
10 first, I think it would be clearer. Could you describe
11 what each of the columns in Table 2 on Page 8 shows?

12 A. Yeah. It might be easier if we actually take a
13 particular district so we can actually run through an
14 example. So let's look at District 3. So District 3 --
15 so the first column tells you what district it is. The
16 first thing is we see the expected Democratic vote in that
17 district is 56.4 percent. Now, that means that if the
18 seat were open, we would expect on average the vote share
19 to be 56.4 percent. But, of course, there's variability.

20 Q. Before you go on, could I clarify, the 56.4
21 percent, is that the same as the past voting average in
22 that district, or is it something different?

23 A. No. That's the estimate that comes out of the
24 forecasting model. That uses the aggregated statewide
25 election results as an input to that model, but it's not

1 the same thing.

2 Q. So what does this 56.4 percent represent?

3 A. It means that if, for example, in the next
4 election -- I doubt -- I don't know if District 3 will be
5 open, but if it were, then our best guess as to what the
6 Democratic vote share would be would be 56.4 percent.

7 Q. What do the third and fourth columns mean?

8 A. Well, clearly elections aren't fixed. We
9 observe good years and bad years for both parties and
10 candidates change, so there's a variability. For this
11 district the variability is about 8.7 percentage points.
12 So the way to think about it is if you thought about
13 what's the entire range of plausible values of Democratic
14 vote share we would see in that district, by some math,
15 which we can talk about in detail if you want, if you take
16 the mean, the 56.4 percent, and you add twice that
17 standard deviation and you subtract twice the deviation,
18 that gives you the range, a sort of 95 percent range, of
19 where we think vote shares would be.

20 So let me actually run through the example. So,
21 for example, in this case 56.4, so the upper bound would 2
22 times -- would be 56.4 plus 2 times 8.7, which is 73.8.
23 That would be like the best you would expect to see in
24 this district. And the lower bound for Democratic
25 performance in this -- Democratic vote in this district

1 would be 56.4 minus 2 times .87, which is 39 percent. So
2 that gives us the idea that there's going to be
3 variability depending on national conditions, state
4 conditions, and districts. Districts vary.

5 Q. And what about the fourth column?

6 A. And the fourth column is sort of the summary,
7 which is telling us what's the probability the Democrat
8 would win that seat, and it's 76.8. Now, what is --
9 people have hard times thinking about probabilities. The
10 best way you should think about it is as a long-term
11 average. Suppose that we were to run, say, 100 elections
12 with this map and observe the election results in it. Of
13 course, we're not actually going to observe it 100 times,
14 but if we did, we would expect about 77 times the
15 Democrats would win and about 33 times they would lose.

16 Q. Do you mean 23?

17 A. 23 times. That's what I get for doing math on
18 the fly on the stand.

19 Q. I don't purport to be able to do it well.

20 Just for clarity, could you explain how this
21 works for District 4, for example?

22 A. Sure. So, similarly, for District 4 the
23 expected Democratic vote share is 42 percent,
24 equivalently, because there's only two parties effectively
25 running in the state. I know there are minor parties.

1 But they get -- the Republicans would get about 58 percent
2 of the vote. It has about a similar variability. It's
3 about 8.6 percentage points. And that corresponds to a
4 sort of long-term average that the Democrats win this
5 about 17 percent of the time or, equivalently, Republicans
6 win this seat about 83 percent of the time if you, say,
7 were to run this election 100 times in this district.

8 Q. Did you provide these four columns of
9 information for each of the 63 Senate districts in the new
10 map?

11 A. I did. I did. It's a very long table. It goes
12 over three pages.

13 Q. So is it accurate to say that the first column
14 is the actual number of the enacted Senate district?

15 A. Yes, that's the number of the enacted plan.

16 Q. The second column is your predicted average
17 Democratic vote percentage for that district in the new
18 map?

19 A. That's correct.

20 Q. The third column is the standard deviation for
21 that calculation?

22 A. Correct.

23 Q. And then the final column is your model's
24 forecast of the percentage of times the Democratic
25 candidate in that district is expected to win?

1 A. Correct.

2 Q. What is the next step of your analysis?

3 A. So recall that to do partisan fairness, we need
4 to compare how many seats the Democrats would get for a
5 given vote share versus how many seats -- what the
6 Republicans get for the same vote share. That entire
7 relationship is captured in what's called a seats-votes
8 curve, and there's an example of one in Figure 1 on
9 Page 11 of my report.

10 Q. Looking at Figure 1 on Page 11, what does this
11 tell us?

12 A. Well, let me tell you. So we estimate -- so
13 this curve comes from perturbing the results in Table 2 to
14 trace out the seats-votes curve, and the seats-votes
15 curve -- the dark line is what you should spend most of
16 your attention on. It's telling you if you -- so the
17 horizontal axis is the average Democratic vote share, and
18 the vertical axis is the percent of seats. So, for
19 example, if we looked at 50 percent, which has a dashed
20 line on it so it'll make it easy to see, we run up until
21 that dashed line intersects the dark seats-votes curve.

22 Q. So just to be clear, you're going up from the
23 bottom dashed line --

24 A. Correct.

25 Q. -- for a 50 percent Democratic district vote

1 percentage?

2 A. Right.

3 Q. And then what does it tell you when you hit the
4 black line that crosses that?

5 A. Then we do another line that goes to the
6 vertical axis, which is about -- I think, about 48 percent
7 if I'm eyeballing it correctly. So that says for 50
8 percent of the vote -- average Democratic vote share,
9 pardon me, Democrats are getting about 48 percent of the
10 seats.

11 Q. For the other vote shares, other than 50
12 percent, what information does this chart provide?

13 A. Exactly the same. So you could do -- so you
14 could look to see what vote share the Democrats get at 70
15 percent of the averaged vote share. We also get the flip.
16 We also get the Republicans. How do we do that? Well,
17 since there's only two parties, we just take 100 minus
18 that. So if I want to know how the Democrats -- how the
19 Republicans are doing at 70 percent of the vote, I look at
20 the 30 percent point because that means the Democrats --
21 that means the Republicans are getting 70 percent of the
22 vote and I look at their -- the seat share, which is
23 about -- looks like about 8 percent. And so that means
24 the Republicans get 100 minus that, so the Republicans are
25 getting back 92 percent of the seats at 70 percent of --

1 60 percent of the vote share.

2 Q. Does this chart also show how many seats
3 Republicans get about a given percent of the vote share?

4 A. Yeah. I just did that calculation.

5 Q. Just clarifying.

6 A. Yes, it does, because it's the mirror image.
7 And I should point out one other feature of this because,
8 again, it's a statistical estimate; we don't know it. If
9 we knew it, you wouldn't need to hire someone like me.
10 These gray lines are basically what are called confidence
11 intervals. They're telling us what's the most likely
12 possible values we could see for the seats-votes curve.

13 Q. What is the next step in your analysis?

14 A. Since reading charts like this by hand is a
15 little painful and really recalling what partisan fairness
16 is, is asking what's the amount of -- how many -- what's
17 the difference in seat share that the Democrats get versus
18 the Republicans at the same vote share, we can actually
19 directly calculate what's called partisan bias, that is,
20 that difference. Of course, we have to choose a
21 particular value -- a particular vote share to do that,
22 and that's done in Figure 2 of my report on Page 12.

23 Q. Is it accurate to say that this figure shows the
24 information on the seats-votes curve we were just looking
25 at in numbers?

1 A. No. It's a calculation from the seats-votes
2 curve is a more accurate way of describing it.

3 Q. Thank you for clarifying.

4 So please tell us what this chart on Page 12,
5 Figure 2, shows.

6 A. Right. So, again, it's probably easiest if we
7 take an example. Let's look -- so what I plot out here
8 are various ranges of vote shares, and we do ranges
9 because we want to average over a range to get a better
10 estimate. And I chose ranges that were either interesting
11 or plausible, so we go from basically 50 percent all the
12 way up to 70 percent vote share. So let's take the top
13 one. The top bin is 66 to 70 percent. So that's -- when
14 the parties are getting 66 to 70 percent of the vote,
15 what's the difference between the Democratic vote share --
16 the Democratic seat share and the Republican seat share in
17 this region? And we see that it's a point estimate of
18 0.58 percent. It's Democrats on average getting about
19 0.58 percent, 0.6 percent more seats.

20 The other thing, remember -- recall, just like I
21 showed you on the seats-votes curve, that there is these
22 uncertainties because we don't actually know these numbers
23 for sure, we can actually estimate a confidence interval
24 for that estimate. That's accounted for in that bar that
25 goes through the center dot. And most importantly, we see

1 that the -- so both of point estimates are very small.
2 It's a very small level of bias. And more importantly,
3 because that bar goes across this dashed line at 0, that
4 means we can't -- that there's no statistically
5 significant evidence of partisan bias in favor of either
6 party.

7 Q. So you just explained that for 66 to 70 percent
8 vote share, the bias percentage is 0.58 percent, correct?

9 A. Correct, in the Democratic direction.

10 Q. Is that a significant level in your review?

11 A. No, because, again, it's, one, small in
12 substance but in practice, because its confidence interval
13 crosses the 0 line, we can't reject that there's no bias
14 at that level, in that range of vote share.

15 Q. What does the next line down for 61 to 65
16 percent vote share show?

17 A. Here it's the same magnitude. It's about .6
18 percentage points, but it's in the Republican direction.
19 So in this range Republicans are doing slightly better
20 than Democrats at converting their votes into seats. But,
21 once again, since the confidence interval crosses this 0
22 line, we can't -- there's no statistically significant
23 evidence of bias. We can't reject that there's 0 bias.

24 Q. What about the third column down -- the third
25 row down, 56 to 60 percent?

1 A. Here, again, the bias is a touch larger in
2 magnitude. The point estimate's about 1.3 percent in the
3 Republican's direction. But, once again, although the
4 magnitude's a touch larger, it's still pretty small, it is
5 statistically insignificant, that is, we can't reject that
6 it is also 0.

7 Q. And just to put it into terms of Senate
8 districts, what does 1.29 percent in the Republican's
9 direction mean, approximately?

10 A. Approximately. Since there's -- 1 over 63 is
11 about 1.6, so it's about one seat. I think that's right.
12 Are my calculations right?

13 Q. So what does that mean, that -- the minus 1.29
14 percent number mean in terms of Senate seats?

15 A. In that range of vote share, the Republicans are
16 getting almost one extra seat than the Democrats at the
17 same vote share.

18 Q. What about 52 to 55 percent row?

19 A. Here the point estimate is down to .2 percent,
20 so even smaller, effectively almost 0 substantively. And,
21 again, the confidence interval crosses the 0 line, so we
22 can't reject that it could be -- that it's 0.

23 Q. And what about the final, 49 to 51 percent row?

24 A. Here the confidence interval's the largest, but
25 the point estimate is 1.44 percent, so similar to the

1 previous example, in the Republicans' favor. They're
2 getting 1.44 percent more seats for the same vote share.
3 The uncertainty's a little bit bigger, but we also can't
4 reject that the -- that it's -- we -- it's statistically
5 insignificant.

6 Q. Overall what were your findings of partisan bias
7 with respect to the New York enacted Senate map?

8 A. Given the results in this figure, there's no
9 evidence of statistical bias in favor of either party in
10 the enacted Senate map.

11 Q. Do these results suggest the intent to disfavor
12 a political party in the enacted Senate map?

13 A. This is evidence that the map is not biased.
14 Intent, I can't really tell you. This is evidence that
15 the map is not biased.

16 Q. Do you have a basis for comparison of the levels
17 of bias on this chart compared to enacted maps that you've
18 dealt with in litigation in other states?

19 A. Sure. In other states I've seen maps that have
20 similar levels. Oregon showed similar levels of low bias
21 in their enacted map. In my work in Florida, that map
22 showed a map that was like -- I forget the exact number.

23 MR. TSEYTLIN: Your Honor, objection. None
24 of this was in the report, about other states.

25 MR. MULLKOFF: Your Honor, I'm just asking

1 Dr. Katz to provide some context for how large these
2 numbers are, and it seems useful to compare to what
3 he's found significant.

4 THE COURT: You can confine it to his
5 report.

6 Q. Is it fair to say that -- do you consider these
7 levels of partisan bias statistically significant in any
8 way?

9 A. No, and they're substantively small.

10 Q. What is the next step in your analysis?

11 A. The second feature that comes out of the
12 seats-votes curve and related to this notion of
13 proportionality is we estimate the responsiveness, which
14 is telling us for -- as the majority party's vote share
15 increases by 1 percentage point, what's -- how much does
16 their seat share increase? So under proportion
17 representation, if your Honor turns back to Figure 1, that
18 curve would be a straight line with a slope of 1, if you
19 remember that from your high school geometry.

20 In practice single-member district systems gives
21 the majority party more than that. So, for example, here
22 we see in the top range at 66 to 70 percent, the slope is
23 about 1.63. That just means that if one of the parties
24 get about 1 percentage point more vote, they get about
25 1.63 percent more seats. And it goes up a little bit as

1 we go down the range. It's about 2.1 percent, so an
2 increase of 1 percentage point in the range 61 to 65
3 percent increases the party's seat share by about 2
4 percentage points.

5 Q. What conclusions, if any, did you draw about
6 responsiveness of the enacted Senate map based on your
7 analysis?

8 A. This is pretty typical. Values between 2 and 4
9 are common. It depends on states. As you can see, the
10 estimates are quite uncertain because estimating a slope
11 is a much harder statistical problem.

12 Q. What was the next step in your analysis?

13 A. The other thing we might care about is the
14 estimated number of seats. That's not on the table.
15 That's in the paragraph that's underneath Figure 3, the
16 second paragraph on Page 13.

17 Q. Did you draw any conclusions about the expected
18 number of seats in the enacted Senate maps -- enacted
19 Senate map?

20 A. Right. So assuming all the seats were open, the
21 estimates from Table 2 suggest that the Democrats would
22 win about 43.1 of the 63 seats. Of course, you can't win
23 a fraction of a seat. Again, you should think about this
24 as a long-run average, if you were to run this many times
25 on this map. Of course, this is about 69 percent of them.

1 Because, as is everything, this is a statistical estimate,
2 there is a confidence interval, a 95 percent confidence
3 interval, on this, and so the low estimate is Democrats
4 could win as few as 37 of the seats and they could win as
5 high as 49 percent of the seats as our best estimates.

6 Q. What is this expected seat share based on?

7 A. It's based on Table 2. In particular, if you
8 were to --

9 Q. Let's say the page number so everyone's --

10 A. Oh. Page 8 of my report, Table 2.

11 Q. So you're expected seat share prediction -- your
12 expected seat share conclusion is based on Table 2?

13 A. Yes. It's a calculation made from -- a fairly
14 complicated but a calculation based from Table 2.

15 Q. Is it related to the final column, the
16 probability a Democrat wins?

17 A. Right. So the point estimate is if you summed
18 up these points and divided by 100. That would be the
19 number of seats they were winning.

20 Q. Did you also examine the New York enacted Senate
21 map with assumptions about incumbents running?

22 A. We did. The initial part of that output is on
23 Table 3 on Page 14.

24 Q. Can I direct you to Page 16 of your report
25 first?

1 A. Certainly.

2 Q. On Page 16 you list a number of districts.
3 Could you tell us what you're referring to?

4 A. Right. To do this analysis, we obviously had to
5 choose what the configuration of incumbents was. With
6 help from Counsel, the best guess we could make given the
7 date of my report was that Republican incumbents would be
8 running in Districts 1, 2, 24, 43, 44, 46, 47, 49, 51, 54,
9 58, 59, 61, and 62. There would be open seats in
10 Districts 3, 4, 9, 17, 23, 27, 36, 50, 53, and 63. And
11 all the remaining seats, so I don't have to enumerate
12 them, would be -- we assumed to have Democratic
13 incumbents.

14 Q. Thank you for running through those.

15 So going back to Page 14 in Table 3, what does
16 this table reflect?

17 A. So this table reflects that allocation of
18 incumbents, so that's going to change the expected
19 Democratic seat share -- sorry -- estimated Democratic
20 vote share. That's Column 2.

21 Q. How did you apply that assumption about
22 incumbents?

23 A. Again, so the statistical model, the forecasting
24 model, allows us to set values, so what we did on the
25 previous analysis is we set all the districts to have 0,

1 that is, to have open seats. This one we set it to have
2 the configuration that I enumerated just previously. And
3 so in districts that will -- the easy rule of thumb in
4 districts that have a Democratic incumbent, the Democratic
5 vote percentage will raise on average about 3 percentage
6 points; in districts that have Republican incumbents from
7 that list, we'll see their vote share increase --
8 decrease -- the Democratic vote share decrease by 3
9 percent or, equivalently, the Republican vote share
10 increases by 3 percent on average; and in open seats it's
11 as in the previous table. And so given this Table 3
12 analysis, we can do the exact same partisan bias and --
13 copy the seats-votes curve and do the same partisan bias
14 analysis we did previously.

15 Q. So just to -- we don't need to run through it in
16 as much detail, but just quickly looking at District 1,
17 for example, could you just explain what the chart shows?

18 A. Right. So in District 1 -- District 1 was
19 assumed to have a Republican incumbent, so the vote share
20 now is -- the Democratic vote share is expected to be 46.5
21 percent. Previously it was -- the Democratic vote share
22 was 49.8 percent.

23 Q. So what was the effect of the incumbency
24 assumption on the predicted vote share?

25 A. It decreased the Democratic vote share,

1 increased the Republican vote share.

2 Q. Is that what you would expect?

3 A. Exactly what one would expect.

4 Q. Okay. What is the -- the standard deviation
5 column, what does that mean?

6 A. That's the same thing we talked about. It's
7 talking about the variability. That's actually not --
8 that's not affected by incumbency or not particularly.

9 Q. And then the final column, the probability a
10 Democrat wins?

11 A. Right. That clearly -- in this case a Democrat
12 wins. Since there's a Republican incumbent, Republicans
13 do better; the probability the Democrat wins declines.
14 That's equivalent to saying the Republican's probably of
15 winning increased. So the Democrats win this about 34
16 percent of the time. That means that the Republican
17 incumbent is expected to win this about 66 percent of the
18 time.

19 Q. Did you do these calculations for each of the 63
20 new Senate districts?

21 A. I did. They're enumerated in Table 3 of my
22 report.

23 Q. Did you calculate the partisan bias for the
24 enacted Senate map with these assumptions about which
25 incumbents will run in the future?

1 A. I did. They're presented in Figure 4 on Page 17
2 of my report.

3 Q. What did you find?

4 A. Qualitatively the same results we saw without
5 the incumbents. The point estimates actually change, but
6 they're all small -- they're actually all smaller in
7 magnitude. And all, once again, are statistically
8 insignificant, so we cannot -- so there's no evidence --
9 there's no statistically significant evidence of partisan
10 bias in favor of either party in the scenario with this
11 set of incumbents.

12 Q. Are these even smaller levels of bias than with
13 the first Senate calculation?

14 A. The point estimates are smaller, an absolute
15 value.

16 Q. Did you draw any ultimate conclusions about the
17 partisan bias of the Senate map based on these
18 calculations?

19 A. Yes. Assuming this configuration of incumbents,
20 there is no evidence of statistically significant partisan
21 bias in favor of either party given this analysis.

22 Q. Did you analyze the responsiveness of the
23 enacted Senate map with this assumption about incumbents?

24 A. I did. That can be found on Page 18 on Figure 5
25 and it's very similar. For the most part responsiveness

1 is somewhere around 2 percentage points, a little bit
2 lower at the very top end, which is, again, in line with
3 what we expect in single-member district electoral
4 systems.

5 Q. With this assumption of which incumbents will
6 run in the future, did you draw any conclusions about how
7 many seats Democrats would be expected to win in the
8 enacted Senate map on average?

9 A. I did. That can be found in the last paragraph
10 of Page 18 of my report, and there we see that now -- the
11 Democrats are now expected to win with this configuration
12 of incumbents 44.3 of the 63 percent -- of those 63 seats
13 or about 70 percent of them, again, with the idea that
14 this is a long-run average. The confidence interval,
15 because this actually remains rather similar, 39 seats on
16 the low end, 49 seats for the Democrats on the high end.

17 Q. So based on those two analyses of the Senate
18 with and without incumbency estimates, did you draw any
19 overall conclusions about -- with respect to partisan
20 bias?

21 A. Yes, that there is no statistically significant
22 evidence of partisan bias in favor of either party in this
23 map with this configuration of incumbents.

24 Q. And was that the same conclusion you drew
25 without incumbents built in?

1 A. It was.

2 Q. In your report you use the term efficiency gap.
3 What does that mean?

4 A. Lately a number of authors have proposed other
5 measures of partisan fairness. The one that's gotten the
6 most prominence is probably the efficiency gap. In work
7 that I did with Gary King and Elizabeth Rosenblatt and
8 somewhat recently published in the American Political
9 Science Review, we sort of showed that all these newly
10 proposed measures actually aren't really a
11 characterization of fairness -- of partisan fairness, but
12 because they've become sort of popular in the press, I
13 calculated the efficiency gap for this map.

14 Q. So what does the efficiency gap purport to
15 measure?

16 A. It purports to measure a very intuitive idea,
17 which is that one way -- the way that -- one way that you
18 disadvantage a party is you make it more expensive, that
19 is, they waste more of their votes. You pack them in is
20 sometimes the language referred to. So the idea under the
21 efficiency gap is for each party we calculate what's
22 called the wasted vote. What's a wasted vote? A wasted
23 vote is all the votes you get over 50.1 percent in a
24 district you win and all the votes in the district you
25 lose. And the idea is that if you knew that ahead of time

1 and it were legal and possible, you'd like to move those
2 votes to some other district that you might win with them,
3 right?

4 So the idea is we look at -- we calculate the
5 number of wasted votes for the Democrats and the number of
6 wasted votes for the Republicans, and we compare those two
7 numbers. And, again, just like we assigned it with bias,
8 a positive number means that the Republicans are wasting
9 more votes, that, more equivalently, the Democrats are
10 more efficient at translating their votes to seats. And a
11 negative value is the converse, that is, the Republicans
12 are wasting less votes; they are more efficient at
13 converting their votes to seats.

14 Q. Is there any commonly used threshold of an
15 efficiency gap that suggests partisan bias in a commonly
16 held view?

17 A. Yeah. The value that I've seen bantered about
18 in litigation and in popular press is about 8 percentage
19 points.

20 Q. Did you calculate the efficiency gap for the
21 New York Senate map?

22 A. I did. It's for the Senate map without
23 incumbents. The results can be found on the first full
24 paragraph on Page 14 of my report. And so basically what
25 we do --

1 Q. Let's just pause a moment so people can turn the
2 page. Thanks.

3 And what did you understand?

4 A. Again, using the estimates from Table 2, we can
5 calculate this wasted votes, and the efficiency gap is
6 minus 0.5 percent, that is, the Republicans waste slightly
7 fewer of their votes converting to seats than the
8 Democrats but, again, substantively small. An efficiency
9 gap less than 1 percent is very small.

10 Q. What does that mean with respect to the idea of
11 wasted votes?

12 A. It means that the Republicans are wasting
13 slightly fewer votes than the Democrats.

14 Q. Is .5 percent commonly viewed as a sufficiently
15 high threshold of the efficiency gap to be meaningful?

16 A. No. It's substantively small. It suggests that
17 there is not a difference between the two parties.

18 Q. Did you calculate the efficiency gap with your
19 assumption of which incumbents may run in future Senate
20 districts?

21 A. I did. That can be found on Page 18 in my
22 report in the paragraph -- the second from the last
23 paragraph.

24 Q. What did you find as far as the efficiency gap
25 with assuming incumbents will run in the Senate?

1 A. Again, the efficiency gap increased a little
2 bit. It's now negative 1.3 percent. So it's still a
3 small magnitude, but it's also still in the Republican
4 direction, that is, the Republicans are wasting slightly
5 fewer votes than Democrats or the Republicans are more
6 efficient at turning their votes into seats in this map
7 than the Democrats, slightly.

8 Q. Is that a high level of efficiency gap?

9 A. No. Again, that's a relatively small level of
10 difference in wasted votes.

11 Q. And in both cases the efficiency gap for the
12 Senate you found to favor Republicans slightly?

13 A. That's correct.

14 Q. To the extent the efficiency gap is a reliable
15 measure of partisan bias in the New York Senate map, what
16 does it tell us?

17 A. It suggested that there was no partisan
18 unfairness; the map is partisan fair.

19 Q. Do you know what the term packing is with
20 respect to redistricting?

21 A. Certainly. It's the idea that one way to
22 disadvantage your opponent is to pack as many of their
23 voters into a small number of districts so that, as we
24 talked about with wasted votes, they're wasting their
25 votes; they're winning a district with 90 -- 80, 90, 100

1 percent of the vote. They would rather shift some of
2 those votes to other seats that might help them -- that
3 they might then be able to win.

4 Q. In your opinion, does the enacted Senate map
5 reflect packing of Republicans in order to favor
6 Democrats?

7 A. Again, I don't think that's the right way to
8 think about it. You have to think about the relative
9 packing. So in both -- there are packed Democratic
10 districts in the Senate map, and there are packed
11 Republican districts. The question is the relative
12 amount, and that's captured in this idea of estimating the
13 full partisan bias of the map.

14 Q. And what is your overall conclusion about the
15 partisan bias of the enacted Senate map?

16 A. There is no statistically significant evidence
17 of partisan bias for either party in the enacted Senate
18 map.

19 Q. In your opinion, is the enacted Senate map a
20 Democratic gerrymander?

21 A. Again, no. Since there's no evidence of
22 partisan bias in their favor, it's not what one would call
23 a Democratic gerrymander.

24 Q. In your opinion, is the enacted Senate map
25 unfair to Republicans?

1 A. Again, since it's shows no partisan bias against
2 them in elections, no, it's not.

3 MR. MULLKOFF: No further questions.

4 THE COURT: This may be a good time to take
5 a ten-minute break, and we'll come back after that
6 and continue. Thank you.

7 (A recess was taken.)

8 THE COURT: Just to get a sense, if you
9 know, Respondents, how many more witnesses, roughly?

10 MR. GOLDENBERG: Your Honor, we have one
11 more witness, and we anticipate completing his
12 testimony today.

13 THE COURT: Okay. Very good.

14 All right. We're on cross-examination.
15 Mr. Tseytlin?

16 You're still under oath, sir.

17 THE WITNESS: Yes, your Honor.

18 MR. TSEYTLIN: Thank you, your Honor.

19 CROSS-EXAMINATION

20 BY MR. TSEYTLIN:

21 Q. And good to see you again, Dr. Katz.

22 I'd like to begin by doing a little exercise
23 based on something that's been confusing me throughout
24 this case as I've heard the various experts. Could you
25 please turn to Page 9 of your report? And I'd like to do

1 a little exercise here. Do you see where it says
2 District 52 there near the bottom?

3 A. I do.

4 Q. And can you tell me what that second column is
5 after 52?

6 A. The Democratic -- expected Democratic vote share
7 in that district is 50.2 percent.

8 Q. Right. And then what is the fourth column?

9 A. The probability the Democrat wins that seat,
10 assuming it's open, is 51.3 percent.

11 Q. I'd like to do that same exercise with
12 District 40.

13 A. Certainly. In District --

14 THE COURT: Where is that? Okay. I've got
15 it. Go ahead.

16 A. District 40, the predicted Democratic vote share
17 is 54.2 percent, and the predicted probability that a
18 Democrat wins is 68.6 percent.

19 Q. And then one just more district, 38.

20 A. Certainly. The predicted Democratic vote share
21 is 80.2 percent, and the probability that a Democrat wins
22 is effectively 100 percent.

23 Q. Would you say that Democrats have a different
24 probability of winning each of those three seats?

25 A. Yes.

1 Q. What would you think of an expert analysis that
2 would just call all of those three Democrat seats without
3 differentiating between how highly Democrats are to win
4 any of those seats?

5 A. That's not correct. They have quite a different
6 probability of electing a Democrat.

7 Q. And so what would you think of an expert
8 analysis that just treated them all as Democrat seats
9 without --

10 MR. MULLKOFF: Objection. Asked and
11 answered.

12 THE COURT: I'm going to let him delve in a
13 little.

14 Go ahead.

15 A. Again, I would -- the correct analysis is to do
16 this probability calculation, and they're quite different
17 probabilities.

18 Q. So if someone were to -- if an expert were to
19 treat those three simply as Democrat seats without doing
20 anything more, you would say that would be an incorrect
21 analysis?

22 A. It wouldn't be how I would do it.

23 Q. Thank you.

24 Now, turning to your conclusions, you stated, I
25 believe, in questioning from my friend that you do not

1 have any ultimate conclusion on whether this map was drawn
2 with the intent of favoring the Democratic party?

3 A. I can just tell you what the data suggests, my
4 analysis suggests. It's not -- but, no, I do not know the
5 intent.

6 Q. You also do not have any conclusion about
7 whether the map was drawn to favor or disfavor any
8 particular incumbents in the state Senate; is that
9 correct?

10 A. I didn't do an analysis to see if it favored any
11 particular incumbent.

12 Q. And so I've certainly heard in partisan symmetry
13 cases experts, including yourself, say that, and it seems
14 a little counterintuitive, so I'd like to explore a little
15 bit one reason why, despite the numbers that you talked
16 about, you're not really opining on partisan intent. So
17 I've got a couple questions on that. Isn't it true that
18 nothing in your report rules out the possibility that the
19 state Senate map is more pro-Democrat than 5,000
20 computer-generated maps done without considering partisan
21 intent -- partisan considerations?

22 A. It's not a well-framed question. What
23 simulations? Will they, in fact, generate legal maps?
24 And it -- I will tell you that my analysis shows that the
25 enacted map, from my estimate, shows no partisan bias.

1 Q. Let me tell you -- let me ask you another one.
2 Is there anything in your report that excludes the
3 possibility that the state Senate map here is the most
4 pro-Democrat map under your metric than any map that could
5 possibly be drawn complying with all of the New York
6 constitutional criteria except the prohibition against
7 partisan intent?

8 A. I don't know that.

9 Q. So you cannot exclude and nothing in your report
10 excludes that the map that the Democrats adopted for the
11 state Senate is the most pro-Democrat map possible under
12 the New York constitutional criteria putting aside the
13 prohibition against --

14 MR. HECKER: Objection, your Honor. There
15 is no evidence whatsoever, even from Mr. Trende, that
16 this is the most Democrat map possible. It is
17 completely baseless and an improper question.

18 THE COURT: Well, he's asking if he can
19 rule it out.

20 MR. HECKER: Rule out that this is
21 literally the most pro-Democratic map that any human
22 being could have drawn? That's the question?

23 THE COURT: If he can answer.

24 MR. HECKER: Go ahead. Answer that
25 question, Dr. Katz.

1 THE COURT: Overruled.

2 Go ahead. You can answer.

3 BY MR. TSEYTLIN:

4 A. I honestly have no idea.

5 Q. Tweaking that question further, is there
6 anything in your report that would conclude that this is
7 not among the 5 percent most pro-Democratic maps that
8 could be drawn by someone who is seeking to draw the most
9 pro-Democrat map possible complying with all New York
10 constitutional criteria except for the prohibition against
11 partisan gerrymander?

12 A. I don't know how we could possibly enumerate
13 every possible map. There's literally trillions.

14 Q. Is there anything in your report that identifies
15 any map, any potential map in New York, that would be more
16 pro-Democrat than the map that the Legislature enacted?

17 A. I only analyzed one map, the enacted map.

18 Q. Is it possible based upon your methodology that
19 a state or locality has such a political geography that it
20 is not possible to draw a map that scores as pro-Democrat
21 on your methodology?

22 A. I don't understand the question. I'm sorry.

23 Q. Is it possible --

24 MR. TSEYTLIN: Could you please read that
25 back?

1 (The record was read back by the court
2 reporter.)

3 BY MR. TSEYTLIN:

4 A. One, this map doesn't show pro-Democrat. It
5 shows it's fair. And, two, again, I don't know how to
6 enumerate every possible map, so I don't know how to
7 answer that question.

8 Q. What is a confidence interval?

9 A. The formal definition of a confidence interval
10 is a data point such that we cannot rule out a given null
11 hypothesis.

12 Q. So can you please turn to Page 12 of your
13 report? So in Figure 2, those lines there, the far right
14 side of those lines, what is the far right side of those
15 lines?

16 A. The far right side is the upper -- the most --
17 the largest expected possible Democratic bias that's
18 consistent with the data I observed.

19 Q. So if I understand this correctly, is it true
20 that this means that you think it is possible that the
21 Senate map has -- in fact, has the value on the right side
22 of that line?

23 A. Possible but not likely. The most -- the most
24 density will be towards the center, towards that center
25 dot. But, yes, it's possible.

1 Q. It is possible.

2 And then what would be the number of seats that
3 the map would be biased with Democrats if, in fact, you're
4 on that right side of the confidence interval on all five?

5 A. That's not exactly -- that's not exactly -- the
6 maximal number of seats the Democrats could estimate, as I
7 previously testified to, is 49 seats.

8 Q. Sorry. Let me rephrase. It says on the bottom
9 here: Bias in percent of seats. Within your confidence
10 interval, how biased could this map be for -- towards
11 Democrats?

12 A. At what point of the seats-votes curve?

13 Q. The rightmost part of the confidence interval
14 for all five parts.

15 A. I don't know the exact number on any of these
16 points.

17 Q. Could you give an approximation?

18 A. It looks like the maximal is somewhere about
19 4 1/2 percent if I'm eyeballing it correctly.

20 Q. So how many seats would that be?

21 A. I'm terrible at math on the spot. 4.5. -- 0.45
22 times 63. Anyone have a calculator? It's -- well, 10
23 percent would be six seats, so about -- a little less than
24 three seats.

25 Q. So under your analysis it's entirely possible

1 that the map is biased in favor of Democrats by three
2 seats with --

3 MR. HECKER: Objection. That's not what he
4 said at all.

5 THE COURT: Well, ask him the question.

6 Q. Is it possible and within your confidence
7 interval that the state Senate map actually favors the
8 Democratic party by three seats?

9 A. Possible but not likely.

10 Q. It is within your confidence interval?

11 A. That's what I said. It's possible.

12 MR. TSEYTLIN: Thank you.

13 THE COURT: Redirect?

14 MR. MULLKOFF: Just very briefly, your
15 Honor.

16 REDIRECT EXAMINATION

17 BY MR. MULLKOFF:

18 Q. Dr. Katz, looking at Page 12 of your report,
19 where you were just focused, I believe he was asking you
20 about the far right edge of those lines, correct?

21 A. I believe he was referring to Page 9, but --

22 Q. Oh. Pardon me. Let's go to Page 9. I'm
23 talking about the partisan bias chart.

24 A. Oh, sorry. That's Page 12. My bad.

25 Q. Page 12. In your interpretation of results of

1 partisan bias, do you generally focus on the far right
2 side alone as a useful indicator of the results?

3 A. No. You want to look at the whole range. So
4 the map could also be biased in favor of the Republicans
5 by about that amount for some regions.

6 Q. If you were to look to the far left side of
7 those lines, what would those indicate?

8 A. They would indicate -- there looks to be a bias
9 of 5 percent, and the very lowest range is bias almost up
10 to 8 percent in favor of Republicans. It's possible,
11 again, not likely to be fair. The most likely points are
12 towards the enter towards the point estimates.

13 Q. Is it equally possible that the far left side of
14 the lines would apply, which would be more pro-Republican,
15 as the far right side of the lines would apply, which
16 would be more pro-Democrat?

17 A. That's correct. They have equal probabilities.

18 Q. What is the most useful place to focus on this
19 chart with respect to estimating the partisan bias of the
20 Senate map?

21 A. Again, I think it's important to look at
22 confidence interval, but the point of highest probability
23 is that center dot, the point estimate.

24 MR. MULLKOFF: No further questions.

25 THE COURT: Recross?

1 MR. TSEYTLIN: Nothing further, your Honor.

2 THE COURT: Thank you. You can step down,
3 sir.

4 THE WITNESS: Thank you, your Honor.

5 THE COURT: Thank you.

6 THE WITNESS: Am I released?

7 THE COURT: Yes.

8 Do you want him released?

9 MR. HECKER: Yes, your Honor.

10 (The witness was excused.)

11 MR. MULLKOFF: Your Honor, before we go off
12 the record, I personally need to leave the courtroom.
13 I just wanted to let you know.

14 (Mr. Mullkoff left the room).

15 TODD A. BREITBART,

16 called herein as a witness, having been first duly sworn,
17 was examined and testified as follows:

18 THE DEPUTY: State and spell your name for
19 the Court, please.

20 THE WITNESS: First name is Todd, T-o-d-d,
21 two Ds. The middle initial is A. The last name is
22 Breitbart -- there are nine letters --
23 B-r-e-i-t-b-a-r-t.

24 THE COURT: Okay. Mr. Breitbart, I'm going
25 to ask you to keep your voice up so I can hear you

1 well. Even though I'm close to you, I'm a little
2 hard of hearing.

3 THE WITNESS: Am I all right now?

4 THE COURT: Fine. Fine. Thank you.

5 All right. Mr. Goldenberg?

6 MR. GOLDENBERG: Thank you.

7 DIRECT EXAMINATION

8 BY MR. GOLDENBERG:

9 Q. Good afternoon, Mr. Breitbart. I'm just going
10 to start by going through some of your relevant
11 qualifications that brings you here today. Am I correct
12 that you began working for the New York State Legislature
13 in 1975?

14 A. The very end of 1975, yes.

15 Q. And you were initially employed by the Assembly;
16 is that correct?

17 A. That is correct.

18 Q. And in 1980 you began your employment with the
19 New York State Senate; is that correct?

20 A. Yes. I began working for the minority --
21 successive Minority Leaders that are state Democratic
22 leaders of the New York State Senate as the director of
23 the staff work on redistricting.

24 Q. And, Mr. Breitbart, for how long did you serve
25 in that position as the head of redistricting for the

1 state Senate Democrats?

2 A. From 1980 through the end of 2005, when I
3 retired and took my pension.

4 Q. Can you please describe for the Court your
5 professional duties with the Legislature when working as
6 the head of redistricting for the Senate Minority Leader?

7 A. Yes. I developed analyses of the possible ways
8 in which redistricting plans could be drawn. I developed
9 proposals that could be used in negotiation or else as the
10 basis for eventual litigation. I analyzed the legal and
11 constitutional aspects of drawing plans in various ways
12 and also analyzed the political consequences.

13 Q. And, Mr. Breitbart, in connection with that
14 employment, were you ever involved in redistricting
15 litigation?

16 A. Yes. In 1982 when there was an impasse in the
17 Legislature as to how the districts should be drawn and
18 when they should be drawn, I advised the lawyers who were
19 working for the Senate Minority Leader in that litigation.
20 And then after the passage of the redistricting bills in
21 1992 and 2002, I advised the lawyers who were involved in
22 challenging the constitutionality of those --
23 constitutionality and legality under the Voting Rights Act
24 of those redistricting plans, and I was principally
25 responsible for marshalling the evidence and the

1 challenges to those redistricting plans.

2 Q. Can you please briefly describe for the Court
3 some of the knowledge and skills that you obtained with
4 respect to redistricting through your work at the
5 Legislature?

6 A. Well, I began working on -- I was asked to begin
7 working redistricting because I had experience targeting
8 political campaigns. So I was in a position to reckon the
9 political consequences of drawing districts in one way or
10 another, but then in the course of my work, I had to learn
11 a great deal about geography, demography, statistics, and
12 the applicable law.

13 Q. And, Mr. Breitbart, am I correct that in 2012
14 after your retirement, you were also involved in matters
15 relating to redistricting in that cycle?

16 A. Yes. I --

17 Q. Can you briefly describe for the Court what you
18 did?

19 A. I submitted a proposed Senate redistricting plan
20 to the Reapportionment Task Force, I consulted with other
21 organizations, especially advocates of minority voting
22 rights about the plans -- the proposals they were
23 submitting, and I testified at length several times before
24 the Redistricting Task Force, and then I was involved in
25 the lawsuits challenging the plans that had been enacted.

1 In one of those lawsuits, I was one of the complainants,
2 in the lawsuit over the manipulation of the formula that
3 determines the number of Senate districts.

4 And in the lawsuit challenging the plans that
5 were enacted on other grounds, I was, again, personally
6 responsible for marshalling the evidence for the
7 plaintiffs, and I submitted a proposed 62-district plan to
8 the Reapportionment Task Force. I revised that in
9 connection with the legislation with a plan -- a
10 63-district plan showing that, quite apart from the
11 controversial -- with the size of the Senate, the
12 criticisms that I had made on the basis of my 62-district
13 plan would still be valid, and I also submitted testimony
14 in that second lawsuit.

15 Q. And, Mr. Breitbart, in addition to this work as
16 a professional employee of the Legislature and other work
17 in connection with litigation, am I correct that you have
18 written about redistricting in New York and served as a
19 consultant both to the Bar Committee and to the New York
20 State Attorney General in connection with redistricting
21 litigation that they were involved in?

22 A. Yes. I was the principal advisor to the
23 Election Law Committee of the Bar Association in the City
24 of New York in developing the proposal that they published
25 in 2007 proposing a reform of the New York State

1 redistricting process, proposing an amendment to the
2 New York State Constitution, I and drafted the text of the
3 report.

4 In -- what was it -- 2016, I think -- or 2014 or
5 2016, when New York City -- when New York State submitted
6 an amicus brief in the case of *Evenwel v. Abbott*, a
7 challenge to the Texas legislative redistricting which was
8 based on the argument that the legislative redistricting
9 should be based only upon citizen voting-age population,
10 not the total population, I briefed and consulted with the
11 lawyers on the staff of the New York State Solicitor
12 General, who submitted an amicus brief on behalf of
13 New York State, several other states, and several
14 municipalities supporting the principle that it was proper
15 for legislative redistricting to be based on the total
16 population. And so they were, in effect, supporting the
17 position that was being argued principally in court by the
18 Attorney General of the State of Texas. There were many
19 other amicus briefs in that case submitted by nonpartisan
20 organizations.

21 I also consulted with the lawyers in the state
22 Attorney General's Office who were responsible for the
23 lawsuit of New York versus Department of Commerce, which
24 successfully prevented the addition of a citizenship
25 question to the 2020 census, and I submitted and an

1 affidavit as a witness in that case.

2 I'm also the co-author of the chapter --
3 Chapter 4, the chapter on redistricting, in the book
4 published by the State University press in 2016,
5 New York's Broken Constitution.

6 Q. Mr. Breitbart, I just want to ask you a question
7 because you were previously employed by the Legislature.
8 In connection with this year's redistricting in 2022, did
9 you have any role at all in the drafting or enactment of
10 that plan?

11 A. None whatsoever. And to the best of my
12 knowledge, I had no communication whatsoever with whoever
13 was responsible for drafting any of the plans.

14 Q. After the commencement of this litigation, were
15 you retained as an expert in this matter?

16 A. Yes, by your firm.

17 Q. And our firm retained you as an expert for what
18 party in the case?

19 A. For the Majority Leader of the state Senate.

20 Q. And are you being paid for your expert --

21 A. Yes, at the rate of \$300 per hour.

22 Q. Does your pay in any way depend on the nature of
23 the opinions you give in this matter?

24 A. No. You and your colleagues have made it very
25 clear that that is not the case.

1 MR. GOLDENBERG: Your Honor, I would move
2 to qualify Mr. Breitbart as an expert with respect to
3 the process, recent history, and constitutional
4 requirements for Senate redistricting in New York
5 State.

6 THE COURT: Petitioners?

7 MR. TSEYTLIN: No objection.

8 THE COURT: Qualifying him as such.
9 Please proceed.

10 BY MR. GOLDENBERG:

11 Q. Mr. Breitbart, what were you retained to do in
12 this case?

13 A. I was asked to examine the '22 Senate
14 redistricting plan, the 2012 Senate redistricting plan,
15 the maps and demographic data regarding those plans,
16 Mr. Lavigna's report regarding the Senate districts in
17 particular, and to evaluate the constitutionality of the
18 2022 Senate plan, especially in comparison with 2012
19 Senate plan, and also to examine point by point what
20 Mr. Lavigna had to say about the 2022 Senate plan.

21 Q. In connection with this work, did you prepare an
22 affidavit?

23 A. Yes, I did.

24 MR. GOLDENBERG: May I approach?

25 THE COURT: You may.

1 (Respondents' Exhibits S-20 and S-21 were
2 marked for identification.)

3 BY MR. GOLDENBERG:

4 Q. Mr. Breitbart, I've handed you for
5 identification what's been marked for identification as
6 S-20 and S-21. Because of the way the documents were
7 printed, S-20 is the affidavit that was filed in this
8 litigation and S-21 are the exhibits that accompanied that
9 affidavit when filed.

10 Mr. Breitbart, if you could briefly look at the
11 documents I've handed to you. Can you please confirm
12 whether that is the affidavit that you wrote in this
13 matter and the exhibits that were accompanied with it?

14 A. Yes, it is.

15 MR. GOLDENBERG: Your Honor, I would move
16 to admit the affidavit and exhibits into the record.

17 THE COURT: Petitioners?

18 MR. TSEYTLIN: No objection.

19 THE COURT: No objection?

20 MR. TSEYTLIN: No objection.

21 THE COURT: Admitted.

22 MR. GOLDENBERG: Thank you, your Honor.

23 (Respondents' Exhibits S-20 and S-21 were
24 received in evidence.)

25 BY MR. GOLDENBERG:

1 Q. Mr. Breitbart, for the sake of time, I will
2 direct your attention to Paragraph 8 of your affidavit and
3 just ask you to confirm whether it accurately reflects the
4 materials and documents that you reviewed in connection
5 with your work in this matter.

6 A. Yes. That's correct.

7 Q. And, Mr. Breitbart, are you familiar, in
8 addition to the constitutional amendments that were in
9 place at the time that you were an employee of the
10 Legislature, with the amendments that were added to the
11 Constitution and the principles that were added to the
12 Constitution for redistricting in 2014?

13 A. Yes, I am.

14 Q. And were those principles and amendments to the
15 Constitution addressed in part of what was written about
16 in the chapter of the Broken Constitution that you
17 co-authored?

18 A. Yes.

19 Q. After conducting your review in this matter, did
20 you reach any conclusions about the enacted Senate plan?

21 A. Yes. I concluded that in many respects the
22 enacted Senate plan in 2022 complied with provisions --
23 important provisions of the New York State Constitution
24 and did so where those provisions were violated by the
25 2012 plan. To give you some examples, the Constitution

1 forbids the division of a town that does not have
2 sufficient population for a whole Senate district. There
3 are three such towns on the boundary between Nassau and
4 Suffolk Counties. In Nassau County there is the Town of
5 Oyster Bay, which extends along the entirety of the county
6 boundary from the Long Island Sound to the Atlantic Ocean.
7 And in Suffolk County there are two such towns, the Town
8 of Huntington to the north and the Town of Babylon to the
9 south. In order to draw districts that have appropriate
10 population deviations, it is necessary to divide the Town
11 of Oyster Bay in some way and to divide one of the two
12 towns that lie along that boundary in Suffolk County, that
13 is, say, the Town of Huntington and Town of Babylon.

14 The 2012 plan unnecessarily divided both the
15 Town of Huntington and the Town of Babylon. The Town --
16 the 2022 plan keeps the Town of Huntington intact within a
17 single district within Suffolk County and so also reduces
18 the number of bi-county districts, that is, Nassau-Suffolk
19 Districts from two to what? It's not necessary to have
20 two districts combining parts of those same two counties
21 in order to achieve appropriate population deviations. It
22 is only necessary to have one. The 2012 had two. The
23 2022 plan has one.

24 And in Exhibit E -- Exhibit A there's a map that
25 shows how Huntington was divided in 2012 with extremely

1 convoluted boundaries. It was divided into three pieces,
2 two of which were part of another district in Suffolk
3 County, one of which extended across the county boundary
4 into Oyster Bay in Nassau County, whereas in the 2022 plan
5 the Town of Huntington is kept intact within a single
6 district and is attached to adjoining areas in the
7 northern part of the Town of Babylon to create a compact
8 district wholly within one county and avoiding the
9 unnecessary division of a town.

10 Also, the 2012 plan had many unnecessarily
11 non-compact districts. If you look at the map that is the
12 first map under -- of Exhibit B, the 2012 Senate districts
13 in New York City --

14 THE COURT: One second now.

15 THE WITNESS: Yes.

16 THE COURT: Which page are you on?

17 THE WITNESS: I'm going --

18 MR. GOLDENBERG: It's Page 1 of Exhibit B,
19 your Honor.

20 THE WITNESS: Yeah.

21 MR. GOLDENBERG: I believe it is four or
22 five pages into the exhibit document.

23 THE WITNESS: It is this page (indicating).

24 THE COURT: I think I'm with you.

25 THE WITNESS: Yes, that's right.

1 BY MR. GOLDENBERG:

2 A. -- you will see that there are many extremely,
3 one might say, wildly non-compact districts in
4 New York City. One of these is District 22, which is
5 further illustrated on the next page. District 22 as it
6 was drawn in 2012, which extends from the Bay Ridge
7 neighborhood through a corridor that is in some places
8 only one block wide to the Marine Park neighborhood in
9 Brooklyn, was picking up -- designed to pick up as many
10 Republican voters as possible along the way.

11 But there are other examples. There's
12 District 20, which includes -- is mostly in the
13 Crown Heights neighborhood but then has this very peculiar
14 corridor, sometimes only one block wide, that extends
15 first northwest and then southwest for over a mile to pick
16 up a group of blocks in Sunset Park. You have
17 District 19, which includes the Canarsie area of Brooklyn
18 but then has this corridor extending around part of the
19 convoluted District 22 to pick up a group of blocks over
20 here, and there are these highly -- these intricate
21 boundaries in Queens County that one could hardly make out
22 on a map of this scale. If you compare that with the map
23 at the same scale of the Senate districts that were drawn
24 in 2022, it's obvious just at a glance that the 2022 map
25 creates districts that are much more compact.

1 Q. Mr. Breitbart, did you make any observations in
2 the 2022 enacted plan with respect to population
3 deviations and constitutional principles related to
4 population equality?

5 A. Yes, and there's a remarkable contrast with the
6 2012 plan. The 2012 plan, the total deviation -- that is
7 the difference in population between the largest and
8 smallest district expressed as a percentage of the mean
9 district population -- is 8.8 percent. In the 2022 plan
10 it is, I believe -- I have it in my report. I think it's
11 1.62 percent.

12 But the problem with the 2012 plan is not just
13 that there was a very large population deviation but that
14 the district population deviations were accumulated in
15 such a way that there was a regional malapportionment.
16 All of the districts in Long Island and New York City had
17 a population deviation well above the mean, and all of the
18 districts to the north had a population deviation below
19 the mean with the result that New York City alone had --
20 one very nearly one district less than its share of the
21 state's population would have warranted. The area to the
22 north had 1 1/6 districts more than its share of the
23 state's population would have warranted.

24 The 2022 plan is a remarkable contrast with
25 that. Because the population deviations are so small,

1 however you may define any region of the state, that
2 region will have a share of the total number of Senate
3 districts that is approximately equal to its share of the
4 state's population. And one resulting change is that
5 because the 2012 plan had given the Upstate area one
6 district at a fraction more than it was entitled to on the
7 basis of its population and because also of the shift --
8 or change in the distribution of the state's population as
9 revealed in the 2020 census, the 2022 plan reapportions
10 two whole districts from Upstate to New York City, but it
11 does so without playing games with the deviation.

12 It does so by creating districts throughout the
13 state that are very close to the same district population.
14 The shift of one district from Upstate to New York City
15 amounts to a correction of the malapportionment in the
16 2012 plan, and the shift of the second district from
17 Upstate to New York City reflects changes in the
18 distribution of the state's population that occurred
19 during the previous decade and are shown in the 2020
20 census.

21 And I might add that if the Democrats in the
22 Senate had done a favor for themselves in 2022 like the
23 one that the Republican Majority in 2012 did for
24 themselves in dealing with the apportionment of Senate
25 districts, there would have been a shift of three

1 districts from Upstate to New York City, but that is not
2 the case. They didn't play around with the deviations or
3 the apportionment in the way it was done in the 2012 plan.
4 They simply apportioned the districts in strict
5 proportionality to the distribution of the population
6 throughout the state.

7 Q. Mr. Breitbart, am I correct that the first new
8 principle announced in the Constitution in 2014 -- by
9 "the first" I mean Paragraph 1 in the relevant section --

10 A. Yes.

11 Q. -- relates to fairness for racial and language
12 minority groups?

13 A. Yes. That was the first time that principle,
14 which is similar to the Voting Rights Act but not exactly
15 the same, has been incorporated into the New York State
16 Constitution.

17 Q. Did you make any observations with respect to
18 the Legislature's compliance with that principle in the
19 2022 plan?

20 A. Yes. And, again, this was a departure from
21 previous practice. As I showed in the testimony that I
22 submitted to the Reapportionment Task Force in 2011 and
23 2012, in the previous four decades, there had been a
24 systematic splitting of minority communities both in
25 Nassau and Suffolk Counties, and I note in my testimony

1 that I submitted there, which I also quote in my
2 affidavit, that in the Town of -- in the Village of
3 Brentwood and the Town of Islip, there is a line running
4 that Village of Brentwood that divides the black and
5 Hispanic communities in the Town of Islip, and that
6 line -- even as districts are redrawn around it, that line
7 was identical in 1982, 1992, 2002, and 2012.

8 In 2022, happily, that line no longer appears.
9 The minority communities in the Town of Islip are now kept
10 together. And although they don't create a district where
11 the minority group voters would necessarily form -- where
12 a part of the minority group voters would necessarily form
13 a majority of the voters, so it's not a situation where
14 you could have made a complaint under Section 2 of the
15 federal Voting Rights Act, it is in compliance with the
16 New York State constitutional rule of providing fair
17 opportunities for members of minority groups to
18 participate in the political process.

19 Q. Mr. Breitbart, you testified earlier about your
20 observations with respect to towns in the 2022 enacted
21 plan. Can you speak to any observations regarding
22 splitting cities and counties in the 2022 plan?

23 A. Yes. Well, let's start with counties first, and
24 then I'll go to cities because there is a stronger rule
25 and has been for a while in the state Constitution against

1 dividing counties. The 2012 plan chopped up Ulster County
2 and the Hudson Valley among four Senate districts. The
3 2022 plan keeps Ulster County intact within a single
4 district.

5 The 2012 plan cut up Tompkins County into three
6 parts. One of those districts extended north to the
7 shores of Lake Ontario. Another of those districts
8 extended east in the Hudson Valley. The 2022 plan keeps
9 Tompkins County intact within a single compact district
10 and united with other areas with which it has more in
11 common, extending down into Broome County and including
12 the City of Binghamton.

13 The 2012 plan split St. Lawrence County among
14 three districts. The 2012 plan, I should say, split
15 Lawrence County among three districts. The 2022 plan
16 keeps Lawrence County intact in a single district.

17 The 2012 plan split Delaware County among three
18 districts. The 2022 keeps Delaware County intact in a
19 single district.

20 As to the division of cities, if you look at the
21 map in Exhibit C, okay, Page 2 of Exhibit C, there's a map
22 of 2012 District 35.

23 THE COURT: I don't think I have Exhibit C.

24 THE WITNESS: It's part of the same
25 document. A, B, and C are part of the same document.

1 THE COURT: There it is. What page of
2 Exhibit C?

3 THE WITNESS: The second page of Exhibit C.

4 THE COURT: Thank you.

5 THE WITNESS: The first page has maps of
6 the whole Upstate area, and then the second page is
7 what I'm referring to.

8 BY MR. GOLDENBERG:

9 A. You will see that District 35 includes the
10 western part of the City of Yonkers and then extends north
11 into some towns. It divides the City of White Plains in a
12 half, and then it extends south, and it splits up the City
13 of New Rochelle with an extremely complex, convoluted
14 boundary, and then there's an adjoining district that
15 similarly, because of the way it goes around
16 District 35 -- I explained that in detail in my
17 affidavit -- you know, along with District 35, splits up
18 the City of New Rochelle with this crazy boundary. The
19 plan enacted in 2022 has a large part of the City of
20 Yonkers, which because of its large population, does have
21 to be divided, but then it goes to the north, Greenburgh,
22 Mount Pleasant, New Castle.

23 THE COURT: Still splits White Plains,
24 doesn't it?

25 THE WITNESS: It takes a few blocks from

1 the western part of White Plains, just a few blocks,
2 which have to be taken out because of the operation
3 of the "block on border" rule, which unfortunately
4 does require removing a few blocks sometimes from a
5 city that could otherwise be kept intact. Towns are
6 protected from being divided in that way, by the
7 "block on border" rule, but cities are not.

8 And unfortunately we do not have in this
9 grouping a detailed map of the City of White Plains.
10 There is one available on the Reapportionment Task
11 Force website, and you would be able to see there
12 that the -- where the old map divided White Plains in
13 half, the new map keeps the City of White Plains
14 almost entirely intact within a single district, but
15 there are a few blocks that have to be cut out
16 because of the "block on border" rule, the same
17 thing, it looks like --

18 Q. Mr. Breitbart, let me just stop you for a moment
19 because there's been a lot of talk about the "block on
20 border" rule in this case, but most of those with whom it
21 was discussed were not familiar with the rule. Can you
22 very briefly describe for the Court why the "block on
23 border" rule required this cut into White Plains?

24 A. The rule says that if you have two adjoining
25 districts and the boundary between the districts is not a

1 town line or a county line and there's a population
2 deviation between the two districts, if there's any block
3 within the more populous district that has a smaller
4 population than the difference between the two districts,
5 it has to be moved to the other district. So to take a
6 simple example, let's suppose you have two adjoining
7 Senate districts, and we'll leave aside the fact that
8 these are not populations that would be possible, you
9 know, with the current state population. But let's say
10 you have one -- and let's say these districts are both in
11 Brooklyn so we're not dealing with town boundaries or
12 county boundaries. You have two adjoining districts. One
13 has a population of 300,000. That's District A.
14 District B has a population of 300,003. If on the
15 boundary between the two there is a block in District B,
16 the district that has a population of 300,003, with a
17 population of two persons, that block has to be moved into
18 District A. Now, this -- because towns are supposed to be
19 kept intact. Towns are protected from being divided by
20 the rule. Counties are protected from being divided by
21 the rule.

22 Unfortunately cities are not protected from
23 being divided by the rule. So where you have a boundary
24 that goes along a city boundary, if the city is in the
25 more populous district, then some blocks may have to be

1 taken out of the city to comply with the "block on border"
2 rule. And that explains why even in the 2022 plan,
3 although the City of White Plains is kept mostly intact
4 within a single district -- and it's not District 37.
5 It's the adjoining district over here. I forget now what
6 the number is. Actually I can find out from the next
7 page. I think it's District 39 -- even a few blocks --

8 Q. I think it's 42.

9 A. You'll also see, if you look at the map that
10 shows the district that includes the City of Niagara Falls,
11 there are just a few blocks in one corner of the City of
12 Niagara Falls that have been cut out of the City of Niagara
13 Falls in the 2022 plan. It was something that had to be
14 done to comply with the same rule.

15 THE COURT: I understand.

16 Q. Mr. Breitbart, based on your analysis of the
17 2022 plan, did you find that the Legislature complied with
18 the "block on border" and "town on border" rules?

19 A. Yes. That is why you will see that in
20 Long Island -- in the region comprising Long Island,
21 New York City, and the Westchester Town of -- Westchester
22 City of Mount Vernon and the Town of Pelham, the districts
23 all have a population within two persons of one another.
24 It's also why the two districts that divide the City of
25 Syracuse are exactly equal in population; the two

1 districts that divide the City of Rochester are exactly
2 equal in population; it's why the two districts that
3 divide Buffalo are exactly equal in population and are
4 equal in population to that district that takes in the
5 rest of Niagara County, other than Niagara Falls, where
6 the populations were equalized by cutting those few blocks
7 out of the City of Niagra Falls.

8 Q. Did you make any observations with regard to the
9 2022 enacted plan's respect for communities of interest?

10 A. Yes. Well, first of all, where the division of
11 the minority communities in the Town of Islip has ended,
12 you would regard that as showing respect for communities
13 of interest. The ending of those wildly non-compact,
14 intricate districts in Brooklyn and Queens and the drawing
15 of the obviously compact districts that I called attention
16 to before would show a respect for communities of
17 interest, keeping all the towns in Tompkins County in the
18 same district rather than attaching some of them to
19 communities on the shore of Lake Ontario, and others to
20 communities in the Hudson Valley shows respect for
21 maintaining communities of interest.

22 And you can also say the same of what was done
23 in changing the district boundaries for the City of
24 Rochester. In the 2012 plan the City of Rochester was
25 divided among three districts, and an area in the southern

1 end of the City of Rochester, which was notable for having
2 a particularly large black population, was attached to an
3 extremely non-compact district that extends west through
4 Genesee County and then through Erie County to the Buffalo
5 City line.

6 There are now just two districts that divide the
7 City of Rochester. That black community in the southern
8 end of the City of Rochester is now included in one of
9 those districts. Both of those districts are entirely
10 within Monroe County. And where Monroe County was
11 previously divided among six districts, it's now divided
12 among three districts, two of which are entirely within
13 the county.

14 Q. Mr. Breitbart, Mr. Lavigna in his report
15 discusses a number of Senate districts and alleges that
16 the district lines for those districts can only be
17 explained as a result of improper partisan gerrymandering.
18 What conclusions did you reach regarding Mr. Lavigna's
19 analysis?

20 A. You will see that in my affidavit I discuss in
21 detail every one of the examples that he gives, and in
22 each case I show that where he says he can conceive of no
23 reason other than partisan intent for the difference
24 between the 2012 plan and the 2022 plan, I show how those
25 differences can be explained by adherence to

1 constitutional principals. He makes no reference to or
2 does not take into account of the reapportionment --
3 regional reapportionment that was necessary in order to
4 give each region of the state its proportional share of
5 districts equal to its proportion of the state's
6 population.

7 And so, for example, he complains that there's
8 an Upstate district where two Republican incumbents are
9 attached in the same district and says that can only be
10 explained by partisan intent. But since a proper
11 apportionment correcting the malapportionment of the 2012
12 plan and also taking into account the change in
13 distribution of the state's population must necessarily
14 involve reducing the number of Upstate Senate districts by
15 two and increasing the number of New York City districts
16 by two, Mr. Lavigna does not attempt to explain how you
17 can reduce the number of Upstate's districts by two
18 without in any place uniting or combining two incumbents
19 in the same districts. It's impossible to do.

20 He says that the changes to Senate District 3 in
21 Long Island can only be explained by partisan intent but
22 doesn't take into account the way the minority communities
23 in Islip were divided in the 2012 plan and not divided in
24 the 2022 plan. He says that the way District 5, the
25 district that now includes all of the Town of Huntington,

1 was drawn could only be explained in terms of partisan
2 intent, but he doesn't take into account the fact that the
3 2012 plan unnecessarily violated the state constitutional
4 rule against dividing towns and the fact that the 2022
5 plan abides by that rule.

6 He says that communities in Tompkins County have
7 now been disconnected from communities with which they
8 have a historical connection and connected to communities
9 with which they do not have such a connection. He
10 apparently believes that the towns in Tompkins County that
11 were formally attached to a district that went to the
12 shore of Lake Ontario, that those towns had some
13 historical connection with communities on the shore of
14 Lake Ontario and that those towns that were attached to
15 part of a district that extended to the Hudson Valley had
16 a historical connection with communities in the Hudson
17 Valley but doesn't seem to think that the towns in
18 Tompkins County have any historical connection with one
19 another.

20 Q. Mr. Breitbart --

21 THE COURT: Mr. Breitbart (sic), I'm not
22 trying to hurry you --

23 MR. GOLDENBERG: Yeah.

24 THE COURT: -- but I just want you to know
25 at the latest I can go is quarter or ten of. I mean,

1 I have to get the staff time to get back to their
2 office.

3 MR. GOLDENBERG: And I know that there's --

4 THE COURT: We can go on tomorrow. I'm not
5 going to hurry you.

6 MR. GOLDENBERG: No, I understand.

7 THE COURT: If we have to go on tomorrow,
8 we can go on tomorrow.

9 MR. GOLDENBERG: And I know there's
10 individuals in the courtroom who also have travel
11 plans that need to be accommodated.

12 BY MR. GOLDENBERG:

13 Q. So I'm going to ask you one more question,
14 Mr. Breitbart. You were present for Mr. Lavigna's
15 testimony, correct?

16 A. Yes, I was.

17 Q. And during that testimony Mr. Lavigna
18 acknowledged that in his analysis he didn't consider
19 certain constitutional principles like "block on border"
20 and "town on border" and minority voting rights and also
21 that his report doesn't address other factors, for
22 example, population equality and splitting cities or
23 towns. Do you have an opinion on the validity of an
24 analysis of a Senate plan that does not account for or
25 address relevant constitutional principles like these?

1 A. Well, obviously one cannot analyze or evaluate
2 the validity of a plan without considering the
3 constitutional rules that are supposed to govern the
4 drawing of the districts, and the fact that he ignored
5 those constitutional rules may explain why he can imagine
6 no reason except partisanship for districts that can
7 actually be -- districting decisions that can actually be
8 explained as adhering to those constitutional rules.

9 MR. GOLDENBERG: Thank you, Mr. Breitbart.
10 No further questions.

11 MR. HECKER: Your Honor, can I just state
12 for the record that if it were 2:00 o'clock, we would
13 do significantly more with Mr. Breitbart. We think
14 we've given you a flavor. His affidavit is very
15 detailed. It's in the record. And we assume that
16 your Honor will look at the Lavigna report and the
17 Breitbart report in detail on your own time and that
18 it's not necessary for Mr. Breitbart to do more than
19 he's already done verbally.

20 THE COURT: And that's fine. I will look
21 at his report again. I have read it, but I will look
22 at it again. But I also want you to know,
23 Mr. Hecker, I'm here tomorrow anyway. I'm willing to
24 do this into tomorrow if need be.

25 MR. HECKER: And so am I for the record.

1 It's actually Petitioners' counsel that we're trying
2 to accommodate.

3 THE COURT: Thank you.

4 All right. Cross?

5 MS. DiRAGO: While we really do thank you,
6 but we're fine staying as well. Don't cut it short
7 for us. I mean, I do appreciate it, but honestly --

8 MR. HECKER: I think we're good.

9 MS. DiRAGO: -- this is more important.

10 MR. HECKER: I think we're good.

11 MS. DiRAGO: Okay. I just wanted to make
12 sure.

13 MR. TSEYTLIN: Your Honor, if I could ask,
14 I think, two minutes of questions --

15 THE COURT: Yes.

16 MR. TSEYTLIN: -- and, you know --

17 THE COURT: I'm not --

18 MR. TSEYTLIN: No, I mean, I just have

19 one --

20 THE COURT: Cross-examination?

21 MR. TSEYTLIN: I have maybe two or three
22 questions.

23 CROSS-EXAMINATION

24 BY MR. TSEYTLIN:

25 Q. Hello, sir.

1 Is it your testimony that the 2022 Senate map
2 complies with all constitutional requirements?

3 A. I don't know whether you can find a place in the
4 map -- a place where the map does not comply with some
5 constitutional requirements. It is obviously a great
6 improvement of the 2022 map -- 2012 map in the way that I
7 described and describe in more detail in my affidavit.
8 What I did examine was every single point in Mr. Lavigna's
9 report, so I have not attempted to determine whether there
10 is someplace where one could make a complaint that no one
11 has yet made about the 2022 plan.

12 Q. I heard you say earlier -- and please correct me
13 if I'm not correct -- that you believe that the
14 Legislature used the new constitutional provision with
15 regard to minority voters to consider racial
16 considerations over other district criteria, like core
17 retention, more than Section 2 of the VRA requirements?

18 A. No. That is not what I said. What I -- my
19 comparison was that in the case law governing Section 2,
20 you cannot complain about the way, let's say, the
21 districts in Suffolk County were drawn unless you can show
22 that it's possible to create a district in which either a
23 single minority group or two minority groups that are
24 politically cohesive will be able to form a voting
25 majority. The provisions in the New York State

1 Constitution do not include such a rule. They say only
2 that the Legislature should take into account the question
3 of whether minority groups are given a fair opportunity
4 and an equal opportunity with other voters to participate
5 in the political process.

6 And what I said was that the way District 3 was
7 drawn was a significant improvement over the way the
8 minority groups in Suffolk County had been systematically
9 split during the four decades. I didn't say that it gave
10 priority over to minority group representation over other
11 redistricting criteria. In fact, as I point out in my
12 affidavit, the Suffolk County districts are more compact.
13 Especially the districts in the Town of Islip are more
14 compact than the 2012 districts that they replace.

15 MR. TSEYTLIN: Thank you for that
16 clarification. I have nothing further.

17 THE COURT: Thank you.

18 Any redirect?

19 MR. GOLDENBERG: No, your Honor. Thank
20 you.

21 THE COURT: Thank you. You can step down.
22 Thank you, sir.

23 (The witness was excused.)

24 THE COURT: Any other witnesses by the
25 respondents?

1 MR. HECKER: Not for the Senate Minority --
2 Majority.

3 THE COURT: Governor?

4 MS. MCKAY: None for the Governor.

5 THE COURT: Lieutenant Governor?

6 MS. HALLIYADDE: (No response.)

7 THE COURT: Assembly?

8 MR. BUCKI: None for the Assembly, although
9 I would like to address a few housekeeping matters --

10 THE COURT: A few what?

11 MR. BUCKI: -- before we conclude.

12 THE COURT: A few what?

13 MR. BUCKI: Housekeeping matters.

14 THE COURT: Yes. Yes. I'm concerned now
15 with closing and closing arguments. Do you wish to
16 do those in person, or are you asking to do those in
17 writing? Is there a consensus?

18 MR. TSEYTLIN: Your Honor, if the Court
19 would accept submissions on writing, that would
20 certainly be preferable from our position.

21 MR. HECKER: I guess the question is when,
22 your Honor. There's a tremendous record. If we're
23 doing it in writing, we're going to need the
24 transcripts to get finalized. And it's a huge amount
25 of work, so I wouldn't even be comfortable committing

1 to doing a project like that in even a week. So on a
2 case like this I think would be appropriate to do
3 that. I just don't know if it's practical.

4 THE COURT: It may not be practical. Are
5 you saying, Mr. Hecker, you don't think by the 25th
6 of -- that's next Friday.

7 MS. DiRAGO: Can we ask when the
8 transcripts would be done?

9 (A discussion was off the record with the
10 court reporter.)

11 MR. BUCKI: On behalf of the Assembly I
12 would submit that in our view, it would be impossible
13 to try to put together written submissions dealing
14 with three days worth of transcripts without having
15 the transcript in front of us --

16 THE COURT: I understand.

17 MR. BUCKI: -- and so I would submit that
18 absent a transcript being ready in advance of
19 April 4, if we were to do a closing argument, that it
20 should be done orally in person.

21 THE COURT: I think it's necessitated here.
22 I don't think we're going to have a transcript for
23 you to look at that do a written closing.

24 MR. HECKER: Under the circumstances we
25 agree.

1 THE COURT: So that brings us to still time
2 needed to get your thoughts together to present a
3 closing argument. I can either do that Friday of the
4 25th if that gives you enough time to gather your
5 thoughts. I'd rather do it earlier, but I'm trying
6 to give you a little time. I'm sorry. It would have
7 to be Monday the 28th. Let me just look. Well, it's
8 either that or this Friday. I'm not available Monday
9 through Friday of next week, so that either puts this
10 Friday or the 21st of March -- I'm sorry -- the 28th
11 of March.

12 MR. TSEYTLIN: Your Honor, certainly I
13 understand about the transcripts. But, I mean, if
14 people are putting together oral arguments, they're
15 writing it out, so it's still, I think, better for
16 parties to be able to put down what they can in a
17 summation submission. These options -- this Friday,
18 that's very soon. And the 28th, that's pretty far;
19 that's close to the decision point. You know, I'm
20 not going to trouble your Honor with personal
21 schedules, but that would be extremely difficult on
22 my end. I think a written submission would convey
23 the same information of things we want to convey in
24 the --

25 MR. HECKER: Your Honor, the other problem

1 with written submissions is then we can't do
2 simultaneous written submissions. It's their burden.
3 It is the highest burden known in the law literally.
4 They would need to put in their position, and you'd
5 have to give us, I would say, a week so respond,
6 certainly not a couple of days. We're open to that,
7 but I just don't think it's practicable given the
8 constitutional deadline.

9 MR. BUCKI: And I would agree with
10 Mr. Hecker. I would submit this is a trial. Oral
11 arguments in summation are done in trials routinely,
12 whether bench or jury, and this case should be no
13 different particularly in the absence of a
14 transcript.

15 THE COURT: Oral argument on the 28th,
16 9:30. You can submit anything in writing you want
17 but oral argument. I've got to give you more than
18 tomorrow to put your thoughts together.

19 MR. HECKER: Your Honor, respectfully, it
20 wouldn't be fair to allow Petitioners to put in like
21 a massive brief the day before the 28th. I think
22 that we either need a briefing schedule so that we
23 can respond to any of their submissions or we should
24 do what Mr. Bucki said, which is the same in every
25 trial.

1 THE COURT: Oral arguments.

2 MR. HECKER: Thank you.

3 THE COURT: Just oral arguments. We'll
4 leave it at that.

5 MR. BUCKI: And I would agree.

6 And then a further housekeeping matter,
7 perhaps much more minor in nature, what I simply
8 wanted the record to reflect, because I was looking
9 at the various exhibits that have been marked and
10 admitted into evidence, is, first of all, is it
11 correct that the stenographer, when the transcript
12 does come out, will have a manifest of which exhibits
13 have which identification numbers and which exhibits
14 have been admitted versus simply marked for
15 identification?

16 (A discussion was off the record with the
17 court reporter.)

18 MR. BUCKI: I did just want to clarify for
19 the record also, in case it was not already clear,
20 because I know that in certain instances various
21 experts' affidavits and curricula vitarum were
22 admitted into evidence separately, I'd like to
23 reflect for the record that in Dr. Barber's case
24 those were attached to each other because the
25 curriculum vitae was an exhibit to the affidavit, and

1 so they are combined under a single exhibit, and both
2 were admitted into evidence as Exhibit A-2 without
3 objection yesterday.

4 THE COURT: And what are you asking?

5 MR. BUCKI: I just wanted to reflect that
6 on the record.

7 THE COURT: On the record?

8 MR. BUCKI: Yes.

9 THE COURT: Yes, Mr. Tseytlin.

10 MR. TSEYTLIN: Your Honor, if it has to be
11 on the 28th, it can be. I'm wondering if it's
12 possible for it to be on the 30th or 31st at all,
13 especially the 31st. I mean, I don't want trouble
14 the Court with personal commitments but...

15 THE COURT: Can you do the 30th?

16 MR. BUCKI: Yes.

17 THE COURT: 30th?

18 MS. MCKAY: I cannot do the 30th.

19 THE COURT: You're not giving me many
20 choices. I mean, I've going to have everybody on
21 board.

22 MS. MCKAY: I could do the 31st. The 30th
23 I have a not-changeable trial scheduling conference.

24 THE COURT: All right. Mr. Hecker, 31st?

25 MR. HECKER: 31st would work.

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THE COURT: 31st, 9:30.

MR. TSEYTLIN: Thank you so, much your
Honor.

THE COURT: Oral argument. Thank you all.

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