

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF WISCONSIN**

WILLIAM WHITFORD, ROGER ANCLAM,)
EMILY BUNTING, MARY LYNNE DONOHUE,)
HELEN HARRIS, WAYNE JENSEN,)
WENDY SUE JOHNSON, JANET MITCHELL,) No. 15-cv-421-bbc
ALLISON SEATON, JAMES SEATON,)
JEROME WALLACE, and DONALD WINTER,)
)
Plaintiffs,)
)
v.)
)
GERALD C. NICHOL, THOMAS BARLAND,)
JOHN FRANKE, HAROLD V. FROEHLICH,)
KEVIN J. KENNEDY, ELSA LAMELAS, and)
TIMOTHY VOCKE,)
)
Defendants.)

PLAINTIFFS' TRIAL BRIEF

Peter G. Earle
LAW OFFICE OF PETER G. EARLE
839 North Jefferson Street, Suite 300
Milwaukee, WI 53202
(414) 276-1076
peter@earle-law.com

J. Gerald Hebert
Ruth Greenwood
Annabelle Harless
Danielle Lang
CAMPAIGN LEGAL CENTER
1411 K Street NW, Suite 1400
Washington, DC 20005
(202) 736-2200
ghebert@campaignlegalcenter.org
rgreenwood@campaignlegalcenter.org
aharless@campaignlegalcenter.org
dlang@campaignlegalcenter.org

Dated: May 16, 2016

Michele Odorizzi
MAYER BROWN, LLP
71 South Wacker Drive
Chicago, IL 60606
(312) 782-0600
modorizzi@mayerbrown.com

Nicholas O. Stephanopoulos
UNIVERSITY OF CHICAGO LAW SCHOOL
1111 E. 60th St., Suite 510
Chicago, IL 60637
(773) 702-4226
nsteph@uchicago.edu

Douglas M. Poland
RATHJE & WOODWARD, LLC
10 East Doty Street, Suite 507
Madison, WI 53703
(608) 960-7430
dpoland@rathjewoodward.com

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INTRODUCTION

There are only two legal questions in this case. *First*, is plaintiffs’ proposed test for partisan gerrymandering—amended as the Court sees fit—judicially discernible and manageable? And *second*, does Wisconsin’s Act 43 (the “Current Plan”) fail this test? The evidence presented at trial will demonstrate that the answer to both questions is yes. The test is deeply rooted in the Supreme Court’s redistricting case law, and enables unlawful partisan gerrymanders to be distinguished easily from valid plans. And the Current Plan not only fails the test, because it intentionally and unjustifiably exhibits a high and durable level of partisan asymmetry, but is also one of the worst gerrymanders in modern American history.

The test’s first prong is whether a plan was enacted with *discriminatory intent*, that is, in order to engage in “intentional discrimination against an identifiable political group.” *Davis v. Bandemer*, 478 U.S. 109, 127 (1986) (plurality opinion). This prong is discernible because it follows from the “basic equal protection principle that the invidious quality of a law . . . must ultimately be traced to a . . . discriminatory purpose.” *Washington v. Davis*, 426 U.S. 229, 240 (1976). The prong also remains doctrinally available, as the Court recognized just last month. *See Harris v. Indep. Redist. Comm’n*, 136 S. Ct. 1301, 1310 (2016) (suggesting that “partisanship is an illegitimate redistricting factor”). And the prong is highly manageable; it is usually satisfied when a single party has unified control over redistricting, *see Bandemer*, 478 U.S. at 129 (plurality opinion), but not when a plan is designed by a court, a commission, or divided government, *see Vieth v. Jubelirer*, 541 U.S. 267, 350 (2004) (Souter, J., dissenting).

Here the evidence will show—as defendants have already admitted—that “partisan motivation . . . clearly lay behind Act 43.” *Baldus v. Wisc. Gov’t Accountability Bd.*, 849 F. Supp. 2d 840, 852 (E.D. Wis. 2012) (*Baldus II*); *see also* Summ. Jdgmt. Op. (Dkt. 94) at 12

(“defendants conceded that plaintiffs can prove this element”). To highlight some of the smoking guns: One of the Current Plan’s drafters gave a speech to Republican legislators noting their “opportunity” and “obligation” to “draw these maps that Republicans haven’t had in decades.” The political scientist who advised the drafters dismissed any effort to “create[] a fair, balanced, or even a reactive map,” and sought instead to “show to lawmakers the political potential of the district[s].” In tandem, the Plan’s authors crafted a series of draft maps with names like “Adam Assertive” and “Joe Aggressive,” whose partisan consequences were painstakingly calculated—and became steadily more pro-Republican with each iteration as Democratic voters were further cracked and packed. All sitting Republican legislators, but not a single Democrat, were allowed to see their districts prior to the Plan’s introduction. And when the Plan was finally introduced, it was rushed to passage on a party-line vote in just over a week.

The second prong of plaintiffs’ test is *discriminatory effect*, or whether a plan has exhibited a high and durable level of partisan asymmetry relative to historical norms. This prong is discernible because the concept of partisan symmetry underpins all of the Court’s partisan gerrymandering decisions, and was marked as promising by five Justices in *LULAC v. Perry*. *See, e.g.*, 548 U.S. 399, 420 (2006) (opinion of Kennedy, J.) (not “discounting [symmetry’s] utility in redistricting planning and litigation”). The prong is also manageable because a plan’s asymmetry can be reliably measured through metrics such as the efficiency gap and partisan bias. These metrics can be used to determine both the magnitude of a plan’s asymmetry and how skewed the plan will likely remain over its lifetime. This information, in turn, can help set an asymmetry threshold above which the effect prong is satisfied and below which it is not. *See id.* at 466 (Stevens, J., concurring in part and dissenting in part) (“the symmetry standard . . . is

undoubtedly a reliable standard for measuring a burden on the complainants’ representative rights” (internal quotation marks omitted)).

Here the evidence will show that the Current Plan has exhibited an extraordinarily high and durable level of partisan asymmetry in the two elections in which it has been in force. It recorded pro-Republican efficiency gaps of 13% in 2012 and 10% in 2014—meaning that Republicans won 13% and 10% more seats, respectively, than they would have under a neutral map. Similarly, the Plan recorded pro-Republican partisan biases of 13% in 2012 and 12% in 2014. Between 1972 and 2010, not a single map *in the country* was as asymmetric as the Plan in its first two elections. And the Plan’s performance to date indicates that there is nearly a 100% likelihood that it will continue to benefit Republicans for the rest of the decade—and to a striking extent, with a predicted lifetime efficiency gap of almost 10%.

The test’s third and final prong is *justification*, or whether a plan’s severe and durable asymmetry can be “justified by the State” based on its political geography or legitimate redistricting objectives. *Brown v. Thomson*, 462 U.S. 835, 843 (1983). This prong is discernible because it is borrowed directly from the Court’s reapportionment doctrine, *see, e.g., id.* at 842-43; *Mahan v. Howell*, 410 U.S. 315, 328 (1973), and recognizes that symmetry must be balanced against both feasibility and other valid goals. The prong is also manageable because it typically boils down to whether the State could have designed a much more symmetric map that still complies as well with all federal and state requirements. If so, there are no proper aims left that could account for the asymmetry. *See, e.g., Chapman v. Meier*, 420 U.S. 1, 25 (1975) (invalidating plan where alternative map “demonstrates that neither [factor] prevents attaining a significantly lower population variance”).

Here the evidence will show that the Current Plan's asymmetry cannot be justified by Wisconsin's political geography or legitimate redistricting objectives. Assembly plans in previous decades typically performed somewhat better than the Current Plan in terms of traditional redistricting criteria—and much better in terms of partisan symmetry. Plaintiffs' Demonstration Plan complies at least as well as the Current Plan with all federal and state requirements, while exhibiting an efficiency gap more than 80% smaller. And Professor Jowei Chen created *hundreds* of Assembly plans, *all* of which improve on the Current Plan's compactness, respect for political subdivisions, and partisan symmetry. Indeed, the vast majority of these plans have efficiency gaps within 3% of zero.

After the trial has concluded, the Court should therefore hold that the Current Plan is an unconstitutional partisan gerrymander that violates the First and Fourteenth Amendments. It was designed with the *intent* of benefiting Republican candidates and voters and disadvantaging Democratic ones on account of their political views. Its observed *effect* is perfectly consistent with this intent: the largest partisan asymmetry in a plan's first two elections in a period of almost forty years. And this imbalance is entirely *unjustified*, as illustrated by Wisconsin's own prior maps, plaintiffs' Demonstration Plan, and hundreds of additional map simulations.

Moreover, the need for the judiciary to begin enforcing the Constitution's ban on partisan gerrymandering is urgent. Thanks to improvements in electoral forecasting and mapping software, today's district plans are more asymmetric, on average, than any of their predecessors in modern American history. *See* Jackman Rpt. (Dkt. 62, Tr. Ex. 34) at 47; PFOF ¶ 292. This unprecedented asymmetry exacts a severe democratic toll. “[M]inority control of state legislative bodies” is common, thereby “deny[ing] majority rights.” *Reynolds v. Sims*, 377 U.S. 533, 565 (1964). Enacted policies are not “responsive to the popular will.” *Id.* And “the core principle of

republican government” is subverted, “namely, that the voters should choose their representatives, not the other way around.” *Ariz. State Legis. v. Ariz. Indep. Redist. Comm’n*, 135 S. Ct. 2652, 2677 (2015) (internal quotation marks omitted); *see also* Pippa Norris, Ferran Martinez I Coma, Alessandro Nai, Max Gromping, *The Year in Elections: 2015*, Electoral Integrity Project 24 (2016) (ranking the United States second-to-last among 139 countries, ahead of only Malaysia, with respect to redistricting).

FACTS

Plaintiffs have submitted to the Court a lengthy set of proposed findings of fact. The parties have agreed on stipulations of uncontested facts as well. To avoid undue length and repetition, plaintiffs therefore focus their present factual presentation on four issues: (1) evidence of discriminatory intent; (2) measures of partisan symmetry; (3) Wisconsin’s past Assembly plans; and (4) alternatives to the Current Plan. All of these are issues that were only covered in passing in previous briefing, and about which the Court requested more information in its summary judgment decision.¹

I. The Current Plan Was Enacted with Discriminatory Intent.

In *Baldus*, the Current Plan’s drafters “testified that the partisan makeup of the potential new districts played no part at all in their decisions.” 849 F. Supp. 2d at 845. “[Joseph] Handrick, for instance, testified that he did not know if partisan makeup was considered, that he had no access to voting data from past elections, and that only ‘population equality, municipal splits, compactness, contiguity, [and] communities of interest’ were considered.” *Id.* Similarly, Adam Foltz claimed that he merely followed the instructions of legislators who “advised him where to draw the boundaries.” *Id.*

¹ However, plaintiffs cover additional factual issues in the Argument section.

The *Baldus* panel found “those statements to be almost laughable,” *id.*, and plaintiffs’ evidence at trial will show why the panel was so incredulous. This evidence of discriminatory intent is overwhelming and falls into the following categories: (1) the absolute secrecy with which the Current Plan was drafted; (2) Democrats’ complete exclusion from the drafting process; (3) the elaborate lengths to which the Plan’s drafters went to estimate its partisan consequences; (4) the escalating magnitude and durability of the Republican advantage in drafts of the Plan; and (5) the highly unusual manner in which the Plan was enacted. *See also* Summ. Jdgmt. Op. (Dkt. 94) at 30 (plaintiffs “should be prepared to present the strongest evidence that they have” on discriminatory intent).

A. The Plan Was Drafted in Absolute Secrecy.

The Current Plan’s key drafters were Adam Foltz (then a member of Assembly Speaker Jeff Fitzgerald’s staff), Joseph Handrick (then a consultant with the law firm of Reinhart Boerner Van Duren s.c.), and Tad Ottman (then and now a member of Senate Majority Leader Scott Fitzgerald’s staff). Foltz, Handrick, and Ottman were given technical assistance by Professor Keith Gaddie (a political scientist at the University of Oklahoma). *See Baldus II*, 849 F. Supp. 2d at 845; *see also* Defs.’ Resp. Pls.’ Rqst. for Adms. (Tr. Ex. 314) (“RFA”) ¶¶ 25-28; Foltz Dep. (Dkt. 113, Tr. Ex. 191) at 42:2-10; Gaddie Dep. (Dkt. 108, Tr. Ex. 161) at 40:12-24, 69:4-11, 72:11-17; Ottman Dep. (Dkt. 118, Tr. Ex. 226) at 35:15-25; PFOF ¶¶ 27-29.² The Plan’s drafting began shortly after new Census data was released in March 2011, and the process concluded with the Plan’s passage in July 2011.

² “Others involved in the process were James Troupis, Eric McLeod, Ray Taffora, Speaker Fitzgerald, Majority Leader Fitzgerald, Sarah Troupis, [Representative] Robin Vos, [and] Senator Rich Zipperer.” *Baldus II*, 849 F. Supp. 2d at 845; *see also* Foltz Dep. (Dkt. 113, Tr. Ex. 191) at 73:6-74:25; Ottman Dep. (Dkt. 118, Tr. Ex. 226) at 59:19-60:3; PFOF ¶¶ 57, 60, 171.

Throughout this period, the Plan’s authors took extraordinary measures to ensure the secrecy of their activity. If they had been pursuing *legitimate* objectives, they would not have had to carry out their work so furtively. *See Baldus II*, 849 F. Supp. 2d at 845 (“Every effort was made to keep this work out of the public eye”); *Baldus v. Wisc. Gov’t Accountability Bd.*, 843 F. Supp. 2d 955, 959 (E.D. Wis. 2012) (*Baldus I*) (criticizing the Legislature for “flailing wildly in a desperate attempt to hide from both the Court and the public the true nature of exactly what transpired in the redistricting process”).

In early January 2011, the Assembly Organization Committee and the Committee on Senate Organization voted not to work on redistricting themselves, but rather to outsource the entire project to the Republican law firms of Michael Best & Friedrich, LLP (“Michael Best”) and the Troupis Law Office, LLC (“Troupis Office”). Tr. Exs. 355, 356; PFOF ¶¶ 31, 32. Through this unprecedented delegation to private firms, the Committees ensured that ordinary rules of legislative transparency would not apply. The Committees adhered to this decision even after the Legislature’s Democratic leadership objected, instead proposing to “authoriz[e] our Legislative Council to . . . serve the Legislature in a nonpartisan fashion to meet our duty and fashion a redistricting plan.” Tr. Ex. 357; PFOF ¶ 33.

As soon as the drafting process began in a designated “map room” at Michael Best, a formal written policy was issued providing that only the Assembly Speaker, the Senate Majority Leader, Foltz, Ottman, Michael Best attorney Eric McLeod, and legal staff specified by McLeod, would have unlimited access to the location. Defs.’ Amend. Answer (Dkt. 56, Tr. Ex. 73) ¶ 33; Tr. Ex. 463; PFOF ¶¶ 21-23. This policy further permitted only limited access by rank-and-file legislators: “Legislators will be allowed into the office for the sole purpose of looking at and discussing their district. They are only to be present when an All Access member is present. No

statewide or regional printouts will be on display while they are present (with the exception of existing districts). They will be asked at each visit to sign an agreement that the meeting they are attending is confidential and they are not to discuss it.” Defs.’ Amend. Answer (Dkt. 56, Tr. Ex. 73) ¶ 38; Tr. Ex. 463; PFOF ¶ 23.

The fixation on secrecy extended to the consulting agreement into which Gaddie entered with Michael Best on April 11, 2011. The agreement stated that “all communications between you and MB&F, as well as communications with the Senate and Assembly, and work performed by you in connection with the Representation, shall be confidential.” It further provided, “You will not discuss with or otherwise disclose to anyone . . . the nature or content of any oral or written communications or of any information or work performed related to the Representation. You will not disclose or permit inspection of any papers or documents related to the Representation.” And it continued, “every page must be sealed or otherwise stamped “Attorney/Client Work-Product Privilege Confidential.” Tr. Ex. 169; PFOF ¶¶ 1-5, 34.³

Between April and June 2011, under McLeod’s direction and supervision, Foltz and Ottman met with 58 Republican members of the Assembly and with 17 Republican members of the Senate to review and discuss their respective districts. Tr. Ex. 342; PFOF ¶¶ 144, 145, 147. Republican Assembly member (now Speaker) Robin Vos also attended all of the meetings with Assembly members. Foltz Dep. (Dkt. 110, Tr. Ex. 205) at 236:6-265:5; PFOF ¶ 149. All of these legislators signed secrecy agreements entitled “Confidentiality and Nondisclosure Related to Reapportionment” before being allowed to proceed with their meetings. Defs.’ Amend. Answer (Dkt. 56, Tr. Ex. 73) ¶¶ 39-40; Tr. Exs. 243-244; Tr. Ex. 72. These agreements (wrongly)

³ On July 27, 2010, months before the redistricting process even began, Foltz and Ottman entered into retention agreements with Michael Best that included nearly identical secrecy and confidentiality provisions. RFA (Tr. Ex. 341) ¶¶ 18-19; Tr. Ex. 257. On February 9, 2011, Troupis also e-mailed Foltz, McLeod, Ottman, and others about Gaddie and Handrick’s agreements. He noted that he “kept these purposely vague, on the assumption they may one day be made public.” Tr. Ex. 347; PFOF ¶ 34.

characterized the legislators' conversations with Foltz and Ottman as privileged communications pursuant to the attorney-client and attorney work product privileges. Compl. (Dkt. 1, Tr. Ex. 138) Ex. 4; Defs.' Amend. Answer (Dkt. 56, Tr. Ex. 73) ¶¶ 39-40; Tr. Exs. 243-244; PFOF ¶¶ 145-150; *see also Baldus I*, 843 F. Supp. 2d at 958-59 (holding that "[t]hose argued privileges . . . exist in derogation of the truth" and are "a charade masking as privilege").

On June 20, 2011, shortly before the Legislature voted on the Current Plan, Foltz created a document for Vos entitled "General Talking Points for Robin." These talking points advised the audience of Republican legislators that "[p]ublic comments on the map may be different than what you hear in this room. Ignore the public comments." The talking points further warned the legislators not to speak about the Plan because "[p]ublic comment will lead to depositions and being called to the witness stand." Tr. Ex. 213; RFA (Tr. Ex. 341) ¶¶ 16-17; PFOF ¶ 152.

B. Democrats Were Completely Excluded from the Plan's Drafting.

The Current Plan's authors were preoccupied not only with secrecy but also with excluding Democratic legislators from the drafting process. As noted above, Foltz and Ottman met with 58 Republican members of the Assembly (with Vos also in attendance) and with 17 Republican members of the Senate to go over their respective districts. In contrast, they did not meet with a *single* Democratic member of the Legislature about redistricting. Indeed, not a single Democrat had set eyes on even a single district (let alone the Plan in its entirety) prior to Act 43's formal introduction on July 11, 2011. *See Baldus II*, 849 F. Supp. 2d at 845; RFA (Tr. Ex. 341) ¶¶ 34-36; Defs.' Amend. Answer (Dkt. 56, Tr. Ex. 73) ¶ 38; Foltz. Dep. (Dkt. 113, Tr. Ex. 191) at 75:16-18; PFOF ¶ 160.

Moreover, Democratic legislators were left out of all of the mapmaking and meetings that took place at Michael Best even though the firm had been hired to represent the *entire*

Legislature, not just its Republican caucus. Democratic members were officially *clients* of Michael Best, yet they were systematically barred from learning anything about the firm's activities, ostensibly on their behalf. Indeed, when efforts were made in *Baldus* to unveil the work that was carried out at Michael Best, the defendants asserted a spurious attorney-client privilege—against parties who included the firm's own nominal clients. *See Baldus I*, 843 F. Supp. 2d at 958-59; PFOF ¶¶ 30-32, 147, 150, 157.

Foltz also completely excluded Democratic Assembly members from the memos he circulated on June 19, 2011 to all 58 Republican (and Republican-leaning Independent) Assembly members, cc'ing Speaker Fitzgerald, Majority Leader Scott Suder, and Vos. These memos summarized each new district's deviation from the ideal population and also presented a map of the new district's boundaries. The memos' centerpiece, though, was a table showing how the old and new versions of each district performed in five statewide races between 2004 and 2010: "Walker '10," "JB '10," "McCain '08," "JB '06," and "Bush '04." For each race, the table displayed "Old District %," "New District %," "Change in Percentage," "Old District Votes," "New District Votes," and "Change in Votes." Tr. Ex. 342; PFOF ¶ 151.

While most of the Republican legislators who met with Foltz and Ottman abided by their secrecy agreements, Senator Leah Vukmir e-mailed Ottman on May 4, 2011 after their meeting. She wrote, "So glad we are in control!" She also offered tactical advice aimed at unseating a Democratic Assembly member, Tony Staskunas. "If you need a way to take the Staskunas seat, put a little bit of my Senate seat into New Berlin (2-3 wards could make that a GOP assembly seat)." Tr. Ex. 239; PFOF ¶ 169. This advice was apparently heeded; Staskunas's seat was identified by Handrick's "summary" spreadsheet as a "Statistical Pick Up" and one of the

“Currently held DEM seats that move to 55% or better.” summary.xlsx, Tr. Exs. 239; PFOF ¶ 54.

On June 24, 2011, after Foltz and Ottman had finished their meetings with Republican legislators and Foltz had distributed his memos to them, Troupis e-mailed Foltz, Ottman, and McLeod, asking “Any issues to date with members?” McLeod responded to the group: “I think all the members are very happy with their new districts based on Tad’s and Adam’s reports to date.” Tr. Ex. 470; PFOF ¶ 171.

C. The Plan’s Drafters Painstakingly Assessed Its Partisan Effects.

The discriminatory intent that underlay the Current Plan can be inferred not only from the secret and partisan manner in which it was drafted, but also from the extraordinarily thorough analysis its authors conducted of its partisan consequences. This analysis began as early as April 5, 2011, just days after the new Census data was released. Ottman e-mailed Andy Speth, a staffer for Wisconsin U.S. House member Paul Ryan, that in assessing district partisanship, “[f]or now, we are using a 3-race composite of GOP Presidential in 2008 and 2004 plus Attorney General for 2010.” Ottman added “the caveat that we are scheduling our political expert to come in and see if he agrees or would recommend different races.” Tr. Ex. 238; PFOF ¶¶ 69-70.

This “political expert”—Gaddie—entered into a consulting agreement with Michael Best on April 11, 2011. Under this agreement, his responsibilities included determining “the appropriate . . . political make-up of legislative and congressional districts in Wisconsin,” “based on . . . election data or information.” RFA (Tr. Ex. 341) ¶¶ 1-5; Gaddie Dep. (Dkt. 108, Tr. Ex. 161) Ex. 35, Tr. Ex. 169; PFOF ¶ 34. On April 17, 2011, less than a week after being retained, Gaddie wrote a memo about analyzing district partisanship. He first noted that because “[w]e are not in court this time,” “we do not need to show that we have created a fair, balanced, or even a

reactive map.” “But, we do need to show to lawmakers the political potential of the district[s].” He then described his efforts to date: “I have gone through the electoral data for state office and built a partisan score for the assembly districts. It is based on a regression analysis of the Assembly vote from 2006, 2008, and 2010, and it is based on prior election indicators of future election performance. I am also building a series of visual aides to demonstrate the partisan structure of Wisconsin politics. The graphs will communicate the top-to-bottom party basis of the state politics.” RFA (Tr. Ex. 341) ¶¶ 8-11; Gaddie Dep. (Dkt. 108, Tr. Ex. 161) Ex. 36, Tr. Ex. 134; PFOF ¶ 38.⁴

On April 19, 2011, Handrick e-mailed Gaddie about his attempts with Foltz and Ottman to identify the right prior races to include in a “composite” (or average) that could be used to predict districts’ future electoral performances. “We looked at the different combos today. The 2006 and 2010 races combined tilt too much to the GOP. I thought 06 and 10 would balance but they don’t. The northern seats were especially out of whack. So I had Tad do a composite with the 2006 and 2010 races and all the federal races from 04 to 2010 (in other words, all statewide races from 04 to 2010). This seems to work well both in absolute terms as well as in relation to each other.” Tr. Ex. 175; PFOF ¶¶ 71-72.

On April 20, 2011, Gaddie responded to Handrick’s e-mail, and Handrick forwarded the response to Foltz and Ottman. Gaddie wrote: “I just went ahead and ran the regression models for 2006, 2008, and 2010 to generate open seat estimates on all of the precincts. The[] expected GOP open seat assembly vote using the equations correlates at .96 with the 2004-2010

⁴ At his deposition, Gaddie further explained his methodology. “[Y]ou can take the actual election results, okay, the actual outcomes of previous elections, you turn those into a dependent variable, an outcome of interest, and then you regress using linear regression those results onto these larger statewide measures. The other thing you do is you attempt to take into account whether or not there’s an incumbent running so that you can account for the incumbency impact.” Gaddie Dep. (Dkt. 108, Tr. Ex. 161) at 44:1-11; PFOF ¶¶ 39-41; *see also id.* at 47:10-52:10, 58:3-59:17, 101:1-103:14, 196:22-198:15, 226:11-228:25.

composite, and at a .93 level with the 2006-2010 state constitutional office composite.” He continued, “at this point, if you asked me, the power of the relationships indicates that the partisanship proxy you are using (all races) is an almost perfect proxy for the open seat vote, and the best proxy you’ll come up with. This seems to pretty much wrap[] up the partisanship measure debate.” Tr. Ex. 175; RFA (Tr. Ex. 341) ¶ 13; PFOF ¶ 73; *see also* Gaddie Dep. (Dkt. 108, Tr. Ex. 161) at 198:25-200:6.

Reassured by Gaddie that their composite measure was extremely highly correlated with the open seat baseline produced by his regression model, Foltz, Handrick, and Ottman used this composite in all of their subsequent analyses of draft plans. *See* Foltz Dep. (Dkt. 113, Tr. Ex. 191) at 80:19-21, 91:24-92:6, 96:14-98:21; Ottman Dep. (Dkt. 118, Tr. Ex. 226) at 73:10-17; PFOF ¶ 74. The composite, again, was the average of the Republican candidates’ shares of the vote in every statewide election (federal and state) held in Wisconsin between 2004 and 2010. The composite was calculated at the ward level, thus enabling partisanship scores to be generated for each draft district based on the wards it contained. *See* Wisconsin_Election_Data.xlsx, Tr. Ex. 464; PFOF ¶ 75; *see also* Ottman Dep. (Dkt. 118, Tr. Ex. 226) at 74:6-75:16.⁵

Using the composite, Foltz, Handrick, and Ottman designed and then assessed a series of draft plans. *See* Foltz Dep. (Dkt. 113, Tr. Ex. 191) at 102:4-9; Ottman Dep. (Dkt. 118, Tr. Ex. 226) at 61:4-62:5; PFOF ¶ 77. These plans had titles including “Adam Assertive,” “Adam Aggressive,” “Joe Basemap Basic,” “Joe Basemap Assertive,” “Joe Assertive,” “Joe Aggressive,” “Joe Aggressive 2,” “Tad Assertive,” and “Tad Aggressive.” *See, e.g.,* joe base map numbers.xlsx, Tr. Ex. 465; PFOF ¶¶ 78-81 (including district-by-district partisanship scores

⁵ At his deposition, Gaddie described Foltz, Handrick, and Ottman’s methodology: They “use[d] what’s called a reconstituted election technique where we take . . . several statewide elections, exogenous elections, which are elections that occur outside a district. And we attempt to get a sense of a partisan average from that.” Gaddie Dep. (Dkt. 108, Tr. Ex. 161) at 43:18-25; PFOF ¶ 76.

for “Joe Basemap Basic” and “Joe Basemap Assertive”); /Users/tad/Desktop/PlanComparisons.xlsx, Tr. Ex. 467; PFOF ¶¶ 87-89 (same for “Joe Aggressive 1” and “Joe Aggressive 2”). Gaddie testified that these monikers signaled that “[t]his was an aggressive map. It’s an assertive map. . . . it is a map that makes an assertive move toward Republican advantage.” Gaddie Dep. (Dkt. 108, Tr. Ex. 161) at 129:23-130:1, 156:4-9, 222:3-7; PFOF ¶ 44; *see also id.* at 156:4-9, 222:3-7.

For several of these plans, Foltz, Handrick, and Ottman created spreadsheets like the one excerpted below for the “Joe Assertive” map. These spreadsheets listed, for all 99 Assembly districts and all 33 Senate districts, their “Current” partisanship composite scores (under the 2000s plan), their “New” scores (under the draft plan), and the “Delta” between the “Current” and “New” scores. The spreadsheets also included tables showing how the “Current Map” and “New Map” performed in terms of “Safe GOP (55%+),” “Lean GOP (52.1-54.9%),” “Swing (48-52%),” “Lean DEM (45.1-47.9%),” and “Safe DEM (-45%)” Assembly and Senate districts. Tr. Ex. 366; PFOF ¶¶ 84-85, 110-111; *see also* Foltz Dep. (Dkt. 113, Tr. Ex. 191) at 129:13-142:7, 177:12-20 Ottman Dep. (Dkt. 118, Tr. Ex. 226) at 99:1-103:15.

Figure 1: Partisanship Scores from “Joe Assertive” for Assembly Districts 1-33 and Senate Districts 1-11, Along with Summary Table for Plan. PFOF ¶ 111.

Joe Assertive							
Assembly				Senate			
DISTRICT	Current	New	Delta	DISTRICT	Current	New	Delta
1	51.15%	51.43%	0.28%	1	54.04%	53.95%	-0.09%
2	54.93%	55.01%	0.08%				
3	56.10%	55.82%	-0.28%				
4	53.31%	52.98%	-0.33%	2	55.44%	54.51%	-0.93%
5	53.74%	53.07%	-0.67%				
6	59.77%	57.76%	-2.01%				
7	48.20%	45.41%	-2.79%	3	40.52%	38.26%	-2.26%
8	22.39%	22.30%	-0.09%				
9	36.73%	35.13%	-1.60%				
10	10.27%	12.82%	2.55%	4	17.58%	19.36%	1.78%
11	11.91%	19.63%	7.72%				
12	29.23%	26.56%	-2.67%				
13	43.67%	59.22%	15.55%	5	50.62%	57.58%	6.96%
14	59.06%	57.74%	-1.32%				
15	48.21%	55.34%	7.13%				
16	14.21%	11.67%	-2.54%	6	14.12%	16.03%	1.91%
17	13.21%	19.87%	6.66%				
18	15.28%	15.35%	0.07%				
19	29.15%	28.31%	-0.84%	7	41.13%	40.81%	-0.32%
20	43.71%	43.69%	-0.02%				
21	51.92%	52.86%	0.94%				
22	39.05%	55.96%	16.91%	8	52.82%	60.68%	7.86%
23	51.70%	59.30%	7.60%				
24	67.29%	67.37%	0.08%				
25	52.79%	53.05%	0.26%	9	52.96%	54.74%	1.78%
26	45.42%	54.67%	9.25%				
27	59.20%	56.34%	-2.86%				
28	54.85%	56.43%	1.58%	10	53.14%	53.46%	0.32%
29	51.32%	50.64%	-0.68%				
30	53.29%	53.16%	-0.13%				
31	67.57%	61.04%	-6.53%	11	67.64%	59.65%	-7.99%
32	61.06%	58.28%	-2.78%				
33	72.24%	59.90%	-12.34%				

	Current Map		New Map	
	Assembly	Senate	Assembly	Senate
Safe GOP (55%+)	27	7	36	9
Lean GOP (52.1-54.9%):	13	8	15	7
Total GOP Seats (safe + lean):	40	15	51	16
Swing (48-52%):	19	5	11	4
Lean DEM (45.1-47.9%):	7	3	7	2
Safe DEM (-45%):	33	10	30	11
Total DEM Seats (safe + lean):	40	13	37	13

Not content merely to produce these spreadsheets for individual plans, on May 25, 2011, Ottman created another file, “summaries,” that tracked the performance of the “Current Map,” the “Team Map,” “Adam Aggressive,” “Joe Assertive,” and “Tad Aggressive” in terms of “Strong GOP,” “Lean GOP,” “Swing,” “Lean DEM,” and “Strong DEM” districts. This “Tale of the Tape” listed the following “Good outcomes”: “statistical pickup = seat that is currently held by DEM that goes to 55% or more,” “GOP incumbent strengthened = positive movement on composite,” “DEM incumbent weakened = positive GOP movement on composite,” and “GOP Donors = those who are helping the team.” The file also listed the following “Bad outcomes”: “statistical loss = seat that is currently held by GOP that goes to 45% or below,” “GOP incumbent weakened = those 55% and below who have negative movement on composite,” “DEM incumbent strengthened = DEM over 45% who has negative movement on composite,” and “GOP non-donors = those over 55% who do not donate points.” Tr. Ex. 283; PFOF ¶¶ 45-51; *see also* Foltz Dep. (Dkt. 113, Tr. Ex. 191) at 164:22-175:11; Ottman Dep. (Dkt. 118, Tr. Ex. 226) at 112:19-118:16, 122:2-127:19.

Similarly, on June 8, 2011, with the Current Plan nearly finalized, Handrick created a spreadsheet, “summary,” that compared the Plan to its predecessor along multiple partisan dimensions. Five districts (13, 15, 22, 37, and 62) were “Statistical Pick Up[s]” for Republicans, or “Currently held DEM seats that move to 55% or better.” Fourteen districts (21, 23, 26, 36, 42, 44, 51, 55, 68, 72, 87, 88, 93, and 96) were “GOP seats strengthened a lot,” or “Currently held GOP seats that start at 55% or below that improve by at least 1%.” Eleven districts (4, 5, 25, 28, 30, 34, 35, 49, 69, 75, and 86) were “GOP seats strengthened a little,” or “Currently held GOP seats that start at 55% or below that improve less than 1%.” In all five cases in which Democratic and Republican incumbents were paired, it was in districts (14, 22, 33, 60, and 61) whose

partisan scores were higher than 57% Republican. And twenty Republican legislators were identified as “GOP Donors to the Team,” or “Incumbents with numbers above 55% that donate to the team” by allowing their districts to be made less safe. Tr. Ex. 284; PFOF ¶¶ 52-54; *see also* Foltz Dep. (Dkt. 113, Tr. Ex. 191) at 160:1-164:11; Ottman Dep. (Dkt. 118, Tr. Ex. 226) at 106:3-112:18.⁶

For his part, Gaddie analyzed the expected partisan performance of draft plans in a more sophisticated fashion, aimed at assessing the durability of the Republican advantage. Using his open seat baseline rather than Foltz, Handrick, and Ottman’s composite, he shifted the *statewide* vote share by up to ten percentage points in each party’s direction. He then determined what each party’s vote share would be in each *district* if it shifted by the same amount as the statewide vote share. He colored safe Republican districts (over 55% Republican) in red, Republican-leaning districts (50-55% Republican) in orange, Democratic-leaning districts (45-50% Republican) in teal, and safe Democratic districts (below 45% Republican) in blue. This sort of “uniform swing” analysis is meant to show the resilience of a gerrymander, that is, whether it retains its partisan tilt even if the state’s electoral environment changes. The analysis gives rise to “S-curves”—called that because of the shape of the seat-vote relationship—one of which, for the “Joe Assertive” map, is shown below. *See* Tr. Ex. 188; PFOF ¶¶ 128-130; *see also* Gaddie Dep. (Dkt. 108, Tr. Ex. 161) at 107:2-8; PFOF ¶ 100 (“[I]f you simply looked at it visually it would create something resembling . . . an S curve. You could see the point at which a party got stronger or

⁶ On June 9, 2011, Ottman created an analogous spreadsheet for the Senate plan. It listed five districts (5, 8, 9, 21, and 23) as “GOP seats strengthened a lot,” four districts (10, 17, 29, and 32) as “GOP seats strengthened a little,” two districts (12 and 30) as “Dems weakened,” and five Republican incumbents as “GOP donors to the team.” Ottman Dep. (Dkt. 118, Tr. Ex. 226) 118:23-121:19, Ex. 89, Tr. Ex. 262.

weaker, the possibility of its district tipping in one direction or another.”); *id.* at 45:1-14, 126:18-129:18.⁷

Figure 2: S-Curve for “Joe Assertive” Showing Assembly Districts’ Expected Performance for Partisan Shifts of up to 10% in Either Direction. Tr. Ex. 265; PFOF ¶¶ 128-130.

⁷ Gaddie shared the S-curves not only with Foltz, Handrick, and Ottman, *see* Foltz Dep. (Dkt. 113, Tr. Ex. 191) at 89:19-91:23, 123:7-10, 145:18-149:19; Ottman Dep. (Dkt. 118, Tr. Ex.226) at 68:6-69:18, 87:8-90:25; PFOF ¶¶ 99-100, but also with the Republican legislative leadership, *see* Gaddie Dep. (Dkt. 108, Tr. Ex. 161) at 75:15-23; (“[T]he pro tem [Senate Majority Leader Scott Fitzgerald] did come over to the mapping room to look at some data that we had and I . . . explained to him . . . one of these large spreadsheets . . . which I think were informally called the heat maps . . . how to interpret that.”).

D. The Size and Durability of the Republican Advantage Increased Steadily over Drafts of the Plan.

It is clear from the record that Foltz, Handrick, and Ottman went through numerous drafts of the Current Plan. Did the size of the predicted Republican advantage increase over these drafts? Indeed it did, and dramatically so, providing further compelling evidence of discriminatory intent. And it was not just the *size* of the Republican edge that rose, but also its *durability*, indicating that the Plan's authors sought to craft a gerrymander that would endure no matter what electoral conditions came to pass.

Plaintiffs' discovery efforts have yielded ten maps for which Foltz, Handrick, and Ottman calculated district-by-district partisanship scores (using their composite measure). These are the 2000s Map, Joe Basemap Basic, Joe Basemap Assertive, Tad MayQandD, Joe Assertive, Joe Aggressive 1, Joe Aggressive 2, Milwaukee_Gaddie, the Team Map, and the Final Map (i.e., Act 43 as enacted).⁸ See RFA (Tr. Ex. 341) ¶ 14; Tr. Exs. 172, 364, 366, 465, 467; PFOF ¶¶ 77-98.

Nine of these plans have the same predicted Republican statewide vote share of 48.6%. (The 2000s Map's vote share is slightly lower, at 48.2%.)⁹ However, the plans vary widely in the number of *seats* they predict Republicans would win for this vote share. Under the 2000s Map, Republicans would win just 49 seats, or less than a majority of the Assembly. Tr. Ex. 465. Under Joe Basemap Basic, they would win 52, or a narrow majority. *Id.* Under Joe Basemap Assertive, Republican seats would increase to 56, or a comfortable majority. *Id.* Under Tad MayQandD, Republican seats would rise by a notch to 57, and under Joe Assertive by another notch to 58. Tr. Exs. 364, 366. And under Joe Aggressive 1, Joe Aggressive 2, Milwaukee_Gaddie, the Team

⁸ The 2000s Map is referred to as the Current Map in these spreadsheets, and Milwaukee_Gaddie is referred to as Milwaukee_Gaddie_v_16_11_V1_B. Plaintiffs' designations are intended to save space and avoid confusion.

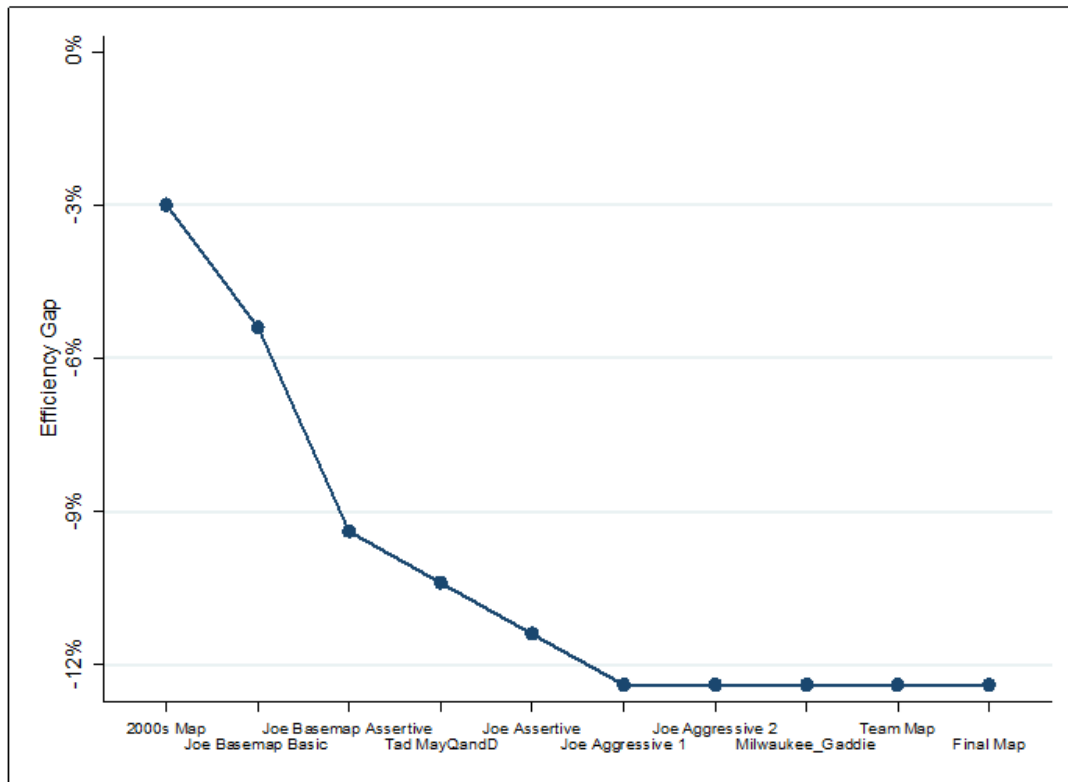
⁹ These figures are simply the averages of all of the districts' partisanship scores.

Map, and the Final Map, Republican seats would reach their pinnacle of 59. Tr. Exs. 172, 467; PFOF ¶¶ 77-98.

The below chart converts this data into efficiency gaps (using the simplified method for calculating the measure). It shows the pro-Republican efficiency gap rising inexorably from 3.0% under the 2000s Map, to 5.4% under Joe Basemap Basic, to 9.4% under Joe Basemap Assertive, to 10.4% under Tad MayQandD, to 11.4% under Joe Assertive, and finally to 12.4% under Joe Aggressive 1, Joe Aggressive 2, Milwaukee_Gaddie, the Team Map, and the Final Map. Tr. Ex. 323; *see also* Gaddie Dep. (Dkt. 108, Tr. Ex. 161) at 162:24-25; PFOF ¶¶ 107-116 (acknowledging that “there is some shift in the skew of the map between the base map and the assertive curve”). This relentless trend reinforces the conclusion that Foltz, Handrick, and Ottman intended to crack and pack Democratic voters and to create a plan that dramatically benefited Republicans.¹⁰

¹⁰ Foltz, Handrick, and Ottman also analyzed an Assembly map submitted by Democratic Assembly member Fred Kessler. Using the composite measure, this map had a Republican statewide vote share of 48.7%, but predicted that Republicans would win only 40 seats for this vote share, yielding a *pro-Democratic* efficiency gap of 7.0%. This map further indicates that the Current Plan’s pro-Republican tilt was far from inevitable. *See* Tr. Ex. 172.

Figure 3: Predicted Efficiency Gaps for Drafts of the Current Plan. Tr. Ex. 323; PFOF ¶¶ 116.



As stark as it is, this trend does not reveal whether the various drafts of the Current Plan increased the *durability* of the Republican advantage relative to the 2000s Map. But Gaddie’s S-curves using his open seat baseline, unlike Foltz, Handrick, and Ottman’s spreadsheets using their composite measure, address exactly this issue. Plaintiffs have located S-curves for five draft maps: the 2000s Map, Adam Assertive, Tad Aggressive, Joe Assertive, and the Team Map.¹¹ See Composite_Current_Curve, Tr. Ex. 273; Composite_Adam_Assertive_Curve, Tr. Ex. 272; TadAggressiveCurve, Tr. Ex. 280; Composite_Joe_Assertive_Curve, Tr. Ex. 274; Team_Map_Curve, Tr. Ex. 282; PFOF ¶¶ 120-139; *see also* Ottman Dep. (Dkt. 118, Tr. Ex. 226) at 68:9 (referring to an S-curve as a “responsiveness curve”).

¹¹ It appears that, of these, the Team Map was closest to the plan that was enacted. See Foltz Dep. (Dkt. 113, Tr. Ex. 191) at 144:18-23; Gaddie Dep. (Dkt. 108, Tr. Ex. 161) at 164:21-22 (“[T]his would be a final version of a map that was agreed to by the mapmakers.”); Ottman Dep. (Dkt. 118, Tr. Ex. 226) at 111:14-23; PFOF ¶¶ 141-142.

For each of these S-curves, plaintiffs calculated the efficiency gap (again using the simplified method) for the benchmark column, which assumed a Republican statewide vote share of about 49%, as well as for the All_46, All_47, All_48, All_50, All_51, and All_52 columns, which shifted this vote share by up to three percentage points in either direction. This sensitivity testing indicates how the plans were expected to perform under conditions including those of 2012 (which corresponded almost perfectly to the 49% benchmark), 2014 (a good Republican year very close to All_52), and 2008 (a good Democratic year very close to All_46).¹²

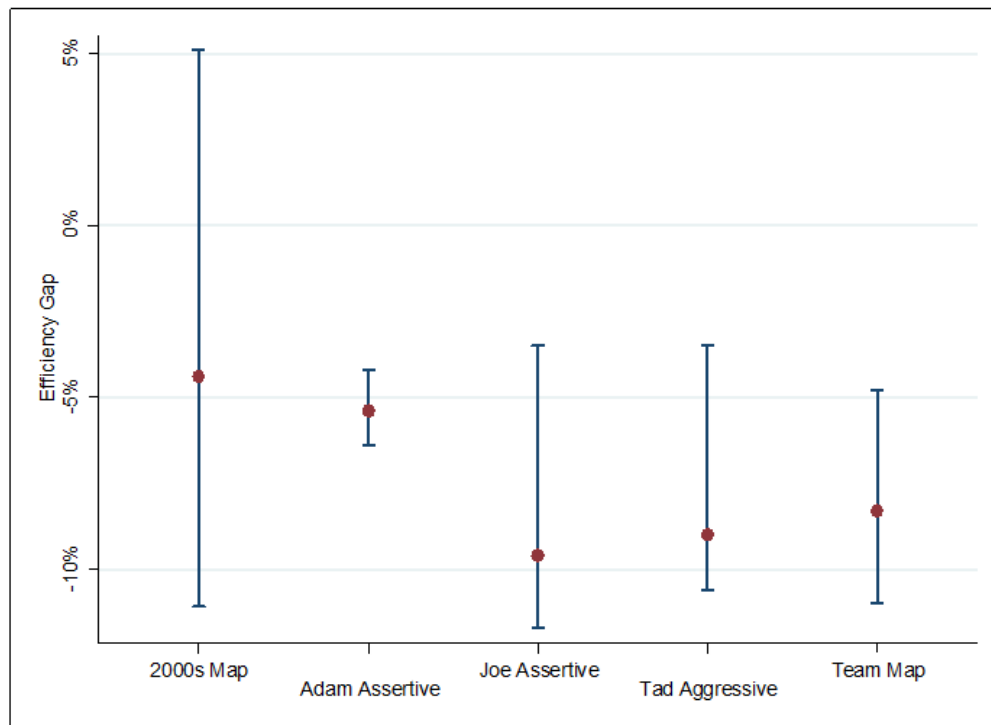
The below chart plots the efficiency gap ranges for each plan, as well as each plan's average efficiency gap across the different electoral environments. The 2000s Map has an efficiency gap stretching all the way from 5.1% in a *Democratic* direction (in the All_46 scenario) to 11.1% in a Republican direction (in the All_52 scenario). Tr. Ex. 273; PFOF ¶ 140. In contrast, all of the draft maps have much more confined (and pro-Republican) efficiency gap ranges. Adam Assertive has a pro-Republican efficiency gap varying from 4.2% (in All_46) to 6.4% (in All_52). Tr. Ex. 272; PFOF ¶ 140. Joe Assertive has a pro-Republican efficiency gap varying from 3.5% (in All_46) to 11.7% (in All_50 and All_51). Tr. Ex. 274; PFOF ¶ 140. Tad Aggressive has a pro-Republican efficiency gap varying from 3.5% (in All_46) to 10.6% (in All_48 and All_50). Tr. Ex. 280; PFOF ¶ 140. And the Team Map has a pro-Republican efficiency gap varying from 4.8% (in All_46) to 11.0% (in All_52). Tr. Ex. 282; PFOF ¶ 140; *see also* Gaddie Dep. (Dkt. 108, Tr. Ex. 161) at 136:8-10 (agreeing that “[t]he band of responsive districts at the mid point [is] broader” under the 2000s Map).

This data shows that the Current Plan's drafters aimed not only to give Republicans a significant advantage, but also to make this advantage *stick* even if Wisconsin's electoral

¹² However, Gaddie's sensitivity testing was somewhat less sophisticated than Professor Mayer's, since it assumed that seats would remain open throughout the decade. *See* Mayer Rebuttal Rpt. (Dkt. 95, Tr. Ex. 114) at 25-29; PFOF ¶ 119 (taking into account incumbency in sensitivity testing).

conditions changed. This is why the S-curves were produced in the first place. And this is also what the S-curves show as a substantive matter: the high level of responsiveness in the 2000s Map systematically contracting in Adam Assertive, Joe Assertive, Tad Aggressive, and the Team Map. Indeed, due to this contraction, three of the four draft plans (all but Adam Assertive) did not anticipate Democrats capturing a majority of the Assembly even if they won as much as 53% of the statewide vote.

Figure 4: Predicted Efficiency Gap Ranges, and Average Efficiency Gaps over These Ranges, for Drafts of the Current Plan. Tr. Ex. 323; PFOF ¶ 140.



E. The Plan Was Rushed to Passage with Little Opportunity for Debate.

The final confirmation of the discriminatory intent underpinning Act 43 comes from the highly rushed—and partisan—manner in which it was introduced, debated, and enacted. In early July 2011, days before the bill was to be unveiled, Ottman prepared notes for remarks he delivered to a Republican-only meeting of legislators. These notes confirmed the durability of the gerrymander they were about to adopt, stating, “The maps we pass will determine who’s here

10 years from now.” The notes added, “We have an opportunity and an obligation to draw these maps that Republicans haven’t had in decades.” Tr. Ex. 241; PFOF ¶ 55.

Also in early July 2011, Ottman prepared notes for the bill’s public hearing with the aim of concealing the partisan nature of the drafting process. One of the questions he anticipated was “What is the partisan makeup of these districts?” His planned response was “Everyone has the ability to draw their own conclusions and interpret how past elections may play out in the new districts.” Another question he anticipated was “Why were Republican Attorneys hired to draw maps but Democrats were not allowed attorneys to draw maps?” His planned response was “Your staff has had all the same hardware, software and data available to them for over a year. . . . I don’t know what your staff has been doing with all that equipment and data. Our staff has been working on this bill.” Tr. Ex. 237; PFOF ¶ 56.

On July 12, 2011, Ottman e-mailed Foltz and several others involved with the Current Plan’s drafting. He recommended deleting negative information about how many counties the Plan split from memos that were being prepared for the next day’s hearing. “One thing I would recommend changing is the enumeration of the County splits, since it doesn’t tell a great story” Instead, he advised focusing on the number of split municipalities. “The municipal splits are a better comparison and a higher priority.”¹³ Tr. Ex. 362; PFOF ¶¶ 57-58.

¹³ There is abundant further evidence that the Current Plan’s drafters were not particularly concerned about traditional redistricting criteria. *First*, Foltz, Handrick, and Ottman did not save any compactness analyses for the draft maps they drew, and did not receive any such analyses from Gaddie until the end of the drafting process. *See* Foltz Dep. (Dkt. 113, Tr. Ex. 191) at 49:23-50:14; Gaddie Dep. (Dkt. 108, Tr. Ex. 161) at 239:23-240:5; Ottman Dep. (Dkt. 118, Tr. Ex. 226) at 43:3-44:17; PFOF ¶ 59.

Second, Republican attorney Jim Troupis wrote a memo to Foltz and Ottman on December 15, 2011, roughly a week before they were deposed in *Baldus*, advising them to use population equality to defend gerrymandered districts. He recommended, “When there are other issues about criteria, e.g. political gerrymandering & race, we will want to make sure that those districts that may be most questioned meet Population criteria as closely as possible.” He also noted that the criteria used to design the Current Plan included “Political Change,” “Incumbent protection—who is and is not protected/jeopardized,” and “R pairs/D pairs.” Tr. Ex. 469; PFOF ¶¶ 66-67.

And *third*, in another spreadsheet of Foltz’s, he again revealed the Plan’s authors’ intent to manipulate districts’ population deviations in order to shield their partisan choices from scrutiny. In this file, he divided existing

After all of this buildup, the sole public hearing on Act 43 took place on July 13, 2011, just two days after the bill was introduced by the Committee on Senate Organization. The bill was passed by the Senate six days later, on July 19, 2011, and by the Assembly the very next day, on July 20, 2011. Both of these votes were strictly along party lines. *See* Defs.’ Amend. Answer (Dkt. 56, Tr. Ex. 73) at 7; PFOF ¶ 161. A district map that had been painstakingly and clandestinely crafted for months was thus revealed to the public, considered by the Legislature, and voted on by both chambers in the span of little more than a week. It is little wonder that Speth, in an e-mail to Foltz, Ottman, and others, described this “legislative agenda” as “very aggressive.” Tr. Ex. 208; PFOF ¶ 173.

Haste, moreover, was not the only irregular aspect of Act 43’s passage. Because its districts were crafted without any consideration of ward boundaries, they necessitated the “upending [of] more than a century of practice in Wisconsin” with respect to designing wards after each Census. *Baldus II*, 849 F. Supp. 2d at 846. Under this tradition, municipalities had drawn wards *first*, and congressional and legislative districts had then preserved all of these wards intact. But in this cycle, the districts were shaped first, and the Legislature then directed municipalities around the state to revise their wards to make them fit entirely within the districts. Indeed, the Legislature passed the statute containing this edict, Act 39, less than a week after enacting Act 43. *See id.* at 845-46; *see also* Tr. Ex. 331; Handrick Dep. (Dkt. 119, Tr. Ex. 290) at 35-36, 146-50, 169-70, 194-95, 220-21; PFOF ¶ 178.¹⁴

districts into three categories, “GOP,” “Indp.,” and “Dem.,” and listed the population deviation of each district, color-coding so that green indicated overpopulation and red underpopulation. RFA (Tr. Ex. 341) ¶ 15; Tr. Ex. 363; PFOF ¶¶ 63-65.

¹⁴ The Current Plan’s drafters had originally planned to adhere to Wisconsin’s time-honored approach of drawing wards first and districts second. On February 25, 2011, Ottman e-mailed Troupis, McLeod, and Foltz with a proposed “Redistricting timeline.” Under this timeline, counties and municipalities would have had from March to October 2011 to form supervisory districts and wards. Districts would then have been designed from “October 2011 to early 2012.” The Plan’s drafters evidently abandoned this timeline once it became inconvenient for them. Tr. Ex. 361; PFOF ¶ 177.

F. Plaintiffs and Other Democratic Voters Were Discriminated Against Because of Their Political Views.

The discriminatory intent animating the Current Plan was nothing more than the bare aim of discriminating against plaintiffs and other Democratic voters on the basis of their political views and their past and predicted political activity. Plaintiffs in this action—William Whitford, Roger Anclam, Emily Bunting, Mary Lynne Donohue, Helen Harris, Wayne Jensen, Wendy Sue Johnson, Janet Mitchell, James Seaton, Allison Seaton, Jerome Wallace, and Don Winter—are all qualified and registered Wisconsin voters who support the Democratic Party and Democratic candidates for office. PFOF ¶¶ 1-17. The Current Plan’s authors used the electoral data available about plaintiffs and other Democratic voters to systematically crack and pack them, thus deliberately impeding their rights to political expression and representation. Such “burdening or penalizing citizens because of their participation in the electoral process, their voting history, their association with a political party, or their expression of political views” offends both the First and Fourteenth Amendments. *Vieth*, 541 U.S. at 314 (Kennedy, J., concurring in the judgment).

II. Other Measures of Partisan Symmetry Confirm that the Current Plan Is an Egregious Outlier.

In both the summary judgment oral argument and its ensuing decision, the Court expressed interest in measures of partisan symmetry other than the efficiency gap. *See* Summ. Jdgmt. Oral Arg. Tr. (Dkt. 89, Tr. Ex. 222) at 70-71; Summ. Jdgmt. Op. (Dkt. 94) at 10. From the beginning of this case, plaintiffs have argued that the Court may use these other measures instead of, or in addition to, the efficiency gap to assess plans’ partisan consequences. *See* Compl. (Dkt. 1, Tr. Ex. 138) ¶¶ 9, 88; Pls.’ Br. in Opp. to Defs.’ Mot. to Dis. (Dkt. 31) at 8, 11,

17, 25; Pls.’ Br. in Opp. to Defs.’ Mot. for Summ. Jdgmt. (Dkt. 68) at 42, 53-54, 70. Accordingly, plaintiffs provide additional information here about two partisan symmetry metrics, partisan bias and the mean-median difference, drawn from the academic literature and the evidence in the record.

Partisan bias is the difference between the shares of *seats* that the major parties would win if they each received the same share (typically 50%) of the statewide *vote*. See *LULAC*, 548 U.S. at 420 (opinion of Kennedy, J.) (bias is “the extent to which a majority party would fare better than the minority party, should their respective shares of the vote reverse”); *id.* at 466 (Stevens, J., concurring in part and dissenting in part) (bias is absent when “each [party] receives the same fraction of legislative seats for a particular vote percentage as the other party would receive if it had received the same percentage”); Bernard Grofman & Gary King, *The Future of Partisan Symmetry as a Judicial Test for Partisan Gerrymandering After LULAC v. Perry*, 6 Election L.J. 2, 6-13 (2007), Tr. Ex. 333; Jackman Rpt. (Dkt. 62, Tr. Ex. 34) at 11-15; PFOF ¶¶ 223-225. For example, if Democrats would win 55% of a plan’s districts if they received 50% of the statewide vote (leaving 45% of the districts to be won by Republicans), then the plan would have a pro-Democratic bias of 5%.

The calculation of partisan bias is relatively straightforward. An analyst first obtains district-by-district electoral results as well as the statewide vote share for each party. Next, the analyst *shifts* the observed vote share in each district by the same amount: the amount necessary to simulate a tied statewide election (or alternatively an election in which the parties’ respective vote shares flipped). The analyst then tallies how many districts each party would have won and lost in this hypothetical election. The difference between the parties’ seat shares in the hypothetical election is partisan bias. For instance, if Republicans won 47% of the statewide

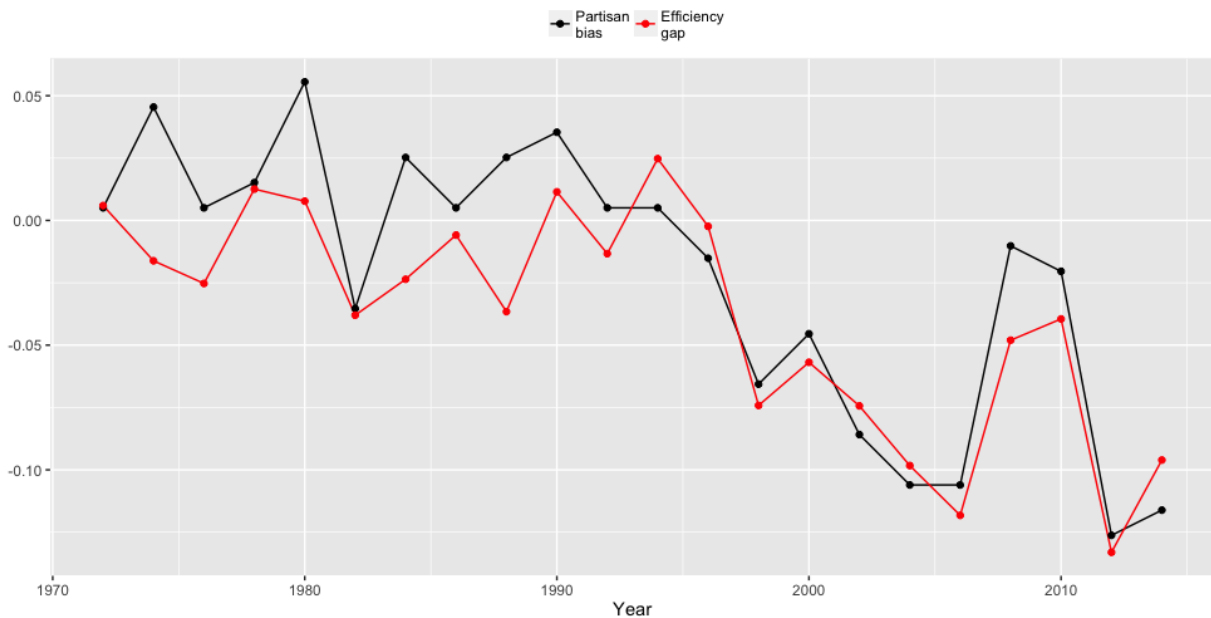
vote, then the observed vote share in each district would be increased by 3% to simulate a tied election. Partisan bias would be determined by comparing the parties' seat shares after this uniform swing was carried out. *See* Jackman Rpt. (Dkt. 62, Tr. Ex. 34) at 11-14; PFOF ¶ 226.

When a statewide election *is* in fact tied, partisan bias and the efficiency gap are identical. This is because the $(S - 0.5) - 2(V - 0.5)$ formula used to calculate the simplified form of the efficiency gap reduces to $(S - 0.5)$ when the parties' vote shares (V) are both 50%. In turn, $(S - 0.5)$ is the very definition of partisan bias: the difference between the parties' seat shares (S) and 50% in a tied election. *See id.* at 17, 19; Nicholas O. Stephanopoulos & Eric M. McGhee, *Partisan Gerrymandering and the Efficiency Gap*, 82 U. Chi. L. Rev. 831, 856 (2015), Tr. Ex. 141; PFOF ¶ 227. Partisan bias and the efficiency gap are also very similar when statewide elections are competitive, that is, closer than 55% to 45%. Under these conditions, the uniform swing that must be carried out to compute partisan bias is relatively small, meaning that there is not much opportunity for the measure to diverge from the efficiency gap. *See* Eric M. McGhee, *Measuring Partisan Bias in Single-Member District Electoral Systems*, 39 Legis. Stud. Q. 55, 67, 69 (2014), Tr. Ex. 98 (finding that both partisan bias and the efficiency gap are excellent predictors of party seat share in competitive elections); PFOF ¶ 229-230.

Because Wisconsin has generally had competitive Assembly elections over the last forty years, we would expect its partisan bias and efficiency gap trends to be comparable. As the below chart illustrates, this is indeed the case. The measures are less consistent in the 1970s and 1980s, when Democrats often received more than 55% of the statewide vote. But from the 1990s to the present—a period in which all Assembly elections have been closer than 55% to 45%—the metrics track almost perfectly. They both grow steadily more pro-Republican from 1994 to 2006, they both move in a Democratic direction in 2008 and 2010, and they both show an

unprecedented Republican advantage in 2012 and 2014. *See* Tr. Exs. 461-462; PFOF ¶ 228. This data should reassure the Court that there is nothing idiosyncratic about the statistical picture painted by the efficiency gap. In competitive settings like Wisconsin, the picture is strongly confirmed by partisan bias.

Figure 5: Efficiency Gaps and Partisan Biases for Wisconsin Assembly Plans, 1972-2014.
Tr. Ex. 329; PFOF ¶ 228.



In *uncompetitive* settings, however, partisan bias becomes less reliable and, in plaintiffs' view, should not be used. This is because larger uniform swings need to be carried out in these settings to simulate a tied election (let alone an election in which the parties' vote shares flipped). These larger swings are politically implausible and subject to a high degree of error; just think about trying to predict what would happen if Massachusetts or Utah suddenly became tossup states. For precisely this reason, even advocates of partisan bias recommend applying the measure only to competitive statewide elections. *See, e.g.,* Andrew Gelman & Gary King, *Enhancing Democracy Through Legislative Redistricting*, 88 Am. Pol. Sci. Rev. 541, 545 (1994), Tr. Ex. 100 ("We therefore limit our analysis to 'competitive electoral systems'");

Grofman & King, Tr. Ex. 333 at 19; PFOF ¶ 229 (partisan bias is “intended only for jurisdictions where the politics is competitive”).

The two charts below highlight the unreliability of partisan bias in uncompetitive settings. The first (Figure 6) plots the difference between the efficiency gap and partisan bias versus the Democratic share of the statewide vote in state house elections from 1972 to 2014. The data points resemble a bowtie, tightly bunched when elections are competitive but fanning in all directions when they are uncompetitive. *See* Tr. Exs. 325, 461-462; PFOF ¶ 230; *see also* Stephanopoulos & McGhee, Tr. Ex. 141 at 858 (presenting an analogous scatter plot). The second chart (Figure 7) indicates how the efficiency gap and partisan bias are related in competitive (closer than 55% to 45%) and uncompetitive (further apart than 55% to 45%) state house elections from 1972 to 2014. In competitive elections, the measures are very highly correlated ($r = 0.89$) and cluster closely around the best fit line. But in uncompetitive elections, the metrics are only modestly correlated ($r = 0.58$) and diverge much more from the best fit line. *See* Tr. Exs. 461-462; PFOF ¶ 231. Plaintiffs therefore recommend that partisan bias be used as a robustness check only when statewide elections are relatively close.¹⁵

¹⁵ One final property of partisan bias warrants mention: its relative stability from election to election. This stability is a consequence of the uniform swings on which the measure relies. These swings return the analysis to the benchmark of the hypothetical tied election, no matter what transpired in the election that actually took place. Refer back, for example, to Gaddie’s S-curves. Each shift of the vote results in different districts being won and lost, and so a different efficiency gap. But because each shift is *undone* to calculate partisan bias, the measure remains constant in every column of the chart. *See* McGhee, Tr. Ex. 98 at 73; PFOF ¶¶ 232-234 (finding that partisan bias exhibits “more persistence through time”). *But see* Stephanopoulos & McGhee, Tr. Ex. 141 at 864 (pointing out that “this relative stability is an artifact . . . stemming from the fact that [partisan bias] . . . negates all uniform swings that may have occurred, and even negates any *non*-uniform swings that fail to move any districts into or out of the counterfactual window”).

Figure 6: Efficiency Gap Minus Partisan Bias Versus Democratic Share of Statewide Vote, State House Elections, 1972-2014, Current Plan in Red. Tr. Ex. 325; PFOF ¶ 230.

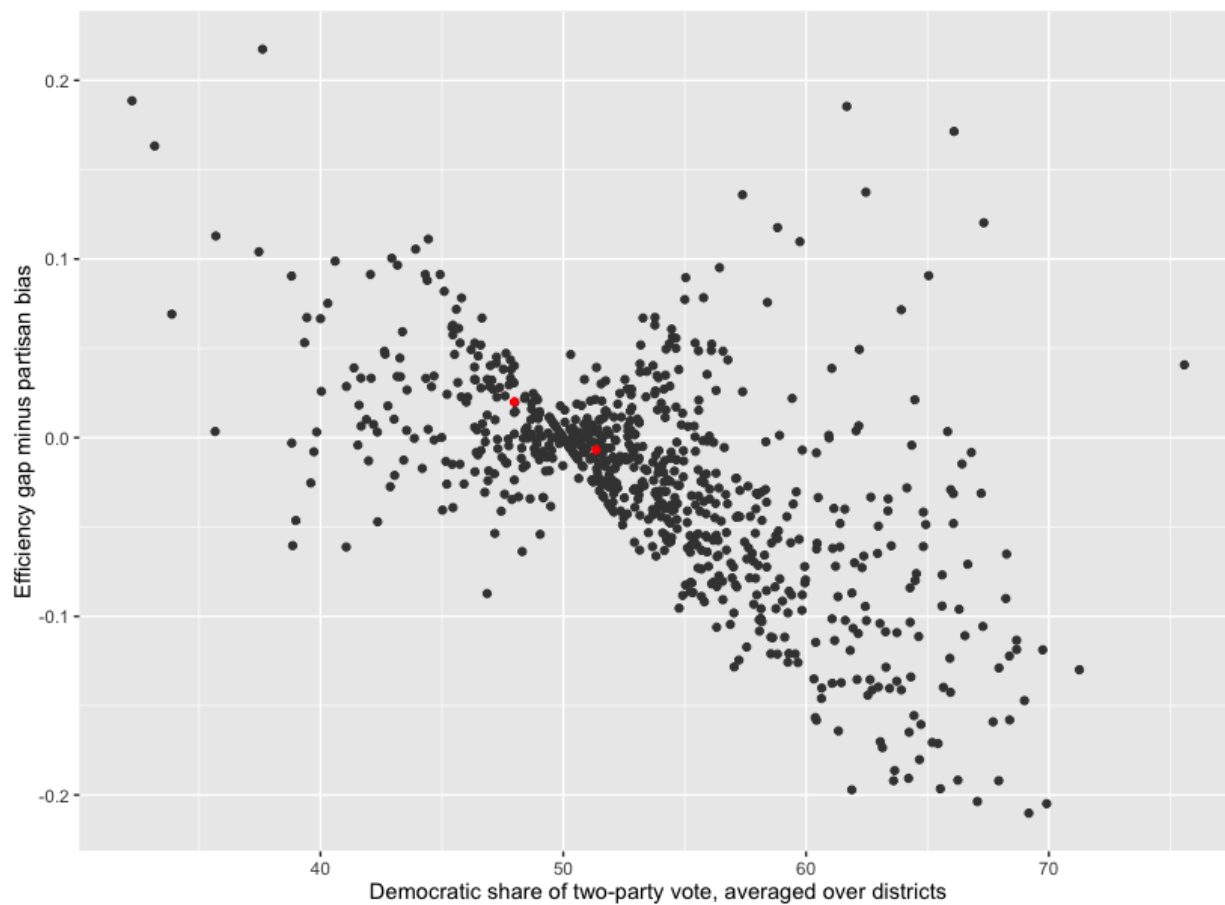
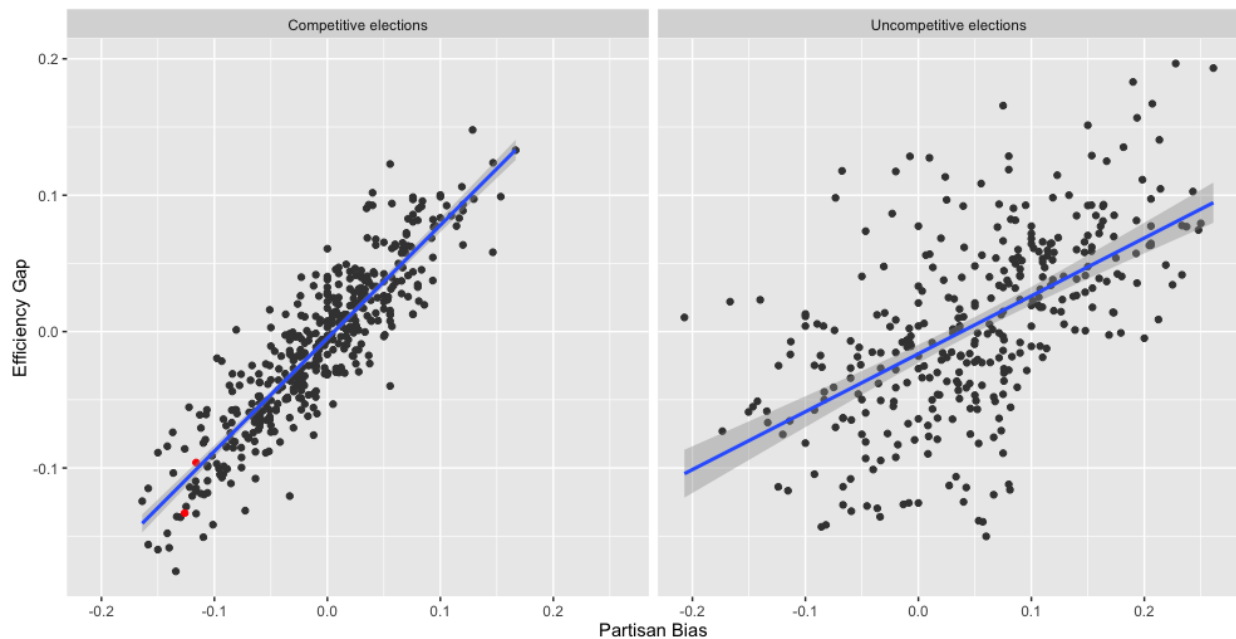


Figure 7: Efficiency Gap Versus Partisan Bias, Competitive and Uncompetitive Elections, State House Elections, 1972-2014, Current Plan in Red. Tr. Ex. 325; PFOF ¶ 231.



While partisan bias and the efficiency gap are the most established measures of partisan symmetry, scholars have recently advanced still another metric: the mean-median difference. This is simply the difference between a party's *mean* vote share and *median* vote share across all of the districts in a plan. The intuition is that when the mean and the median diverge significantly, the district distribution is skewed in favor of one party and against its opponent. Conversely, when the mean and the median are close, the district distribution is more symmetric. See Michael D. McDonald & Robin E. Best, *Unfair Partisan Gerrymanders in Politics and Law: A Diagnostic Applied to Six Cases*, 14 Election L.J. 312 (2015), Tr. Ex. 405; Samuel S. Wang, *Three Tests for Practical Evaluation of Partisan Gerrymandering*, 68 Stan. L. Rev. (forthcoming 2016), Tr. Ex. 408; PFOF ¶ 235.

Unlike partisan bias and the efficiency gap, the mean-median difference is denominated in units of *vote share* rather than *seat share*. PFOF ¶ 236. In fact, the measure ignores which party actually wins each district, as this is immaterial to the calculation of the mean and the

median. The mean-median difference also has an arithmetical relationship with partisan bias. It is partisan bias divided by the slope of a plan's seat-vote curve at the point of a tied election. As this slope is usually close to two, the magnitude of the mean-median difference is usually about half that of partisan bias. *See* McDonald & Best, Tr. Ex. 405 at 315 (illustrating these points graphically).

Thanks to their arithmetical connection, the mean-median difference and partisan bias are highly correlated in both competitive ($r = 0.91$) and uncompetitive ($r = 0.83$) elections. Also thanks to this connection, the mean-median difference has essentially the same links to the efficiency gap as does partisan bias. That is, the mean-median difference is highly correlated with the efficiency gap in competitive elections ($r = 0.80$) but only somewhat correlated with it in uncompetitive ones ($r = 0.38$). *See* Tr. Exs. 461-462; PFOF ¶ 237. Both because the mean-median difference is so similar to partisan bias, and because its facial validity as a measure of gerrymandering is undermined by its exclusive focus on votes rather than seats, plaintiffs recommend using it, at most, as a secondary robustness check in competitive settings.

As Wisconsin is a competitive setting, at least under the Current Plan, it is worthwhile to note the Plan's mean-median differences. In 2012, the mean Democratic vote share was 51.4% and the median Democratic vote share was 45.7%, resulting in a pro-Republican differential of 5.6%. In 2014, the mean Democratic vote share was 48.0% and the median Democratic vote share was 41.1%, for a pro-Republican differential of 6.9%. These are very large mean-median differences—Wisconsin's average from 1972 to 2010 was just 1.1%—that further confirm the severity of the Plan's partisan asymmetry. *See* Tr. Exs. 461-462; PFOF ¶ 238.

III. Comparing the Current Plan to Prior Wisconsin Plans Shows that Its Extreme Asymmetry Is Unjustified.

In its summary judgment decision, the Court also asked for “comparative evidence of prior redistricting plans in the State of Wisconsin.” Summ. Jdgmt. Op. (Dkt. 94) at 30. This kind of evidence is probative of both discriminatory intent (which may be inferred if the Current Plan is no better than its predecessors in terms of traditional redistricting criteria but much worse in terms of partisan symmetry) and justification (which is then presumably absent). Plaintiffs therefore present here the data they have been able to find with respect to current and previous Assembly plans’ compliance with traditional criteria and levels of partisan symmetry.

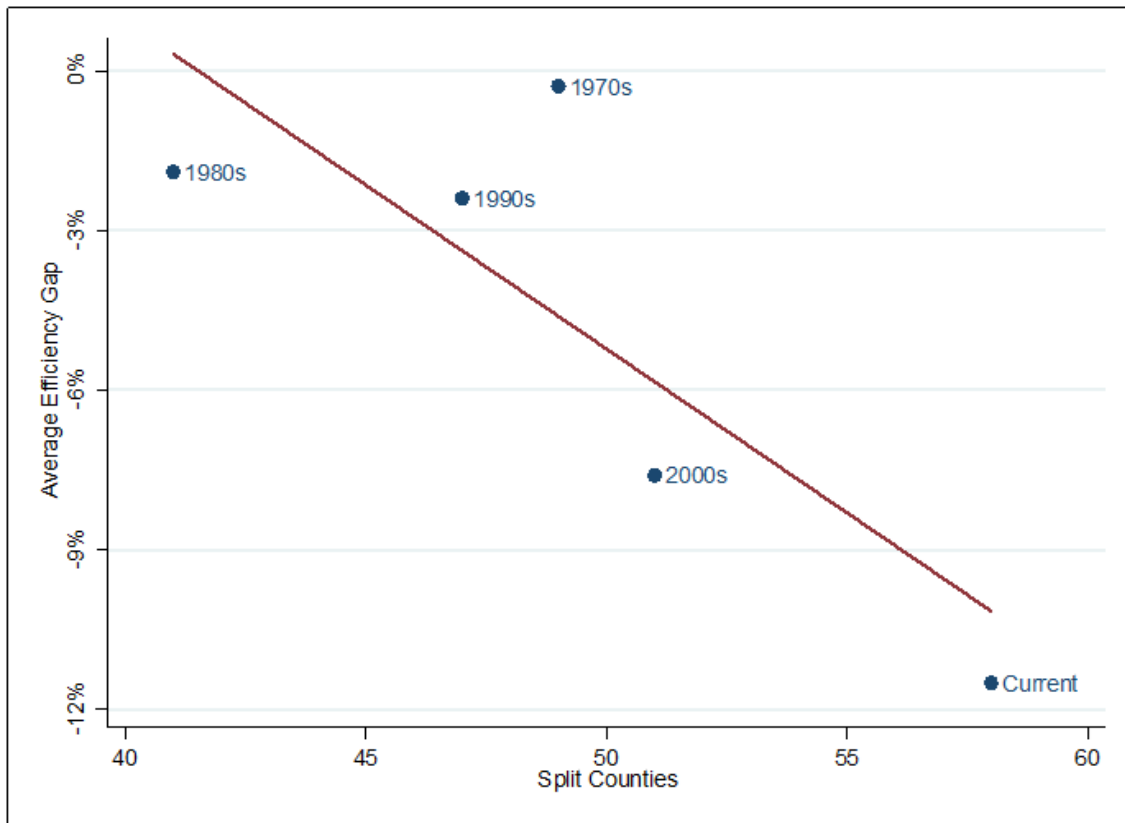
Plaintiffs note at the outset that, due to inconsistencies in prior plans’ shapefiles, they have not been able to assess directly these maps’ compliance with traditional criteria. Instead, they have had to rely on statements by the courts that designed the plans as well as the defendants’ pretrial submissions in *Baldus*. These sources provide three types of information with respect to traditional criteria: (1) the number of county splits in each cycle from the 1970s onward; (2) the number of municipal splits from the 1990s onward; and (3) average district compactness for the 2000s Map and the Current Plan. See *Baumgart v. Wendelberger*, 2002 WL 34127471, at *7 (E.D. Wis. July 11, 2002); *Prosser v. Elections Bd.*, 793 F. Supp. 859, 871 (W.D. Wis. 1992); *Wisc. State AFL-CIO v. Elections Bd.*, 543 F. Supp. 630, 635 (E.D. Wis. 1982); Joint Pretrial Rpt., Ex. A, tbls. 20-21, *Baldus v. Brennan*, 2:11-cv-00562-JPS-DPW-RMD, Tr. Ex. 178; PFOF ¶ 363.

However, plaintiffs did locate an intriguing e-mail that helps explain the relatively large partisan asymmetry of the court-drawn 2000s Map. On June 21, 2011, Troupis wrote to Foltz, McLeod, and Ottman about experts that the Legislature could choose to hire in the event of litigation. Troupis strongly advocated Bernard Grofman, a political scientist at UC-Irvine who

was retained by the Republican intervenors in the 2000s *Baumgart* litigation, and who “has been recognized by courts as perhaps the single most respected political scientist addressing matters of redistricting.” Troupis added, “Without Grofman in 2001 we would not have succeeded in getting the map we did get as Easterbrook followed his direction in drawing the map.” Tr. Ex. 348; PFOF ¶ 341. This message in no way impugns the integrity of the *Baumgart* court. But it does suggest that the court may have unwittingly crafted a pro-Republican map by heeding the advice of the Republican intervenors’ expert.

In any event, the below chart plots the average efficiency gap of each Assembly plan from the 1970s to the present versus the number of counties split by each plan. (Again, only county split data is available from the 1970s to today.) The Current Plan is clearly the most extreme along both dimensions, exhibiting an average efficiency gap of -11.5% and splitting 58 of Wisconsin’s 72 counties. All earlier plans both exhibited much smaller efficiency gaps and split fewer (often many fewer) counties. The chart also demonstrates that, in Wisconsin at least, there is no conflict between respecting county boundaries and designing a symmetric map. In fact, the relationship runs in exactly the opposite direction; greater respect for county lines is strongly associated with a *smaller* efficiency gap. See Jackman Rpt. (Dkt. 62, Tr. Ex. 34) at 72; Tr. Ex. 324, PFOF ¶ 364.

Figure 8: Average Efficiency Gap Versus Counties Split, Wisconsin Assembly Plans from 1970s to Present. Tr. Ex. 324; PFOF ¶ 364.



The story is much the same with other traditional criteria. The Current Plan splits 62 municipalities, which is more than the 2000s Map (50) and less than the 1990s map (72). But the Current Plan's average efficiency gap (-11.5%) is much worse than either the 2000s Map's (-7.6%) or the 1990s map's (-2.4%). Similarly, the Current Plan's average smallest-circle and perimeter-to-area compactness scores are both worse than those of the 2000s Map (0.39 versus 0.41, and 0.28 versus 0.29, respectively). And again, the Current Plan is not just more noncompact but also more asymmetric than the 2000s Map. *See id.*; PFOF ¶ 363. In short, this historical examination spanning five redistricting cycles lends no support to any attempt to justify the Current Plan based on compliance with traditional criteria. Previous Assembly plans satisfied these criteria at least as well while exhibiting much smaller efficiency gaps.

IV. Comparing the Current Plan to Simulated Wisconsin Plans Further Confirms that Its Extreme Asymmetry Is Unjustified.

As discussed above, one way to draw inferences about a plan's motivations and justifications is to consider "comparative evidence of prior redistricting plans." Summ. Jdgmt. Op. (Dkt. 94) at 30. A logically related approach is to examine a large number of lawful simulated maps. If the challenged plan is similar to many of the simulated maps in terms of partisan symmetry and compliance with traditional criteria, this undermines claims that the plan was driven by partisanship and cannot be neutrally justified. On the other hand, if the challenged plan is an outlier relative to the simulated maps, this provides further evidence that the plan was driven by partisanship and lacks a legitimate justification.

Using a simulation technique that defendants have repeatedly praised, University of Michigan political scientist and noted redistricting expert Professor Jowei Chen created 200 randomly drawn Assembly plans for Wisconsin. His algorithm used four line-drawing criteria: (1) equal population, so that no district deviates by more than 1% from the ideal population; (2) the preservation of county boundaries; (3) the preservation of municipal boundaries; and (4) smallest-circle (also known as Reock) compactness. Additionally, Professor Chen froze in place the Current Plan's six black-majority districts (10, 11, 12, 16, 17, 18) and one Hispanic-majority district (8) to ensure compliance with the Voting Rights Act. And he did not consider electoral data in any way when programming and running his algorithm. *See* Jowei Chen, *Wisconsin Act 43 Analysis*, 16 Election L.J. (forthcoming 2017) (manuscript at 5-8), Tr. Ex. 156; Mayer Dep. (Dkt. 99) at 10:9-16, 138:3-21; PFOF ¶ 377.

Plaintiffs note that this analysis by Professor Chen does not fall victim to their criticisms of his earlier work with Professor Jonathan Rodden. *See* Pls.' Br. in Opp. to Defs.' Mot. for Summ. Jdgmt. (Dkt. 68) at 14-15. Here, unlike in that work, Professor Chen takes into account

redistricting requirements such as respect for county boundaries, respect for municipal boundaries, and compliance with the Voting Rights Act. Here, he employs recent data from the 2012 election rather than outdated data from 2000. Here, his results are consistent with the findings of other scholars. And here, it is irrelevant that his simulated maps may not be a representative sample of all possible maps that satisfy his criteria, since the point of the exercise is simply to find out whether maps both more symmetric than the Current Plan and at least as compliant with traditional criteria could have been designed.

Professor Chen's analysis gives a crystal clear answer to this question. *Every one* of his 200 simulated maps keeps intact more counties than the Current Plan (18-25 versus 14). *Every one* also keeps intact more municipalities (1837-1853 versus 1825). *Every one* has a better average smallest-circle compactness score as well (0.43-0.46 versus 0.37).¹⁶ And most importantly, *every one* has a much smaller efficiency gap. Fully 144 of the 200 simulated maps have efficiency gaps within 3% of zero. Forty-six of them have efficiency gaps within 1% of zero. And the *very worst* efficiency gap exhibited by any simulated map is -5.8%, or less than half of that exhibited by the Current Plan. *See* Chen, Tr. Ex. 156 at 1, 5-8, 10, Tr. Exs. 158-160; Mayer Dep. (Dkt. 99) at 10:9-16, 138:3-21; PFOF ¶¶ 378-383.

The three charts below illustrate these points graphically. The first (Figure 9) plots counties kept intact by a plan versus the plan's efficiency gap. It reveals the Current Plan to be a dramatic outlier along both dimensions, splitting more counties and displaying greater asymmetry than any simulated map. Chen, Tr. Ex. 156 at 10; Tr. Exs. 157-159; PFOF ¶ 383. The second (Figure 10) plots municipalities kept intact by a plan versus the plan's efficiency gap. It

¹⁶ Professor Chen's average smallest-circle compactness score for the Current Plan, 0.37, is slightly different from the one reported in the defendants' pretrial submissions in *Baldus*, 0.39. This difference illustrates the challenge plaintiffs faced in trying to assess plans' compliance with traditional criteria directly.

also shows the Current Plan to be a striking outlier relative to the simulated maps. Chen, Tr. Ex. 156 at 12; Tr. Exs. 157-159; PFOF ¶ 383.

Lastly, the third chart (Figure 11) presents the Current Plan’s districts and the average simulated map’s districts in order from least to most Republican. The two distributions are most different in their respective centers, where about ten Current Plan districts lie above the 50% threshold while about ten simulated districts fall below; and on the right-hand side, where only seven Current Plan districts are above 60% compared to roughly a dozen simulated districts. The chart highlights two of the techniques that account for the Current Plan’s extreme Republican tilt: the cracking of Democratic voters in districts they otherwise would have won narrowly, and the unpacking of Republican voters in districts they otherwise would have won by large margins. The chart also further undermines any claim that the Current Plan had neutral motivations or justifications. Chen, Tr. Ex. 156 at 17; Tr. Ex. 160: PFOF ¶ 383.

Figure 9: Counties Preserved Intact Versus Efficiency Gap for 200 Simulated Plans and Act 43. Tr. Ex. 158; PFOF ¶ 383.



Figure 10: Municipalities Preserved Intact Versus Efficiency Gap for 200 Simulated Plans and Act 43. Tr. Ex. 159; PFOF ¶ 383.

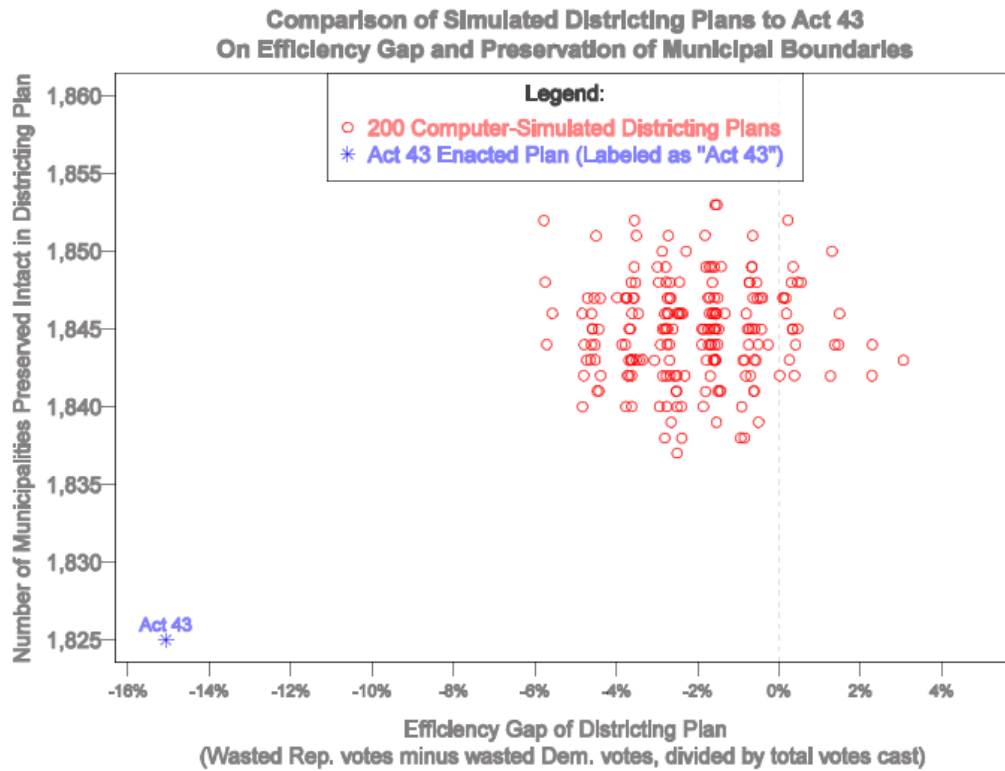
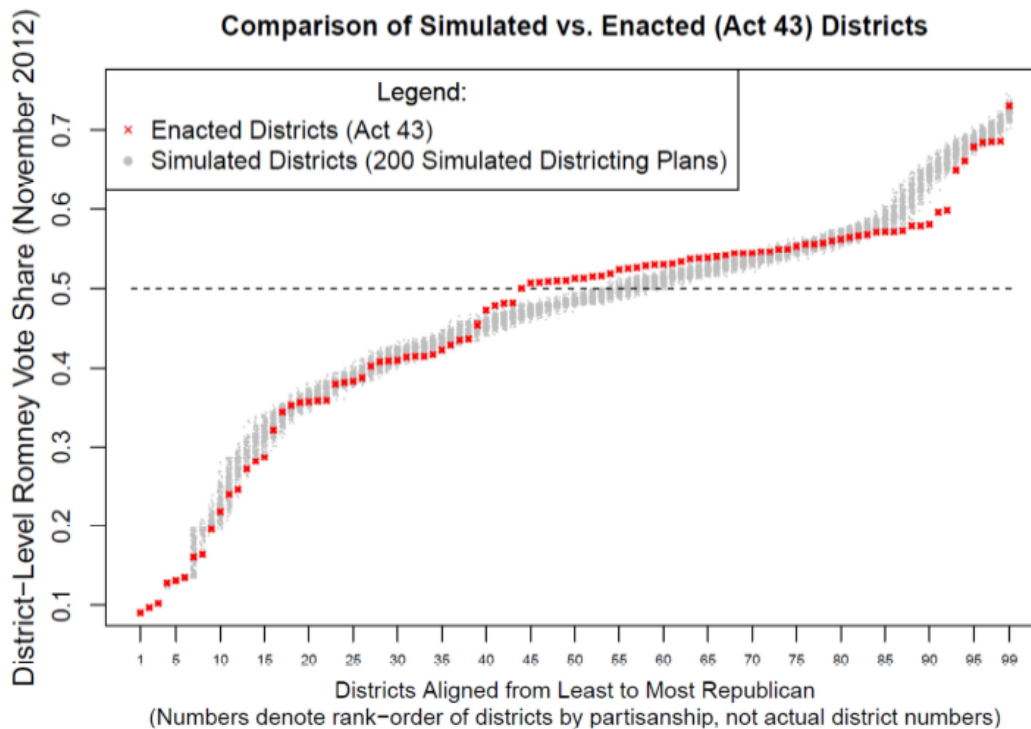


Figure 11: Assembly Districts in Order of Partisanship for Act 43 and Mean Simulated Plan. Tr. Ex. 160; PFOF ¶ 384.



ARGUMENT

Plaintiffs comment below on the three prongs of their proposed test for partisan gerrymandering: (1) discriminatory intent; (2) discriminatory effect; and (3) justification. For each prong, plaintiffs explain why it is judicially discernible and manageable, respond to the Court's analysis in its summary judgment decision, rebut defendants' likely criticisms, and show that the prong is satisfied here.

I. The Test's Discriminatory Intent Prong Is Discernible, Manageable, and Satisfied Here.

A. The Intent Prong Is Discernible.

A partisan gerrymandering test must include an intent prong. *See Bandemer*, 478 U.S. at 127 (plurality opinion) (“We . . . agree . . . that in order to succeed the . . . plaintiffs were required to prove . . . intentional discrimination . . .”); Summ. Jdgmt. Op. (Dkt. 94) at 4 (“the plaintiffs must prove a discriminatory intent”). Plaintiffs have advanced the precise intent prong that was adopted by the *Bandemer* plurality and that was used in dozens of cases between *Bandemer* and *Vieth*. This prong asks whether a plan was enacted with discriminatory intent, that is, in order to engage in “intentional discrimination against an identifiable political group.” *Bandemer*, 478 U.S. at 127 (plurality opinion).

So formulated, the prong is consistent with key First and Fourteenth Amendment tenets, and thus judicially discernible. In the First Amendment context, “political belief and association constitute the core of those activities protected,” *Elrod v. Burns*, 427 U.S. 347, 356 (1976), meaning that strict scrutiny applies when the government disadvantages people “on account of their political association,” *O’Hare Truck Serv., Inc. v. City of Northlake*, 518 U.S. 712, 717 (1996). Similarly, under the Fourteenth Amendment, it is a “basic equal protection principle that the invidious quality of a law . . . must ultimately be traced to a . . . discriminatory purpose.”

Washington, 426 U.S. at 240; see also, e.g., *Village of Arlington Heights v. Metro Hous. Dev. Corp.*, 429 U.S. 252, 265 (1977) (“Proof of . . . discriminatory intent or purpose is required to show a violation of the Equal Protection Clause.”).

Contrary to defendants’ argument in their summary judgment briefing, a discriminatory intent requirement has not been precluded by any of the Supreme Court’s partisan gerrymandering cases. In *Vieth*, the plurality rejected the appellants’ proposal that mapmakers be shown to have “acted with a *predominant intent* to achieve partisan advantage.” 541 U.S. at 284 (plurality opinion). In the course of rejecting this proposal, the Court unfavorably assessed it relative to *Bandemer*’s intent prong. “As compared with the *Bandemer* plurality’s test of mere intent to disadvantage the plaintiff’s group, this proposal . . . makes . . . the standard more indeterminate.” *Id.* In other words, *Bandemer*’s intent prong is more manageable than a predominant-intent requirement. Likewise, in *LULAC*, the Court rebuffed the appellants’ suggestion that a plan be held invalid if it is “*solely* motivated by partisan objectives.” 548 U.S. at 416 (opinion of Kennedy, J.) (emphasis added). The Court said not a word about *Bandemer*’s quite different approach.

It is true, as defendants have pointed out, that the *Vieth* plurality remarked that partisanship is an “ordinary and lawful motive.” 541 U.S. at 286 (plurality opinion). But the plurality made this statement in response to the claim that an “excess” of partisanship should be enough, on its own, to “invalidate” a plan. *Id.* That, of course, is not how plaintiffs’ discriminatory intent prong would operate. Even if a discriminatory motive were shown, a plan would not be struck down unless the discriminatory effect and justification prongs were satisfied as well.

The *Vieth* plurality's statement was also sharply criticized by the other justices. Justice Stevens wrote that "the plurality errs in assuming that politics is 'an ordinary and lawful motive,'" and that "a naked purpose to disadvantage a political minority" is not "a rational basis for drawing a district line." *Id.* at 324, 336-37 (Stevens, J., dissenting). Justice Souter made clear that, in his view, "naked partisan advantage" is an impermissible motive. *Id.* at 351 (Souter, J., dissenting). Justice Breyer took the same position with respect to "an effort to obtain partisan political advantage." *Id.* at 366 (Breyer, J., dissenting). And in his key concurrence, Justice Kennedy declared that plans should be invalidated if "political classifications . . . were applied in an invidious manner or in a way unrelated to any legitimate legislative objective." *Id.* at 307 (Kennedy, J., concurring in the judgment). That is, line-drawers violate the Constitution if they use electoral data ("political classifications") to benefit themselves and harm the opposing party ("in an invidious manner") or to accomplish any other improper goal ("in a way unrelated to any legitimate legislative objective"). *Id.*

It is also true that the Court commented in *Gaffney v. Cummings*, 412 U.S. 735, 752 (1973), that "[i]t would be idle . . . to contend that any political consideration taken into account in fashioning a reapportionment plan is sufficient to invalidate it." This, again, is not how plaintiffs' discriminatory intent prong would work. More importantly, the only "political consideration" present in *Gaffney* was the "conscious intent to . . . achieve a rough approximation of the statewide political strengths of the Democratic and Republican Parties." *Id.* Plaintiffs agree wholeheartedly with the *Gaffney* Court that "judicial interest should be at its lowest ebb when a State purports fairly to allocate political power to the parties in accordance with their voting strength." *Id.* at 754. When a State uses electoral data to *avoid* a partisan gerrymander and to treat both parties *symmetrically*, there is no reason for the courts to interfere.

That plaintiffs' discriminatory intent prong remains doctrinally available is further confirmed by the Court's recent cases involving allegations that districts were malapportioned on partisan grounds. In *Cox v. Larios*, 542 U.S. 947 (2004), the Court summarily affirmed the invalidation of a Georgia plan whose districts' population deviations were attributable to "an intentional effort to allow incumbent Democrats to maintain or increase their delegation." *Id.* at 947 (Stevens, J., concurring). Similarly, in *Harris*, decided just last month, the Court confirmed that *Cox* is still good law, and assumed without deciding that "partisanship is an illegitimate redistricting factor." 136 S. Ct. at 1310. Plainly, this entire line of doctrine would be incoherent if partisanship were actually an "ordinary and lawful motive." *Vieth*, 541 U.S. at 286 (plurality opinion).

In its summary judgment decision, this Court hinted that *durability* could be incorporated into the discriminatory intent prong. *See* Summ. Jdgmt. Op. (Dkt. 94) at 30 ("One suggestion was that plaintiffs show that defendants had the intent to prevent the minority party from regaining control throughout the life of the districting plan."). Plaintiffs can make this showing here thanks to the S-curves they located during discovery. The only reason to create S-curves is to assess gerrymanders' resilience in the face of changing electoral conditions. And the S-curves in fact demonstrate that the drafts of the Current Plan were much less responsive to shifts in voter sentiment than the 2000s Map. *See supra* Facts I.D. Nevertheless, plaintiffs note some reasons to be wary of formally including a durability element in the intent inquiry.

First, such an element would be inconsistent with how the *Bandemer* plurality, the five concurring and dissenting Justices in *Vieth*, and the full Court in the malapportionment cases approached the issue of intent. In all of these contexts, their focus was exclusively on the motive to achieve partisan advantage. Second, a durability element would diverge from general free

speech and equal protection principles. Under these tenets, discriminatory intent suffices, and a motive to achieve a discriminatory *and resilient* advantage is not required. Third, durability is more naturally incorporated into the discriminatory effect prong of plaintiffs' proposed test. At that stage, courts could ask whether a plan has exhibited a high and durable level of partisan asymmetry relative to historical norms. And fourth, it may be the atypical case in which plaintiffs are able to find direct evidence, like the S-curves, that durability was considered by the mapmakers. Indeed, even here, the State furiously resisted turning over this material, which was disclosed only after the *Baldus* panel compelled its production. *See Baldus I*, 843 F. Supp. 2d at 960-61 (ordering the State to “*cooperate immediately*” and criticizing “the litigation tactics being used by public officials”).

B. The Intent Prong Is Manageable.

Neither this Court nor defendants have suggested that plaintiffs' discriminatory intent prong is unmanageable, in that it would produce outcomes that are “inconsistent, illogical, and ad hoc” rather than “principled, rational, and based upon reasoned distinctions.” *Vieth*, 541 U.S. at 278 (plurality opinion). Plaintiffs therefore discuss the prong's manageability only briefly, and direct the Court to their summary judgment briefing for further analysis. *See* Pls.' Br. in Opp. to Defs.' Mot. for Summ. Jdgmt. (Dkt. 68) at 42-45.

In short, plaintiffs agree with the *Bandemer* plurality that when a single party has unified control over redistricting, “it should not be very difficult to prove that the likely political consequences of the reapportionment were intended.” 478 U.S. at 129 (plurality opinion); *see also Vieth*, 541 U.S. at 350 (Souter, J., dissenting) (“proving intent should not be hard” when “a plan [is] devised by a single major party”). Plaintiffs also agree with the *Bandemer* plurality that, whether the task is easy or hard, discriminatory intent must actually be established and cannot

simply be assumed. *See* 478 U.S. at 129 n.11 (plurality opinion) (“That discriminatory intent may not be difficult to prove in this context does not, of course, mean that it need not be proved at all . . .”). And plaintiffs agree as well with Justice Souter’s opinion in *Vieth* that discriminatory intent is usually absent when a plan is enacted by a court, a commission, or divided government. *See* 541 U.S. at 350 (Souter, J., dissenting) (“I would . . . treat any showing of intent . . . as too equivocal to count unless the entire legislature were controlled by the governor’s party (or the dominant legislative party were vetoproof.)”); *id.* at 351 (“[A] plaintiff would naturally have a hard time showing requisite intent behind a plan produced by a bipartisan commission.”).

That this inquiry is manageable is further demonstrated by the Court’s prior decisions. The *Bandemer* plurality was “confident that . . . th[e] record would support a finding that the discrimination was intentional” when Indiana maps were designed by Republicans in unified control of the state government. 478 U.S. at 127 (plurality opinion). The *Cox* Court was equally sure that a Georgia plan crafted by Democrats in unified control reflected “an intentional effort to allow incumbent Democrats to maintain or increase their delegation.” 542 U.S. at 947 (Stevens, J., concurring). Conversely, the Court in *Gaffney* concluded that discriminatory intent was *not* present when a Connecticut map was drawn by a three-member bipartisan board. *See* 412 U.S. at 736-37, 751-54. Nor did the Court in *Harris* find discriminatory intent when an Arizona plan was the product of a five-member bipartisan commission. *See* 136 S. Ct. at 1309-10. By any reasonable standard, these holdings are a model of judicial predictability, falling reliably on the correct side of the line.¹⁷

¹⁷ In determining whether discriminatory intent is present, courts also have the benefit of the well-established *Arlington Heights* framework. *See* 429 U.S. at 267-68 (identifying disparate impact, “[t]he historical background of the decision,” “[t]he specific sequence of events leading up to the challenged decision,” “[d]epartures from the normal procedural sequence,” “substantive departures too,” “[t]he legislative or administrative history,”

C. The Intent Prong Is Satisfied Here.

Turning to whether plaintiffs' discriminatory intent prong is satisfied here—that is, whether the Current Plan was enacted with the motive of benefiting Republican candidates and voters and disadvantaging Democratic ones—defendants have already admitted that the answer is yes. *See* Summ. Jdgmt. Op. (Dkt. 94) at 12 (“defendants conceded that plaintiffs can prove this element of the test”). This is a wise concession given the *Baldus* panel’s explicit findings that “partisan motivation . . . clearly lay behind Act 43,” and that “the testimony of Foltz, Ottman, and the other drafters . . . that they were not influenced by partisan factors” was “almost laughable.” 849 F. Supp. 2d at 851.¹⁸

It is also a wise concession given the overwhelming evidence of discriminatory intent that plaintiffs presented above. *See supra* Facts I.A-E. This evidence, again, can be slotted into five separate categories. First, the Current Plan’s drafters took elaborate measures to guarantee the secrecy of the mapmaking process, including removing the process from the Legislature, transferring it to a private law firm, and cloaking the proceedings at the firm with a fraudulent attorney-client privilege. Second, Republican legislators were allowed to see their new districts (and analyses of the districts’ partisanship) prior to the Plan’s unveiling, while Democratic legislators were denied this opportunity. Third, the Plan’s drafters extensively analyzed the expected partisan consequences of multiple iterations of the map. Fourth, over the course of

and “contemporaneous statements by members of the decisionmaking body, minutes of its meetings, or reports” as factors probative of illicit intent).

¹⁸ In his deposition in this case, Ottman, at least, changed his tune from *Baldus*, repeatedly admitting that in drafting the Current Plan, he, Foltz, and Handrick took into account partisan considerations. He testified: “In evaluating the districts that became part of Act 43, we looked at partisan data as part of our evaluation of the maps.” He added: “The partisan considerations came into play in evaluating what we had drawn.” And again: “We used . . . the partisan analysis to evaluate what had been drawn.” And once more: “The partisan scores were something that we used to evaluate the maps.” Ottman Dep. (Dkt. 118, Tr. Ex. 226) at 47:21-23, 49-3-4, 50:2-3, 62:13-16; PFOF ¶ 68; *see also* RFA (Tr. Ex. 341) ¶ 29 (admitting that “Foltz, Ottman, and Gaddie looked at the past performance of voters in the existing legislative districts”); RFA (Tr. Ex. 341) ¶ 30 (admitting that “Foltz and Ottman looked at whether a district was likely to vote majority Republican or majority Democrat”); PFOF ¶ 144.

these iterations, the Republican advantage grew dramatically and the Plan's responsiveness to shifts in voter sentiment plunged. And fifth, the Plan was ultimately introduced, debated, and passed in the span of little more than a week. *See id.* In combination, these facts leave no doubt that the *Baldus* panel's conclusions about the Plan's partisan motivation are accurate.

At trial, defendants may argue that the Current Plan's drafters merely sought to protect incumbent legislators and to adjust the existing lines as the incumbents requested. But almost all of the mapmaking took place before any sitting members were consulted, and *no* changes to the lines were made as a result of the consultations. *See* Compl. (Dkt. 1, Tr. Ex. 138) Ex. 4; Defs.' Amend. Answer (Dkt. 56, Tr. Ex. 73) at 7; Foltz. Dep. (from *Baldus*) at 269:2-7; Tr. Ex. 368; PFOF ¶ 167. The drafters also deliberately *weakened* the electoral position of *twenty* Republican "Donors to the Team," in order to bolster less secure Republicans and undercut Democrats. *See* summary.xlsx, Tr. Ex. 284; PFOF ¶ 54. And most importantly, it can hardly be said that the drafters' goal was to protect incumbents *generally* when they met only with *Republican* incumbents and carefully targeted *Democratic* incumbents for elimination. *See id.*; *see also* RFA (Tr. Ex. 341) ¶¶ 34-36; Defs.' Amend. Answer (Dkt. 56, Tr. Ex. 73) at 7; Foltz. Dep. (Dkt. 113, Tr. Ex. 191) at 75:16-18; PFOF ¶¶ 54, 162,163.

Defendants may also claim that the Current Plan's authors intended to comply with traditional redistricting criteria. Even if this was one of their aims, their compliance effort paled in comparison to their pursuit of partisan advantage. For instance, Foltz, Handrick, and Ottman did not save any compactness analyses for the draft maps they drew, and did not receive any such analyses from Gaddie until the very end of the drafting process. *See* Foltz Dep. (Dkt. 113, Tr. Ex. 191) at 49:23-50:14; Gaddie Dep. (Dkt. 108, Tr. Ex. 161) at 239:23-240:5; Ottman Dep. (Dkt. 118, Tr. Ex. 226) at 43:3-44:17; PFOF ¶ 59. Likewise, with respect to population

deviation, their objective was to ensure that “[w]hen there are . . . issues about criteria, e.g. political gerrymandering . . . those districts that may be most questioned meet Population criteria as closely as possible.” Tr. Ex. 469; PFOF ¶ 67. Additionally, when they noticed that “the enumeration of the County splits . . . doesn’t tell a great story” about the Plan, they deleted this information from their presentation to the Legislature. Tr. Ex. 362; PFOF ¶¶ 57-58. And rather than abide by the Wisconsin custom of respecting ward boundaries, they designed the districts first and then compelled the State’s municipalities to fit their wards within the districts. Tr. Ex. 331; PFOF ¶ 178. Plainly, these were not the actions of mapmakers who prioritized traditional criteria over partisan gain.

Defendants may further assert that the Current Plan’s drafters did not literally intend to *maximize* the number of Republican seats in the Assembly. This too is technically true; in theory, given the statewide Republican vote share of 48.6% that they expected, they could have created as many as 87 districts that Republicans would have won by 55% to 45%, leaving just 12 to be won by Democrats. But the map the drafters actually drew was more than bad enough. They anticipated that it would enable Republicans to win 59 out of 99 districts with a *minority* of the statewide vote. They also anticipated that Republicans would manage to hold on to their Assembly majority even if their statewide vote share fell to 47%—or even lower if incumbency were taken into account. *See* Gaddie Dep. (Dkt. 108, Tr. Ex. 161) Ex. 39; Tr. Ex. 172; Team_Map_Curve, Tr. Ex. 282; PFOF ¶ 139.

In any event, all of these arguments are beside the point. The dispositive issue is whether partisan advantage was *a* motivation for the Current Plan, not whether it *predominated* over other factors or was *maximal* in scale. And on this issue, the parties are in agreement that “plaintiffs can prove this element of the test.” Summ. Jdgmt. Op. (Dkt. 94) at 12.

II. The Test’s Discriminatory Effect Prong Is Discernible, Manageable, and Satisfied Here.

A. The Court May Adjust the Effect Prong.

A partisan gerrymandering test must also include an effect prong. *See LULAC*, 548 U.S. at 418 (opinion of Kennedy, J.) (“a successful claim . . . must . . . show a burden . . . on the complainants’ representational rights”); *Bandemer*, 478 U.S. at 127 (plurality opinion) (“plaintiffs were required to prove . . . an actual discriminatory effect”); Summ. Jdgmt. Op. (Dkt. 94) at 4. The effect prong that plaintiffs recommend is whether a plan has exhibited a high and durable level of partisan asymmetry relative to historical norms. As this is a somewhat terse formulation, plaintiffs now unpack how it might be applied (or adjusted) by the Court. Specifically, plaintiffs address (1) which measures of partisan symmetry could be consulted; (2) how sensitivity testing could be used; (3) whether an asymmetry threshold should be set here; and (4) whether the baseline from which asymmetry is assessed should be shifted from zero. *Cf. Baldus II*, 849 F. Supp. 2d at 853 (noting that “the Court shares that duty” “for the development of the law”).

First, in plaintiffs’ view, the efficiency gap is the best available measure of partisan symmetry. Unique among metrics, it recognizes that all partisan gerrymandering is accomplished through either the *packing* of a party’s supporters in “district[s] with a supermajority of a given group,” or the supporters’ *cracking* “among several districts to deny that group . . . a majority in any of those districts.” *Vieth*, 541 U.S. at 286 n.7 (plurality opinion). Indeed, at its core, the efficiency gap is nothing more than a compilation of all of a plan’s packing and cracking choices into a single, tidy number. *See* Jackman Rpt. (Dkt. 62, Tr. Ex. 34) at 15-19; PFOF ¶¶ 186-190. The efficiency gap can also be calculated for any plan, requires no consideration of counterfactual elections, and has an easily grasped substantive meaning: a party’s extra seat

share relative to a perfectly symmetric map. *See id.*; Stephanopoulos & McGhee, Tr. Ex. 141 at 850-55; PFOF ¶ 195.

However, plaintiffs do not ask the Court to embrace one measure to the exclusion of all others. Rather, at least when statewide elections are competitive (that is, decided by a margin closer than 55% to 45%),¹⁹ the Court could supplement the efficiency gap with partisan bias and, perhaps, the mean-median difference. These metrics do not capture the essence of partisan gerrymandering as well as the efficiency gap. But they do correspond to closely related concepts: what would transpire in the event of a tied election (in the case of partisan bias), and how skewed the underlying district distribution is (in the case of the mean-median difference). The metrics are also highly correlated with the efficiency gap in competitive statewide settings. This means that they will generally confirm the impression given by the efficiency gap—and that if they do not, a court could reasonably decide that its intervention is unwarranted. *See* Compl. (Dkt. 1, Tr. Ex. 138) ¶¶ 9, 88; Pls.’ Br. in Opp. to Defs.’ Mot. to Dis. (Dkt. 31) at 8, 11, 17, 25; Pls.’ Br. in Opp. to Defs.’ Mot. for Summ. Jdgmt. (Dkt. 68) at 42, 53-54, 70.

Second, while the durability of a plan’s asymmetry is closely tied to the asymmetry’s size, *see* Jackman Rpt. (Dkt. 62, Tr. Ex. 34) at 66-69; Jackman Rebuttal Rpt. (Dkt. 63, Tr. Ex. 83) at 11-17; PFOF ¶¶ 258-261, the Court could also require durability to be demonstrated using sensitivity testing. Sensitivity testing analyzes how a plan’s asymmetry would change if the statewide electoral environment shifted. If the asymmetry would remain even if electoral conditions became quite different, then it is a resilient feature of the plan. Conversely, if the asymmetry would disappear in other electoral settings, then it is a more transient plan attribute—and one that is less supportive of judicial intervention. Gaddie’s S-curves are an excellent

¹⁹ Plaintiffs do not recommend consulting partisan bias or the mean-median difference in uncompetitive statewide settings, though. In these circumstances, the metrics become unreliable and their own creators advise against their use. *See* Gelman & King, Tr. Ex. 148 at 545; Grofman & King, Tr. Ex. 333 at 19; PFOF ¶ 229.

example of sensitivity testing, *see* PFOF ¶ 106, and the technique was also carried out by defendants' expert, Professor Goedert, *see* Goedert Rpt. (Dkt. 51, Tr. Ex. 136) at 13-14; PFOF ¶ 273, as well as by Professor Jackman, *see* Tr. Ex. 93 at 1-6; PFOF ¶¶ 261-285, and Professor Mayer, *see* Mayer Rebuttal Rpt. (Dkt. 95, Tr. Ex. 114) at 25-29; PFOF ¶¶ 361-362. This repeated use is evidence of the technique's value, as is its endorsement by the case law and the academic literature. *See Bandemer*, 478 U.S. at 135 (plurality opinion) (criticizing the lower court because it "did not ask by what percentage the statewide Democratic vote would have had to increase to control either the House or the Senate"); Stephanopoulos & McGhee, Tr. Ex. 141 at 889-90.

Third, while it would be useful *eventually* to set an asymmetry threshold, above which the effect prong is satisfied and below which it is not, it may be unnecessary to try to do so in this case. As the Court explained in its summary judgment decision, "in the equal apportionment cases, the Supreme Court did not determine at first how large a population deviation must be in order to trigger a presumption of unconstitutionality." Summ. Jdgmt. Op. (Dkt. 94) at 26. Instead, "the Court proceeded on a case by case basis, settling on ten percent as the threshold only after several years." *Id.* Here too, since "the efficiency gap created by Act 43 is one of the largest in recent history," "determining a threshold may be something that can wait for another day." *Id.*

And fourth, in its summary judgment decision, this Court flagged defendants' argument that the baseline from which asymmetry is assessed should not be zero (or perfect symmetry), but rather "should incorporate whatever natural advantage a party has a result of political geography." *Id.* at 16. Plaintiffs advise against this kind of approach for several reasons. First, perfect symmetry is the only baseline that enjoys normative support. By definition, any baseline other than zero would be one that does *not* treat the parties symmetrically or allow them to

convert their popular support into legislative representation with equal ease. Second, perfect symmetry is the only baseline that enjoys doctrinal support. When the Justices commented on the promise of symmetry in *LULAC*, they referred only to *actual* partisan bias scores, not to scores somehow *adjusted* to take into account Texas’s political geography. *See, e.g.*, 548 U.S. at 466-72 (Stevens, J., concurring in part and dissenting in part).

Third, the impact of political geography is already fully incorporated into the first and third prongs of plaintiffs’ proposed test. A State that sought only to respect political subdivisions and communities of interest, thus producing a map that accurately reflected its spatial realities, would *not* have enacted the plan with discriminatory intent, and so would not have violated the test’s first prong. Likewise, if a State could show that its map’s large and durable asymmetry stemmed from the State’s political geography, then the asymmetry would be justified and the third prong would not be met. Lastly, while it may be debatable whether a baseline of perfect symmetry is feasible in all circumstances, there is no doubt that it is appropriate here. As discussed below, both plaintiffs’ Demonstration Plan and dozens of Professor Chen’s simulated maps perform at least as well as the Current Plan with respect to all traditional redistricting criteria, while exhibiting efficiency gaps nearly indistinguishable from zero.

B. The Effect Prong Is Discernible.

1. The Prong’s Discernibility Stems from Several Factors.

Plaintiffs turn next to the discernibility of their proposed discriminatory effect prong. This Court has already noted three reasons why the prong is discernible. First, it is based on the concept of partisan symmetry—the idea that “the electoral system [should] treat similarly-situated parties equally”—in which five Justices expressed interest in *LULAC*. *Id.* at 466; *see also* Summ. Jdgmt. Op. (Dkt. 94) at 7-8. Second, it is consistent with the Supreme Court’s

understanding that partisan gerrymandering, at its core, means ““giv[ing] one political party an unfair advantage by diluting the opposition’s voting strength.”” *Vieth*, 541 U.S. at 271 n.1 (plurality opinion); *see also* Summ. Jdgmt. Op. (Dkt. 94) at 8. And third, by relying on symmetry, it reflects the “consensus position of the scholarly community.” Grofman & King, Tr. Ex. 333 at 6; *see also* Summ. Jdgmt. Op. (Dkt. 94) at 8-9.

Rather than belabor these points, plaintiffs highlight one more reason why their proposed effect prong is discernible: its explicit emphasis on the *durability* of a plan’s asymmetry. The *Bandemer* plurality made durability a formal element of its test: whether a plan “will *consistently* degrade . . . a group of voters’ influence,” resulting in the “*continued* frustration of the will . . . of the voters.” 478 U.S. at 132-33 (plurality opinion) (emphasis added). Similarly, both Justice Breyer’s opinion in *Vieth* and Justice Kennedy’s in *LULAC* stressed the harm of minority party entrenchment in the face of countervailing voter sentiment. *See LULAC*, 548 U.S. at 419 (opinion of Kennedy, J.) (criticizing a plan that “entrenched a party on the verge of minority status”); *Vieth*, 541 U.S. at 360 (Breyer, J., dissenting) (suggesting test based on “use of political factors to entrench a minority in power”); *see also* Summ. Jdgmt. Op. (Dkt. 94) at 20.

Precisely because of the Justices’ repeated references to durability, plaintiffs’ experts thoroughly analyzed how plans’ initial efficiency gaps are related to their lifetime average efficiency gaps. *See* Jackman Rpt. (Dkt. 62, Tr. Ex. 34) at 66-69; Jackman Rebuttal Rpt. (Dkt. 63, Tr. Ex. 83) at 11-17; Tr. Exs. 90, 95; PFOF ¶¶ 258-285. Also for this reason, the experts carried out extensive sensitivity testing, both for all plans now in effect nationwide, *see* Tr. Ex. 93 at 1-6, and for Wisconsin’s Current Plan and plaintiffs’ Demonstration Plan. , *see* Mayer Rebuttal Rpt. (Dkt. 95, Tr. Ex. 114) at 25-29; Tr. Exs. 116-117; PFOF ¶¶ 361-362, 373-376. Accordingly, plaintiffs present to the Court not only an effect prong that overtly requires a

durably asymmetric map, but also the most rigorous empirical analysis of durability that has ever been conducted.

2. A Plan's Partisan Asymmetry Need Not Be Solely the Product of Discriminatory Intent.

Defendants' main discernibility argument (albeit one not raised until their summary judgment reply brief) is that the efficiency gap fails as a measure of gerrymandering because it is not *exclusively* the product of discriminatory intent. As the Court summarized this claim, "the mere existence of large efficiency gaps in plans adopted by neutral bodies is sufficient to discredit the efficiency gap as a tool." Summ. Jdgmt. Op. (Dkt. 94) at 15. In addition to distilling defendants' position, the Court identified one fatal flaw with it. This is that, under well-established First and Fourteenth Amendment principles, discriminatory intent and discriminatory effect are separate inquiries, and the *entire* discriminatory effect counts, not just that portion of it that is attributable to discriminatory intent. In the Court's words, "there are many instances in which a government act or policy may have a disparate impact even in the absence of intentional discrimination," and "discriminatory intent and discriminatory effect [need not] be borne out by the same evidence." *Id.* at 16; *see also, e.g., Arlington Heights*, 429 U.S. at 265 (noting that "a plaintiff [does not have] to prove that the challenged action rested solely on racially discriminatory purposes").

But there are two further problems with defendants' argument. The first is that, in its partisan gerrymandering decisions, the Supreme Court has recognized over and over that there can be discriminatory effect without discriminatory intent, as well as discriminatory intent without discriminatory effect. The former possibility was raised as far back as *Gaffney*, in which the Court criticized the suggestion that "those who redistrict and reapportion should work with census, not political, data and achieve population equality without regard for political impact."

412 U.S. at 753. “[T]his politically mindless approach may produce, *whether intended or not, the most grossly gerrymandered results.*” *Id.* (emphasis added). In other words, and contrary to defendants’ view of the law, an extreme partisan impact can arise even in the absence of any partisan motivation. *See also Vieth*, 541 U.S. at 289 (plurality opinion) (pointing out that “a legislature that draws district lines with no objectives in mind except compactness and respect for the lines of political subdivisions” might unintentionally disadvantage Democrats); *id.* at 308-09 (Kennedy, J., concurring in the judgment) (observing that “a decision under these [traditional redistricting] standards would unavoidably have significant political effect, whether intended or not”).

As for the latter possibility, discriminatory intent without discriminatory effect, it describes the holding of *Bandemer* itself. The plurality “assumed that there was discriminatory intent,” but nevertheless “found that there was insufficient discriminatory effect”—a scenario that defendants think is impossible. 478 U.S. at 141-42 (plurality opinion). The plurality also warned that discriminatory intent and discriminatory effect are “separate components of an equal protection analysis,” meaning that it is “inappropriate” for them “to be considered together without regard for their separate functions or meaning.” *Id.* at 142. The plurality continued, “This undifferentiated consideration of the various factors confuses the import of each factor.” *Id.* Unfortunately, defendants are now making the exact mistake the plurality cautioned against.

The other problem with defendants’ argument is that it applies not only to the efficiency gap but also to *any* measure of gerrymandering that takes into account parties’ seats or votes. If the efficiency gap fails because it is not attributable entirely to discriminatory intent, then partisan bias, the mean-median difference, and any other conceivable seat or vote metric are invalid as well. They too are the product of discriminatory intent *and* redistricting skill, political

geography, electoral swings, and other factors. But in that case, defendants are simply repeating their error with respect to the discriminatory intent prong: that is, claiming “that there is *no* viable [discriminatory effect] element for a partisan gerrymandering claim.” Summ. Jdgmt. Op. (Dkt. 94) at 28-29. This position is untenable since “a majority of the Supreme Court has directed litigants and lower courts to continue searching for an appropriate standard.” *Id.* at 29.

3. The Prong Would Not Require “Hyper-Proportionality.”

Defendants’ only other discernibility critique is that plaintiffs’ proposed discriminatory effect prong would mandate “hyper-proportionality,” or a seat-vote relationship of two. The Court has already pointed out several of the defects of this claim. When the efficiency gap is calculated using the full method, tallying wasted votes district by district, no seat-vote ratio whatsoever is implied. *See id.* at 21. Even using the simplified method to compute the efficiency gap, “the 2:1 ratio appears . . . only when the efficiency gap is zero.” *Id.* at 22. When the efficiency gap is *not* zero, there can be “a significant deviation from the 2:1 ratio.” *Id.* Also under the simplified method, “the ratio is not a normative requirement,” but rather “simply what happens when a district plan treats the parties symmetrically.” *Id.* Furthermore, the effect prong cannot be considered in isolation from the test’s intent and justification prongs. “The efficiency gap is only part of plaintiffs’ test, so no claim can prevail simply because a districting plan produces a particular vote share to seat share ratio.” *Id.* And to the extent the efficiency gap encourages jurisdictions to enact plans that are reasonably responsive, it merely prods them to comply with historical norms, “which show[] that a 1 percent increase in vote share generally leads to a two percent increase in seat share.” *Id.*

To these points, plaintiffs would add two more. The first is that the *other* measures of partisan symmetry that plaintiffs have discussed, partisan bias and the mean-median difference,

do not entail any sort of seat-vote relationship. Because partisan bias asks what would occur in a hypothetical tied election, “a[]n electoral system may have any degree of partisan bias, no matter what level of responsiveness happens to exist.” Grofman & King, Tr. Ex. 333 at 9; PFOF ¶ 224. Likewise, because the mean-median difference is calculated using district vote shares alone, it has no bearing on how the statewide vote share should be linked to the statewide *seat* share. *See* McDonald & Best, Tr. Ex. 405 at 315; PFOF ¶¶ 235-238.

The second point responds to the Court’s reformulation of defendants’ argument: that the efficiency gap might be “an improper measure simply because it treats a particular vote share to seat share ratio as the ‘ideal’ result.” Summ. Jdgmt. Op. (Dkt. 94) at 22. As noted above, in its full form, the efficiency gap does *not* treat any seat-vote ratio as the ideal; and in its simplified form, an efficiency gap of zero implies the exact seat-vote ratio that has characterized American elections for generations. Additionally, under plaintiffs’ proposed test, a State would be free to deliberately design a plan with a seat-vote ratio below two (perhaps to achieve proportional representation) or above two (maybe to heighten responsiveness to shifts in voter sentiment). In both of these cases, the State’s motive would not be partisan advantage, so the test’s first prong would not be satisfied, and the State’s policy would justify even a large efficiency gap, so the third prong would not be met either.

C. The Effect Prong Is Manageable.

1. A Plan’s Partisan Symmetry Is Reliably Measurable.

Proceeding to the manageability of the effect prong, the case for the prong’s workability is quite simple. There exist measures of partisan symmetry—the efficiency gap in particular, but also partisan bias and the mean-median difference—that capture the extent to which a plan treats the parties’ candidates and voters asymmetrically. These measures can be reliably calculated

using easily obtained electoral results, as shown by Professor Jackman’s expert report, which computed the efficiency gap for all available state house elections over a five-decade period. *See* Jackman Rpt. (Dkt. 62, Tr. Ex. 34) at 32-36; PFOF ¶ 239. Accordingly, to determine if the prong is satisfied, all a court must do is ascertain the challenged plan’s asymmetry and then compare it to historical norms. This is a straightforward quantitative exercise, akin to determining a plan’s total population deviation and then comparing it to the 10% threshold. *See LULAC*, 548 U.S. at 466 (Stevens, J., concurring in part and dissenting in part) (“the symmetry standard . . . is undoubtedly a reliable standard for measuring a burden on the complainants’ representative rights” (internal quotation marks omitted)); *Bandemer*, 478 U.S. at 134 (plurality opinion) (arguing that “[r]eapportionment cases involving the one person, one vote principle” are a useful template for the “effect” inquiry in gerrymandering cases).

This analysis would hold even if the Court were to tweak the effect prong in the ways suggested above. *See supra* Argument II.A. It is no harder to calculate multiple measures of partisan symmetry than a single metric; all that is necessary is some more basic arithmetic. If the various measures point in the same direction (and the electoral setting is competitive, so that partisan bias and the mean-median difference are applicable), then a court may be more confident in its appraisal of a plan’s asymmetry. Conversely, if the metrics point in different directions, then a court may decide that a plan’s asymmetry is not clear enough to warrant invalidation. *Cf.* D. James Greiner, *Ecological Inference in Voting Rights Act Disputes: Where Are We Now, and Where Do We Want to Be?*, 47 *Jurimetrics* 115, 155-57 (2007), Tr. Ex. 473; PFOF ¶ 185 (listing dozens of cases in which courts properly used two distinct methods to estimate racial polarization in voting). Similarly, the sensitivity testing that plaintiffs recommend is a well-established statistical technique. It may show either that a plan’s asymmetry would

endure under different electoral environments, or that it would evaporate if conditions changed. Plainly, judicial intervention is more appropriate in the former case.

Defendants do not seem to disagree with any of this. Instead, they insist that the effect prong is unmanageable because (1) both in Wisconsin and nationwide, large efficiency gaps sometimes arise in the absence of discriminatory motivation; (2) the prong would result in too many plans being struck down; (3) the efficiency gap can shift from election to election; and (4) some of plaintiffs' experts' methods are allegedly unreliable. Plaintiffs therefore turn next to these claims, addressing them relatively briefly because they have already been canvassed thoroughly in plaintiffs' summary judgment briefing. *See* Pls.' Br. in Opp. to Defs.' Mot. for Summ. Jdgmt. (Dkt. 94) at 53-70.

2. Defendants' Political Geography Objections Are Meritless.

Defendants' core critique of the effect prong's manageability involves political geography. Supposedly, Democratic voters in both Wisconsin and the country as a whole are naturally packed while Republican voters are more efficiently distributed. As a consequence, large pro-Republican efficiency gaps are said to ensue even when plans are designed by neutral institutions. Because the efficiency gap does not correct for this purported spatial reality, defendants claim it is a flawed and unworkable metric.

The following is the sum total of evidence that defendants have advanced in support of this critique: Wisconsin's court-drawn plan in the 2000s had a significant pro-Republican efficiency gap. *See* Defs.' Br. in Supp. of Summ. Jdgmt. (Dkt. 94) at 34-37. So do a handful of current maps in other states drawn by courts or commissions. *See id.* at 38-39. Nationwide, the average efficiency gap has grown more pro-Republican since the 1990s. *See id.* at 37-38. Wisconsin's ward distribution has a slight pro-Republican skew. *See* Goedert Rpt. (Dkt. 51, Tr.

Ex. 136) at 21-23; PFOF ¶¶ 409-411. The pattern of counties won by the major parties' presidential candidates in the West South Central region of the country has shifted since the 1990s. *See* Trende Decl. (Dkt. 55, Tr. Ex. 126) ¶¶ 66-70. So has the pattern of these candidates' margins of victory by county in Wisconsin. *See id.* ¶¶ 79-86. Democratic wards in Wisconsin have grown more Democratic over the past decade. *See id.* ¶¶ 91-95; PFOF ¶ 429. And Democratic wards in Wisconsin are spatially closer to their "nearest neighbors" (defined by partisanship) than are Republican wards. *See id.* ¶¶ 96-100; PFOF ¶¶ 419-424.

The fundamental problem with all of this evidence is that, even if true, it undermines the manageability of neither the efficiency gap nor plaintiffs' test in its entirety. As to the efficiency gap, plaintiffs have never claimed that it captures only that proportion of a plan's asymmetry that is attributable to the drafter's discriminatory intent. Rather, as emphasized above, *all* symmetry metrics—the efficiency gap, partisan bias, the mean-median difference, and so on—are driven by discriminatory intent *and* redistricting skill, political geography, electoral swings, and other factors. *See supra* Argument II.B.2. Defendants' assertions thus merely highlight the obvious.

As to the test as a whole, its first and third prongs are specifically designed to avoid the outcome that troubles defendants: the invalidation of plans whose large efficiency gaps are the product of political geography rather than discriminatory intent. Again to reiterate earlier points, a State that merely tried to follow the contours of its subdivisions and communities would be exempt from liability since it was not motivated by partisan advantage. Likewise, a large efficiency gap that stemmed from the natural spatial allocation of a State's voters would be justified at the test's third stage, and so safe from judicial interference. Accordingly, if defendants are right that Wisconsin's and America's political geographies increasingly compel

pro-Republican plans, they have nothing to fear from plaintiffs' test. Plans that reflect this trend would be upheld under it.

But defendants are not right. In fact, there are severe flaws with all of their evidence, and it is contradicted by more reliable analyses in the record. Start with Wisconsin's court-drawn plan in the 2000s. Every *other* Wisconsin plan crafted by a neutral institution has had a much lower average efficiency gap: the 1970s map enacted by divided government (-0.3%), the 1980s court-drawn map (-1.9%), the 1990s court-drawn map (-2.4%), Professor Mayer's Demonstration Plan (-2.5% across three scenarios), and Professor Chen's hundreds of simulated maps (72% of which fall within 3% of zero). *See* Chen, Tr. Ex. 156 at 1; Jackman Rpt. (Dkt. 62, Tr. Ex. 34) at 72; Mayer Rebuttal Rpt. (Dkt. 95, Tr. Ex. 114) at 27; PFOF ¶¶ 343, 377, 381. Moreover, while the 2000s court *itself* harbored no discriminatory intent, it apparently "followed [the Republican intervenors' expert's] direction in drawing the map." Tr. Ex. 348; PFOF ¶ 341. This may explain why the plan is an outlier.

Next, consider the pro-Republican trend in the country's average efficiency gap since the 1990s. This trend is *entirely* attributable to the rising share of plans designed by Republicans in unified control of redistricting. If the distribution of party control had remained constant over this period, so too would have the average efficiency gap. *See* Jackman Rebuttal Rpt. (Dkt. 63, Tr. Ex. 83) at 18-20; PFOF ¶ 294. Similarly, consider the slight pro-Republican skew of Wisconsin's ward distribution. Compared to the far more lopsided distribution of Wisconsin's Assembly districts, the ward distribution is almost perfectly symmetric. If anything, the gulf between the two distributions is further proof of the partisanship animating the Current Plan. *See* Mayer Rebuttal Rpt. (Dkt. 95, Tr. Ex. 114) at 11-12; PFOF ¶ 413.

This leaves only Trende’s work, which is so methodologically deficient that plaintiffs have challenged it on *Daubert* grounds. To flag just a few of its errors: There is no academic precedent for analyzing partisan clustering using county-level maps of presidential election results. Such maps ignore counties’ varying populations and sizes, and must be “eyeball[ed]” by the viewer since they do not generate “quantitative scores for Democratic and Republican clustering.” Trende Dep. (Dkt. 66, Tr. Ex. 128) at 59:2-23; *see also id.* at 51:6-11, 52:3-6, 52:25-53:3, 53:25-54:13, 56:2-59:9, 62:22-63:2, 185:19-186:4; PFOF ¶¶ 313-319. Trende miscalculated Wisconsin wards’ partisan voting index scores. When ward partisanship is correctly computed, it has increased for *both* Democratic and Republican wards over the last decade. *See* Mayer Rebuttal Rpt. (Dkt. 95, Tr. Ex. 114) at 4-6; PFOF ¶¶ 415-418. And “near neighbor analysis” is not a suitable way to study clustering because it completely ignores the *adjacency* (or lack of it) of geographic units. In carrying out this analysis, Trende also wrongly failed to control for ward size and calculated the median rather than the mean inter-ward distance. *See id.* at 6-11; PFOF ¶ 424.²⁰

In contrast to this unsound (and inadmissible) evidence, the facts at trial will show that, both in Wisconsin and nationwide, both parties’ supporters are roughly equally spatially distributed. For example, the isolation index indicates, for the typical Democratic or Republican voter, what share of her fellow county or ward residents are also Democrats or Republicans. Both in Wisconsin and nationwide, Democratic and Republican isolation scores are about the same and fairly steady over time. *See* Edward L. Glaeser & Bryce Adam Ward, *Myths and Realities of American Political Geography* 6, 39 (2005), Tr. Ex. 118; Mayer Rebuttal Rpt. (Dkt.

²⁰ Trende also opined at length about the supposed underinclusiveness and overinclusiveness of plaintiffs’ proposed test. *See* Trende Decl. (Dkt. 55, Tr. Ex. 126) ¶¶ 106-31. This section of his report completely ignores the test’s first and third prongs, mostly analyzes congressional rather than state legislative plans, and disregards academic norms in conducting this analysis. *See* Jackman Rebuttal Rpt. (Dkt. 63, Tr. Ex. 83) at 22-26.

95, Tr. Ex. 114) at 16-17; PFOF ¶ 299. Similarly, Global Moran's I is the most widely used measure of spatial autocorrelation. According to this metric, Wisconsin's Democrats and Republicans are nearly identically clustered. *See* Mayer Rebuttal Rpt. (Dkt. 95, Tr. Ex. 114) at 17-18; PFOF ¶¶ 387-388.

Furthermore, the models created by defendants' own expert, Professor Goedert, can be used to predict what efficiency gaps different States would exhibit given different mapmaking institutions. These models show that Wisconsin would have had a small *pro-Democratic* efficiency gap in both 2012 and 2014 if its map had been designed by a court, a commission, or divided government. The models produce the same result, in both years, for a hypothetical State mirroring the country demographically and electorally. *See id.* at 12-16; PFOF ¶ 304. And while it is true that the models are based on congressional plans with smaller numbers of districts, Professor Chen and Professor Rodden have found that asymmetry predictions are highly reliable as long as plans have more than a handful of districts. *See* Jowei Chen & Jonathan Rodden, *Unintentional Gerrymandering: Political Geography and Electoral Bias in Legislatures*, 57 Q.J. Pol. Sci. 239, 252 (2013), Tr. Ex. 394.

In any event, plaintiffs view the debate over whether Wisconsin's or America's political geographies have natural pro-Republican tilts as irrelevant at this stage of the legal analysis. The best available data indicates that they do not. But even if they do, this possibility is fully taken into account by the first and third prongs of plaintiffs' proposed test. It in no way lessens the manageability of the second one.

3. The Prong Would Not Result in the Invalidation of Too Many Plans.

Defendants also attack the effect prong's manageability on the ground that it would lead to too many plans being struck down. The Court correctly declined to cite defendants' inflated

estimates of the volume of plans in jeopardy, which wholly ignore whether maps were designed with discriminatory intent or can be justified by the State. *See* Defs.’ Br. in Supp. of Summ. Jdgmt. (Dkt. 94) at 44-46. Instead, the Court observed that “approximately 20 to 25 percent of plans adopted by a party with unified control of the state government . . . have an initial efficiency gap of seven percent or more,” and noted its reluctance “to adopt a standard that rendered suspect a large swath of districting plans around the country.” Summ. Jdgmt. Op. (Dkt. 94) at 24-25. Plaintiffs agree with both the Court’s statistics and its reluctance to launch another reapportionment revolution, but add two further points.

First, as recognized by the Court, the volume of plans put at risk by a partisan gerrymandering test can easily be *calibrated* by adjusting the test’s asymmetry threshold up or down. *See id.* at 26 (“If plaintiffs’ proposed formulation is not sufficiently demanding, this may support raising the threshold . . .”). For instance, while plaintiffs consider a 10% efficiency gap threshold to be too high, if the bar were set at this level, then only 20 of 206 plans in the modern era, and only 7 of 43 current plans, would both have exceeded the threshold and been enacted by a single party with unified control over redistricting. *See* Jackman Rpt. (Dkt. 62, Tr. Ex. 34) at 7, 34; Jackman Rebuttal Rpt. (Dkt. 63, Tr. Ex. 83) at 18-20; Tr. Ex. 124; PFOF ¶ 327. These are very low figures compared to the many plans that are already invalidated or designed by courts in each cycle. They are also upper bounds of the test’s impact since they do not take into account whether plans could have been justified by legitimate factors.

Second, plaintiffs stress that, to the extent that many maps might be endangered by a partisan gerrymandering test, it is because many *mapmakers* engage in deliberate and brazen gerrymandering. Illustrative of these efforts is a memorandum prepared by the Republican State Leadership Committee (“RSLC”) after the 2012 elections, in which “voters pulled the lever for

Republicans only 49 percent of the time,” but “Republicans [won] a 33-seat margin in the U.S. House.” The memorandum boasted that this “aberration” was only possible because “Republicans had an unquestioned [redistricting] advantage,” and so were able “to erect a Republican firewall . . . that paved the way to Republicans retaining a U.S. House majority.” The memorandum also detailed how the RSLC raised and spent tens of millions of dollars on “a strategy to keep or win Republican control of state legislatures with the largest impact on congressional redistricting.” Wisconsin’s was one of these targeted chambers. “[T]he RSLC spent \$1.1 million to successfully flip both chambers of the Wisconsin legislature,” resulting in “a 5-3 Republican majority to Congress” even though “Wisconsin voters . . . reelected President Obama by nearly seven points.” Tr. Ex. 472; PFOF ¶ 184.

Plaintiffs do not mean to single out either party for blame; partisan gerrymandering is a bipartisan abuse. But they do mean to call the Court’s attention to how often egregious asymmetries are exactly what mapmakers intended. *That* is the essential reason why large efficiency gaps are more common than one might like, not any issue with the measure itself.

4. The Efficiency Gap Is Not Too Changeable to Be Reliable.

Defendants’ next manageability critique is that the efficiency gap changes from election to election. In their view, there is thus no guarantee that a plan that exhibits a large efficiency gap in one election will also do so in the next. This is less a point about the efficiency gap and more one about the nature of elections themselves. Parties’ votes and seats vary from year to year; the efficiency gap simply registers this variation because it is calculated using vote and seat data. The point is also largely inapplicable to partisan bias and the mean-median difference. Because partisan bias is computed based on a counterfactual tied election, it is unaffected by many of the vote and seat swings that in fact occur. *See* McGhee, Tr. Ex. 98 at 73; Stephanopoulos &

McGhee, Tr. Ex. 141 at 864; PFOF ¶ 227. Similarly, because seats won or lost are irrelevant to the mean-median difference, it is a relatively stable measure. *See* McDonald & Best, Tr. Ex. 405 at 322.

More importantly, Professor Jackman conducted a series of five analyses to confirm that the efficiency gap is a durable plan characteristic and that a plan's initial efficiency gap is a reliable guide to its lifetime performance. First, he examined whether most variation in the efficiency gap is *within* plans (in which case the metric would not be very trustworthy) or *between* plans (in which case it would be a resilient plan attribute). His results confirmed the latter thesis. Fully 76% of the efficiency gap's variation is between plans, indicating that it "*is* measuring an enduring feature of a districting plan." Jackman Rpt. (Dkt. 62, Tr. Ex. 34) at 48; PFOF ¶¶ 262, 264.

Second, he calculated the proportions of plans that either had initial efficiency gaps below 7% (his suggested threshold) or had larger initial efficiency gaps and never once favored the opposing party over their lifetimes. These shares were 96% on the Republican side and 93% on the Democratic side, both extremely high figures. Jackman Rpt. (Dkt. 62, Tr. Ex. 34) at 67; PFOF ¶ 258. Third, he subjected different efficiency gap thresholds to a battery of prognostic tests. A 7% threshold resulted in very few false positives, that is, cases where a plan's average efficiency gap was expected to have the same sign as its initial efficiency gap, but this expectation turned out to be incorrect. A 7% threshold also produced a rate of true negatives (or accurate predictions) of nearly 100%. *See* Jackman Rebuttal Rpt. (Dkt. 63, Tr. Ex. 83) at 12; PFOF ¶ 283.

Fourth, he analyzed the relationship between a plan's initial efficiency gap and the size and sign of its average efficiency gap. The former accounts for fully three-fourths of the

variation in the latter. Given an initial efficiency gap of 7%, there is also roughly a 95% likelihood (96% on the Republican side, 90% on the Democratic side) that the average efficiency gap will have the same sign as the first value. *See id.* at 15-17; PFOF ¶¶ 269, 271. And fifth, he carried out rigorous sensitivity testing for all plans currently in force, shifting their electoral environments by up to five percentage points in each party's direction. For plans with large observed efficiency gaps (above 7%), their predicted efficiency gaps were very strongly correlated with their original ones, and almost certain to have the same sign. Tr. Ex. 93 at 1-6; PFOF ¶¶ 274-282.

As noted above, no previous litigant (or scholar) has so thoroughly analyzed the durability of a measure of partisan symmetry. This painstaking work should reassure the Court that when a map exhibits a high level of asymmetry—as the Current Plan unquestionably does—it is extremely likely to remain asymmetric over its lifetime.

5. Defendants' Methodological Criticisms Are Unfounded.

Lastly, defendants criticize some of the methods used by Professor Jackman and Professor Mayer, and by extension the manageability of the approaches they advocate. Most of defendants' suggestions for additional analyses were tried out in Professor Jackman's and Professor Mayer's rebuttal reports, and did not change the experts' conclusions. Defendants' remaining points betray a misunderstanding of basic social scientific techniques.

First, defendants complain that Professor Mayer did not consider incumbency when calculating the efficiency gaps of the Current Plan and of the Demonstration Plan. He did not do so originally for the same reason that the Legislature's consultant, Gaddie, did not: "incumbents can be defeated, retire, run for higher office, or switch parties," so "[a] map's authors will typically want to ensure that their projections do not depend on particular incumbents continuing

to run in particular districts.” Mayer Rebuttal Rpt. (Dkt. 95, Tr. Ex. 114) at 24; PFOF ¶ 427; *see also* Gaddie Dep. (Dkt. 108, Tr. Ex. 161) at 44:8-11, 45:7-8, 197:14-20, 227:8-11; PFOF ¶ 41. But to allay defendants’ concerns, Professor Mayer did take incumbency into account in his rebuttal report. Doing so actually *bolstered* his conclusions; the differential between the Current Plan’s and the Demonstration Plan’s efficiency gaps *rose* from 9.5% to 10.3%. *See* Mayer Rebuttal Rpt. (Dkt. 95, Tr. Ex. 114) at 24; PFOF ¶ 446. Moreover, every one of the 786 efficiency gap scores in Professor Jackman’s database incorporates incumbency as well. Since he was not designing a new map, he had no reason to generate an open seat measure. *See* Jackman Rpt. (Dkt. 62, Tr. Ex. 34) at 19-32; PFOF ¶¶ 244-253.

Second, defendants claim that Professor Jackman’s analysis of how party control is related to the efficiency gap, *see* Jackman Rebuttal Rpt. (Dkt. 63, Tr. Ex. 83) at 18-20; PFOF ¶¶ 293-296, omits plans enacted by a court, a commission, or divided government. It does not. In fact, in Professor Jackman’s model, enactment by a neutral institution is the *benchmark* relative to which the impact of unified Democratic or Republican control over redistricting is assessed. Defendants seem to confuse an omitted *variable* (necessary to avoid collinearity) with the omission of *cases* (something the model did not and should not do).

Third, defendants point out that two different methods exist for calculating the efficiency gap: the full method, in which wasted votes are tallied district by district, and the simplified method, which assumes that district turnout is equal and employs the $(S - 0.5) - 2(V - 0.5)$ formula. This is true enough, but these methods produce virtually identical results because turnout variations are neither overly large nor especially partisan. In fact, in all of the cases in Professor Jackman’s database in which all races were contested, the methods’ efficiency gap

estimates never diverge by more than 1% and exhibit a correlation of 0.997 . Tr. Ex. 93; PFOF ¶ 216.

Fourth, defendants argue that plaintiffs' experts should have considered the results of the 2014 election specifically, and other electoral environments generally. This is an odd claim since Professor Jackman's database includes efficiency gaps for all available state house plans in 2014. *See* Jackman Rpt. (Dkt. 62, Tr. Ex. 34) at 7, 34; PFOF ¶ 239. In their rebuttal reports, both Professor Jackman and Professor Mayer also carried out extensive sensitivity testing in which they shifted the statewide vote in both directions and then assessed how plans' efficiency gaps would change as a result. Professor Jackman analyzed swings of up to five points for all plans currently in force, while Professor Mayer analyzed Democratic and Republican wave scenarios for both the Current Plan and the Demonstration Plan. In both cases, the experts' conclusions did not budge. Highly asymmetric plans nationwide remain asymmetric when subjected to sensitivity testing, and in Wisconsin, the Current Plan stays tilted and the Demonstration Plan stays balanced. Tr. Ex. 93 at 1-6; Mayer Rebuttal Rpt. (Dkt. 95, Tr. Ex. 114) at 26-29; PFOF ¶¶ 282, 362, 376.

And fifth, defendants assert that Professor Mayer's baseline model, which he used to produce comparable efficiency gap estimates for the Current Plan and the Demonstration Plan, is unreliable because it wrongly predicts the outcomes of certain Assembly races. But this model was never meant to make predictions for actual races; obviously, one would not strip out the effects of incumbency if such forecasting was the aim. Rather, like Gaddie's baseline model, it was meant to enable apples-to-apples comparisons between the Current Plan and an alternative map. *See* Mayer Rpt. (Dkt. 54, Tr. Ex. 2) at 29-31. Moreover, Professor Mayer's *original* model, which did *not* remove the effects of incumbency, was spectacularly accurate. It accounted for

99.0% of the variation in Republican Assembly votes and 98.4% of the variation in Democratic ones. Social scientific models do not come any more reliable than this. *See id.* at 21-25; PFOF ¶ 437.

D. The Effect Prong Is Satisfied Here.

Having cleared away all of this underbrush, plaintiffs now turn to the application of their proposed effect prong: that is, whether the Current Plan has exhibited a high and durable level of partisan asymmetry relative to historical norms. Every available category of evidence indicates that the answer is yes: the Plan's efficiency gaps, partisan biases, and mean-median differences in 2012 and 2014, the Plan's drafters' forecasts before it went into effect, Professor Jackman's comparative analysis, Professor Mayer's Wisconsin-specific analysis, and so on. In fact, "It is undisputed that, from 1972 to 2010, not a single legislative map in the country was as asymmetric in its first two elections as [the Current Plan] in 2012 and 2014." *Summ. Jdgmt. Op.* (Dkt. 94) at 12.

Start with the Plan's actual symmetry scores. It exhibited pro-Republican efficiency gaps of 13% in 2012 and 10% in 2014. It also exhibited pro-Republican partisan biases of 13% in 2012 and 12% in 2014. And it exhibited pro-Republican mean-median differences of 6% in 2012 and 7% in 2014. As just noted, in the four decades prior to the current cycle, not a single state house map *in America* was this skewed in a party's favor in its two initial elections. *See Jackman Rpt.* (Dkt. 62, Tr. Ex. 34) at 7, 63; Tr. Exs. 35, 461-462; PFOF ¶¶ 345-347.

As these figures are somewhat bloodless, it is worth reiterating what they reveal. Efficiency gaps of 13% and 10% mean that Republicans won 13 and 10 more Assembly seats (and Democrats 13 and 10 fewer) than they would have under a neutral map. Partisan biases of 13% and 12% mean that if Wisconsin had experienced a tied election, Republicans would have

won 62 and 61 Assembly seats (leaving Democrats with 37 and 38). And mean-median differences of 6% and 7% mean that the dispositive district for majority control of the Assembly was miles away electorally from the chamber's average district.²¹ Asymmetry this severe both produces wrong-winner outcomes (as in 2012, when Republicans won 49% of the vote but 61% of the seats) and distorts even majoritarian results (as in 2014, when Republicans won 52% of the vote but 64% of the seats). It is simply "incompatible with democratic principles." *Ariz. State Legis.*, 135 S. Ct. at 2658 (internal alterations omitted).

Moreover, the asymmetry's severity was both anticipated by the Current Plan's drafters and confirmed by Professor Mayer's baseline model. Using past statewide elections (and so assuming no incumbents or uncontested races), Foltz, Handrick, and Ottman predicted that Republicans would win 49% of the vote but 60% of the seats under their Final Map, for a pro-Republican efficiency gap of 12%. *See* Gaddie Dep. (Ex. 108, Tr. Ex. 161) Ex. 39, Tr. Ex. 172; PFOF ¶ 115. Likewise, using 2012 election results and also assuming that all seats were open and contested, Professor Mayer found that the Current Plan had a pro-Republican efficiency gap of 12%. *See* Mayer Rpt. (Dkt. 54, Tr. Ex. 2) at 46; PFOF ¶ 448. The similarity of these estimates to each other, as well as to the Plan's actual symmetry scores, shows that the Plan's extreme pro-Republican tilt was forecast in advance and holds no matter how it is computed.

Turn next to the durability of the Current Plan's asymmetry. According to Professor Jackman's historical analysis, there is almost a 0% chance that the Plan will favor Democrats in even a single election—let alone that it will favor Democrats *on average* over its lifetime. To the contrary, the Plan is likely to produce an average pro-Republican efficiency gap of 10% during the decade it is in force. *See* Jackman Rpt. (Dkt. 62, Tr. Ex. 34) at 56-63; Jackman Rebuttal Rpt.

²¹ As noted earlier, the mean-median difference is denominated in units of vote share rather than seat share, and its magnitude is usually about half that of partisan bias. This relationship holds nearly perfectly for the Current Plan: its mean-median differences (6% and 7%) are very close to half its partisan biases (13% and 12%). *See supra* Facts II

(Dkt. 63, Tr. Ex. 83) at 5-17; PFOF ¶¶ 272, 357. Similarly, according to Professor Jackman’s sensitivity testing, it is nearly certain that the Plan’s efficiency gap will remain large and pro-Republican even if Wisconsin’s electoral environment shifts by up to five points in either a Democratic or Republican direction. Specifically, given such shifts, the plan’s efficiency gaps would vary from -7% to -13%, a tight and very pro-Republican band. *See* Tr. Ex. 93 at 1-6; PFOF ¶ 357.

Again, Professor Jackman’s results are corroborated by both the Current Plan’s authors and Professor Mayer. Gaddie’s S-curves show that the Plan’s responsiveness to changing electoral conditions was estimated to be less than half of the 2000 map’s. The S-curves also show that Republicans were expected to keep their Assembly majority even if their statewide vote share fell to 47%—or even lower if incumbency were considered. *See* Team_Map_Curve, Tr. Ex. 282; PFOF ¶ 139. And Professor Mayer’s sensitivity testing indicates that the Plan would have an average pro-Republican efficiency gap of 12% across three electoral scenarios: a close election like 2012, a Democratic wave like 2006, and a Republican wave like 2010. *See* Mayer Rebuttal Rpt. (Dkt. 95, Tr. Ex. 114) at 28; PFOF ¶ 362.

In combination, this evidence leaves no doubt that the effect prong is satisfied. The Current Plan plainly exhibited a high and durable level of partisan asymmetry relative to historical norms in 2012 and 2014. This leaves only the test’s justification prong, which plaintiffs next address.

III. The Test’s Justification Prong is Discernible, Manageable, and Satisfied Here.

A. The Court May Adjust the Justification Prong.

Plaintiffs’ proposed justification prong asks whether a plan’s large and durable asymmetry can be “justified by the State” based on the State’s political geography or legitimate

redistricting objectives. *Brown*, 462 U.S. at 843. Plaintiffs have amended their formulation of this prong in response to the Court’s analysis in its summary judgment decision. While some state legislative reapportionment cases have required the State to show *necessity*, *see, e.g., Chapman*, 420 U.S. at 24 (examining whether “factors . . . necessitate the substantial population deviation embraced by the plan”); *Kilgarlin v. Hill*, 386 U.S. 120, 123 (1967) (examining whether “the announced policy of the State . . . necessitated the range of deviations”), the more common requirement has been a showing of *justification* by the State, *see, e.g., Voinovich v. Quilter*, 507 U.S. 146, 161 (1993) (“appellants were required to justify the deviation”); *Brown*, 462 U.S. at 843; *Mahan*, 410 U.S. at 326 (“Virginia [had] to justify the divergences”); *Swann v. Adams*, 385 U.S. 440, 444 (1967) (“variations from a pure population standard might be justified by . . . state policy considerations”). Accordingly, plaintiffs’ articulation of the prong now reflects the majority view that justification, not necessity, is the crux of the inquiry.

Under this familiar approach, three points are important. First, the burden is on the State to justify the plan’s asymmetry, not on plaintiffs to prove that the asymmetry is *unjustified*. This burden allocation is sensible because, by the time the justification prong is reached, plaintiffs have already “established a prima facie case of discrimination” by showing discriminatory intent and discriminatory effect. *Voinovich*, 507 U.S. at 161; *see also Brown*, 462 U.S. at 842-43 (a plan that “creates a prima facie case of discrimination . . . must be justified by the State”). The burden allocation also reflects the State’s greater familiarity with the choices and tradeoffs inherent in the map. *See, e.g., Brown*, 462 U.S. at 843; *Mahan*, 410 U.S. at 326.

Second, it is the plan’s *asymmetry* that must be justified by the State, not the plan’s general layout. Almost every map is underpinned by at least some legitimate considerations. But these factors do not save the map unless they actually justify its asymmetry. This is why the

Court's reapportionment cases refer over and over to the "deviations" or "variations" for which the State must account.

And third, alternative plans are the most probative evidence of justification, though other kinds of material (such as statistical analyses, academic literature, or mapmaker testimony) are relevant as well. If alternative plans show that the challenged map's asymmetry cannot be meaningfully reduced while still achieving the State's valid goals, then the asymmetry is justified. Conversely, if other plans reveal that the challenged map's asymmetry *can* be significantly cut without sacrificing the State's legitimate aims, then the asymmetry is unjustified. *See, e.g., Chapman*, 420 U.S. at 25; *Kilgarlin*, 386 U.S. at 124.

Notwithstanding these threshold principles, plaintiffs recognize that the reapportionment and gerrymandering contexts are not identical, and so do not challenge the Court's suggestion that they may "have an initial burden to show that defendants' plan cannot be justified using neutral criteria." Summ. Jdgmt. Op. (Dkt. 94) at 17, 35. Notably, in another related area, Section 2 of the Voting Rights Act, plaintiffs must typically submit a demonstration map indicating "the possibility of creating more than the existing number of reasonably compact [majority-minority] districts." *Johnson v. De Grandy*, 512 U.S. 997, 1008 (1994); *see also, e.g., LULAC*, 548 U.S. at 437. Applying here this aspect of Section 2 doctrine, plaintiffs presumably would be obligated to present something like their Demonstration Plan, and then, if they satisfied the rest of their prima facie case as well, the burden would ultimately shift to the State to justify its plan's asymmetry. Plaintiffs will proceed at trial as if they bear this threshold burden.

B. The Justification Prong Is Discernible.

Proceeding to the discernibility of the justification prong, it is deeply rooted in (indeed, borrowed from) the Supreme Court's state legislative reapportionment decisions. *See, e.g.,*

Voinovich, 507 U.S. at 161; *Brown*, 462 U.S. at 843; *Mahan*, 410 U.S. at 326; *Swann*, 385 U.S. at 444. As this Court observed in its summary judgment decision, the prong also has analogues in the partisan gerrymandering case law. *See Vieth*, 541 U.S. at 307 (Kennedy, J., concurring in the judgment) (asking whether “classifications . . . were applied . . . in a way unrelated to any legitimate legislative objective”); *id.* at 351 (Souter, J., dissenting) (“I would then shift the burden to the defendants to justify their decision by reference to objectives other than naked partisan advantage.”); *Bandemer*, 478 U.S. at 141 (plurality opinion) (if plaintiffs set forth a prima facie case, “then the legislation would be examined for valid underpinnings”); *Karcher v. Daggett*, 462 U.S. 725, 759-60 (1983) (Stevens, J., concurring) (“In order to overcome a prima facie case of invalidity,” “the State can demonstrate that the plan as a whole embodies acceptable, neutral objectives.”); Summ. Jdgmt. Op. (Dkt. 94) at 32-33.

Not only is the justification prong grounded in longstanding doctrine, it is also a reasonable way to balance a constitutional imperative (like population equality or partisan symmetry) against other legitimate interests. If there were no justification prong, then States would be unable to pursue goals like compactness, respect for political subdivisions, respect for communities of interest, compliance with the Voting Rights Act, proportional representation, or electoral competitiveness to the extent these aims resulted in excessive asymmetry. States could also be placed in an impossible position if their political geography prevented them from enacting a sufficiently symmetric (and otherwise lawful) plan. The justification prong avoids both of these scenarios. It allows States to further the valid interests of their choice as long as they take care in doing so to limit asymmetry to the extent possible. It also recognizes that partisan balance cannot be mandated in States where it cannot realistically be attained. *See Stephanopoulos & McGhee*, Tr. Ex. 141 at 891-95.

C. The Justification Prong Is Manageable.

That the justification prong is manageable as well is evident from the half century in which it has been used in reapportionment cases. Over this period, courts have shown that they can reliably distinguish between plans whose large population deviations are justified by legitimate factors and plans whose malapportionment cannot be properly explained. *Mahan* and *Brown* offer good examples of plans with justifiable deviations. In *Mahan*, Virginia “consistently sought to avoid the fragmentation of [political] subdivisions,” and “[t]here was uncontested evidence . . . that the legislature’s plan . . . ‘produce[d] the minimum deviation above and below the norm, keeping intact political boundaries.’” 410 U.S. at 323, 326. Similarly, in *Brown*, Wyoming had a “constitutional policy—followed since statehood—of using counties as representative districts,” and applied this policy so that “population deviations [were] no greater than necessary to preserve counties as representative districts.” 462 U.S. at 843-44. Unsurprisingly, the Court upheld both plans.

On the other hand, *Kilgarlin* and *Chapman* are both cases featuring unjustifiable deviations. In *Kilgarlin*, Texas claimed that it was “respect[ing] county boundaries wherever possible,” but “Texas policy . . . permit[ted] . . . the violation of county lines” and “at least two other plans [were] presented to the court, which respected county lines but which produced substantially smaller deviations.” 386 U.S. at 123-24. Likewise, in *Chapman*, North Dakota invoked “the division of the State caused by the Missouri River” and “the asserted state policy of observing existing geographical and political subdivision boundaries.” 420 U.S. at 25. But “North Dakota policy [neither] requires nor favors strict adherence to political lines,” and “a plan devised by [a] Special Master . . . demonstrates that neither [interest] prevents attaining a

significantly lower population variance.” *Id.* As one might expect, both of these plans were struck down.

What is workable in the reapportionment context is also feasible in gerrymandering cases. Population equality and partisan symmetry are both quantifiable using data to which mapmakers have access when designing their plans. Both of these values are also linked only loosely to other legitimate aims. That is, plans can have high or low levels of population equality and partisan symmetry while simultaneously having high or low levels of compactness, respect for political subdivisions, electoral competitiveness, and so on. And both values can be rigorously analyzed using cartographic evidence. Alternative maps are an intuitive way to distinguish between valid explanations for large population deviations or partisan asymmetries—and reasons that are “a mere pretext for an old-fashioned gerrymander.” *Vieth*, 541 U.S. at 352 (Souter, J., dissenting); *see also Karcher*, 462 U.S. at 759 (Stevens, J., concurring) (arguing that “[t]he same kinds of justification that the Court accepts as legitimate in the context of population disparities” should be available in the gerrymandering context).

D. The Justification Prong Is Satisfied Here.

1. Four Types of Alternative Maps Confirm the Lack of Justification for the Current Plan’s Asymmetry.

Can defendants, then, justify the Current Plan’s large and durable symmetry based on Wisconsin’s political geography or legitimate redistricting objectives? Four separate types of alternative maps show that they cannot: Professor Mayer’s Demonstration Plan; the 200 simulated maps created by Professor Chen; the Assembly plans used in Wisconsin in earlier cycles; and the drafts of the Current Plan produced by Foltz, Handrick, and Ottman. *All* of these maps are similar to (or better than) the Current Plan in terms of compliance with federal and state requirements, and far superior in terms of partisan symmetry.

Beginning with Professor Mayer's Demonstration Plan, it complies at least as well as the Current Plan with all applicable criteria. It has a total population deviation smaller than 1%. It includes as many black-majority (6) and Hispanic-majority (1) districts as the Current Plan. Its average smallest-circle compactness score is slightly better (0.41 versus 0.39). And it splits slightly fewer political subdivisions (119 versus 120). *See* Mayer Rpt. (Dkt. 54, Tr. Ex. 2) at 37-38; PFOF ¶¶ 367, 370. However, the Demonstration Plan is far more symmetric than the Current Plan. Using 2012 election results, assuming that all seats are contested and open, and calculating the efficiency gap with the full method, the Demonstration Plan has a gap of only -2.2%, compared to -11.7% for the Current Plan. In other words, the Demonstration Plan is more than 80% more balanced. *See id.* at 46; PFOF ¶ 366.²²

Moreover, the Demonstration Plan's neutrality endures even if incumbents are taken into account or large electoral swings are simulated. Incorporating incumbents worsens the Demonstration Plan's efficiency gap by only 1.7%, or less than the 2.5% by which the Current Plan's efficiency gap deteriorates under the same condition. *See* Mayer Rebuttal Rpt. (Dkt. 95, Tr. Ex. 114) at 24; PFOF ¶ 446. Similarly, incorporating incumbents *and* replicating the most dramatic Democratic and Republican waves of the last generation only makes the Demonstration Plan *more* symmetric. Its efficiency gap declines from -3.9% to -3.7% in the Democratic wave scenario, and from -3.9% to 0.1% in the Republican wave scenario. Across 2012 and the two wave scenarios, the Plan has an average efficiency gap of just -2.5%. *See id.* at 27; PFOF ¶ 376.

Next consider Professor Chen's two hundred simulated maps. Every one of them keeps intact more counties than the Current Plan (18-25 versus 14); preserves more municipalities (1837-1853 versus 1825); has a better average smallest-circle compactness score (0.43-0.46

²² For the sake of consistency, plaintiffs report these efficiency gaps using the same signs (negative for pro-Republican gaps, positive for pro-Democratic gaps) as elsewhere in their briefing.

versus 0.37); and is equally compliant with the one person, one vote rule and the Voting Rights Act. Every simulated map also has a much smaller efficiency gap (calculated using 2012 election results and the full method) than the Current Plan. In fact, fully 144 of the 200 maps have efficiency gaps within 3% of zero, and 46 of them have efficiency gaps no more than 1% away from perfect symmetry. *See* Chen, Tr. Ex. 156 at 1, 5-8, 10; Mayer Dep. (Dkt. 99) 10:9-16, 138:3-21; PFOF ¶ 381. In combination, these maps show that Professor Mayer's Demonstration Plan is not unusual in achieving a much lower efficiency gap without compromising along other dimensions. To the contrary, there are dozens, if not hundreds, of plans that generate similar improvements.

Wisconsin's Assembly plans in previous cycles are the third set of maps that bear on the justifiability of the Current Plan's asymmetry. The Current Plan splits more counties than any other map in Wisconsin's history (58 compared to 51 in the 2000s, 47 in the 1990s, 41 in the 1980s, 49 in the 1970s, and 0 in the 1960s and earlier). *See supra* Facts III; *see also Wisc. State AFL-CIO*, 543 F. Supp. at 635. The Current Plan also splits more municipalities than the 2000s map (62 versus 50), though fewer than the 1990s map (62 versus 72). The Current Plan's districts are less compact than the 2000s Map's too, both in terms of average smallest-circle compactness (0.39 versus 0.41) and average perimeter-to-area compactness (0.28 versus 0.29). *See supra* Facts III. And despite (or perhaps because of) its inferior performance in these respects, the Current Plan is far more asymmetric than any of its predecessors. Its average efficiency gap was -11.5% over the 2012 and 2014 elections, compared to plan averages of -7.6% in the 2000s, -2.4% in the 1990s, -1.9% in the 1980s, and -0.3% in the 1970s. *See* Jackman Rpt. (Dkt. 62, Tr. Ex. 34) at 72; PFOF ¶¶ 343-344.

Lastly, the draft maps crafted by the Current Plan's own authors further illustrate the unjustifiability of the enacted version's asymmetry. Four of these drafts (Joe Basemap Basic, Joe Basemap Assertive, Tad MayQandD, and Joe Assertive) had predicted efficiency gaps smaller than the Final Map's -12.4% (-5.4%, -9.4%, -10.4%, and -11.4%, respectively). The most symmetric of these drafts (Joe Basemap Basic) also had district-by-district partisanship scores, black population shares, and Hispanic population shares that were extremely highly correlated (above 0.9) with those of the Final Map. *See supra* Facts I.C; *see also* joe base map.xlsx, Tr. Ex. 337. The most reasonable inference from these correlations is that the Final Map did not much change Joe Basemap Basic's overall layout, but *did* substantially amend a few of its districts to yield a greater Republican advantage.²³

2. Defendants' Rationalizations for the Current Plan's Asymmetry Are Unpersuasive.

In response to this broad and varied evidence of unjustifiability, plaintiffs expect defendants to raise two kinds of arguments. First, they may take issue with Professor Mayer's Demonstration Plan for pairing more incumbents than the Current Plan or for allegedly producing results similar to the Current Plan's under electoral conditions like those of 2014.²⁴ Second, they may claim that the Current Plan's asymmetry is explained by traditional redistricting criteria such as respect for political subdivisions. Neither approach has merit.

With respect to incumbent pairings, defendants only criticize the Demonstration Plan for *unintentionally* pairing incumbents. This criticism rings hollow given that Foltz, Handrick, and

²³ Unfortunately, the Current Plan's authors do not seem to have conducted or saved any analyses of these drafts' compliance with traditional criteria. Also of note, Foltz, Handrick, and Ottman examined an Assembly map submitted by Democratic Assembly member Fred Kessler. This map was predicted to have a *pro-Democratic* efficiency gap of 7.0% while still performing similarly in terms of traditional criteria. *See* Tr. Ex. 172 at 5.

²⁴ Defendants may also argue that the Demonstration Plan cannot give rise to a valid *Senate* map (with each Senate district composed of three Assembly districts). This is plainly false. Starting with the Demonstration Plan, it would be straightforward to produce a Senate map that complied with the one person, one vote rule, the Voting Rights Act, and all state legal requirements. Professor Mayer did not perform this exercise for the simple reason that plaintiffs are only challenging the constitutionality of the Assembly plan.

Ottman *purposefully* paired incumbents in such a way that five Democratic incumbents would be defeated. There were five districts (14, 22, 33, 60, and 61) in the Current Plan in which Democratic incumbents were pitted against Republican incumbents in 2012. *All* of these districts had predicted Republican partisanship scores of 57% or higher, thus effectively guaranteeing the Democratic incumbents' elimination. Needless to say, there is nothing like this selective targeting of one party's incumbents in the Demonstration Plan. Summary.xlsx, Tr. Ex. 284; PFOF ¶ 54.

Similarly, with respect to defendants' assertion that the Demonstration Plan would have performed no differently than the Current Plan in 2014, it ignores their own expert's warning that, when conducting sensitivity testing, data on "which districts will be contested by which incumbents" should be incorporated. Goedert Rpt. (Dkt. 51, Tr. Ex. 136) at 16-17. It is appropriate (indeed the professional norm) to omit such data when generating an open seat baseline for a plan's *first* election. *See* Mayer Rebuttal Rpt. (Dkt. 95, Tr. Ex. 114) at 22-24; PFOF ¶¶ 427, 431-433, 444, 445. But in *subsequent* elections, almost every candidate who prevailed in the first election will be running for reelection, and it is foolish to discard this information. When this information is taken into account, it reveals that the Demonstration Plan would remain highly symmetric not only under the electoral conditions of 2014, but also in the event of an even larger Republican wave like that of 2010. *See id.* at 27; PFOF ¶ 376; *see also* Tr. Ex. 93 at 1-6 (taking incumbency into account when conducting sensitivity testing).

That defendants' calculations are unreliable becomes even more evident when their method is applied to Professor Mayer's open seat estimates for the Current Plan. Six of these estimates are in the range of 50.0% to 53.4% Democratic, meaning that, under defendants' approach, all of these districts would have been expected to flip from Democratic to Republican

control in 2014. But in fact, Republicans won only three more districts in 2014, not six. And the *reason* they won only three more is that Democratic incumbents outperformed the open seat estimates for their districts. *See* Mayer Rpt. (Dkt. 54, Tr. Ex. 2) at 50-51.

Applying defendants' method to the Demonstration Plan's open seat estimates in the event of a *pro-Democratic* swing is also illuminating. Twelve of these estimates are in the range of 50.0% to 53.4% Republican, meaning that, under defendants' approach, all of these districts would be expected to flip from Republican to Democratic control if there was an analogous *pro-Democratic* shift. *See id.* at 48-49. This degree of turnover is again implausible because it overlooks the effects of incumbency. More importantly, it demonstrates that there is no latent *pro-Republican* bias in the Demonstration Plan. Rather, defendants have simply stumbled upon the Plan's high degree of responsiveness, that is, the fact that it enables *both* Democrats and Republicans to make rapid seat gains if the electorate moves in their direction. *See id.* at 34; ("Beyond these criteria, the primary decision rule was creating competitive districts where possible . . ."). A high degree of responsiveness, of course, is generally thought to be a desirable plan characteristic.

This leaves only defendants' effort to justify the Current Plan's asymmetry based on compliance with traditional redistricting criteria. This attempt is untenable for two reasons. First, Professor Mayer's Demonstration Plan, Professor Chen's two hundred simulated maps, the Assembly plans used in Wisconsin in earlier cycles, and the Current Plan's authors' own draft maps *all* show that a far lower level of asymmetry could have been attained while still complying at least as well with traditional criteria. *See supra* Argument III.D.1.

Second, while the Current Plan's authors claim to have considered traditional criteria, they repeatedly twisted them to facilitate their pursuit of partisan advantage. The authors sought

to insulate their most grossly gerrymandered districts from an anticipated legal challenge by making their populations as close as possible to the ideal. *See* Tr. Ex. 469; PFOF ¶¶ 66-67. When the authors noticed that municipal split data cast their Plan in a rosier light than county split data, they deleted the latter information from their presentation to the Legislature. *See* Tr. Ex. 362; PFOF ¶ 57-58. And the authors flipped the normal process for delineating wards so that their districts would not have to respect ward boundaries—but rather the wards would have to follow the district lines. *See* Tr. Ex. 331; PFOF ¶ 178. Plainly, these sorts of actions do not *justify* the Plan’s asymmetry but rather further *indict* it.

CONCLUSION

Plaintiffs have advanced a three-part test for partisan gerrymandering, all of whose prongs are judicially discernible and manageable. The Current Plan fails this test because it discriminates against Democratic candidates and voters (1) intentionally, (2) severely and durably, and (3) unjustifiably. This Court should therefore hold that the Plan is an unconstitutional partisan gerrymander in violation of the First and Fourteenth Amendments.

Respectfully submitted,

s/ Nicholas O. Stephanopoulos
One of the attorneys for plaintiffs

Peter G. Earle
LAW OFFICE OF PETER G. EARLE
839 North Jefferson Street, Suite 300
Milwaukee, WI 53202
(414) 276-1076
peter@earle-law.com

Michele Odorizzi
MAYER BROWN, LLP
71 South Wacker Drive
Chicago, IL 60606
(312) 782-0600
modorizzi@mayerbrown.com

J. Gerald Hebert
Ruth Greenwood
Annabelle Harless
Danielle Lang
CAMPAIGN LEGAL CENTER
1411 K Street NW, Suite 1400
Washington, DC 20005
(202) 736-2200
ghebert@campaignlegalcenter.org
rgreenwood@campaignlegalcenter.org
aharless@campaignlegalcenter.org
dlang@campaignlegalcenter.org

Nicholas O. Stephanopoulos
UNIVERSITY OF CHICAGO LAW SCHOOL
1111 E. 60th St., Suite 510
Chicago, IL 60637
(773) 702-4226
nsteph@uchicago.edu

Douglas M. Poland
RATHJE & WOODWARD, LLC
10 East Doty Street, Suite 507
Madison, WI 53703
(608) 960-7430
dpoland@rathjewoodward.com