No. 23AP1399-OA

In the Supreme Court of Wisconsin

REBECCA CLARKE, RUBEN ANTHONY, TERRY DAWSON, DANA GLASSTEIN, ANN GROVES-LLOYD, CARL HUJET, JERRY IVERSON, TIA JOHNSON, ANGIE KIRST, SELIKA LAWTON, FABIAN MALDONADO, ANNEMARIE MCCLELLAN, JAMES MCNETT, BRITTANY MURIELLO, ELA JOOSTEN (PARI) SCHILS, NATHANIEL SLACK, MARY SMITH-JOHNSON, DENISE SWEET and GABRIELLE YOUNG, PETITIONERS,

GOVERNOR TONY EVERS, in his official capacity; NATHAN ATKINSON, STEPHEN JOSEPH WRIGHT, GARY KRENZ, SARAH J. HAMILTON, JEAN-LUC THIFFEAULT, SOMESH JHA, JOANNE KANE, and LEAH DUDLEY, INTERVENORS-PETITIONERS

v.

WISCONSIN ELECTIONS COMMISSION, DON MILLIS, ROBERT F. SPINDELL, JR., MARK L. THOMSEN, ANN S. JACOBS, MARGE BOSTELMANN, JOSEPH J. CZARNEZKI, in their official capacities as Members of the Wisconsin Election Commission, MEAGAN WOLFE, in her official capacity as the Administrator of the Wisconsin Elections Commission, ANDRE JACQUE, TIM CARPENTER, ROB HUTTON, CHRIS LARSON, DEVIN LEMAHIEU, STEPHEN L. NASS, JOHN JAGLER, MARK SPREITZER, HOWARD MARKLEIN, RACHAEL CABRAL-GUEVARA, VAN H. WANGGAARD, JESSE L. JAMES, ROMAINE ROBERT QUINN, DIANNE H. HESSELBEIN, CORY TOMCZYK, JEFF SMITH AND CHRIS KAPENGA, in their official capacities as Members of the Wisconsin Senate, RESPONDENTS,

WISCONSIN LEGISLATURE; BILLIE JOHNSON, CHRIS GOEBEL, ED PERKINS, ERIC O'KEEFE, JOE SANFELIPPO, TERRY MOULTON, ROBERT JENSEN, RON ZAHN, RUTH ELMER and RUTH STRECK, INTERVENORS-RESPONDENTS.

EXPERT REPORT OF CHRISTOPHER BLUNT IN SUPPORT OF MAPS PROPOSED BY THE JOHNSON INTERVENORS

I.   INTRODUCTION AND SCOPE OF WORK

1.   My name is Christopher C. Blunt, Ph.D. I am a professional political scientist and President of Overbrook Research. I specialize in providing data analytic services for a wide variety of clients, including those in politics, public policy, and consumer marketing. I am particularly experienced in turnout modeling on behalf of political campaigns, and also have substantial expertise in public opinion research.

2.   I have been asked by counsel representing ten Wisconsin voters in connection to litigation concerning Wisconsin's state assembly and senate apportionment maps to analyze and determine whether a partisan-blind redistricting process, following traditional districting criteria, would or would not be likely to produce a Plan consistent with that submitted by the Johnson Interveners. To do so, I simulated a set of 20,000 possible Wisconsin state assembly and (separately) 20,000 state senate apportionment plans that adhere as closely as possible to traditional redistricting criteria, but my simulations did not take race or partisanship into account. The simulations allow me to compare the likely outcomes from the Johnson Intervenors' maps to the outcomes which would be likely to emerge from a neutral map-drawing process that followed these traditional criteria.

II.   SUMMARY OF OPINIONS

3.   The simulated state assembly plans would be expected to yield, on average, between 41 and 42 Democratic seats. Most plans include 23 or 24 competitive seats out of the 99.

4.   The simulated state senate plans would be expected to yield, on average, around 14 Democratic seats. Most plans include 9 or 10 competitive seats out of the 33.

5.   The Johnson Intervenors' maps do not differ greatly from what the simulated plans for each chamber predict. The Johnson Intervenors' maps would be expected to yield 43

Democratic seats in the assembly and 13 seats in the senate. Furthermore, the maps for both chambers include more competitive districts than the simulated plans do on average.

III.   QUALIFICATIONS, EXPERIENCE, AND COMPENSATION

6.   I am trained as a political scientist, and have a Ph.D. in that field from the University of California at Los Angeles (2002). I also hold Bachelor and Master of Arts degrees in political science from Northwestern University; I won admission to an accelerated program of study, and was awarded both degrees simultaneously in 1991.

7.   I began my career with Market Strategies, Inc., a national political polling firm in Michigan. The firm's clients included U.S. Senators, governors, members of congress, and the re-election campaign of the sitting U.S. President. Over my first two election cycles, I worked on a wide variety of studies and learned a great deal about the practical design and execution of effective public opinion research.

8.   I began a Ph.D. program in political science at U.C.L.A following the 1994 election. My work focused primarily on American politics, elections, and the role of campaigns in shaping public opinion. I returned to work with Market Strategies, both remotely and occasionally on location, as I progressed further in my graduate studies. This arrangement provided not only additional practical experience, but also invaluable data for use in academic research. I grew to become an expert in data analysis, and came to particularly enjoy better understanding why voters believe and behave as they do.

9.   I was the principal or sole author of seven scholarly papers, presented at political science conferences, while a graduate student. All involved significant original research and in-depth analysis, often with novel or complex data sources. My first, analyzing hundreds of thousands of ballot images from a recent general election, won a departmental prize for the year's

best conference paper by a graduate student. Another, written the next year using an extension of those ballot data, was nominated for an award for best paper presented at the conference.

10. My doctoral dissertation, filed in 2002, synthesized the professional and academic research I conducted over the previous decade. Much of the previous campaign effects academic research had been limited to presidential elections, where such effects can be difficult to detect. My dissertation focused on subpresidential (statewide and local) contests, and found this sort of political campaign activity does indeed provide information which moves voters to candidates whose positions are more in accord with their own underlying values.

11. As the owner and President of Overbrook Research, a public opinion consulting practice, I was among the core team of analysts who collaborated to develop a new methodological approach to voter microtargeting leading up to the 2004 general election. I became a specialist in turnout modeling, and have provided countless such models in the years since.

12. I have conducted hundreds of data analyses on behalf of many other clients, covering a broad range of topics. Many of my clients are other research firms, ranging in size from the global to the boutique, who entrust me with the analysis of their data. I have produced consumer segmentations and attribute driver models that have helped guide national and international product marketing campaigns. My work has helped shape communication campaigns nationally and in many individual states. In addition, my research has helped guide nonprofit organizations, trade associations, large and small corporations, public and private utilities, colleges and universities, and advocacy campaigns. Since 2006, I have also worked on the decision team of a national news network, where I use vote models to project the outcome of primary and general election races.

13. A copy of my resume is attached as Exhibit A.

14.   I am being compensated at a rate of $250 per hour. My compensation does not depend in any way on the outcome of the case or on the opinions I provide. I previously testified as an expert at trial in the case of *Robinson* v. *Ardoin* (2022).

IV.   METHODOLOGY

15.   I conducted a simulation analysis to create a large number of possible Wisconsin state assembly and state senate district plans.[1] Redistricting simulation algorithms generate a representative sample of all possible plans that satisfy a specified set of criteria. In Wisconsin, that means drawing reasonably compact districts, limiting the number of split municipal boundaries, ensuring the vote tabulation districts comprising it are contiguous[2], and ensuring population equality between the districts in the plan. The simulated plans that emerge from this analysis represent a set of plans that could have been drawn while being compliant with the specified criteria. By examining this representative set of plans, we can determine the likelihood that any given plan would emerge from a neutral mapmaking process that followed traditional redistricting criteria.

16.   For the purposes of this analysis, I set all the plans to adhere to the following guidelines: a total of 99 geographically contiguous districts for the assembly and 33 geographically contiguous districts for the senate; the districts as a whole are fairly compact; the district boundaries result in a small number of municipal boundary splits; and the districts in any given plan do not deviate by more than +/- 0.75 percent from the ideal population distribution. None of the simulated plans take account of race, partisanship, or existing district boundaries.

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[1] Redistricting simulation algorithms have played an increasingly important role in legal cases. Simulation analyses using the REDIST software I utilized in this case have been credited by the Pennsylvania Reapportionment Commission, the Ohio Supreme Court, and the New York State Supreme Court. In addition, Dr. Kosuke Imai submitted an expert report in the recent *Merrill v. Milligan* case in Alabama using the REDIST software.

[2] The exercise relies on Vote Tabulation Districts as they stood at the time of the 2020 Census, which are the only data currently available. Some of these VTDs were of course comprised of blocks which were not themselves contiguous.

17.   Although in practice Wisconsin senate districts are compilations of three adjoining assembly districts, inconsistencies in district numbering[3] preclude using simulated assembly districts as the basis for senate districts in this exercise. It was therefore necessary to build simulations of the senate and assembly plans independently of each other.

18.   My simulations are generated using REDIST, an open-source software package for redistricting analysis.[4] The software includes several different redistricting simulation algorithms, and a variety of methods to evaluate the simulated plans it generates. I rely on the Sequential Monte Carlo (SMC) algorithm, which is most appropriate for the current application.[5]

19.   SMC generates nearly independent samples, which produces a diverse set of simulated plans that meet the specified constraints. The SMC algorithm also avoids splitting municipal[6] boundaries where possible.

20.   In addition to the evaluation tools built into REDIST, I used IBM's SPSS statistical software to conduct further analysis of the results.

21.   Most evaluation metrics regarding the Johnson Intervenors' maps were sourced on 10 January 2024 from Dave's Redistricting App (DRA)[7]. I was able to report some statistics directly from the DRA's analytics pages. However, in instances where DRA reports expected election outcomes that include votes for "other" candidates, I recomputed the Democratic

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[3] Because the simulated assembly districts are built without reference to the current apportionment plan, the resulting simulated district number labels are arbitrary and do not necessarily indicate geographic proximity or shared borders.

[4] REDIST runs on the R statistical software platform, and full documentation is available at https://CRAN.R-project.org/package=redist.

[5] "Sequential Monte Carlo for sampling balanced and compact redistricting plans," a forthcoming article by Cory McCartan and Kosuke Imai, provides more theoretical background about SMC. The article is currently available at https://arxiv.org/abs/2008.06131.

[6] I use the terms "municipal" and "municipalities" to refer to the 1,850 Wisconsin cities, villages, and Towns. Cities and villages with territory in more than one county are treated here as single entities.

[7] The number of municipal splits in each plan was provided to me directly from Counsel and is not available on the DRA page. Johnson Intervenors' assembly map and related data can be found here: https://davesredistricting.org/maps#analytics::55a849c8-0687-4b89-ab78-b6b3c4e8097b .

Senate map and data can be found here: https://davesredistricting.org/maps#viewmap::26aa9638-8740-4373-8059-a599d48ff2ae

percentage as a share of the two-party vote, to allow an apples-to-apples comparison with partisan vote shares generated by REDIST.

V.   RESULTS

A.   STATE ASSEMBLY

22.   I used the REDIST software to produce 20,000 simulated assembly apportionment plans following the guidelines outlined above. This number of simulated plans easily provides a large enough sample to ensure statistical precision. I then computed the estimated Democratic candidate share of the two-party vote for each of the 99 districts in each of the 20,000 simulated plans, based on a composite of past voting behavior in six elections[8] across 2016, 2018, and 2020. Assuming those geographic partisan voting patterns continue, the average plan would be expected to yield 41.45 Democratic seats. A majority (57.3 percent) of the simulated plans would be expected to yield 41 Democratic seats, and another 31.7 percent of the plans would be expected to yield 42 Democratic seats. The Johnson Intervenors' map, by comparison, using the same composite partisan baseline, expects to yield 43 Democratic seats. Figure 1 shows the full distribution of expected outcomes across the 20,000 simulated plans.

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[8] President (2016), U.S. Senate (2016), U.S. Senate (2018), Governor (2018), Attorney General (2018), and President (2020). The overall average two-party vote division across all these races was 50.7% Democratic / 49.3% Republican.

Figure 1: Expected Democratic Assembly Seats
Partisan Baseline: Composite 2016-2018-2020
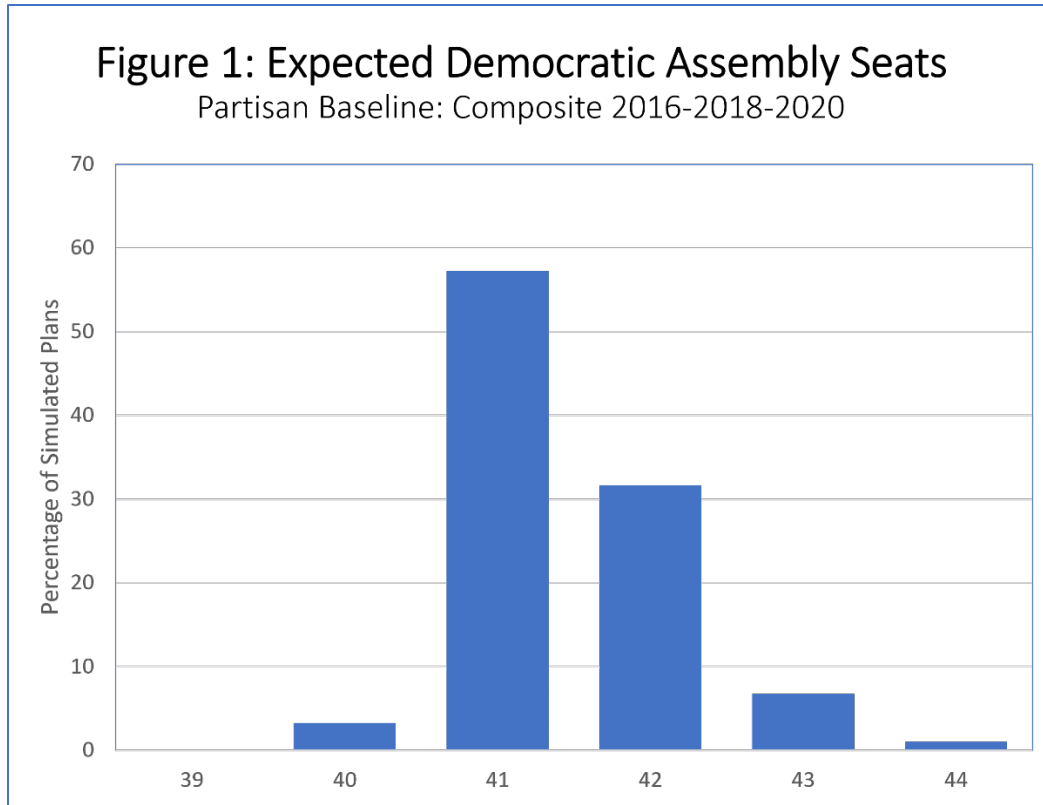
23.   Across all the districts with an expected Republican winner, that winning candidate would have an average expected two-party vote share of 59.55 percent. Winning Democratic candidates would take an estimated 66.07 percent of the two-party vote on average. This is similar to the average estimated winning percentages for Republican (60.05 percent) and Democratic (65.94 percent) candidates in the Johnson Intervenors' map.

24.   The simulated plans include, on average, 23.9 competitive districts[9]. The Johnson Intervenors' map, with 25 competitive districts, is slightly more competitive. Only 18.5 percent of the simulated plans have at least 25 competitive districts.

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[9] Competitive districts are defined here as having an expected Democratic share of the two-party vote of at least 45% and not more than 55%.

Figure 2: Competitive Assembly Seats
Partisan Baseline: Composite 2016-2018-2020
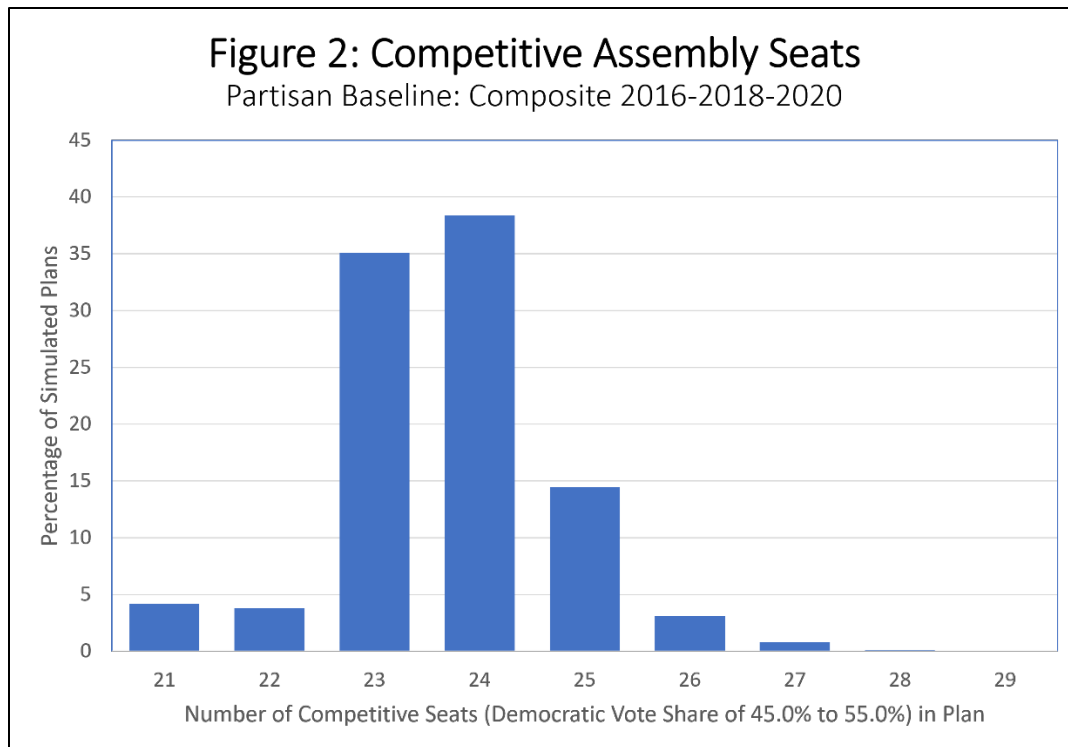
25. I next used the Polsby-Popper test to examine district compactness. First proposed by lawyers Daniel Polsby and Robert Popper[10], the score is a popular metric in the academic literature to evaluate the geographic compactness of a given district.[11] The 1,980,000 individual simulated districts (99 districts times 20,000 maps) have an average Polsby-Popper score of .244, with a range of .041 to .657. This level of compactness is consistent with the current (SB 621) apportionment plan currently in force, which has a Polsby-Popper score of .245 (and a range of .05 to .605). However, the Johnson Intervenors' map, which has an average Polsby-Popper score of .347 (and a range of .118 to .695), is considerably more compact than the simulated plans.

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[10] "The Third Criterion: Compactness as a Procedural Safeguard Against Partisan Gerrymandering," Polsby, Daniel D and Robert D. Popper, *Yale Law & Policy Review* 9 (2): 301-353

[11] The formula is 4π times the area of a district, divided by the squared perimeter of the district. Scores will always fall between 0 and 1, with higher scores indicating greater compactness.

8

26.   The simulated plans split portions of a given municipality into different districts, on average, 59 times[12]. The plan with the fewest has 52 municipal splits, with 68 being the largest number of splits in any plan. The Johnson Intervenors' map, with 70 splits of municipalities, is not far outside this range.

27.   Finally, it should be noted that the simulated districts in each plan come reasonably close to equality of total population. Because the simulations rely on voting districts as the smallest geographical unit, achieving perfect equality would be very difficult. In running the simulations, I set the population deviation threshold at +/- 0.75 percent from the "ideal" size of 59,533. This works out to a difference between the smallest district and largest district of no more than 1.5 percent, or 891 people[13], and is less than the 1.88% largest difference previously approved by a Wisconsin court.

B.   STATE SENATE

28.   I used the REDIST software to produce 20,000 simulated state senate apportionment plans, each containing 33 districts, but otherwise following the same guidelines as were used for the assembly districts. I then computed the estimated Democratic candidate share of the two-party vote for each of the 33 districts in each of the 20,000 simulated plans, based on the same composite of past voting behavior in six elections across 2016, 2018, and 2020. The plans would be expected to yield 13.96 Democratic seats on average. A majority (58.8 percent) of the simulated plans would

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[12] The REDIST software does not list the specific municipalities each plan splits, or the number of times any given municipality is split. Furthermore, the description I have given above is my commonsense interpretation of the "splits" statistic REDIST produces. My assumption is that REDIST reports the number of *times* that municipalities are split, not the number of municipalities that are split, and I have compared the number of splits based on that assumption. If REDIST is reporting the number of municipalities that are split, then the Johnson Intervenors' maps outperform the simulated plans on splits (their plans split 35 municipalities in the assembly map and 23 in the senate map, but some of these are split multiple times). Unfortunately, the software's technical documentation does not provide additional details.
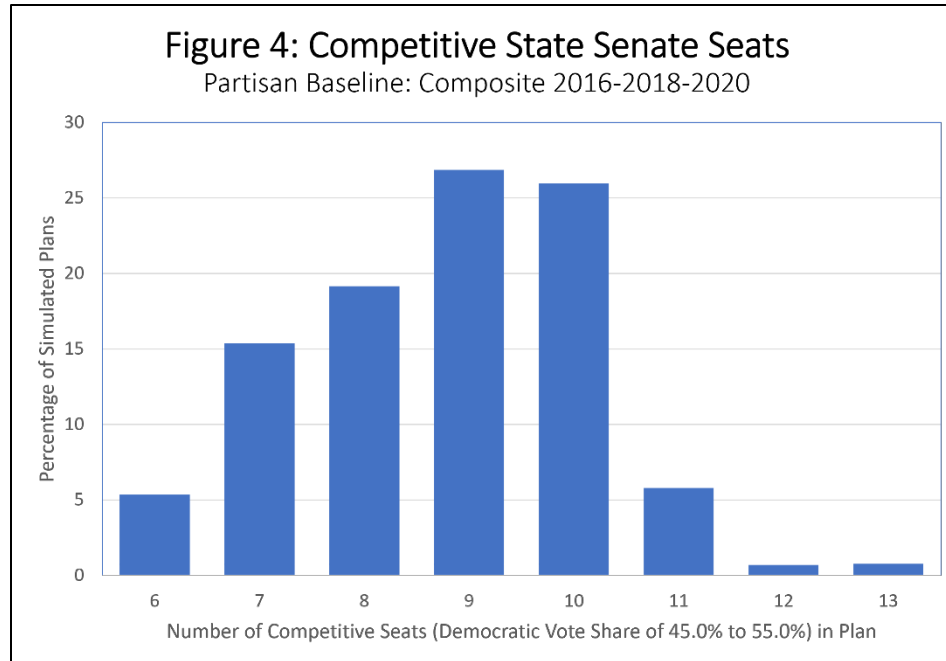
[13] The smallest district in any plan has 59,087 people and the largest district has 59,978.

be expected to yield 14 Democratic seats, and most of the remaining plans would yield either 13 (17.6 percent) or 15 Democratic seats (18.2%). The Johnson Intervenors' senate map, by comparison, using the same composite partisan baseline and the same methodology for assigning estimated seats to the respective parties, expects to yield 13 Democratic seats. Figure 3 shows the full distribution of expected outcomes across the 20,000 simulated plans.

Figure 3: Expected Democratic State Senate Seats
Partisan Baseline: Composite 2016-2018-2020
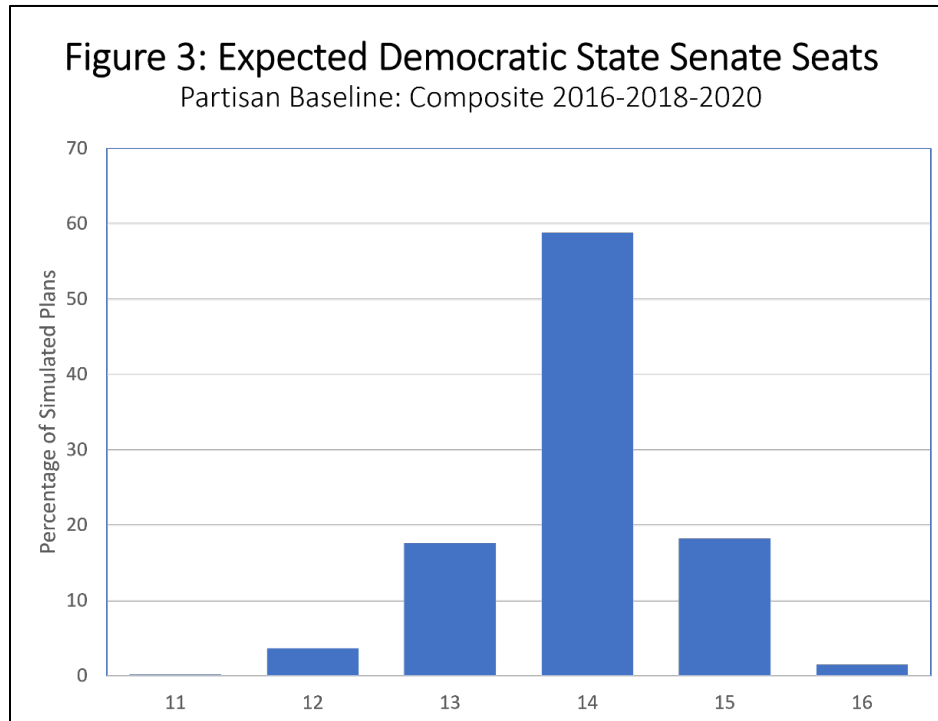
29.   Across all the districts with an expected Republican winner, that winning candidate would have an average expected two-party vote share of 58.6 percent. Winning Democratic candidates would take an estimated 63.9 percent of the two-party vote on average. This is similar to the average estimated winning percentages for Republican (57.72 percent) and Democratic (68.86 percent) candidates in the Johnson Intervenors' map.

30.   The simulated senate plans include, on average, 8.8 competitive districts. The Johnson Intervenors' map, with ten competitive districts, is slightly more competitive. Only 33 percent of the simulated plans have at least ten competitive districts.

10

Figure 4: Competitive State Senate Seats
Partisan Baseline: Composite 2016-2018-2020

Y-axis: Percentage of Simulated Plans (0 to 30)
X-axis: Number of Competitive Seats (Democratic Vote Share of 45.0% to 55.0%) in Plan (6 to 13)

31.   I next used the Polsby-Popper test to examine district compactness. The 660,000 individual simulated senate districts (33 districts times 20,000 maps) have an average Polsby-Popper score of .214, with a range of .055 to .584. The Johnson Intervenors' senate map, which has an average Polsby-Popper score of .279 (and a range of .099 to .458), is again considerably more compact on average than the simulated plans.

32.   The simulated plans split portions of a given municipality into different districts, on average, 31 times. The plan with the fewest has 21 municipal splits, with 40 being the largest number of splits in any plan. The Johnson Intervenors' map, with 36 splits of municipalities, is within this range and not far off from the typical simulated plan.

33.   The simulated senate districts meet the same population equality standards as the simulated assembly districts do. In running the simulations, I set the population deviation threshold at +/- 0.75 percent from the "ideal" size of 178,598. This works out to a difference between the smallest district and largest district of no more than 1.5 percent, or 2,677 people[14].

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[14] The smallest district in any plan has 177,259 people and the largest district has 179,936.
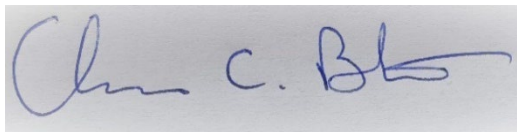
11

VI.   CONCLUSION

34.   This analysis had a specific but limited objective: explore the range of Wisconsin state assembly and state senate districts which would emerge if a large number of simulated plans were drawn from scratch, following criteria for contiguity, equal population, compactness, and respecting municipal boundaries – but without reference to the racial or partisan makeup of the geographic units, or to previous district lines – and compare the Johnson Intervenors' maps to these expected ranges.

35.   Following these criteria, producing districts which are reasonably compact and split few municipal boundaries, I find that the Johnson Intervenors' maps are even more competitive. The assembly plan would be expected to yield at least as many Democratic seats as these simulated plans would, and the senate plan comes very close to the number of Democratic seats expected in the average simulated plan. Both of the Johnson Intervenors' maps differ most from the simulated plans in their greater compactness. They also include slightly more municipal splits than the simulated plans.

All of the foregoing opinions in this report are given to a reasonable degree of scientific certainty, and the statements and opinions provided in this report are true and accurate to the best of my knowledge, information, and belief.

Dated this 11th day of January, 2024.

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Christopher C. Blunt, Ph.D.

12

CHRISTOPHER C. BLUNT
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EXPERIENCE

2003-Present   **OVERBROOK RESEARCH**
                  President

- Provide marketing research firms, policy foundations, political pollsters, jury consultants, and other clients with complete analysis of qualitative and quantitative research data.

- Extensive experience in turnout modeling, segmentation, regression, analysis of variance, data mining, cluster analysis, and factor analysis.

- Expert witness at trial in *Robinson* v. *Ardoin* redistricting case (2022), U.S. District Court, Middle District of Louisiana.

- Member of the American Association for Public Opinion Research (AAPOR).

- Partial client list: Deep Root Analytics, TargetPoint Consulting, Hill and Knowlton, Edelman, Koch Industries, AmericanPublic, Chicago Urban League, Whitman Insight Strategies, Communications Consortium Media Center, National Media, Western Corporate Credit Union (WesCorp), and Howard Varinsky Associates.

- Member of CNN's decision team, responsible for election night race projections (2006 to present).

1996-2003   **MARKET STRATEGIES, INC.**
1991-1994   *Study Director*

- Managed hundreds of quantitative and qualitative research projects through all stages of completion, from design to presentation of findings. Excelled at client management, study and questionnaire design, coordinating internal operations and outside contractors, data analysis, and presentation.

- Strategic recommendations contributed to dozens of primary and general election victories for presidential, senatorial, gubernatorial and other candidates.

- Conducted and analyzed hundreds of focus groups identifying critical campaign and social marketing themes. Prepared full written and multimedia reports, with recommendations for the enactment of these strategies.

EDUCATION

1995-2002   **UNIVERSITY OF CALIFORNIA - LOS ANGELES**
               Doctor of Philosophy in political science

- Doctoral Dissertation filed Spring, 2002. *Producing Responsibility: The Role of Campaigns in Sub-presidential Elections.*
- Committee Chair: David O. Sears. Other committee members: John R. Petrocik, Joel Aberbach, Jim Sidanius, James Q. Wilson, and Thomas Schwartz.

1987-1991   **NORTHWESTERN UNIVERSITY**
               Master and Bachelor of Arts in political science

- Accelerated BA/MA degree program. Concentrations in American government, political participation, and voting behavior.

TEACHING EXPERIENCE

- Deliver guest lectures to university courses about voter microtargeting, political polling, and the role of strategic information in political campaigns.

- Teaching Assistant for several UCLA courses. Responsibilities included leading three weekly discussion sections of 20 students each, grading exams, evaluating written papers, holding office hours, and delivering guest lectures on behalf of the professor.

  - ✓ Public Opinion and Voting Behavior, upper division (junior/senior) course.
  - ✓ Mass Media and Elections, upper division (junior/senior) course.
  - ✓ Political Parties, upper division (junior/senior) course.
  - ✓ Introduction to American Politics, freshman/sophomore survey course.

HONORS
- UCLA Dissertation Year Fellowship, 2001-2002.
- UCLA departmental prize for best 1997-1998 conference paper by a graduate student.
- Dean's List.
- *Pi Sigma Alpha,* national political science honor society.

PUBLICATIONS
- "Testing Overall and Synergistic Campaign Effects in a Partisan Statewide Election," Political Research Quarterly, Vol. 71, No. 2 (June 2018), pp. 361-379. Co-authored with Daron Shaw and Brent Seaborn.
- "The Campaign." Chapter in *Public Opinion and Polling Around the World: A Historical Encyclopedia.* John G. Geer, editor. ABC-CLIO. 2004.
- "Survey Finds Americans Support Early Learning." *News & Issues,* publication of Columbia University National Center for Children in Poverty. Winter 2003. Vol 13:1.
- "Who Will Reconnect with the People: Republicans, Democrats, or None of the Above?" *Americans Talk Issues Foundation,* August, 1995. Co-authored with Fred Steeper, Alan Kay, Stan Greenberg, and Hazel Henderson.
- "Steps for Democracy: The Many Versus the Few," analysis of the American electorate and five major public policy reform proposals. *Americans Talk Issues Foundation,* March, 1994. Co-authored with Fred Steeper, Alan Kay, Stan Greenberg, Celinda Lake, and Hazel Henderson.
- "Disapproval as a Key Indicator," a multivariate analysis of the early Clinton and Bush presidencies. *The Polling Report,* 28 June 1993. Co-authored with Fred Steeper.

CONFERENCE PAPERS
- "Cooking the Goose: Candidate Unfavorable Ratings and Voting Behavior." Paper delivered at the annual meeting of the Midwest Political Science Association, April 2003.
- "Campaigns, Partisanship, and Candidate Evaluations in Subpresidential Elections." Paper delivered at the annual meeting of the Midwest Political Science Association, April 2001.
- Campaigns and Voter Rationality." Paper delivered at the annual meeting of the Western Political Science Association, March 2001.

- "Incumbency, Issues, and Split-Ticket Voting." Paper delivered at the annual meeting of the American Political Science Association, September 2000.
- "The Representativeness of Primary Electorates." Paper delivered at the annual meeting of the Western Political Science Association, March 2000.
- "Can Voters Judge? Voting Behavior at the Extreme of Low Information." Paper delivered at the annual meeting of the Western Political Science Association, March 1999. *Nominated for WPSA award for best 1999 conference paper.*
- "Priming and Issue Agendas in American Campaigns." Paper delivered at the annual meeting of the Midwest Political Science Association, April 1998. Co-authored with John Petrocik and Fred Steeper.
- "Rationality and Representation in Direct Legislation Voting." Paper delivered at the annual meeting of the Western Political Science Association, March 1998. *Winner of UCLA departmental prize for best 1997-1998 conference paper by a graduate student.*