

Kenneth R. Mayer, Ph.D.

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

* * * * *

WILLIAM WHITFORD, et al.,

Plaintiffs,

vs.

Case No. 15-CV-421-JDP

BEVERLY R. GILL, et al.,

Defendants.

* * * * *

THE WISCONSIN ASSEMBLY DEMOCRATIC CAMPAIGN
COMMITTEE,

Plaintiff,

vs.

Case No. 18-cv-763-JDP

BEVERLY R. GILL, et al.,

Defendants,

* * * * *

VIDEOTAPED DEPOSITION OF KENNETH R. MAYER, Ph.D.

TAKEN AT: Bell, Giftos, St. John
LOCATED AT: 5325 Wall Street
Madison Bay, WI

April 10, 2019
9:58 a.m. to 7:02 p.m.

REPORTED BY ANITA KORNBURGER
REGISTERED PROFESSIONAL REPORTER

* * * * *

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<p>1 EXHIBITS</p> <p>2 Page</p> <p>3 Exhibit No. Description Identified</p> <p>4 1 Opening report. 11</p> <p>5 2 Rebuttal report. 11</p> <p>6 3 CV. 13</p> <p>7 4 Invoices from July 2018 through</p> <p>8 the end of January. 26</p> <p>9 5 E-mail between Mr. Mayer and</p> <p>10 Chris Warshaw. 39</p> <p>11 6 Notice. 44</p> <p>12 7 E-mail from Nick Stephanopoulos. 45</p> <p>13 8 Ward level data map, also the first</p> <p>14 attachment in the e-mail marked</p> <p>15 Exhibit 7. 46</p> <p>16 9 Same ward level data with district</p> <p>17 boundaries from Professor Chen's</p> <p>18 demonstration map. 47</p> <p>19 10 E-mail from Nick. 52</p> <p>20 11 Printout of the Wisconsin Elections</p> <p>21 Commission's canvass of assembly</p> <p>22 results. 92</p> <p>23 12 Dr. Chen's opening report submitted</p> <p>24 October 15, 2018. 93</p> <p>25 13 Data from the National Institute of</p> <p>Money in State Politics. 206</p> <p>14 2016 article relied on in portion</p> <p>15 of report, pages ten and eleven. 223</p> <p>16 15 Shor and McCarty article. 226</p> <p>17 16 Gerrymandering state house Mayer,</p> <p>18 CSC file. 232</p>	<p>1 TRANSCRIPT OF PROCEEDINGS</p> <p>2 THE VIDEOGRAPHER: Good morning. We are</p> <p>3 now on the record. My name is Jon Hansen, CLVS,</p> <p>4 videographer for Golkow Litigation Services.</p> <p>5 Today's date, April 10, 2019. The time, 9:58.</p> <p>6 This deposition is being held in Madison, Wisconsin</p> <p>7 in the matter of William Whitford, et al., versus</p> <p>8 Beverly R. Gill, et al., United States District</p> <p>9 Court, Western District of Wisconsin, case number</p> <p>10 15-CV-00421 JDP. The deponent today is Kenneth</p> <p>11 Mayer, PhD.</p> <p>12 At this time if counsel could</p> <p>13 please state their appearances for the record,</p> <p>14 after which our reporter will swear in the witness</p> <p>15 and we can proceed.</p> <p>16 MS. MEEHAN: Taylor Meehan here on behalf</p> <p>17 of the Wisconsin State Assembly from Bartlit Beck,</p> <p>18 LLP in Chicago.</p> <p>19 MR. ST. JOHN: Kevin St. John, Bell,</p> <p>20 Giftos, St. John, Madison, Wisconsin, on behalf of</p> <p>21 the Wisconsin State Assembly.</p> <p>22 MR. KEENAN: Assistant attorney general</p> <p>23 Brian Keenan on behalf of the Wisconsin Election</p> <p>24 Committee defendants.</p> <p>25 MS. HARLESS: Annabelle Harless on behalf</p>

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1 of the individual plaintiffs, from the Campaign
 2 Legal Center in Chicago.
 3 MR. POLAND: Doug Poland of Rathje
 4 Woodward representing the plaintiffs and
 5 representing the witness today.
 6 KENNETH R. MAYER, Ph.D., called as a
 7 witness herein, having been first duly sworn on
 8 oath, was examined and testified as follows:
 9 E X A M I N A T I O N
 10 BY MS. MEEHAN:
 11 Q. Good morning.
 12 A. Good morning.
 13 Q. Can you please state your full name for
 14 the record?
 15 A. Kenneth R. Mayer.
 16 Q. And you understand, Professor Mayer, that
 17 you're under oath here today?
 18 A. Yes.
 19 Q. And is there any reason you can't give
 20 your best testimony today?
 21 A. No.
 22 Q. You've been deposed before, I understand?
 23 A. Correct.
 24 Q. Okay. So I won't bore you with a bunch
 25 of ground rules, but just know that you can take a

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1 break whenever, but I'd ask that we don't take any
 2 breaks when any of my questions are pending that
 3 you have yet to answer. And if you don't
 4 understand my question, let me know and I'll have
 5 the reporter read it back. Okay.
 6 So you are a professor of political
 7 science at the University of Wisconsin-Madison;
 8 right?
 9 A. Correct.
 10 Q. And your annual compensation from
 11 Wisconsin is about \$122,000 a year; isn't that
 12 right?
 13 A. It's a little higher now.
 14 Q. What is it?
 15 A. I believe, starting next year, it will be
 16 about 150.
 17 Q. In 2018 was it 122,000?
 18 A. I don't know.
 19 Q. Okay. You're teaching the American
 20 presidency this semester; is that right?
 21 A. That's correct.
 22 Q. Are you teaching anything else this
 23 semester?
 24 A. A graduate seminar on the presidency.
 25 Q. Are you affiliated with any partnership

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1 or corporation or other entity besides the
 2 University of Wisconsin?
 3 A. I have an LLC that I use for my expert
 4 witness and consulting work.
 5 Q. And that's Kenneth Mayer Consulting, LLC;
 6 is that right?
 7 A. That's correct.
 8 Q. And you've been a professor at Wisconsin
 9 since 1989; isn't that right?
 10 A. That's correct.
 11 Q. And you were at the Rand Corporation
 12 before then?
 13 A. Correct.
 14 Q. How long were you at the Rand
 15 Corporation?
 16 A. About a year.
 17 Q. Why did you leave after only a year?
 18 A. Because I had received a job from
 19 Wisconsin.
 20 Q. Are you from Wisconsin?
 21 A. No.
 22 Q. Where are you from?
 23 A. California.
 24 Q. Whereabouts?
 25 A. Southern California.

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1 Q. In the last ten years have you received
 2 any other employment-related compensation other
 3 than the compensation you receive as a Wisconsin
 4 professor or compensation you receive as an expert
 5 witness in litigation?
 6 A. Would employment through Wisconsin
 7 include things like royalties through books and so
 8 forth?
 9 Q. Okay, yeah. So do you receive royalties
 10 through books?
 11 A. Yes.
 12 Q. And any other royalties? Any patents,
 13 for example?
 14 A. No.
 15 Q. Beyond royalties from books, your salary
 16 from Wisconsin, and income received as an expert
 17 witness in litigation, have you received any other
 18 employment-related compensation in the last ten
 19 years?
 20 A. I don't remember any. The answer is most
 21 likely no. I don't -- I don't recall any other
 22 forms of compensation other than those things.
 23 Q. Okay. You're also currently serving as
 24 an expert in another redistricting case, the League
 25 of Women Voters of Michigan versus Johnson;

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<p>1 correct?</p> <p>2 A. Correct.</p> <p>3 Q. And you are an expert for the plaintiffs</p> <p>4 in this case; correct?</p> <p>5 A. Correct.</p> <p>6 Q. And those plaintiffs identify as -- are</p> <p>7 there individual plaintiffs in that case</p> <p>8 identifying as Democratic voters as well?</p> <p>9 A. I don't know.</p> <p>10 Q. Okay. And you are also an expert in</p> <p>11 Baldus versus Members of the Wisconsin</p> <p>12 Accountability Board; right?</p> <p>13 A. Correct.</p> <p>14 Q. And did you testify for the plaintiffs in</p> <p>15 that case?</p> <p>16 A. Yes.</p> <p>17 Q. And you were also an expert in Baumgart</p> <p>18 versus Wendelberger; is that right?</p> <p>19 A. That's correct.</p> <p>20 Q. And that was about the 2002</p> <p>21 redistricting?</p> <p>22 A. Correct.</p> <p>23 Q. The 2002 redistricting in Wisconsin;</p> <p>24 right?</p> <p>25 A. Correct.</p>	<p>1 A. Correct.</p> <p>2 Q. And does this look like an accurate and</p> <p>3 complete copy of that report? We'll be going</p> <p>4 through it throughout the day today, so --</p> <p>5 A. It looks like it, yes.</p> <p>6 Q. Okay. And then are you familiar with</p> <p>7 Exhibit No. 2?</p> <p>8 A. Yes.</p> <p>9 Q. What is that exhibit?</p> <p>10 A. This was a rebuttal report that I -- that</p> <p>11 was submitted in January.</p> <p>12 Q. Of 2019; is that right?</p> <p>13 A. Correct.</p> <p>14 Q. So on page 3 of your opening report, if</p> <p>15 you can flip that open. Do you see here you have</p> <p>16 your other experience testifying as an expert</p> <p>17 witness in trial or by deposition or via report?</p> <p>18 A. Yes.</p> <p>19 Q. And is that an accurate list of your --</p> <p>20 the work -- the expert witness work you've been</p> <p>21 involved in for the relevant time period?</p> <p>22 A. There is one addition that's reflected in</p> <p>23 my CV.</p> <p>24 Q. And what is that addition?</p> <p>25 A. That -- I would --</p>
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<p>1 Q. And what party -- for whom did you submit</p> <p>2 an expert report in Baumgart?</p> <p>3 A. I believe that was on behalf of the</p> <p>4 senate Democratic caucus.</p> <p>5 Q. Okay. I'm going to go ahead and hand you</p> <p>6 both of your reports. So I'm handing you a</p> <p>7 document marked Assembly's Dep Exhibit No. 1. I am</p> <p>8 also handing you a document marked Assembly's Dep</p> <p>9 Exhibit No. 2.</p> <p>10 (Exhibit 2 marked for identification.)</p> <p>11 BY MS. MEEHAN:</p> <p>12 Q. If you just want to flip through those.</p> <p>13 MR. KEENAN: Is the initial one number</p> <p>14 one?</p> <p>15 MS. MEEHAN: Oh, yes. The opening report</p> <p>16 is Exhibit No. 1, and the rebuttal report is</p> <p>17 Exhibit No. 2.</p> <p>18 BY MS. MEEHAN:</p> <p>19 Q. All right. Are you familiar with Exhibit</p> <p>20 No. 1?</p> <p>21 A. Yes.</p> <p>22 Q. What is Exhibit No. 1?</p> <p>23 A. This was the report that I wrote in this</p> <p>24 case that was submitted in October.</p> <p>25 Q. October of 2018?</p>	<p>1 Q. You need to take a look at your CV?</p> <p>2 A. Yeah, that would be --</p> <p>3 (Exhibit 3 marked for identification.)</p> <p>4 BY MS. MEEHAN:</p> <p>5 Q. Handing you a document that I've marked</p> <p>6 Assembly's Dep Exhibit No. 3. Take a look at that.</p> <p>7 Does this look like the latest version of your CV?</p> <p>8 A. Yes.</p> <p>9 Q. And when did you last update your CV?</p> <p>10 A. Last month.</p> <p>11 Q. And where on your CV is the new -- is the</p> <p>12 addition to your expert experience?</p> <p>13 A. It's on the top of page 2, the first</p> <p>14 entry in the heading services and expert witness,</p> <p>15 Dwight versus Revensberger.</p> <p>16 Q. And that's a redistricting case; is that</p> <p>17 right?</p> <p>18 A. Yes.</p> <p>19 Q. And I see you have voting rights also</p> <p>20 here on the top of page 2 describing that case.</p> <p>21 Are there voting rights claims in that case as</p> <p>22 well?</p> <p>23 A. Yes.</p> <p>24 Q. Are there partisan gerrymandering claims</p> <p>25 in that case?</p>

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<p>Page 14</p> <p>1 A. I -- I don't know. I was asked to answer 2 a specific empirical question. 3 Q. What is the specific empirical question 4 you were asked to answer? 5 A. Whether African Americans and minorities 6 participate equally in the political process in 7 Georgia. 8 Q. And when you say participate equally in 9 the political process, at what level of the 10 political process? What elections are involved? 11 A. The analysis that I did used statewide 12 elections. Primarily presidential, but they were 13 statewide elections. 14 Q. Okay. Who -- for whom have you -- are 15 you writing an expert report in that case? 16 A. On behalf of plaintiffs. 17 Q. Okay. So with that addition, as well as 18 the work on -- listed on page 3 of your opening 19 report, are those the complete and accurate list of 20 your expert work? 21 A. Correct. 22 Q. So it looks like you've been involved as 23 an expert in one case or another since 2011; isn't 24 that right? 25 A. There were two earlier cases.</p>	<p>Page 16</p> <p>1 taxes for 2018? 2 A. I don't recall exactly. 3 Q. Okay. When did you get involved in this 4 case? 5 A. Initially, I believe it was sometime in 6 2014. 7 Q. And how did you get involved in 2014? 8 A. I received an inquiry about whether I 9 would be willing to provide opinions in the case. 10 I don't recall the precise sequence. 11 Q. Did you talk to anyone in the assembly 12 about assisting with redistricting before Act 43 13 was passed? 14 A. In the assembly, no. 15 Q. Did you talk to anyone in the state 16 senate about assisting with redistricting before 17 Act 43 was passed? 18 A. No. 19 Q. Did you talk to anyone in the Wisconsin 20 state government about assisting with redistricting 21 before Act 43 was passed? 22 A. No. 23 Q. Did you talk to anyone in the assembly or 24 states -- did you talk to anyone in the assembly 25 about getting involved in potential redistricting</p>
<p>Page 15</p> <p>1 Q. One of those earlier cases is Baumgart; 2 right? 3 A. Correct. 4 Q. And what is the other earlier case? 5 A. Well, that is reflected on here, McComish 6 versus Brewer, which was a case in Arizona. 7 Q. Okay. Since 2011, what percent of your 8 annual income, on average, is from expert work? 9 A. I don't know exactly. 10 Q. What percent of your 2018 income was from 11 expert work? 12 A. I don't know precisely. 13 Q. Aren't you about to file your taxes? 14 A. We did. 15 Q. You did file your taxes. Did you submit 16 a W9 for the litigation you've been involved with? 17 A. Probably. I don't -- I don't -- I'm not 18 the one who does the taxes. 19 Q. Did you -- you did not review a W9 20 submitted for litigation you've been involved with? 21 A. Did I review a W9, no. 22 Q. Do you think more than half of your 23 income in 2018 was from expert work? 24 A. More than half. I don't think so. 25 Q. How much income are you reporting on your</p>	<p>Page 17</p> <p>1 litigation anytime after Act 43 was passed? 2 A. In the assembly? 3 Q. Correct. 4 A. No. 5 Q. Did you talk to anyone in the state 6 senate about getting involved in potential 7 redistricting litigation any time after Act 43 was 8 passed? 9 A. No. 10 Q. Did you talk to anyone in the Wisconsin 11 state government about getting involved in 12 potential redistricting litigation any time after 13 Act 43 was passed? 14 A. No. 15 Q. We're back here because the Supreme Court 16 vacated and remanded Whitford one; do you 17 understand that? 18 A. Yes. 19 Q. After the Supreme Court vacated and 20 remanded -- vacated Whitford one and remanded for 21 further proceedings, did you reach out to anyone 22 about further work in this case? 23 A. Did I contact anyone about further work? 24 Q. Correct. 25 A. No.</p>

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<p>1 Q. Did someone reach out to you about doing 2 further work in this case after the Supreme Court 3 remanded for further proceedings? 4 A. Yes. 5 Q. Who reached out to you about doing 6 further work? 7 A. I don't recall precisely, but it was -- I 8 believe it was counsel. 9 Q. Counsel for plaintiffs? 10 A. Correct. 11 Q. Did you discuss an assignment for -- did 12 you discuss an assignment when counsel for 13 plaintiffs reached out to you after the Supreme 14 Court's remand? 15 A. There were conversations about the scope 16 of work and what they were asking me to do. 17 Q. Is the scope of work on remand different 18 than your assignment when you first became involved 19 in 2014? 20 A. Partially. 21 Q. How is it different? 22 A. The question I was asked to analyze in 23 2016 was the underlying partisanship of -- of 24 Wisconsin, and about whether it was possible to 25 draw a demonstration plan with a smaller efficiency</p>	<p>1 partisan intent, is the court's opinion in -- the 2 three judge district court's opinion in Whitford 3 one; is that right? 4 A. Part of it. 5 Q. What else -- what other bases do you have 6 that the legislature acted with partisan intent? 7 A. It's my review of the record of the case 8 and the -- the testimony of people who drew the 9 maps. 10 Q. So when you say it's not your opinion, it 11 is in part your opinion; correct? 12 A. Correct. 13 Q. I want to make sure I have all the bases 14 for your opinion that the legislature acted with 15 partisan intent. So you've said the three judge 16 district court's opinion in Whitford one, your 17 review of the record in the case, which -- anything 18 else? 19 A. As I noted in my October report, it is 20 also an inference that can be drawn by actually 21 looking at the structure and the way that the 22 districts were drawn. 23 Q. And what in the record in this case led 24 you to conclude that the legislature acted with 25 partisan intent?</p>
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<p>1 gap. In 20 -- this question was to analyze 2 specific districts as to whether they had been, in 3 my judgment, packed or cracked, and also to analyze 4 some of the effects of Act 43 on -- on political 5 parties. 6 Q. One second. Were you instructed, as part 7 of your assignment in 2018, to assume partisan 8 intent? 9 A. Was I instructed to assume partisan 10 intent? No. 11 Q. Were you instructed -- did your attorneys 12 instruct you to assume any other facts for the 13 purposes of your assignment? 14 A. To assume facts, no. 15 Q. Is it part of -- is it then part of your 16 expert opinion that the legislature acted with 17 partisan intent? 18 A. That was part of my opinion, but that's 19 not my opinion. 20 Q. When you say that's not your opinion, 21 what do you mean by that? 22 A. That -- that is the court's opinion in 23 this case. 24 Q. And so the basis of your opinion, your 25 expert opinion that the legislature acted with</p>	<p>1 A. Well, I -- I don't have immediate access 2 to the full record, but it was the -- I mean, 3 the -- the testimony that came out of that case, 4 the way that the judges read the evidence, and the 5 conclusion that they -- that they wrote, and the -- 6 the basic composition of districts in Act 43. 7 Q. Do you recall whose testimony? 8 A. It was from the -- the staffers who drew 9 the map. I don't remember exactly who. Adam 10 Fultz, Ted Ottoman, Joe Hendrick. And 11 communications that they had about what they were 12 doing. 13 Q. Is your opinion that the drafters' 14 foremost consideration was partisanship? 15 A. Is my opinion that that was their 16 foremost? I would say was it -- was it number one 17 priori -- I don't know. 18 Q. Have you ruled out that it was their 19 number one priority? 20 A. Have I ruled it out? No. 21 Q. It's your opinion that partisan intent 22 was one of many considerations? 23 A. It was one of several considerations that 24 have to be taken into account when drawing a map. 25 Q. Do you have any opinion on the -- the</p>

Page 22	<p>1 legislature's prioritization of those</p> <p>2 considerations?</p> <p>3 A. Of the legislature's?</p> <p>4 Q. Yes. Do you have any opinion of the</p> <p>5 legislature's prioritization of those</p> <p>6 considerations?</p> <p>7 A. So I want to make sure I understand the</p> <p>8 question. Are you asking whether I can make an</p> <p>9 inference about the collective intent of the</p> <p>10 legislature or about the -- the intent of the</p> <p>11 people who drew the maps who were acting on behalf</p> <p>12 of the legislature? I just want to be precise</p> <p>13 about what it is that you're asking.</p> <p>14 Q. So earlier I asked you what other bases</p> <p>15 do you have that the legislature acted with</p> <p>16 partisan intent, and you answered "it's my review</p> <p>17 of the record of the case and the testimony of</p> <p>18 people who drew the maps." Do you remember that?</p> <p>19 A. Yes.</p> <p>20 Q. So we know that -- I understand your</p> <p>21 opinion to be that you think the legislature acted</p> <p>22 with partisan intent. What I'd like to know is</p> <p>23 was -- was that consideration of partisan intent</p> <p>24 the most important consideration?</p> <p>25 A. Whether it was the most important</p>	Page 24	<p>1 A. But there -- in my view, there is simply</p> <p>2 no doubt that partisan intent, if not the most</p> <p>3 important factor, was one of the most important</p> <p>4 factors behind the drawing of Act 43. And that's</p> <p>5 based on the evidence and data that I've already</p> <p>6 mentioned.</p> <p>7 Q. But it's not your opinion that</p> <p>8 partisanship was the most important factor;</p> <p>9 correct?</p> <p>10 A. I'm not offering an opinion about whether</p> <p>11 it was the most important factor, although it</p> <p>12 clearly was one of the most important factors.</p> <p>13 Q. Are you offering an opinion about whether</p> <p>14 it was the second most important factor?</p> <p>15 A. My answer does not change.</p> <p>16 Q. Are you offering an opinion about whether</p> <p>17 it was the third most important factor?</p> <p>18 A. Well, I mean, we -- it was one of the</p> <p>19 most important factors.</p> <p>20 Q. Is your opinion that partisan intent was</p> <p>21 not the least important factor?</p> <p>22 A. Was not the least important factor. My</p> <p>23 opinion is that it was one of the most important</p> <p>24 factors.</p> <p>25 Q. Okay. So was your assignment also for</p>
Page 23	<p>1 consideration, I don't have any evidence to draw</p> <p>2 that inference about whether it was number one, or</p> <p>3 one-and-a-half, or two. But clearly it was a major</p> <p>4 part of the way the map drawers drew the map,</p> <p>5 because that's what they said.</p> <p>6 Q. When you say it was a major -- a major</p> <p>7 part of the way the map drawers drew the map, do</p> <p>8 you think that it was, you know, more important</p> <p>9 than half of the considerations?</p> <p>10 A. It's not possible to answer that</p> <p>11 question. I base my opinion on the empirical</p> <p>12 record and the data that I have. And that</p> <p>13 indicates clearly that partisan intent was a major</p> <p>14 factor behind how Act 43 is drawn. And we know</p> <p>15 that because it's part of the record. The judges</p> <p>16 reached that conclusion. And it's my conclusion</p> <p>17 based on my analysis of how -- what the map looks</p> <p>18 like, what Act 43 looks like, and looking at</p> <p>19 specific districts.</p> <p>20 Q. What's the difference between a major</p> <p>21 factor and a minor factor in redistricting?</p> <p>22 A. Well, essentially this is semantic, but</p> <p>23 we can go over the, you know, the traditional</p> <p>24 redistricting criteria.</p> <p>25 Q. We'll get there later today.</p>	Page 25	<p>1 the Assembly Democratic Campaign Committee in this</p> <p>2 case?</p> <p>3 MR. POLAND: I'm going to object to the</p> <p>4 form of the question. Because you used the term</p> <p>5 "in this case."</p> <p>6 BY MS. MEEHAN:</p> <p>7 Q. Are you aware that the Assembly</p> <p>8 Democratic Campaign Committee filed a lawsuit in</p> <p>9 2018 alleging similar claims?</p> <p>10 A. Actually, no.</p> <p>11 Q. Are you aware that -- you're not aware</p> <p>12 that the Assembly Democratic Campaign Committee</p> <p>13 filed a lawsuit against the same defendants in this</p> <p>14 case?</p> <p>15 A. I was asked to perform an empirical</p> <p>16 analysis.</p> <p>17 Q. I want you to answer my question. You're</p> <p>18 not aware that the Assembly Democratic Campaign</p> <p>19 Committee filed a lawsuit against the same</p> <p>20 defendants in 2018?</p> <p>21 A. That's correct.</p> <p>22 Q. You mentioned that one of your</p> <p>23 assignments was to analyze the effects of Act 43 on</p> <p>24 political parties; isn't that right?</p> <p>25 A. That's correct.</p>

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<p>1 Q. And you were analyzing the effects on 2 political parties as part of your expert report 3 drafted on behalf of the individual plaintiffs in 4 this case; is that correct? 5 A. That's correct. 6 Q. You were not analyzing the effects of Act 7 43 on the political parties for purposes of 8 offering an expert opinion for the Assembly 9 Democratic Campaign Committee; is that correct? 10 A. I was asked to write a report. I 11 submitted it to counsel that I had been working 12 with. And I -- I don't know all of the -- the 13 specifics about who got involved or intervened and 14 when. 15 (Exhibit 4 marked for identification.) 16 BY MS. MEEHAN: 17 Q. I'm handing you an exhibit marked 18 Assembly's Dep Exhibit No. 4. Go ahead and take a 19 look through that. What is this document? 20 A. These appear to be the invoices that I 21 submitted to the Campaign Legal Center covering my 22 work from July 2018 through the end of January. 23 Q. Are these all the invoices you've sent to 24 the Campaign Legal Center between the time the 25 Supreme Court remanded this case for further</p>	<p>1 Q. But you aren't sure? 2 A. Well, it was -- it was not a lot, but it 3 certainly was not \$10,000. 4 Q. So something between 1,000 and \$10,000? 5 A. I don't know. 6 Q. Okay. 7 A. I would have to check my records. 8 Q. Are these invoices an accurate reflection 9 of your work between the time the Supreme Court 10 remanded this case and March -- I 11 guess February 28th? 12 A. I think that's true. I don't recall 13 doing any work prior to July of 2018. 14 Q. And the hours on these invoices are an 15 accurate reflection of your work? 16 A. That's correct. 17 Q. The amounts billed on these invoices are 18 an accurate reflection of the amounts you've billed 19 plaintiff's counsel? 20 A. That's correct. 21 Q. You started drafting your report in 22 September 2018; isn't that right? 23 A. I don't recall the exact date that I 24 would consider to be starting. 25 Q. Can you turn to page 3 of Exhibit 4? Do</p>
Page 27	Page 29
<p>1 proceedings, and today? 2 A. I believe so. 3 Q. You haven't submitted an invoice for 4 February; is that right? 5 A. That's correct. 6 Q. Have you submitted an invoice for March? 7 A. I think so. 8 Q. You think you have submitted an 9 invoice -- 10 A. Yes. 11 Q. -- for March? When did you send the 12 Campaign Legal Center that invoice? 13 A. Probably at the beginning of April. 14 Q. You sent it to them more than a week ago? 15 A. Well, hang on a second. Probably. I 16 don't recall the specifics. 17 Q. Do you remember how much -- what was the 18 total of that invoice for March? 19 A. No. 20 Q. Was it more than \$1,000? 21 A. I don't -- I don't know. 22 Q. Was it more than \$10,000? 23 A. No. 24 Q. Was it more than \$5,000? 25 A. I don't -- I don't think so.</p>	<p>1 you see on page 3, this is your invoice for 2 services. The dates on this invoice are in 3 September; correct? 4 A. That's correct. 5 Q. And see where it says September 9th, 6 report drafting? 7 A. That's correct. Yes, I see that. So 8 that probably reflects the date that I actually 9 started formally drafting the report as opposed to 10 doing work on it reflected in earlier hours. But 11 sometimes the distinction is not quite as clear. 12 Q. But here the distinction's pretty clear. 13 It looks like at all times before September 9th you 14 were doing data analysis or having phone calls; 15 after September 9th you were report drafting; isn't 16 that right? 17 A. That's correct. 18 Q. Okay. So excluding March, which you 19 don't know how much you were paid, you billed about 20 \$33,000 for work since 2018; isn't that right? 21 A. That looks about right. 22 Q. How much have you been paid for your work 23 since 2018? 24 A. I think everything is up to date, but I'm 25 not sure.</p>

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1 Q. I want to -- I want to figure out who
 2 you've talked to about your work in this case
 3 without revealing the substance of your
 4 conversations. Have you talked to your lawyers?
 5 MR. POLAND: Just going to object to the
 6 form of the question. You said your lawyers. If
 7 you're referring to counsel in a case --
 8 BY MS. MEEHAN:
 9 Q. Have you talked to the plaintiff's
 10 lawyers about your work in this case?
 11 A. Yes.
 12 Q. Do you have your own personal lawyer?
 13 A. No.
 14 Q. Have you talked to any individual
 15 plaintiffs about your work in this case?
 16 A. No.
 17 Q. Have you talked to Dr. Jowei Chen about
 18 your work in this case?
 19 A. I may have had some conversations with
 20 him, but I actually don't recall. But it's
 21 possible that I -- that I did speak with him.
 22 Q. Did you speak with him over the phone?
 23 A. If we had a conversation, it was probably
 24 over the phone.
 25 Q. You've never e-mailed Dr. Chen?

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1 A. Have I ever e-mailed Dr. Chen?
 2 Q. You've never -- you've never e-mailed
 3 Dr. Chen about your work in this case?
 4 A. Well, let's establish the parameters.
 5 From the beginning, since 2014, or since July of
 6 2018?
 7 Q. Well, let's do both. Have you talked to
 8 Dr. Jowei Chen about your work in this case since
 9 the Supreme Court remanded for further proceedings?
 10 A. It's possible, but I don't -- I don't
 11 recall any specific conversations.
 12 Q. And sorry, I was imprecise there. Have
 13 you e-mailed with Dr. Jowei Chen about your work in
 14 this case since the Supreme Court remanded for
 15 further proceedings?
 16 A. Not that I recall.
 17 Q. Do you have access to your e-mail today?
 18 A. Today? No.
 19 Q. You don't have any access to your e-mail?
 20 A. Sitting here, no.
 21 Q. If we took a break and you -- would you
 22 be able to look through your e-mail?
 23 A. Yes.
 24 Q. So maybe if we take a break you could
 25 look through your e-mail and see if you ever

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1 e-mailed with Dr. Jowei Chen about this case;
 2 right?
 3 A. I could -- I could do that.
 4 Q. Okay. But you might have talked to him
 5 on the phone; is that right?
 6 A. It's possible.
 7 Q. And how many times do you think you might
 8 have talked to him on the phone?
 9 A. Since July, I don't recall. It certainly
 10 wouldn't have been a lot. But I'm not sure if I
 11 actually spoke with him at all. I don't recall
 12 having a conversation with him.
 13 Q. Do you recall having conversations with
 14 anyone who works for Dr. Chen?
 15 A. No.
 16 Q. And you did talk to Dr. Chen in Whitford
 17 one, so between 2014 and the Supreme Court appeal;
 18 isn't that right?
 19 A. That's correct.
 20 Q. And did you e-mail with him during that
 21 time period?
 22 A. It's possible.
 23 Q. Did you talk to him over the phone during
 24 that time period?
 25 A. Yes.

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1 Q. And how many times did you talk to him
 2 over the phone?
 3 A. I would estimate maybe once or twice.
 4 Q. What did you talk about?
 5 A. We had a conversation about his -- his
 6 automated map drawing coding.
 7 Q. The same automated -- the same
 8 methodology for automated map drawing that he's
 9 used in this case?
 10 A. I don't know that it's precisely the
 11 same. There were -- my understanding is that there
 12 are some similarities, but I don't know if he was
 13 using the -- exactly the same method in 2018 that
 14 we had talked about in 2016.
 15 Q. Was it the Monte Carlo method that you
 16 were talking about in two -- between 2014 and 2018?
 17 A. No.
 18 Q. What was it?
 19 A. It was -- the conversation that I recall
 20 was about his method of avoiding the problem of
 21 automated maps getting themselves into corners, and
 22 how he had solved that problem.
 23 Q. Why -- why were you interested in
 24 Dr. Chen's resolution of that problem?
 25 A. Because why I was interested in that

Page 34	<p>1 particular issue is that that is -- that is a</p> <p>2 problem that has beset automated redistricting</p> <p>3 methods from the beginning of attempts to try to</p> <p>4 use computers to do that since the 1960s. And I</p> <p>5 was familiar with Professor Chen's work prior to</p> <p>6 that, but wanted to talk to him about these methods</p> <p>7 about how he had devised a way to avoid automated</p> <p>8 maps getting -- drawing themselves into corners.</p> <p>9 Q. Can you explain that problem to me?</p> <p>10 A. So the problem is, once you start drawing</p> <p>11 a map -- a lot of automated methods begin drawing a</p> <p>12 map. And it doesn't matter where they start, but</p> <p>13 they wind up, as they get closer to completion,</p> <p>14 that they have a problem that they can't -- the</p> <p>15 computer can't solve because it's a map that has</p> <p>16 noncontiguous areas or a population that exceeds</p> <p>17 acceptable deviations. And a lot of methods that</p> <p>18 have attempted to do this wind up generating lots</p> <p>19 of maps that actually are not compliant. And the</p> <p>20 method that Professor Chen devised solved that</p> <p>21 problem.</p> <p>22 Q. Is his method that solves that problem --</p> <p>23 let me start over. So you said you talked about a</p> <p>24 method, his method in Whitford one. Is he applying</p> <p>25 the same method to solve that problem since the</p>	Page 36	<p>1 conversation, it probably would have been something</p> <p>2 about the work that he had done in 2016 and any</p> <p>3 questions I might have had about that. But again,</p> <p>4 I don't recall a specific conversation or exchange</p> <p>5 with him.</p> <p>6 Q. Did you talk to any other experts who are</p> <p>7 or were involved earlier in this case since --</p> <p>8 since 2018?</p> <p>9 A. So if I -- so there are two parts of</p> <p>10 that. Have I talked to anybody else, any other</p> <p>11 experts who were involved in this case from the</p> <p>12 beginning?</p> <p>13 Q. Since 2018, have you talked to any other</p> <p>14 experts who have been involved in Whitford?</p> <p>15 A. I don't believe so.</p> <p>16 Q. Since 2018, have you talked to any other</p> <p>17 experts involved in the Michigan redistricting case</p> <p>18 about this case?</p> <p>19 A. I don't think so.</p> <p>20 Q. Have you talked to Chris Warshaw about</p> <p>21 this case?</p> <p>22 A. Yes.</p> <p>23 Q. Is Chris -- Chris Warshaw is an expert</p> <p>24 involved in the Michigan redistricting case; isn't</p> <p>25 that right?</p>
Page 35	<p>1 Supreme Court remanded the case for further</p> <p>2 proceedings?</p> <p>3 MR. POLAND: Object to the form of the</p> <p>4 question.</p> <p>5 THE WITNESS: So my understanding of the</p> <p>6 description of the method he used since I was --</p> <p>7 have been working on this part of the -- my report</p> <p>8 is that it begins with the same underlying</p> <p>9 solution, or the same underlying approach. I don't</p> <p>10 know if it is the same in all characteristics from</p> <p>11 what he and I had talked about.</p> <p>12 BY MS. MEEHAN:</p> <p>13 Q. Did you talk to Dr. Simon Jackman since</p> <p>14 the Supreme Court remanded this case for further</p> <p>15 proceedings?</p> <p>16 A. It's possible. I don't -- I don't recall</p> <p>17 any specific conversations.</p> <p>18 Q. Would you have talked to him over the</p> <p>19 phone?</p> <p>20 A. Possibly.</p> <p>21 Q. Would you have exchanged e-mails with</p> <p>22 him?</p> <p>23 A. It's possible.</p> <p>24 Q. What would you have talked about?</p> <p>25 A. We might have -- I -- if we had a</p>	Page 37	<p>1 A. He might be. I don't know all of the --</p> <p>2 actually, let me restate that. He -- I do know</p> <p>3 that he testified, so he was an expert in that</p> <p>4 case.</p> <p>5 Q. He's an assistant professor at George</p> <p>6 Washington University; isn't that right?</p> <p>7 A. That's correct.</p> <p>8 Q. Do you know if he's an expert in any</p> <p>9 other cases beyond the Michigan redistricting case?</p> <p>10 A. I imagine he probably has been involved</p> <p>11 in other cases. I don't know specifically what</p> <p>12 they -- which ones they are.</p> <p>13 Q. Do you know whether he's involved in the</p> <p>14 Pennsylvania redistricting case?</p> <p>15 A. I don't know.</p> <p>16 Q. You're also an expert in the Michigan</p> <p>17 redistricting case; right?</p> <p>18 A. That's correct.</p> <p>19 Q. Have you -- have you met Mr. Warshaw, or</p> <p>20 Professor Warshaw, as part of your work in that</p> <p>21 case?</p> <p>22 A. As part of my work in that case, no.</p> <p>23 Q. Did you talk to Chris Warshaw over the</p> <p>24 phone about your work in this case?</p> <p>25 A. Yes.</p>

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1 Q. What did you talk about over the phone?

2 A. We talked about his data set that he

3 developed to analyze the aggregate effects of

4 gerrymandering, and also had a conversation about

5 an R-package that he wrote which I used to generate

6 a probability of policy differences between

7 2010-2014.

8 Q. Did you talk about anything else?

9 A. Related to the case?

10 Q. Did you --

11 A. Or anything else?

12 Q. Did you talk about anything else related

13 to your work in this case?

14 A. No.

15 Q. Did you talk to a professor named Andy

16 Bonica?

17 A. Bonica.

18 Q. Bonica.

19 A. About my work in this case?

20 Q. Correct.

21 A. No.

22 Q. Have you talked to any other professors

23 about your work in this case?

24 A. I don't -- I don't think so. I don't

25 believe so. I don't recall any conversations about

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1 this case with -- with anybody else.

2 Q. Have you talked to anyone at the Assembly

3 Democratic Campaign Committee about your work in

4 this case?

5 A. No.

6 Q. Have you talked to any legislators about

7 your work in this case?

8 A. No.

9 Q. Have you talked to any legislative aides

10 about your work in this case?

11 A. No.

12 Q. Have you talked to anyone else about your

13 work in this case?

14 A. My wife is aware that I'm working on this

15 case, but I've had no substantive conversations

16 with anybody else besides the ones that I've

17 mentioned.

18 Q. I'm going to show you a document -- one

19 second. We're going -- we'll come back to this

20 later.

21 (Exhibit 5 marked for identification.)

22 BY MS. MEEHAN:

23 Q. I'm handing you a document marked

24 Assembly's Dep Exhibit No. 5. Are you familiar

25 with this document?

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1 A. Yes.

2 Q. And is this an e-mail between yourself

3 and Chris Warshaw?

4 A. Yes, it is.

5 Q. And the e-mail's dated December 26, 2018;

6 isn't that right?

7 A. That's correct.

8 Q. This is the same Chris Warshaw we were

9 discussing who's an assistant professor at George

10 Washington University; is that right?

11 A. That's correct.

12 Q. Is this the only e-mail you have between

13 you and Chris Warshaw about this case?

14 A. There might be some others, but this is

15 the -- this is the sub -- a substantive e-mail. So

16 I -- I did go through and check my e-mail records

17 for other communications.

18 Q. How many other e-mails do you think there

19 are between you and Chris Warshaw about your work

20 in this case?

21 A. I don't know. Not many.

22 Q. More than five?

23 A. I doubt it.

24 Q. Do you see in this e-mail it says, "Here

25 are some files that might help you form some rough

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1 analysis of associational impacts for state

2 legislature plans"?

3 A. Yes.

4 Q. And then there's a link to a Dropbox

5 account; isn't that right?

6 A. That's correct.

7 Q. Unfortunately, that Dropbox link is -- no

8 longer works. So do you know how many files were

9 in this linked Dropbox folder?

10 A. No.

11 Q. And do you know -- I mean, were there

12 more than five files?

13 A. I don't remember.

14 Q. Were there more than ten files?

15 A. I don't remember.

16 Q. Were there a hundred files?

17 A. I doubt it.

18 Q. Do you doubt there were more than ten

19 files?

20 A. I don't recall.

21 Q. Do you recall what kind of files were in

22 the linked Dropbox folder?

23 A. The one file that I do recall is that

24 there was a -- a data file of various state level

25 variables going back to, I think the 1990s, or even

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1 the 1970s.
 2 Q. And do you know the file names?
 3 A. I do remember that one file name that I
 4 used.
 5 Q. What is it?
 6 A. I believe it's called gerrymandered state
 7 house, or state house gerrymander.
 8 Q. And when you say it's the one file you
 9 used, did you open the other files in the Dropbox
 10 folder?
 11 A. I don't recall.
 12 Q. It's possible you opened them?
 13 A. It's possible.
 14 Q. Earlier I asked you a series of questions
 15 about whether you talked to anyone. Do you
 16 understand that when I asked you if you talked to
 17 anyone, that would mean e-mailing, phone calls,
 18 texting?
 19 A. Okay.
 20 Q. I mean, I could go back through all the
 21 people. But when I say did you talk to anyone in
 22 the case, what does that mean to you?
 23 A. Well, I regarded that I have
 24 communications with -- with individuals.
 25 Q. And you can have communications over the

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1 phone?
 2 A. Yes.
 3 Q. You can have communications over e-mail?
 4 A. Yes.
 5 Q. You can have communications over text
 6 messages?
 7 A. Yes.
 8 Q. Okay. Go ahead and look back at your
 9 reports, Exhibits 1 and 2. Did you write both of
 10 these reports?
 11 A. Yes.
 12 Q. Did your lawyers write any parts of your
 13 reports?
 14 A. Did the lawyers write any part of it?
 15 No.
 16 Q. Did they suggest edits?
 17 A. There were questions about clarity and --
 18 but I made the final decision about everything that
 19 went in here.
 20 Q. You spent about 45 hours drafting your
 21 opening report; is that right?
 22 A. Well, if we -- if we limit drafting to
 23 actually writing, that sounds about right.
 24 Q. About how much time did you spend writing
 25 your rebuttal report?

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1 A. I would have to look. It might be
 2 reflected in the -- in the invoices, but I
 3 don't -- so it looks in the invoices that I didn't
 4 explicitly distinguish between the background data
 5 work and the writing. But it looks on the order of
 6 about 40 hours.
 7 Q. For both background data analysis and
 8 writing; is that right?
 9 A. That's correct.
 10 Q. Okay. You can put those aside for one
 11 moment. Bear with me. There we go. All right.
 12 I'm handing you an exhibit that's been marked
 13 Assembly's Dep Exhibit No. 6. Take a look and flip
 14 through that.
 15 (Exhibit 6 marked for identification.)
 16 BY MS. MEEHAN:
 17 Q. Do you recognize this document?
 18 A. Yes.
 19 Q. This is the notice asking you to be here
 20 today; isn't that right?
 21 A. That's correct.
 22 Q. And go ahead and flip to the last page of
 23 Exhibit 6, the notice. Have you seen this
 24 particular page? It's titled Exhibit A.
 25 A. Yes.

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1 Q. And what is Exhibit A?
 2 A. It's a request for documents. It's a
 3 request for documents.
 4 Q. And including -- do you see where number
 5 two on Exhibit A asks you for documents and
 6 communications containing or reflecting facts or
 7 data considered by you in forming your opinions,
 8 and then there's a list of examples?
 9 A. Yes.
 10 Q. Did you gather all of those documents?
 11 A. Yes.
 12 Q. And did you provide them to your counsel?
 13 A. Yes.
 14 Q. Have you withheld any documents?
 15 A. No.
 16 (Exhibit 7 marked for identification.)
 17 BY MS. MEEHAN:
 18 Q. And have you gathered all the other
 19 documents for the other numbered requests on
 20 Exhibit A?
 21 A. Everything that I was able to find that
 22 was in my possession.
 23 Q. I'm handing you a document marked
 24 Assembly's Dep Exhibit 7. Take a look at that.
 25 What is this document?

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1 A. This is an e-mail to me from Nick
 2 Stephanopoulos with some maps and data files.
 3 Q. And on -- so the e-mail's dated
 4 August 19, 2018; isn't that right?
 5 A. That's correct.
 6 Q. And it says it's to K.R. Mayer Consulting
 7 at gmail.com. That's you?
 8 A. That's correct.
 9 Q. Do you see that the e-mail has five
 10 attachments?
 11 A. That's what it looks like, yes.
 12 Q. Okay.
 13 (Exhibit 8 marked for identification.)
 14 BY MS. MEEHAN:
 15 Q. I'm handing you a document marked
 16 Assembly's Dep Exhibit No. 8. Take a look at that
 17 document. Is Exhibit 8 -- or what is Exhibit 8?
 18 A. This is a -- a map which -- that was
 19 provided to me that shows the Act 43 districts with
 20 the ward level vote share based on the -- the
 21 baseline measure that Professor Chen calculated.
 22 Q. Do you recognize this as the first
 23 attachment in the e-mail marked Exhibit 7?
 24 A. That's what it looks like.
 25 Q. And that first attachment, for the

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1 record, is titled 180818.ChenAct43map.PDF; isn't
 2 that right?
 3 A. That's what it says.
 4 Q. Okay.
 5 (Exhibit 9 marked for identification.)
 6 BY MS. MEEHAN:
 7 Q. I'm handing you another document marked
 8 Assembly's Dep Exhibit No. 9. Do you recognize
 9 this document?
 10 A. Yes.
 11 Q. What is this document?
 12 A. This is the same ward level data with
 13 district boundaries from Professor Chen's
 14 demonstration map.
 15 Q. Do you recognize this document as 180818
 16 document Chen alternative map dot PDF, the second
 17 attachment in Exhibit 7?
 18 A. That appears to be what it is.
 19 Q. You relied on both of these maps in
 20 drafting your reports?
 21 A. Relied on them in drafting my original
 22 report. And I think I made a couple of references
 23 in the rebuttal report.
 24 Q. Okay. Looking back at exhibit -- you can
 25 set those aside, but we'll be coming back to those

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1 today, so keep them close. Looking back at
 2 Exhibit 7, which is the e-mail that Professor
 3 Stephanopoulos sent to you on August 19, 2018. Oh,
 4 there's one more unredacted attachment, isn't that
 5 right? It's titled district composite scores.xlsx.
 6 A. That's correct.
 7 Q. And that attachment refers to the Chen
 8 composite scores for each district; right?
 9 A. That's what it -- that's what it appears
 10 to be.
 11 Q. It looks like -- so -- and then it looks
 12 like there were two other attachments; right?
 13 A. That's correct.
 14 Q. But those are redacted; right?
 15 A. That's correct.
 16 Q. What were those attachments?
 17 A. I don't remember.
 18 Q. If you don't remember what the redacted
 19 attachments were, how do you know if you considered
 20 them?
 21 A. Because I disclosed or made counsel aware
 22 of everything that I did consider. And if it's
 23 redacted, what that means is that the information
 24 was not something I considered in forming my
 25 opinion.

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1 Q. When you gave this e-mail to your
 2 counsel, it was not redacted; correct?
 3 A. That's correct.
 4 Q. When did you gather your documents
 5 responsive to the Assembly's dep notice?
 6 A. So when you mean the Assembly deposition
 7 notice, do you mean today?
 8 Q. When did you gather your documents
 9 responsive to Exhibit A on -- this is a little
 10 confusing. The Assembly's deposition notice is
 11 marked as Assembly Deposition Exhibit 6; isn't that
 12 right?
 13 A. That's correct.
 14 Q. The last page of Assembly's is titled
 15 Exhibit A; isn't that right?
 16 A. That's correct.
 17 Q. And Exhibit A asks you to gather
 18 documents and communications containing or
 19 reflecting facts or data considered by you in
 20 forming your opinions; isn't that right?
 21 A. That's correct.
 22 Q. When did you gather these documents?
 23 A. My recollection is that it was at the
 24 beginning of last week.
 25 Q. So at the beginning of last week you

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<p>1 found this e-mail, Exhibit 7?</p> <p>2 A. So my recollection is that this was part</p> <p>3 of the disclosures in the -- in the initial report,</p> <p>4 and I --</p> <p>5 Q. Okay. When you provided this as</p> <p>6 disclosures for your initial deposition in November</p> <p>7 of 2018, you provided this e-mail to your counsel?</p> <p>8 A. That's correct.</p> <p>9 Q. And when you provided this e-mail to your</p> <p>10 counsel, it was not redacted; correct?</p> <p>11 A. That's correct.</p> <p>12 Q. What were the unredacted names of the</p> <p>13 attachments in this e-mail?</p> <p>14 A. As I said before, I don't remember.</p> <p>15 Q. Did you open the attachments?</p> <p>16 A. I don't remember.</p> <p>17 Q. You don't remember when Professor</p> <p>18 Stephanopoulos sent you an e-mail in August 2018,</p> <p>19 whether you opened all five attachments?</p> <p>20 A. That's correct.</p> <p>21 Q. When -- Professor Stephanopoulos is one</p> <p>22 of the lawyers for the plaintiffs; correct?</p> <p>23 A. That's correct.</p> <p>24 Q. So if a lawyer for a plaintiff sends you</p> <p>25 an e-mail containing maps and data related to your</p>	<p>1 MR. POLAND: If you got a request for</p> <p>2 production, Counsel, you can make it to us and</p> <p>3 we'll consider it.</p> <p>4 BY MS. MEEHAN:</p> <p>5 Q. Okay. I'm handing you a document marked</p> <p>6 Assembly's Dep Exhibit No. 10.</p> <p>7 (Exhibit 10 marked for identification.)</p> <p>8 BY MS. MEEHAN:</p> <p>9 Q. What is this document?</p> <p>10 A. This is an e-mail from Nick attaching</p> <p>11 some, in the text, some published papers that I may</p> <p>12 want to look at.</p> <p>13 Q. And there are nine -- the e-mail was sent</p> <p>14 August 3, 2018; isn't that right?</p> <p>15 A. That's correct.</p> <p>16 Q. And it was sent to you at K.R. Mayer</p> <p>17 Consulting at gmail.com; correct?</p> <p>18 A. That's correct.</p> <p>19 Q. And there are nine attachments to this</p> <p>20 e-mail; isn't that right?</p> <p>21 A. That's correct.</p> <p>22 Q. We can see one attachment titled</p> <p>23 Winburn.PDF; isn't that right?</p> <p>24 A. That's correct.</p> <p>25 Q. But the eight other published papers that</p>
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<p>1 expert report, you don't open all the attachments?</p> <p>2 MR. POLAND: Going to object to the form</p> <p>3 of the question.</p> <p>4 BY MS. MEEHAN:</p> <p>5 Q. Answer the question.</p> <p>6 A. It depends. I might have opened them.</p> <p>7 But if I did not rely on them in forming my</p> <p>8 opinion, that puts them in a separate category, as</p> <p>9 I understand it. It's possible that I opened them,</p> <p>10 looked at them, and decided that they were not</p> <p>11 useful. But this was eight months ago.</p> <p>12 Q. You said you did not rely on them -- you</p> <p>13 might not have relied on them. Did you consider</p> <p>14 them?</p> <p>15 A. Probably not. Or actually, no.</p> <p>16 Q. Why do you say "actually, no"?</p> <p>17 A. Because if I looked at something and</p> <p>18 decided that it was not materially useful, that</p> <p>19 means I didn't consider it.</p> <p>20 Q. You have access to your e-mail during a</p> <p>21 break; correct?</p> <p>22 A. That's correct.</p> <p>23 Q. Okay. Why not, during the break, you</p> <p>24 find this e-mail and let me know what the names of</p> <p>25 these two attachments are. You okay with that?</p>	<p>1 are attached are redacted; correct?</p> <p>2 A. That's correct.</p> <p>3 Q. What were these eight other published</p> <p>4 papers?</p> <p>5 A. I don't remember.</p> <p>6 Q. Were the published papers about</p> <p>7 redistricting?</p> <p>8 A. I don't remember.</p> <p>9 Q. Did you open the eight published papers?</p> <p>10 A. It's possible.</p> <p>11 Q. Did you read any portion of the redacted</p> <p>12 papers?</p> <p>13 A. It's possible that it also may have been</p> <p>14 things that were already in my possession. So it's</p> <p>15 possible that I was familiar with them or had</p> <p>16 already read them.</p> <p>17 Q. Is it possible you considered the eight</p> <p>18 redacted published papers?</p> <p>19 A. Again, is it possible that I considered.</p> <p>20 I would say no, because if I had considered or</p> <p>21 relied upon them, that would have been noted.</p> <p>22 Q. So the papers might have been already in</p> <p>23 your possession -- let's move on. Since gathering</p> <p>24 the documents responsive to exhibit -- Assembly's</p> <p>25 Dep Exhibit 6, have you realized that you forgot to</p>

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<p>1 include anything?</p> <p>2 A. It's possible that I may not have</p> <p>3 included an e-mail from Chris Warshaw.</p> <p>4 Q. Anything else?</p> <p>5 A. No.</p> <p>6 Q. Is it possible that there are e-mails</p> <p>7 between you and Professor Chen?</p> <p>8 A. Since -- it's possible. I don't think</p> <p>9 so.</p> <p>10 Q. Anything else?</p> <p>11 A. Not that I recall.</p> <p>12 Q. Okay. Go ahead and find your CV again,</p> <p>13 which is marked Assembly's Dep Exhibit 3. Do you</p> <p>14 have any new articles since updating your CV?</p> <p>15 A. Nothing that has been published.</p> <p>16 Q. Do you have forthcoming articles?</p> <p>17 A. I have one article that is undergoing</p> <p>18 revisions under what's called a revise and</p> <p>19 resubmit. But that is -- that is not the same as</p> <p>20 being forthcoming.</p> <p>21 Q. Is that article reflected on your CV yet?</p> <p>22 A. The previous paper it's based on is, but</p> <p>23 I -- is reflected on page 8, but I don't put R and</p> <p>24 Rs on my vitae --</p> <p>25 Q. And what is the previous paper that this</p>	<p>1 you ever acted as a redistricting consultant?</p> <p>2 A. So what do you mean by "consultant"?</p> <p>3 'Cause that encompasses a wide range of things.</p> <p>4 Q. Have you ever worked with a state</p> <p>5 legislature performing redistricting?</p> <p>6 A. Outside of the cases that I have worked</p> <p>7 on, no.</p> <p>8 Q. When you say outside of the cases you</p> <p>9 have worked on, do you mean you have worked with</p> <p>10 state legislatures as an expert witness?</p> <p>11 A. In Baumgart, for example, given that the</p> <p>12 senate Democrats, the senate Democratic caucus, I</p> <p>13 did -- there were legislators who were in the room</p> <p>14 and that I had talked to.</p> <p>15 Q. And have you ever after -- let's say</p> <p>16 after a state receives new census data, have you</p> <p>17 ever worked with a legislature to redistrict based</p> <p>18 on that new census data?</p> <p>19 A. With the legislature, no.</p> <p>20 Q. After a state receives new census data,</p> <p>21 have you ever worked with any redistricting</p> <p>22 commissions to redistrict based on that census</p> <p>23 data?</p> <p>24 A. So by commissions, do you mean an</p> <p>25 official state agency that has the responsibility</p>
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<p>1 article is based on?</p> <p>2 A. It's the first conference paper on</p> <p>3 page 8, Voter Identification and Nonvoting in</p> <p>4 Wisconsin.</p> <p>5 Q. And what publication is currently doing</p> <p>6 the -- or what publication -- who's asked you to do</p> <p>7 the R and R?</p> <p>8 A. We submitted the paper to the Election</p> <p>9 Law Journal, and the editor asked us to do</p> <p>10 revisions.</p> <p>11 Q. How do you describe your expertise?</p> <p>12 A. How would I describe my expertise?</p> <p>13 Q. Uh-huh.</p> <p>14 A. In political science elections, election</p> <p>15 administration. That would be the -- the general</p> <p>16 categories of expertise. Could add the presidency,</p> <p>17 American National Institutions.</p> <p>18 Q. Do you consider yourself a redistricting</p> <p>19 expert?</p> <p>20 A. Yes.</p> <p>21 Q. Has a court found you to be an expert in</p> <p>22 redistricting?</p> <p>23 A. Several courts have found me to be an</p> <p>24 expert in redistricting.</p> <p>25 Q. Before your work in this litigation, had</p>	<p>1 for drawing a map, or --</p> <p>2 Q. Have you ever worked with an official</p> <p>3 state agency?</p> <p>4 A. An official state agency. I had</p> <p>5 conversations with people on the state elections</p> <p>6 board, but I don't consider that to be official</p> <p>7 consulting.</p> <p>8 Q. The Wisconsin State Elections Board?</p> <p>9 A. Correct.</p> <p>10 Q. So earlier I asked you if you talked to</p> <p>11 anyone in the Wisconsin state government about</p> <p>12 assisting with redistricting before Act 43 was</p> <p>13 passed. Do you remember that?</p> <p>14 A. Yes.</p> <p>15 Q. And you said no.</p> <p>16 A. That's correct.</p> <p>17 Q. So why were these discussion -- when were</p> <p>18 these discussions with the Wisconsin State</p> <p>19 Elections Board?</p> <p>20 A. Well, I want to be more precise, that I</p> <p>21 was part of a research group since 2008 that had</p> <p>22 been working with the state elections board, and</p> <p>23 people in the -- the state elections board, not</p> <p>24 necessarily the board but the agency, and had</p> <p>25 conversations on a lot of different things. But I</p>

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<p>1 don't recall ever being in a position where I was</p> <p>2 formally providing advice or expertise or</p> <p>3 information specifically on redistricting.</p> <p>4 Q. Okay.</p> <p>5 A. We did provide expertise on other issues.</p> <p>6 Q. But no -- you didn't comment on</p> <p>7 redistricting?</p> <p>8 A. Not in any official capacity, no.</p> <p>9 Q. Did you comment on redistricting in any</p> <p>10 unofficial capacity?</p> <p>11 A. It's possible that I had conversations</p> <p>12 with, over a decade of working, that it might have</p> <p>13 come up. But that's -- that's an informal,</p> <p>14 nonsubstantive conversation, which is different</p> <p>15 from actually doing -- doing work.</p> <p>16 Q. Would those conversations have related to</p> <p>17 how particular districts were drawn?</p> <p>18 A. I don't remember.</p> <p>19 Q. Is it possible those conversations would</p> <p>20 have related to how particular districts were</p> <p>21 drawn?</p> <p>22 A. I think it's unlikely.</p> <p>23 Q. Would those conversations have related to</p> <p>24 the effect of district lines on Wisconsin state</p> <p>25 assembly elections?</p>	<p>1 process, which does -- it's not really a</p> <p>2 commission, it's a state agency that does it.</p> <p>3 Q. Do you have -- did you have printed-out</p> <p>4 remarks?</p> <p>5 A. Yes.</p> <p>6 Q. Do you still have those remarks in your</p> <p>7 possession, custody, or control?</p> <p>8 A. I doubt it.</p> <p>9 Q. Do you remember what month the hearing</p> <p>10 occurred?</p> <p>11 A. No.</p> <p>12 Q. Do you remember if it was the first half</p> <p>13 of the year?</p> <p>14 A. I don't remember.</p> <p>15 Q. Okay. Do you think a redistricting</p> <p>16 commission is a better way to go about</p> <p>17 redistricting than the state legislature?</p> <p>18 A. I'm not offering an opinion in this case</p> <p>19 about alternatives.</p> <p>20 Q. Well, what do you think?</p> <p>21 A. Well, I'm going to limit what -- it</p> <p>22 doesn't matter what I think. What matters is the</p> <p>23 work that I did in this case.</p> <p>24 Q. What's your personal opinion about</p> <p>25 whether a redistricting commission is better than a</p>
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<p>1 A. I doubt it.</p> <p>2 Q. Have you taught any classes about</p> <p>3 redistricting?</p> <p>4 A. Yes.</p> <p>5 Q. When?</p> <p>6 A. Actually, can I amend one of my earlier</p> <p>7 answers? I did -- there was a -- an unofficial</p> <p>8 legislative hearing held in I think 2016 where I</p> <p>9 was asked by Dale Schultz and Tim Cullin to talk.</p> <p>10 And that -- that was in the Capitol, but it was not</p> <p>11 an official legislative hearing. But that was</p> <p>12 specifically about redistricting.</p> <p>13 Q. And what were -- what were your -- what</p> <p>14 was your talk about?</p> <p>15 A. It was about the -- the process and about</p> <p>16 different alternatives to state legislative</p> <p>17 redistricting.</p> <p>18 Q. When you say different alternatives to</p> <p>19 state legislative redistricting, do you mean</p> <p>20 instituting a redistricting commission?</p> <p>21 A. That's one of them.</p> <p>22 Q. What are other alternatives?</p> <p>23 A. To -- there's a wide range of</p> <p>24 possibilities. As I remember that hearing, one of</p> <p>25 the things they were talking about was the Iowa</p>	<p>1 state legislature?</p> <p>2 A. There are some advantages to a</p> <p>3 redistricting commission. It depends on how it's</p> <p>4 structured and what they -- how they go about the</p> <p>5 process of drawing the districts.</p> <p>6 Q. Okay. So you have taught classes about</p> <p>7 redistricting; isn't that right?</p> <p>8 A. That's correct.</p> <p>9 Q. What -- how recently did you teach a</p> <p>10 class about redistricting?</p> <p>11 A. I taught a course, an undergraduate</p> <p>12 course, on election administration generally. I</p> <p>13 believe that was the fall of -- may have been</p> <p>14 the -- the spring of 2018 or 2017 or the fall of</p> <p>15 2017.</p> <p>16 Q. The years start to run together.</p> <p>17 A. They do.</p> <p>18 Q. Yes. Are you familiar with GIS?</p> <p>19 A. Yes.</p> <p>20 Q. And have you used GIS for your work as a</p> <p>21 political science professor?</p> <p>22 A. Yes.</p> <p>23 Q. Have you used GIS for any of your</p> <p>24 articles listed on your CV?</p> <p>25 A. I don't know that I've actually relied on</p>

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<p>1 it in any published work.</p> <p>2 Q. Have you used GIS for your work as an</p> <p>3 expert in litigation?</p> <p>4 A. Yes.</p> <p>5 Q. You're not using GIS for your work as an</p> <p>6 expert for your -- never mind. We can come back to</p> <p>7 that.</p> <p>8 Has a court ever found you to be an</p> <p>9 expert in statistics?</p> <p>10 A. The courts have accepted my testimony on</p> <p>11 quantitative methods. If that constitutes being</p> <p>12 accepted as an expert on statistics, then yes.</p> <p>13 Q. What quantitative methods are you using</p> <p>14 in your expert reports here?</p> <p>15 A. The main quantitative methods are ranging</p> <p>16 from tabulation of data to different regression</p> <p>17 techniques and analyzing data, ward level data, on</p> <p>18 election returns. It's not terribly complicated,</p> <p>19 that part.</p> <p>20 Q. Okay. If you turn to page 2 of your</p> <p>21 opening report, Exhibit 1. Do you see here the</p> <p>22 bullet -- or it's the second full paragraph. You</p> <p>23 say, "My opinions, which are based on the technical</p> <p>24 and specialized knowledge that I have gained from</p> <p>25 my education, training, and experience, are</p>	<p>1 A. To maximize compactness. That's not my</p> <p>2 understanding.</p> <p>3 Q. Do you have any legal training?</p> <p>4 A. Formal legal training, no.</p> <p>5 Q. Do you have any informal legal training?</p> <p>6 A. What do you mean by that?</p> <p>7 Q. Well, you said "formal legal training,</p> <p>8 no," so I'm trying to figure out if there's any</p> <p>9 other legal training, though not formal, you would</p> <p>10 still consider legal training.</p> <p>11 A. I'm familiar -- I am familiar with some</p> <p>12 of the literature. I have used case books in my</p> <p>13 teaching. But I'm not offering a legal conclusion</p> <p>14 in my report.</p> <p>15 Q. Have you ever run for political office?</p> <p>16 A. No.</p> <p>17 Q. Have you ever been a consultant for a</p> <p>18 campaign?</p> <p>19 A. Yes.</p> <p>20 Q. And what campaign were you a consultant</p> <p>21 for?</p> <p>22 A. I was an informal consultant for Russ</p> <p>23 Feingold in 1992 and '98, and also was an informal</p> <p>24 consultant for Madison's mayor Dave Cieslewicz, to</p> <p>25 help him analyze polling data. And I had also done</p>
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<p>1 premised on commonly used, widely accepted, and</p> <p>2 reliable methods of analysis, the application of</p> <p>3 the legal requirements of redistricting, and are</p> <p>4 based on my review and analysis of the following</p> <p>5 information and materials." Do you see that?</p> <p>6 A. Yes.</p> <p>7 Q. I want to focus particularly on your</p> <p>8 statement that your opinions are based on the</p> <p>9 application of the technical -- pardon -- the</p> <p>10 application of the legal requirements of</p> <p>11 redistricting. Do you see that?</p> <p>12 A. Yes.</p> <p>13 Q. Do you consider yourself an expert in the</p> <p>14 legal requirements of redistricting?</p> <p>15 A. What -- that refers to the traditional</p> <p>16 redistricting principles which I am familiar with.</p> <p>17 Q. What do you mean by "legal requirements"?</p> <p>18 A. To give a couple of examples, the</p> <p>19 requirements of population equality, continuity,</p> <p>20 and there are a number of exceptions to that. Some</p> <p>21 of the criteria compactness, respecting municipal</p> <p>22 subdivisions, geographic boundaries, things of that</p> <p>23 nature.</p> <p>24 Q. Is it your opinion that a legislature is</p> <p>25 legally required to maximize compactness?</p>	<p>1 some work for -- so that's -- that's the work I've</p> <p>2 done for specific candidates.</p> <p>3 Q. Have you done any work for political</p> <p>4 parties?</p> <p>5 A. In 1990 I did some polling for, I believe</p> <p>6 it may have been the senate Democratic caucus.</p> <p>7 Q. Do you remember the subject of the</p> <p>8 polling?</p> <p>9 A. I did some -- I did. I created the</p> <p>10 survey instrument and drew the sample of random</p> <p>11 digit dialing asking about -- we did polling in a</p> <p>12 couple of senate races; I don't remember</p> <p>13 specifically the questions that we asked.</p> <p>14 Q. Were the senate -- was the survey before</p> <p>15 the election occurred?</p> <p>16 A. Yes.</p> <p>17 Q. Any other political experience?</p> <p>18 A. I was a consultant for Justice Prosser in</p> <p>19 his 2011 election for the recount.</p> <p>20 Q. On the ideological spectrum of, you know,</p> <p>21 conservative, classical liberal, liberal,</p> <p>22 progressive, where do you think you fall?</p> <p>23 A. I consider myself a moderate.</p> <p>24 Q. Have you ever voted for a Republican?</p> <p>25 A. I'm not going to talk about my voting</p>

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<p>1 history.</p> <p>2 Q. How do you define being a moderate?</p> <p>3 A. Someone who -- someone who's a centrist,</p> <p>4 who has centrist positions on public issues.</p> <p>5 Q. Can you give me an example of a centrist</p> <p>6 position?</p> <p>7 A. Something on -- something that is in the</p> <p>8 middle of the more ideological positions taken by</p> <p>9 Republicans and Democrats.</p> <p>10 Q. Do you think partisan gerrymandering is a</p> <p>11 problem?</p> <p>12 A. I think partisan gerrymandering has some</p> <p>13 identifiable effects on the political process that</p> <p>14 I think can be described as negative.</p> <p>15 Q. Can you tell me all the times you've</p> <p>16 commented on partisan gerrymandering by Democrats</p> <p>17 before the passage of Act 43?</p> <p>18 A. What do you mean by "commented"?</p> <p>19 Q. Have you ever publicly commented on the</p> <p>20 Benisek litigation pending in Maryland?</p> <p>21 A. No.</p> <p>22 Q. Did you ever approach plaintiff's counsel</p> <p>23 in Benisek to serve as an expert?</p> <p>24 A. No.</p> <p>25 Q. Were you approached by plaintiff's</p>	<p>1 that you can point to. It is a function of context</p> <p>2 in looking -- can you articulate a set of reasons</p> <p>3 why there is a community in this area that ought to</p> <p>4 have been maintained. But you sometimes will not</p> <p>5 get universal agreement about what that means.</p> <p>6 Q. Would an American Indian tribe be a</p> <p>7 community of interest?</p> <p>8 A. Certainly could be.</p> <p>9 Q. Are you aware that cities sometimes cross</p> <p>10 county lines?</p> <p>11 A. Yes.</p> <p>12 Q. When a drafter goes about redistricting,</p> <p>13 they'd have to make a choice there to keep the city</p> <p>14 together and cross the county line or split the</p> <p>15 city; isn't that right?</p> <p>16 A. The different redistricting principles</p> <p>17 often are intentioned with each other. So that if</p> <p>18 that was something that some -- that a map drawer</p> <p>19 was making a choice about, yes, they would have to</p> <p>20 decide -- they would have to make a choice about</p> <p>21 whether to split or not split. Although it -- some</p> <p>22 states would not count that as a split. Wisconsin,</p> <p>23 I believe, would.</p> <p>24 And so it would essentially be a split</p> <p>25 either way. If you kept the county line, then the</p>
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<p>1 counsel in Benisek to serve as an expert?</p> <p>2 A. No.</p> <p>3 Q. Do you think Democrats in Illinois have</p> <p>4 deployed a partisan gerrymander to maintain control</p> <p>5 of the state legislature?</p> <p>6 A. I haven't looked specifically at the --</p> <p>7 at Illinois. I think that's a reasonable</p> <p>8 inference. If the Benisek plaintiffs had</p> <p>9 approached me and asked me to work for them, I</p> <p>10 wouldn't say no because they were Republicans.</p> <p>11 Q. Are you familiar with traditional</p> <p>12 redistricting criteria?</p> <p>13 A. Yes.</p> <p>14 Q. What does it mean to preserve communities</p> <p>15 of interest?</p> <p>16 A. That's a recognized subjective criterion,</p> <p>17 and it involves maintaining if you can identify a</p> <p>18 community of interest, whether it's a community</p> <p>19 that shares economic interests or industrial, that</p> <p>20 you endeavor to keep that together. It's often put</p> <p>21 into practice with things like core district</p> <p>22 retention. So that is -- that is a standard. But</p> <p>23 it is a subjective one.</p> <p>24 Q. What do you mean by "subjective"?</p> <p>25 A. That there's no single quantity or number</p>	<p>1 city would be split. If you kept the city</p> <p>2 together, then you would be crossing a county line.</p> <p>3 But there are some states that formalize those</p> <p>4 requirements in ways that don't count everything,</p> <p>5 that all districts that cross political subdivision</p> <p>6 are counted as a split.</p> <p>7 Q. It's your opinion that in Wisconsin, if</p> <p>8 you keep the city together, that's still a split?</p> <p>9 A. I would have to check. It could be. One</p> <p>10 of the things that Wisconsin does is there are</p> <p>11 municipal holes. So a township that might have</p> <p>12 parts of that township that are interior to a city</p> <p>13 that are entirely contained in the city and in</p> <p>14 Wisconsin, that's not counted as a municipal split.</p> <p>15 So I would have to check. It could be. Sitting</p> <p>16 here, I don't remember.</p> <p>17 Q. You mentioned core retention earlier. Do</p> <p>18 you agree to core retention as a traditional</p> <p>19 redistricting criteria?</p> <p>20 A. That's correct.</p> <p>21 Q. Do you agree that the map makers don't</p> <p>22 start on a blank slate; isn't that right?</p> <p>23 A. Well, it depends. Sometimes they act as</p> <p>24 if they do. But maintaining a -- maintaining core</p> <p>25 districts is a consideration. And again, there's</p>

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1 no -- well, I'll stop there.
 2 Q. You agree that before Act 43, there was
 3 an existing map in Wisconsin; right?
 4 A. That's correct.
 5 Q. And that was the court drawn map from
 6 2002; is that right?
 7 A. That's correct.
 8 Q. The result of the Baumgart litigation;
 9 isn't that right?
 10 A. That's correct.
 11 Q. And you were an expert in that case;
 12 right?
 13 A. Yes.
 14 Q. If an existing district from the 2002 map
 15 crossed a county line, the new district might also
 16 cross the same county line because of the core
 17 retention criteria; isn't that right?
 18 A. It's possible.
 19 Q. Do you agree partisanship is not the only
 20 district level factor that affects voting behavior
 21 in state legislature elections?
 22 A. So if you're asking is partisanship the
 23 only factor that affects voting, no, it is not,
 24 there are other factors.
 25 Q. And by "partisanship," do you mean the

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1 party affiliation of the candidate?
 2 A. The party affiliation of the candidate
 3 and the partisan identification or identifications
 4 of voters.
 5 Q. If a voter votes for Tammy Baldwin, a
 6 Democrat, for US senate, but a Republican for their
 7 state assembly, what is the partisan ID of that
 8 voter?
 9 A. It depends.
 10 Q. What would it depend on?
 11 A. What the voter considers themselves. The
 12 key here is that voting patterns in Wisconsin
 13 actually are consistent, very consistent, with
 14 underlying partisanship, which can be accurately
 15 inferred from voting behavior. So the fact that
 16 there might be other factors that affect outcomes,
 17 that does not, by any stretch, render partisanship,
 18 or attempts to estimate partisanship, meaningless
 19 or irrelevant.
 20 Q. Wisconsin doesn't have -- you don't
 21 register for a party when you vote; correct?
 22 A. That's correct.
 23 Q. So how would you determine what a voter
 24 considers herself if she's voted for Tammy Baldwin
 25 for US senate and a Republican assembly candidate?

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1 A. Well, one of the ways is that you would
 2 ask them. But again, that's -- in my report I'm
 3 looking at aggregate outcomes and ways of
 4 characterizing the partisanship of a region, a
 5 ward, a municipality, a district. So there are
 6 actually two different questions. Is it possible
 7 to take a quick break?
 8 MS. MEEHAN: Yeah, totally.
 9 THE VIDEOGRAPHER: Going off the record
 10 at 11:34.
 11 (Break taken.)
 12 THE VIDEOGRAPHER: We're back on the
 13 record at 11:43.
 14 BY MS. MEEHAN:
 15 Q. Professor Mayer, you agree that factors
 16 other than partisanship affect a voter's decision
 17 to vote for a particular candidate; correct?
 18 A. That's correct.
 19 Q. But your opinion is that partisanship is
 20 the most important factor; correct?
 21 A. In Wisconsin, partisanship and -- as
 22 expressed through voting is, from what I observe,
 23 the most important factor in predicting district
 24 level and ward level results.
 25 Q. And how much does a voter consider

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1 partisanship as compared to other factors in
 2 deciding whether to vote for a particular
 3 candidate?
 4 A. Well, the academic literature has shown
 5 that partisanship is probably the most important
 6 factor in shaping how individual voters,
 7 individuals engage, with politics. And again, it
 8 doesn't have to be 100 percent in order to allow
 9 you to make accurate forecasts and draw accurate
 10 inferences about outcomes.
 11 Q. Did you do any quantitative analysis in
 12 this case about how much a voter considers
 13 partisanship as compared to other factors that
 14 affect a voter's decision to vote for a particular
 15 candidate?
 16 A. At the individual level, no. At the
 17 aggregate level, yes.
 18 Q. How did you -- what quantitative analysis
 19 did you do regarding factors affecting a voter's
 20 decision to vote for a particular candidate?
 21 A. So again, at the aggregate level, in my
 22 report in 2016 I developed a statistical model, a
 23 regression model that forecasts election outcomes
 24 at the ward level using the presidential vote in a
 25 ward and a series of other factors: the race,

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<p>1 geography -- I would have to go back and look at 2 the original report. But that was a model that 3 used voting behavior, presidential voting behavior 4 and demographics, to forecast outcomes in assembly 5 elections. Which was actually very, very close to 6 the baseline measure that Professor Gaddie had 7 developed for -- for the assembly, or for the 8 legislature. 9 Q. And when you say you analyze 10 demographics, do you mean the demographics of the 11 voters? 12 A. So it was aggregate demographics at 13 the -- at the ward level. 14 Q. You weren't analyzing the demographics of 15 the candidates for whom the voters were voting for; 16 correct? 17 A. I'm not sure I understand the question. 18 Q. You weren't -- were you analyzing the 19 race of a particular candidate that the voters were 20 voting for as part of this analysis? 21 A. No. The dependent variable was the share 22 of -- the Democratic share or the Republican share 23 of the ward level vote. 24 Q. So when you say that you analyzed factors 25 affecting voters' decisions to vote for a</p>	<p>1 Q. How did you develop it? 2 A. I didn't develop the baseline. Professor 3 Chen developed the baseline. 4 Q. Do partisan baselines change over time? 5 A. They can. They tend to be stable. 6 Q. Would 1970s data used to create a 7 partisan baseline accurately reflect today's 8 partisan baseline in Wisconsin? 9 A. 1970? I would say no. 10 Q. Would 1980s data accurately reflect 11 today's partisan baseline in Wisconsin? 12 A. As you get closer to the present, the 13 accuracy increases. 14 Q. Would 1990s data accurately reflect 15 today's partisan baseline in Wisconsin? 16 A. It could be. It depends on how stable. 17 That would be an empirical question. 18 Q. Have you done any empirical analysis 19 about how comparing -- have you done any empirical 20 analysis about whether 1990s data would accurately 21 reflect today's partisan baseline in Wisconsin? 22 A. Have I done that? Have I investigated 23 that myself? No. 24 Q. Have you done any empirical analysis 25 about whether a two thousand -- about whether the</p>
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<p>1 particular candidate, did you, as part of that 2 analysis, were you analyzing the characteristics of 3 the candidates themselves? 4 A. No. That wasn't the purpose of the 5 analysis. It was to generate what are called 6 baseline estimates, which effectively control for 7 candidate characteristics, particularly in 8 incumbency. 9 Q. What is a partisan baseline? 10 A. A partisan baseline is an estimate of the 11 underlying partisanship of an area. That is the 12 reason it's a baseline, is it can be -- it is 13 independent of the specifics of a particular 14 election or a particular campaign, and it gives you 15 an estimate of essentially the foundational 16 partisanship or the likely voting outcome at the 17 aggregate level in an area. 18 Q. The Chen composite is a partisan 19 baseline; is that right? 20 A. That's correct. 21 Q. How did you develop it? 22 A. How did I develop it when? 23 Q. The Chen composite is a partisan 24 baseline; correct? 25 A. That's correct.</p>	<p>1 2004 to 2010 data accurately reflects today's 2 partisan baseline in Wisconsin? 3 A. Yes. 4 Q. And where is that empirical analysis in 5 your report? 6 A. That is in -- in the portion of the 7 report looking at some of the individual districts 8 in Act 43 and examining election outcomes, I think 9 through 2016. And in my rebuttal report I may have 10 even referred to 2018 results. 11 Q. We're going to go through those districts 12 later, so we'll probably come back to that. Are 13 there factors other than the partisan baseline that 14 you consider in predicting who will win an 15 election? 16 A. Well, I want to be precise here. Are 17 there other factors in general, or in the work that 18 I did in this case are there other factors that 19 affected my forecasts of the district level 20 forecasts under Act 43? Which do you mean? 21 Q. In general would a political scientist 22 consider factors other than a partisan baseline to 23 predict who will win an election? 24 A. They could. 25 Q. And what would those factors be?</p>

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<p>1 A. Well, so we'll start off by saying that</p> <p>2 the partisan baseline is actually a widely-used</p> <p>3 method for analyzing redistricting plans, because</p> <p>4 in a redistricting plan, the configuration of</p> <p>5 districts, going forward, was going to be different</p> <p>6 than it is today. And so you can't look at actual</p> <p>7 state legislature outcomes in a district to predict</p> <p>8 what's going to happen after redistricting occurs,</p> <p>9 because the district will be different. So the</p> <p>10 baseline gives you a common metric that is</p> <p>11 independent of any district configuration.</p> <p>12 So if a political scientist was</p> <p>13 interested in predicting election outcomes</p> <p>14 generally, the partisanship, a partisan estimate of</p> <p>15 a district, would be one of the factors. You might</p> <p>16 use a partisan baseline, there might be other</p> <p>17 methods that you use. But in terms of anticipating</p> <p>18 or forecasting the effect of a redistricting plan,</p> <p>19 partisan baselines is probably a universal -- may</p> <p>20 not be universal, but it is almost a universally</p> <p>21 used method to try to analyze the effects of a</p> <p>22 redistricting plan.</p> <p>23 Q. Can you use a partisan baseline to</p> <p>24 predict who will win an election?</p> <p>25 A. It can be one of the factors. So yes.</p>	<p>1 races at a higher level of aggregation. I believe</p> <p>2 the Chen model uses statewide races which, by</p> <p>3 definition, are not dependent on district-specific</p> <p>4 factors like whether a state assembly candidate is</p> <p>5 an incumbent or not.</p> <p>6 Q. Does the Chen composite incorporate</p> <p>7 statewide election results in elections involving</p> <p>8 incumbents?</p> <p>9 A. Yes.</p> <p>10 Q. Does the Chen composite make any</p> <p>11 adjustments for those statewide election results</p> <p>12 involving incumbents?</p> <p>13 A. I don't believe so, no.</p> <p>14 Q. How does the Chen composite factor out a</p> <p>15 variable such as the characteristics of a</p> <p>16 candidate?</p> <p>17 A. And again, it factors that out because</p> <p>18 you're looking at a range of races, not a single --</p> <p>19 not a single specific race. And that an</p> <p>20 expectation, on average, over a wider number of</p> <p>21 races, that voting for things like incumbency and</p> <p>22 candidate characteristics will average out.</p> <p>23 Q. How many races does a partisan baseline</p> <p>24 measure have to consider to average out these</p> <p>25 variables?</p>
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<p>1 Q. What are the other factors you would</p> <p>2 consider?</p> <p>3 A. It depends on the analysis. If you were</p> <p>4 looking to understand a specific outcome, you</p> <p>5 could -- if you had measures of previous voting</p> <p>6 behavior, you might look at the amounts that a</p> <p>7 candidate has raised. There are a wide range of</p> <p>8 district-specific factors or campaign-specific</p> <p>9 factors that you would look at.</p> <p>10 But the key to a baseline is that a</p> <p>11 baseline averages out all of those things. So you</p> <p>12 don't need to know whether a candidate is an</p> <p>13 incumbent to forecast an outcome. You don't need</p> <p>14 to know how much a candidate spends, especially</p> <p>15 when you're looking at a redistricting plan. And,</p> <p>16 you know, it turns out that in Wisconsin, that</p> <p>17 that -- that partisan baseline is actually a very</p> <p>18 good predictor of outcomes in state assembly races</p> <p>19 even in 2016 and 2018. The numbers might not be</p> <p>20 exact, but it will still give you a very good idea</p> <p>21 of which party is likely to win an election.</p> <p>22 Q. How does the Chen composite factor out --</p> <p>23 how does the Chen composite factor out a variable</p> <p>24 like incumbency?</p> <p>25 A. It factors out incumbency because it uses</p>	<p>1 A. I don't think that there is an ironclad</p> <p>2 rule. Enough so that you can -- and the accuracy</p> <p>3 of the -- of the baseline is a function of its</p> <p>4 predictive capacity.</p> <p>5 Q. If a partisan baseline is greater than</p> <p>6 52 percent Democratic, do you predict the</p> <p>7 Democratic candidate will win?</p> <p>8 A. If the partisan baseline in a district is</p> <p>9 above 52 percent, the prediction would be that the</p> <p>10 Democratic candidate would win.</p> <p>11 Q. If the partisan baseline in a district is</p> <p>12 51 percent or greater Democratic, do you present --</p> <p>13 do you predict the Democratic candidate will win?</p> <p>14 A. That's the forecast, yes.</p> <p>15 Q. If the partisan baseline in a district is</p> <p>16 50 percent or greater Democratic, do you predict</p> <p>17 the Democrat will win?</p> <p>18 A. Again, the method is that -- or the</p> <p>19 general approach is that if a partisan baseline, a</p> <p>20 Democratic partisan baseline or Republican partisan</p> <p>21 baseline is greater than 50 percent, using the</p> <p>22 baseline method you would forecast that the</p> <p>23 Democratic candidate would win.</p> <p>24 Q. But if the partisan baseline is</p> <p>25 49.5 percent Democratic, you would not forecast the</p>

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<p>1 Democrat would win? 2 A. That's correct. 3 Q. So the partisan baseline doesn't 4 incorporate any margin of error? 5 A. What do you mean by "margin of error"? 6 Q. When you use a partisan baseline, you 7 assume that if a -- if an area has, let's say, 8 50.1 percent Democratic score, that the Democrat 9 would win; right? 10 A. Correct. 11 Q. But if the same area has a 49.9 percent 12 Democratic score, the Democrat would not win; is 13 that right? 14 A. That would be the forecast. 15 Q. And what's the difference between the 16 forecast and whether a region is coded as Democrat 17 or Republican? 18 A. Well, the forecast -- all forecasts are 19 probabilistic. And as you move farther away from 20 50 percent, your -- the probability that that is 21 the -- the probability that a candidate wins goes 22 up. But the purpose of the baseline method is to 23 develop an underlying measure of a district's 24 partisanship. And the -- if the prediction -- 25 basically that if the critical threshold is</p>	<p>1 A. It's possible, yes. But again, the 2 predictive accuracy of the baseline method is does 3 it -- does it give you an expectation of which 4 candidate is going to win. And the model that I 5 developed, I think I got 97 of 99 districts 6 correct. And I think the -- Professor Chen's 7 baseline method is, I don't remember what the exact 8 predictive accuracy was, but it's in the same 9 range. 10 So it's not as if we're flipping coins 11 and taking wild guesses. These are forecasts that 12 are informed by underlying methods that have been 13 shown to accurately estimate the likely voting 14 behavior of a ward or a district. 15 Q. You believe that the Chen composite is a 16 reliable measure of the normal vote; correct? 17 A. Well, the normal vote is -- is not 18 exactly synonymous with the baseline vote. Because 19 the baseline method is a way of trying to measure 20 the normal vote. But if the question is in my 21 view, if the Chen baseline is a reliable method of 22 understanding baseline partisanship, the answer is 23 yes. 24 Q. The Chen -- you agree that Chen's 25 baseline method is a reliable way of trying to</p>
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<p>1 50 percent, a candidate -- an area with 2 50.1 percent Republican or 90 percent Republican, 3 those are both going to be predicted Republican 4 victories. 5 And that -- that's how -- there are 6 methods that incorporate a measure of uncertainty. 7 So that as you were looking at outcomes, the 50.1, 8 even though the probability the Democrat wins is 9 going to be more than 50 percent, that the -- the 10 probability is going to be less than a 90 percent 11 Democratic victory. 12 But again, the reason the baseline 13 method is important is that it controls for 14 district and campaign-specific factors. And it's 15 actually what the people who drew the maps, people 16 who drew Act 43, relied on. That was the measure 17 they used to evaluate the partisan outcomes. 18 Q. You mentioned it controls for 19 candidate-specific factors. But do you agree that 20 certain elections -- you mentioned that the 21 partisan baseline controls for candidate-specific 22 factors, but do you agree that certain 23 candidate-specific factors cause certain elections 24 to -- to come out differently than what the 25 baseline predicts?</p>	<p>1 measure the normal vote in assembly districts? 2 A. Well, it depends on what you mean by the 3 normal vote as a -- 'cause the baseline and normal 4 are not exactly synonymous. But if you define the 5 normal vote as the -- the underlying partisanship 6 of an area or region or a district, then the -- the 7 Chen baseline method, the elections that he uses, 8 is a reliable way of estimating the underlying 9 partisanship of an area. 10 Q. Your opinion is that the Chen composite 11 score is a reliable way of measuring the underlying 12 partisanship of a district? 13 A. That's correct. 14 Q. You developed a partisan baseline earlier 15 in this case; isn't that right? 16 A. That's correct. 17 Q. Do you think your partisan baseline is 18 superior to Chen's composite score? 19 A. I haven't done a direct comparison, but I 20 do know that my partisan baseline estimate was 21 virtually identical to Professor Gaddie's baseline 22 estimate, and he used essentially the same method 23 that Professor Chen used. 24 Q. If your partisan baseline measure -- are 25 you aware that plaintiffs filed an amended</p>

Page 86	<p>1 complaint in 2018 after the Supreme Court remanded 2 for further proceedings? 3 A. I'm not sure what that means. Can you -- 4 I mean can -- 5 Q. Yeah. I mean, so to initiate a lawsuit, 6 plaintiffs have to file a complaint; right? 7 A. So was -- so how I would describe it? 8 I'm aware that there was another round of 9 litigation that was in response to what the Supreme 10 Court decided. 11 Q. And the Supreme Court told plaintiffs 12 that they needed to allege that they had been 13 injured in a district-specific way. Are you 14 familiar with that? 15 A. Well, I'm familiar with that 16 characterization, but I want to stay away from 17 specific legal conclusion. 18 Q. And you were asked to analyze particular 19 districts; right? 20 A. That was one of the things I was asked to 21 do. 22 Q. To analyze those particular districts, 23 you're using the Chen composite measure; correct? 24 A. That's correct. 25 Q. And the Chen composite measure uses 2004</p>	Page 88	<p>1 reliable way to measure the underlying partisanship 2 of a district; correct? 3 A. That's correct. 4 Q. And you also said that you thought using 5 2004 to 2010 data was a reliable way to measure the 6 underlying partisanship of a district in 2012; 7 correct? 8 A. That's correct. 9 Q. Does it become less reliable in 2014? 10 A. In terms of which party is going to win 11 the district, I don't think it does. As you get 12 closer, if you're interested in predicting the 13 exact percentage, you would -- you know, you would 14 want to rely on more recent data. But that does 15 not mean that what -- the information you had in 16 2011, which is when the districts were drawn, are 17 going to be uninformative as to what outcomes were 18 in 2018 because, you know, we can observe that and 19 you can actually look at the sequence in elections 20 in particular districts, as I do in my report 21 about, you know, how parties actually performed. 22 Q. Does a partisan baseline measure using 23 2004 to 2010 data become less informative as time 24 goes on? 25 A. As a --</p>
Page 87	<p>1 to 2010 statewide election results; correct? 2 A. That's correct. 3 Q. Why are more recent statewide election 4 results a more reliable measure of the partisanship 5 of a district in 2018? 6 A. Well, it gets to the -- to the purpose of 7 using a baseline partisan measure platform, because 8 that's the data that the Act 43 map drawers had. 9 And the -- the 2004 to 2010 measure was virtually 10 identical to the measure that I estimated, which 11 actually was based on 2012 election data. 12 And my interpretation of more recent 13 election results was that even though the vote 14 percentages might actually, and probably did 15 change, you still knew with great confidence, or 16 high confidence, which party was actually going to 17 win, and did win, the district. 18 Q. In 2012; isn't that right? 19 A. Also in 2014 and 2016 and 2018. It still 20 gave you -- it was still informative as to allowing 21 you to make a forecast of who was going to -- was 22 likely to win an election. 23 Q. Do you agree that as the data underlying 24 the partisan baseline measure becomes older -- or 25 earlier you agreed that 1970s data might not be a</p>	Page 89	<p>1 MR. POLAND: Let me just object to the 2 form of the question. You can answer if you can. 3 BY MS. MEEHAN: 4 Q. Just a minute ago you said -- you talked 5 about whether information you had in 2011 would be 6 informative as to what outcomes were in 2018. Do 7 you remember that? 8 A. Yes. 9 Q. What did you mean when you said that data 10 will not be uninformative? 11 A. Because if I look at actual 2018 outcomes 12 and compare them to the baseline measure in 2011, 13 there is still going to be a strong relationship. 14 It's not going to be as strong as it was in 2012, 15 but it's not as if it would be -- would not allow 16 you to make an inference about what the 17 partisanship of a district in 2018 or 2016 would 18 be, or was. 19 Q. Do you agree that a partisan baseline 20 using data from 2004 to 2010 has less -- has a 21 weaker relationship with 2018 election results than 22 with 2012 election results? 23 A. It's possible. That's an empirical 24 question. And what -- what I found in the 25 districts that I examined is that the 2018 outcomes</p>

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<p>1 actually were either identical to or very similar</p> <p>2 to what the outcomes predicted in 2012 were.</p> <p>3 Q. Where's your analysis in your reports</p> <p>4 about the relationship between the Chen composite</p> <p>5 measure and the 2018 election results?</p> <p>6 A. In my report, when I went through the</p> <p>7 regions, there were instances where I examined not</p> <p>8 just the baseline, but looked at what happened in</p> <p>9 subsequent elections.</p> <p>10 Q. Where in your reports is there analysis</p> <p>11 of the Chen composite as compared to 2018 election</p> <p>12 results in particular?</p> <p>13 A. In 2018?</p> <p>14 Q. Correct.</p> <p>15 A. So that wouldn't be my October report,</p> <p>16 because the election -- so I would begin by</p> <p>17 referring to figure four, which shows the -- the</p> <p>18 Democratic assembly vote in 2012 and 2016 in</p> <p>19 contested wards. And you can see that there is</p> <p>20 a -- and the 45 -- the black diagonal line is the</p> <p>21 45-degree line that would occur if the votes were</p> <p>22 exactly equal. And you can see that they are not</p> <p>23 exactly equal, but there is a very, very strong</p> <p>24 relationship between 2012 and 2016.</p> <p>25 And if the partisan baseline is a</p>	<p>1 2014, that's going to be 100 percent, that is</p> <p>2 clearly indicates that knowing the partisan</p> <p>3 baseline is informative as to what the results are</p> <p>4 going to be even in 2018.</p> <p>5 Q. I'm handing you an exhibit marked</p> <p>6 Defendant's Deposition Exhibit No -- or Assembly's</p> <p>7 Dep Exhibit No. 11. Take a look at this exhibit.</p> <p>8 (Exhibit 11 marked for identification.)</p> <p>9 BY MS. MEEHAN:</p> <p>10 Q. Are you familiar -- or what is this</p> <p>11 document?</p> <p>12 A. This is a printout of the Wisconsin</p> <p>13 Elections Commission's canvass of assembly results.</p> <p>14 Or actually all of it. Looks like there are some</p> <p>15 statewide ones as well.</p> <p>16 Q. You're familiar with the Wisconsin</p> <p>17 Election Commission's election results reporting?</p> <p>18 A. Yes.</p> <p>19 Q. Go ahead and turn to page 13 of</p> <p>20 Exhibit 11. Do you see on page 13 the Wisconsin</p> <p>21 Election Commission reports that the Republican</p> <p>22 candidate for assembly in assembly district 13 won</p> <p>23 51.41 percent of the vote?</p> <p>24 A. Yes.</p> <p>25 Q. And the Democrat received 48.45 percent</p>
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<p>1 reliable predictor of what the actual vote is going</p> <p>2 to be, that suggests that the 2016 results are</p> <p>3 still going to be related to what the partisan</p> <p>4 baseline was earlier.</p> <p>5 Q. Figures four and five do not analyze</p> <p>6 assembly election results from 2018; correct?</p> <p>7 A. Well, they -- they compare 2012 and 2016.</p> <p>8 So that's correct, there is not a specific</p> <p>9 reference to 2018.</p> <p>10 Q. Where in your report -- where in your</p> <p>11 rebuttal report do you analyze the relationship</p> <p>12 between the Chen composite scores and the 2018</p> <p>13 election results?</p> <p>14 A. Well, I'll give you an example. On</p> <p>15 page 23, the second to the last paragraph, so --</p> <p>16 first of all, there is evidence that the partisan</p> <p>17 baseline effects and the efficiency measures of the</p> <p>18 efficiency gap do persist over the length of a</p> <p>19 cycle. But if you look at the 13th assembly</p> <p>20 district, that -- Professor Chen's baseline for</p> <p>21 that district was 59.7 percent Republican. The</p> <p>22 Republican candidate won in 2012 with 60.5 percent</p> <p>23 of the vote. It was very closely related. Ran</p> <p>24 uncontested in 2014 and 2016 and won again in 2018.</p> <p>25 So even though the vote percentages in</p>	<p>1 of the vote; correct?</p> <p>2 A. That's correct.</p> <p>3 Q. And you pointed me to page 23 where you</p> <p>4 say the Chen baseline for this district, district</p> <p>5 13, was 59.7 percent; correct?</p> <p>6 A. Correct.</p> <p>7 Q. If Chen's baseline for this district is</p> <p>8 59.7 percent, and the actual 2018 election results</p> <p>9 show 51.41 percent for the Republican, is Chen's</p> <p>10 composite measure a reliable measure of the</p> <p>11 partisanship of district 13?</p> <p>12 A. Yes, because it still tells you who the</p> <p>13 winner is. And if I'm drawing a district and I'm</p> <p>14 trying to gerrymander and I'm thinking about what</p> <p>15 an election outcome eight years from now would be,</p> <p>16 and I had a crystal ball that said that 59.7</p> <p>17 districts would still give me a win in 2018, I</p> <p>18 would take that every time. So again, even though</p> <p>19 the percentage is different, you still get the</p> <p>20 expected winner.</p> <p>21 Q. Okay.</p> <p>22 (Exhibit 12 marked for identification.)</p> <p>23 BY MS. MEEHAN:</p> <p>24 Q. I'm handing you a document marked</p> <p>25 Assembly's Dep Exhibit No. 12. Take a look at this</p>

Page 94	<p>1 document. Are you familiar with this document?</p> <p>2 A. In general terms, yes.</p> <p>3 Q. Is this Dr. Chen's opening report</p> <p>4 submitted in this case in October 15, 2018?</p> <p>5 A. That is what it says.</p> <p>6 Q. Okay. And are you familiar -- or can you</p> <p>7 flip to the tables in this exhibit? In particular,</p> <p>8 can you flip to table two? Sorry, table three.</p> <p>9 MR. POLAND: What page, Taylor?</p> <p>10 MS. MEEHAN: On page 15.</p> <p>11 MR. POLAND: I'm sorry?</p> <p>12 MS. MEEHAN: Page 15.</p> <p>13 MR. POLAND: 15?</p> <p>14 MS. MEEHAN: Yep.</p> <p>15 BY MS. MEEHAN:</p> <p>16 Q. What does this table tell you on page 15?</p> <p>17 The last column of the table on page 15 says</p> <p>18 "Republican vote share Chen composite measure";</p> <p>19 correct?</p> <p>20 A. That's correct.</p> <p>21 Q. So are these the -- are these the Chen</p> <p>22 composite scores that you used in your reports for</p> <p>23 Act 43 districts?</p> <p>24 A. I believe so.</p> <p>25 Q. And what is the Chen composite measure</p>	Page 96	<p>1 the composite measure does not predict the winner</p> <p>2 in every race, that there are races that it</p> <p>3 mispredicts, that does not mean that this is</p> <p>4 unreliable. So are you determining the reliability</p> <p>5 of the composite measure district by district?</p> <p>6 A. So you would look at the overall</p> <p>7 predictive capacity.</p> <p>8 Q. And by "overall predictive capacity," you</p> <p>9 mean the ability of the Chen composite measure to</p> <p>10 predict how many Democrats and how many Republicans</p> <p>11 will be in the state assembly in 2018; isn't that</p> <p>12 right?</p> <p>13 A. As a general rule, that's correct.</p> <p>14 Q. Would a composite measure using 2012 to</p> <p>15 2016 statewide election results be a better</p> <p>16 predictor of assembly district elections in 2018</p> <p>17 than a composite measure using 2004 to 2010</p> <p>18 statewide election results?</p> <p>19 A. It certainly could. But again, the map</p> <p>20 drawers didn't have access to 2012 to 2016 data</p> <p>21 when they drew the map, they had their composite</p> <p>22 measure. So in terms of understanding the effects</p> <p>23 of Act 43, it is important to evaluate or to</p> <p>24 understand the data that were in hand at the time</p> <p>25 the map was drawn, because that was the expectation</p>
Page 95	<p>1 for district 14?</p> <p>2 A. 59.6.</p> <p>3 Q. Okay. So the Chen composite measure for</p> <p>4 district 14 is 59.6. If you look at page 13 of</p> <p>5 Exhibit 11, the election results from 2018, do you</p> <p>6 see here that the Democrat in assembly district 14</p> <p>7 won the election with 48.58 percent of the vote?</p> <p>8 A. That's correct.</p> <p>9 Q. If the Chen composite baseline for</p> <p>10 district 14 is 59.6 percent, and the actual</p> <p>11 election result is that the Democrat, not the</p> <p>12 Republican, won that district in 2018, is the Chen</p> <p>13 composite measure a reliable measure of district</p> <p>14 14?</p> <p>15 A. I would say that the fact that the</p> <p>16 composite measure does not predict the winner in</p> <p>17 every race, that there are races that it</p> <p>18 mispredicts, that does not mean that this is</p> <p>19 unreliable. You would have to look at the general</p> <p>20 characteristics of the -- of the metric.</p> <p>21 Q. Is your opinion that the reliability of</p> <p>22 the Chen composite measure depends on its</p> <p>23 reliability statewide?</p> <p>24 A. What do you mean by "statewide"?</p> <p>25 Q. Earlier -- or you just said the fact that</p>	Page 97	<p>1 of what the effects would be.</p> <p>2 Q. Why is it -- why is it important to</p> <p>3 evaluate the effects of Act 43 to use old data?</p> <p>4 A. The -- that's the information that the</p> <p>5 map drawers had at the time that they drew the map.</p> <p>6 Q. Well, but the effect of Act 43 is the</p> <p>7 2018 election results; right?</p> <p>8 A. That's -- that's one of the effects.</p> <p>9 That is -- yes, that is one of the outcome</p> <p>10 variables that you would observe to understand the</p> <p>11 effects of Act 43. But that's not what you had in</p> <p>12 hand or what the map drawers had in hand when they</p> <p>13 drew the map.</p> <p>14 Q. Other than election results, what are the</p> <p>15 other effects of Act 43 that you're analyzing?</p> <p>16 A. Those are laid out in my report of</p> <p>17 effects on the -- my report, in my rebuttal report,</p> <p>18 the aggregate affects on the party, the general</p> <p>19 effect of efficiency gaps and partisan bias on</p> <p>20 outcome variables such as fundraising, candidate</p> <p>21 recruitments, the incumbents who return.</p> <p>22 Q. Are you aware that the Chen composite</p> <p>23 measure adds a 1.8 swing for Republicans --</p> <p>24 favoring Republicans in each district?</p> <p>25 A. That's my understanding of what the --</p>

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1 what the measure is.
 2 Q. Does that 1.8 swing make the Chen
 3 composite measure more reliable than just the 2004
 4 to 2010 statewide election results?
 5 A. My understanding is that Professor Chen
 6 did that to account for the observed swings
 7 post-2012. But I would have to go back and
 8 actually look specifically at his report. Is it
 9 possible we could break for lunch?
 10 MS. MEEHAN: Yeah, that's fine with me.
 11 MR. POLAND: Is this a good time, Taylor?
 12 MS. MEEHAN: Yeah.
 13 MR. POLAND: Okay.
 14 MS. MEEHAN: Now's as good as ever.
 15 THE WITNESS: Okay, thanks.
 16 THE VIDEOGRAPHER: Going off the record
 17 at 12:24.
 18 (Break taken.)
 19 THE VIDEOGRAPHER: And we're back on the
 20 record at 1:38.
 21 BY MS. MEEHAN:
 22 Q. Professor Mayer, before lunch we
 23 discussed some e-mail communications you might have
 24 had with Dr. Chen since 2018. Do you remember
 25 that?

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1 A. Yes.
 2 Q. And before lunch we discussed additional
 3 e-mail communications you had with Chris Warshaw
 4 since 2018; remember that?
 5 A. Yes.
 6 Q. We also discussed a redacted e-mail to
 7 you from Professor Stephanopoulos dated August 19th
 8 that is Exhibit 7; correct?
 9 A. That's correct.
 10 Q. And we discussed a redacted e-mail to you
 11 from Professor Stephanopoulos on August 3rd that is
 12 Exhibit 10. Remember that?
 13 A. Yes.
 14 Q. Did you look for any of those e-mails
 15 during the break?
 16 A. I did not.
 17 Q. And why not?
 18 A. Because I didn't -- I don't have access
 19 to my -- my files and my computer, and doing it on
 20 my phone seemed to be a clumsy and probably
 21 error-prone way of doing it.
 22 Q. You didn't bring your computer with you
 23 today?
 24 A. No.
 25 Q. Sitting here today, are you certain that

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1 you did not open the attachments to Professor
 2 Stephanopoulos's e-mail dated August 19th, which is
 3 in the record as dep Exhibit 7?
 4 A. Am I certain I didn't open any of the
 5 those other attachments? No, I'm not certain.
 6 Q. Sitting here today, are you certain that
 7 you did not open attachments to Professor
 8 Stephanopoulos' e-mail from August 3rd, which is in
 9 the record as Assembly Dep Exhibit 10?
 10 A. Certain, no.
 11 Q. Very quickly, can you take a look again
 12 at Exhibit 7, which is Professor Stephanopoulos's
 13 e-mail to you dated August 19, 2018. In addition
 14 to the redacted attachments, do you see that there
 15 are other redactions to this e-mail?
 16 A. Yes.
 17 Q. In fact, there's a whole page of the
 18 printed e-mail that's redacted; correct?
 19 A. That's correct.
 20 Q. Was there text under these redactions?
 21 A. I assume so.
 22 Q. And was that text written by Professor
 23 Stephanopoulos?
 24 A. I don't recall.
 25 Q. Did the redacted portions of this e-mail

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1 contain any facts or data you considered in forming
 2 your opinion in this case?
 3 A. I did not do the redaction. So my
 4 interpretation of this is that there was nothing in
 5 here that I relied on in forming my opinions. But
 6 I did not do the redaction.
 7 Q. Is there anything in here containing
 8 facts or data that you considered in forming your
 9 opinions?
 10 A. I don't recall.
 11 Q. Sitting here today, are you certain that
 12 the redacted text in this e-mail did not contain
 13 any facts or data you considered in forming your
 14 opinions?
 15 A. Well, given that I don't recall what is
 16 in the text here, I can't -- I can't say that I'm
 17 certain.
 18 Q. Okay. So put that aside. Also before
 19 the break we were discussing the Chen composite
 20 measure; correct?
 21 A. Correct.
 22 Q. And the Chen composite measure, as I
 23 understand it, is 2004 to 2010 statewide election
 24 results plus a 1.8 percent swing in favor of
 25 Republicans in every district; is that right?

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1 A. That's correct.
 2 Q. And does that 1.8 percent Republican
 3 swing make Chen's composite measure more reliable
 4 than using only 2004 to 2010 statewide election
 5 results?
 6 A. That's a question you can put to him. In
 7 my view, the Chen composite with the swing is a
 8 reliable metric to estimate the underlying
 9 partisanship of a district.
 10 Q. If the Chen composite measure did not
 11 include the 1.8 percent swing, would it be less
 12 reliable as a metric estimating the underlying
 13 partisanship of a district?
 14 A. Well, that's a question that you should
 15 put to Professor Chen. My understanding of the
 16 reason he put the uniform swing in there is to
 17 better capture the -- to make the measure more
 18 accurate.
 19 Q. What do you mean by "make the measure
 20 more accurate"?
 21 A. Well, so that it more reliably captures
 22 the underlying partisanship of districts.
 23 Q. How does adding a 1.8 percent Republican
 24 swing make the Chen composite better capture the
 25 underlying partisanship of the district?

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1 A. It can make it more accurate as a
 2 predictive matter. But that's -- that's a question
 3 that you should put to him.
 4 Q. Well, you used Dr. Chen's composite in
 5 evaluating each of these districts; correct?
 6 A. That's correct.
 7 Q. So isn't a -- before you used the Chen
 8 composite measure, didn't you assure yourself that
 9 it was a reliable measure of partisanship?
 10 A. Based on the analysis that I did, it was.
 11 Q. And what's the analysis that you did?
 12 A. Looking at the partisanship and election
 13 outcomes and the general reliability of the -- of
 14 the baseline method.
 15 Q. Did you do any analysis comparing the
 16 reliability of the Chen composite measure to -- to
 17 a composite measure that uses only 2004 to 2010
 18 statewide election results?
 19 A. Can you -- I'm not sure I understand the
 20 question.
 21 Q. Did you do any analysis comparing the
 22 reliability of the Chen composite measure with the
 23 1.8 percent swing to a composite measure without a
 24 1.8 percent swing?
 25 A. No.

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1 Q. Did you do any analysis comparing the
 2 Chen composite measure with the 1.8 percent swing
 3 to a composite measure using 2012 to 2016 election
 4 results?
 5 A. No.
 6 Q. In determining that Dr. Chen's composite
 7 measure was a reliable measure of partisanship, you
 8 did not evaluate how Dr. Chen's composite measure
 9 compared to 2012 to 2016 election results?
 10 A. I'm sorry, I'm having trouble parsing the
 11 question.
 12 Q. What analysis did you do to determine
 13 that Chen's composite measure -- never mind. Do
 14 you agree that Wisconsin's political geography does
 15 not evenly distribute individuals who have voted
 16 for Republicans and individuals who have voted for
 17 Democrats in past elections?
 18 A. Well, what do you mean by "evenly
 19 distribute"?
 20 Q. Do you agree that there are certain
 21 counties or municipalities that have a high
 22 concentration of people -- a higher concentration
 23 of people who vote for Democrats than people who
 24 vote for Republicans?
 25 A. That's correct.

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1 Q. And do you agree that there are fewer
 2 people who vote for Democrats in less urban areas?
 3 A. As a -- as a general rule, that's --
 4 that's correct.
 5 Q. And so do you agree in certain regions of
 6 Wisconsin that there are a higher concentration of
 7 individuals who have voted for Republicans than
 8 individuals who have voted for Democrats?
 9 A. That's -- that's true.
 10 Q. Do you agree that even with no
 11 consideration of partisanship in redistricting,
 12 that Wisconsin's average statewide efficiency gap
 13 is not zero?
 14 A. That is a generally true statement. The
 15 demonstration map that I drew had an efficiency gap
 16 of, I believe, 2.2 or 2.1.
 17 Q. Are you aware of what the efficiency gap
 18 was for the 2002 map that was court drawn?
 19 A. Not off the top of my head.
 20 Q. Are you aware whether it was greater than
 21 zero?
 22 A. I believe it was greater than zero.
 23 Q. An efficiency gap greater than zero means
 24 the map advantages Republicans; correct?
 25 A. That's correct. But just let me -- I

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<p>1 mean, as Mr. Keenan asked me in my earlier 2 deposition, it is possible for a neutral process to 3 produce a nonneutral outcome. But the reason 4 that's inapposite in this case is that we know for 5 a fact that this was not a neutral process. So 6 even though Democrats and Republicans have 7 distributed, or not distributed, in a uniform way 8 around the state, that lack of uniformity cannot 9 and does not explain or -- the size of the 10 efficiency gap. 11 Q. You analyzed the effects of Act 43 on 12 political parties in your report; correct? 13 A. That's correct. 14 Q. Did you analyze the effects of Act 43 on 15 individual plaintiffs' campaign contributions? 16 A. No. 17 Q. Did you analyze the effects of Act 43 on 18 individual plaintiffs volunteering for campaigns? 19 A. No. 20 Q. Did you analyze the effects of Act 43 on 21 individual plaintiffs' efforts to recruit 22 candidates? 23 A. No. 24 Q. Did you analyze the effects of Act 43 on 25 any other campaign-related activities undertaken by</p>	<p>1 Q. And how did you evaluate those other 2 factors? 3 A. So as I noted in my rebuttal report, in 4 comparing the sequence of fundraising differentials 5 over time, evaluated some of the other factors such 6 as majority status, overall competitiveness. There 7 were other analysis that looked at the effect of 8 the efficiency gap generally, not just in 9 Wisconsin, establishing the empirical result that 10 partisan bias and the efficiency gap has a general 11 effect on fundraising, competitiveness and the 12 ability to contest races. 13 So I did examine factors -- did 14 consider other factors in forming my conclusion 15 that Act 43 had an identifiable effect. 16 Q. Other than considering the effect of Act 17 43, of parties' majority status, overall 18 competitiveness, and the efficiency gap, did you 19 evaluate any other factors related to -- that could 20 have caused differences in Republican and 21 Democratic fundraising? 22 A. Well, let me refer to -- my report 23 identifies some of the expectations in the 24 literature on fundraising and competitiveness and 25 engagement and the ability to recruit candidates</p>
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<p>1 the individual plaintiffs? 2 A. My analysis was based on aggregate 3 effects in particular districts. 4 Q. With respect to the campaign-related 5 activities such as fundraising, did you evaluate 6 the effect of Act 43 on particular districts? 7 A. No, the effect was the aggregate 8 statewide effect. 9 Q. In your report you did compare 10 fundraising for Republican candidates and 11 Democratic candidates; correct? 12 A. That's correct. 13 Q. And likewise you compared fundraising for 14 a Republican group, the Republican Assembly 15 Campaign Committee, versus Democratic group, the 16 Democratic Assembly Campaign Committee? 17 A. Correct. 18 Q. Do you agree that phenomena other than 19 Act 43 could have caused differences in each 20 Republicans and Democrats' ability to fund-raise? 21 A. So were there other factors besides Act 22 43, yes. 23 Q. Did you evaluate any of these other 24 possible factors? 25 A. I did.</p>	<p>1 and contest districts. So the factors that I 2 considered were Act 43, the -- as I noted in my 3 rebuttal report, that the patterns that are 4 observed after Act 43 are most likely not a 5 function of other exogenous factors. 6 Q. And other than the ones you've discussed 7 today, are there any other exogenous factors you 8 considered? 9 A. The analysis listed in the reports are 10 the factors that I relied on and the ones that I 11 described in the report. 12 Q. You've mentioned -- you've alluded to 13 your opinions about candidate recruitment. And in 14 your report you say that the most plausible 15 explanation for more seats left uncontested by 16 Democrats was the electoral environment. Do you 17 remember that? 18 A. Can you give me the reference? 19 Q. Uh-huh. One second. I think it's in 20 your opening report. Take a look at page 10 of 21 your opening report. It's about, I don't know, 22 midway down. Four lines above table four. Do you 23 agree that there are -- that phenomena other than 24 Act 43 could have caused uncontested elections? 25 A. Well, as I note in my report and describe</p>

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<p style="text-align: right;">Page 110</p> <p>1 how the electoral environment can affect some of</p> <p>2 these observed outcomes.</p> <p>3 Q. When you say electoral environment, is</p> <p>4 that electoral environment caused entirely by Act</p> <p>5 43?</p> <p>6 A. Entirely by Act 43, no.</p> <p>7 Q. What else contributes to the electoral</p> <p>8 environment?</p> <p>9 A. National effects, whether it's a</p> <p>10 presidential or mid-term election. So I did not</p> <p>11 claim that Act 43 is the only possible explanation</p> <p>12 for the variation in the patterns. But in my view,</p> <p>13 based on analysis of the data and the literature on</p> <p>14 parties' redistricting and state legislative</p> <p>15 elections, it is clear that Act 43 played a major</p> <p>16 part in these patterns.</p> <p>17 Q. When you say based on your review of the</p> <p>18 literature, I don't see any articles cited</p> <p>19 either -- from pages eight to nine, to ten, to</p> <p>20 eleven, these are the two sections where you</p> <p>21 discuss fundraising and competitiveness and</p> <p>22 candidate recruitment. So what literature are you</p> <p>23 relying on?</p> <p>24 A. That is laid out in pages four</p> <p>25 through eight of the report.</p>	<p style="text-align: right;">Page 112</p> <p>1 my rebuttal report that addresses this. So in</p> <p>2 general that would be an expectation. However, if</p> <p>3 you look at figure six in my rebuttal report on</p> <p>4 page 14, between 2008 and 2010, the Democratic</p> <p>5 assembly campaign committee actually did a little</p> <p>6 bit better than they did in 2008. So in terms of</p> <p>7 the -- the difference between the amount raised by</p> <p>8 the Democratic committee and the Republican</p> <p>9 committee, the Democratic advantage actually went</p> <p>10 up a little bit.</p> <p>11 And you see something different</p> <p>12 between 2012 and 2014, and even 2016 to 2018, where</p> <p>13 the fundraising advantage went up by a factor of</p> <p>14 about eight between 2016 and 2018, which is not</p> <p>15 something that can be explained by a decline in</p> <p>16 support for the president's party, because in 2018,</p> <p>17 the president was a Republican.</p> <p>18 Q. Do you agree that some Wisconsin voters</p> <p>19 vote for a Republican for assembly and a Democrat</p> <p>20 for another state office?</p> <p>21 A. That happens, yes.</p> <p>22 Q. Do you agree that some Wisconsin voters</p> <p>23 vote for a Democrat for assembly and a Republican</p> <p>24 for another state office?</p> <p>25 A. It's true at an individual level, but the</p>
<p style="text-align: right;">Page 111</p> <p>1 Q. I see. Does this literature acknowledge</p> <p>2 that in a mid-term election immediately following</p> <p>3 the election of a new president, support for that</p> <p>4 new president's party often wanes?</p> <p>5 A. So the literature on mid-term elections</p> <p>6 has established that the -- the president --</p> <p>7 members of Congress of the president's party -- or</p> <p>8 that the president's party will typically lose</p> <p>9 seats in the house and frequently, although not as</p> <p>10 frequently, in the senate.</p> <p>11 Q. For example, in the 2010 election,</p> <p>12 Democrats lost seats in the US house, correct,</p> <p>13 following -- it was two years after Barack Obama</p> <p>14 was elected?</p> <p>15 A. That's correct.</p> <p>16 Q. Did you rule out this mid-term election</p> <p>17 effect as causing differences in fundraising?</p> <p>18 A. Did I rule out the mid-term effect.</p> <p>19 You -- as I noted in the report, you can't rule it</p> <p>20 out.</p> <p>21 Q. Is, for example, lacking support or</p> <p>22 waning support for the Democratic party in 2010</p> <p>23 perhaps a reason why fundraising might go down for</p> <p>24 Democrats in 2010?</p> <p>25 A. I'm just referring -- there's a table in</p>	<p style="text-align: right;">Page 113</p> <p>1 point is at an aggregate level, it doesn't matter.</p> <p>2 Even though some voters split their -- split their</p> <p>3 ballots in the aggregate, that does not prevent</p> <p>4 accurate forecasts and predictions of district</p> <p>5 level election results; that those predictions are</p> <p>6 accurate even accounting for the possibility or the</p> <p>7 fact that there are some voters that not -- that it</p> <p>8 is not the case that 100 percent of Democratic</p> <p>9 assembly voters -- that not -- 100 percent of</p> <p>10 voters do not vote uniform -- uniform partisan way</p> <p>11 up and down the ballot. That happens. That</p> <p>12 doesn't prevent accurate forecasts of outcomes</p> <p>13 using baseline measures.</p> <p>14 Q. We will talk about those accurate</p> <p>15 forecasts in a second. I want to make sure. So I</p> <p>16 asked you whether you agreed there were some</p> <p>17 Wisconsin voters who vote for one party for</p> <p>18 assembly and another party for a statewide office.</p> <p>19 Do you likewise agree that some Wisconsin voters</p> <p>20 vote for one party for assembly but another party</p> <p>21 for federal office, like president?</p> <p>22 A. Yes, that occurs.</p> <p>23 Q. In 2016, President Trump was the</p> <p>24 Republican presidential candidate; correct?</p> <p>25 A. Yes.</p>

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<p>Page 114</p> <p>1 Q. What about President Trump would have 2 made voters vote for a Republican assembly 3 candidate but not for President Trump? 4 A. I'm not offering an opinion about why 5 voters chose one candidate or another. I'm 6 offering opinions about the aggregate effect of the 7 way the districts were drawn. So I'm not going to 8 offer an opinion about why someone might split 9 their ticket. Because in the aggregate, it doesn't 10 matter. 11 Q. But the aggregate effect -- let's be 12 clear about what we're talking about. The 13 aggregate, you mean the aggregate number of votes 14 in a ward for a particular candidate; correct? 15 A. A ward or a district. 16 Q. Okay. And so when we're talking about 17 the aggregate votes for Trump in a district, we're 18 talking about the number of individual voters who 19 voted for Trump; correct? 20 A. If that's what you -- if that's what you 21 mean by that, then -- 22 Q. Well, you keep using the word aggregate, 23 and I want to make perfectly clear that I un -- I 24 want to make sure I understand it. So when you say 25 the aggregate -- the aggregate in a ward, you mean</p>	<p>Page 116</p> <p>1 And so in that sense, the fact that 2 there are some voters, but that those numbers don't 3 match up exactly, that's true. But they don't have 4 to match up exactly to allow me, or allow someone, 5 to make an inference that those two quantities are 6 very, very, very strongly related. 7 Q. So you're offering no opinion about why a 8 voter, even though -- you're offering no opinion 9 about why a voter, even if they voted for a 10 Republican presidential candidate, would not have 11 voted for an assembly candidate? 12 A. The opinion I'm offering is based, in 13 this context, on the results shown in figures one 14 and two of my report, that it doesn't matter why an 15 individual voter might split their ticket, what 16 matters is that in the aggregate, the number of 17 Republican presidential votes in a ward is very 18 strongly predictive or is very close to the number 19 of Republican assembly votes cast in that ward. 20 And the same is true for Democrats. 21 And so I don't need to speculate or 22 offer an opinion about why a voter might split 23 their ticket as they move down the ballot. What 24 this shows is that on the whole, on average, an 25 expectation in the aggregate, those two quantities</p>
<p>Page 115</p> <p>1 the aggregate of the votes? So the total number of 2 votes in a ward for a particular candidate? 3 A. That's correct. 4 Q. And you say that these aggregates are 5 good predictors because the aggregate votes for 6 President Trump predict the aggregate vote for 7 assembly; correct? 8 A. Well, I'm not using the term predict in 9 that context, but it is certainly going to be 10 related. And, you know, we -- this is not 11 something that I'm guessing at. If you look at 12 figures one and two in my rebuttal report, it shows 13 the ward level vote numbers. So we're not even 14 talking percentages here, we're talking about 15 actual votes, the number of Republican -- the 16 relationship between the Republican assembly vote 17 total and the Republican presidential vote total. 18 If you look at the distribution of 19 those points, it is true that there's some 20 variation. There are points that are off the line. 21 Some wards there are more people who vote for the 22 assembly than -- Republican assembly candidate than 23 vote for President Trump, and other wards there are 24 fewer. But the overall strength of that 25 relationship is patently clear and undeniable.</p>	<p>Page 117</p> <p>1 are very closely related. 2 Q. We'll spend quite a bit of time on 3 figures one and two in just a second, but I want to 4 understand more why you think split ticket voting 5 doesn't matter here. Is that a fair -- 6 A. Because of figures one and two. In the 7 aggregate, there are some voters who split their 8 ticket. But that does not prevent drawing an 9 accurate inference about what that relationship is 10 on the whole. 11 Q. What the Chen composite measure is trying 12 to do is to figure out the partisanship of a 13 district; correct? 14 A. It's an estimate of the baseline 15 partisanship. 16 Q. And it's an estimate of what each 17 individual voter in that district is going to do 18 when they go to the polls; correct? 19 A. That is incorrect. 20 Q. Okay. What is it? 21 A. It is an estimate of the overall 22 percentage of what the vote will be. It is not 23 dependent -- or does not make an assumption about 24 individuals. It is an expectation, it's a 25 prediction that's based on an aggregate split of</p>

<p style="text-align: center;">Page 118</p> <p>1 the two party vote.</p> <p>2 Q. In your personal opinion, what about</p> <p>3 President Trump would have made voters vote for a</p> <p>4 Republican assembly candidate but not for President</p> <p>5 Trump?</p> <p>6 A. My personal opinions are irrelevant. My</p> <p>7 conclusions are based on my analysis of the data.</p> <p>8 Q. In 2018, senator Tammy Baldwin was a</p> <p>9 Democratic candidate for US senate; correct?</p> <p>10 A. That's correct.</p> <p>11 Q. What about Tammy Baldwin would have made</p> <p>12 voters vote for Baldwin for US senate but not for</p> <p>13 their Democratic assembly candidate?</p> <p>14 A. Again, I'm not going to offer an opinion</p> <p>15 about why an individual voter might have split</p> <p>16 their ballot. It doesn't matter to my analysis.</p> <p>17 My analysis is based on the aggregate district and</p> <p>18 ward level results.</p> <p>19 Q. Nothing about Tammy Baldwin's candidacy</p> <p>20 is relevant to the reliability of the -- of the</p> <p>21 Chen composite measure?</p> <p>22 A. Well, the Chen composite measure is a</p> <p>23 measure that controls for -- or that averages out</p> <p>24 candidate-specific effects.</p> <p>25 Q. Are you aware that in certain districts</p>	<p style="text-align: center;">Page 120</p> <p>1 ballots with different candidates -- candidate of</p> <p>2 one party for one office and another party for</p> <p>3 another office, you know, that -- that is -- that</p> <p>4 does not undermine the ability of baseline</p> <p>5 partisanship measures to allow for accurate</p> <p>6 forecasts of outcomes.</p> <p>7 Q. Okay. Let's go to your rebuttal report,</p> <p>8 Exhibit 2, at pages five to six. So now I want to</p> <p>9 take a closer look at figures one and two. Figures</p> <p>10 one and two employ a five variate linear</p> <p>11 regression; correct? Is that correct?</p> <p>12 A. That's correct.</p> <p>13 Q. Sorry. And you're using the regression</p> <p>14 to show correlation; correct?</p> <p>15 A. It shows the relationship between the</p> <p>16 presidential and assembly vote.</p> <p>17 Q. So figure one compares the 2016</p> <p>18 Democratic presidential vote to the 2016 Democratic</p> <p>19 assembly vote; correct?</p> <p>20 A. That's correct.</p> <p>21 Q. And each point in figure one is the</p> <p>22 aggregate vote total for each of these Democratic</p> <p>23 candidates in a particular ward; correct?</p> <p>24 A. That's correct.</p> <p>25 Q. So the X axis is the total votes cast in</p>
<p style="text-align: center;">Page 119</p> <p>1 Tammy Baldwin won a majority of votes, but the</p> <p>2 Republican assembly also won the majority -- a</p> <p>3 Republican assembly candidate also won the majority</p> <p>4 of votes?</p> <p>5 A. It would not surprise me if that were</p> <p>6 true.</p> <p>7 Q. Why wouldn't it surprise you?</p> <p>8 A. Because there is some variation.</p> <p>9 Q. By variation, how much variation?</p> <p>10 A. Well, I would have to -- I would have to</p> <p>11 look. But again, the -- the importance of the</p> <p>12 baseline is that it allows you to predict aggregate</p> <p>13 results. And that is -- that's what a baseline</p> <p>14 measure is designed to do.</p> <p>15 Q. Do you agree split ticket voting occurred</p> <p>16 in Dane county in 2018?</p> <p>17 A. Based on Professor Gaines' report, there</p> <p>18 is evidence of split ticket voting.</p> <p>19 Q. Do you agree that you can't rule out</p> <p>20 split ticket voting in other districts?</p> <p>21 A. Well, it is -- well, based on the ward</p> <p>22 level results, there's no question that there is</p> <p>23 some degree of split ticket voting where candidates</p> <p>24 cast ballots. But again, looking at individual</p> <p>25 ballots, showing that there was -- that there are</p>	<p style="text-align: center;">Page 121</p> <p>1 the ward for the Democratic president presidential</p> <p>2 candidate in 2016, and the Y axis is the total</p> <p>3 votes cast in a ward for the Democratic assembly</p> <p>4 candidate in 2016; correct?</p> <p>5 A. That's correct.</p> <p>6 Q. So most points are clustered in the first</p> <p>7 quadrant of the figure; do you see that?</p> <p>8 A. Yes.</p> <p>9 Q. Why didn't you use the percentage of the</p> <p>10 two party vote instead of the aggregate vote</p> <p>11 totals?</p> <p>12 A. The reason is, what these figures</p> <p>13 demonstrate is that the actual vote counts are</p> <p>14 related. I imagine -- I suspect that the -- that</p> <p>15 the district vote totals, or the vote percentages,</p> <p>16 would show -- I mean, I'm absolutely sure they</p> <p>17 would show a very similar pattern. But the</p> <p>18 advantage of showing the actual votes is that it</p> <p>19 allows me to include information about the actual</p> <p>20 size of the wards, where that that's something</p> <p>21 where if all you do is take the average, you lose</p> <p>22 the piece of information that tells you how many</p> <p>23 people are in each ward, how many votes are being</p> <p>24 cast in each ward.</p> <p>25 Q. Did you run figure one using the</p>

<p>Page 122</p> <p>1 percentage of two party votes? 2 A. No. 3 Q. And why didn't you use the Chen composite 4 as the X axis in figures one and two instead of the 5 2016 presidential vote totals? 6 A. Because these -- this analysis is in 7 response to a claim that Professor Gaines made that 8 it is not -- that split ticket voting and variation 9 makes it -- means that the underlying partisanship 10 of a district or ward can't be accurately measured. 11 And what this analysis shows is that's just simply 12 incorrect. 13 Q. I didn't see anything about the slope of 14 the regression line in your report. Did you 15 analyze the slope of the regression line? 16 A. The slope of the regression line is 17 pretty close to one. But again, the slope of the re -- 18 based on the analysis that I did in 2016, it 19 was very close to one, on the order of .95 or .92. 20 But again, the -- the purpose of this analysis is 21 to show that those two quantities are very strongly 22 related, and that partisanship, as expressed in one 23 vote for president, is very closely related to 24 partisanship as expressed in another vote for state 25 assembly.</p>	<p>Page 124</p> <p>1 that tell you? 2 A. What it tells me is that on average, that 3 there are slightly -- that the number of votes cast 4 for assembly candidates is slightly less than votes 5 cast for Republican candidates. And if you see, 6 the same holds true for Republicans. Well, 7 actually -- 8 Q. We're going to get to figure two. 9 A. Yeah, it's a little bit different for 10 Republicans. But again, the point of this is the 11 slope of the line is a distraction from the basic 12 empirical relationship, that the underlying 13 partisanship of a district is a meaningful quantity 14 that gives me information about what's likely to 15 happen in a state assembly race. 16 Q. On page 5 of your rebuttal report, you 17 say that figure one shows a near -- the R-squared 18 of figure one shows a near perfect relationship 19 between 2016 Democratic presidential vote totals 20 and 2016 Democratic assembly vote totals; do you 21 see that? 22 A. That's what it says. 23 Q. But when you say a near perfect 24 relationship, you don't mean a near perfect 25 one-to-one relationship; correct?</p>
<p>Page 123</p> <p>1 Q. You said that the slope of the line is 2 pretty close to one. Do you agree the slope of the 3 line is less than one? 4 A. I would have to go back and look, but 5 again, the slope of the line is less material than 6 how the points are bunched around it. 7 Q. Let's look at -- we'll get to all that. 8 But for the slope of the line, let's look at where 9 the line crosses the X axis at 2000 votes, for 10 example. You agree that when the -- when -- where 11 the line crosses the X axis, showing that -- or 12 when the line says there have been 2000 votes on 13 the X axis, there have been less than 2000 votes on 14 the Y axis; correct? 15 A. Yes, the regression line crosses the -- 16 2000 on the X axis, below 2000 on the Y axis. But 17 that could be explained by roll-off or drop-off and 18 the fact that not everybody who votes for president 19 actually votes on down ticket races. So again, the 20 slope of this line is not relevant for the 21 underlying point that I'm making, which is that 22 those two quantities are very strongly related. 23 The slope doesn't have to be one for that to be a 24 meaningful relationship. 25 Q. If the slope is less than one, what does</p>	<p>Page 125</p> <p>1 A. I'm not making a claim that the 2 relationship is one to one. What I'm -- what I am 3 saying here is that knowing how many Democratic 4 presidential votes are cast in a district gives me 5 a very good idea of how many Democratic votes are 6 cast for the assembly. There's going to be some 7 variation around that, but that -- that does not 8 undermine the utility or the meaning -- the 9 meaningfulness of this as a metric of underlying 10 partisanship. 11 Q. The slope of this line tells you that, on 12 average, there were more votes cast for the 13 Democratic presidential candidate in 2016 than 14 there were votes cast for Democratic assembly 15 candidates in 2016; isn't that right? 16 A. That's correct. 17 Q. So in fact, the near perfect relationship 18 here is showing us that there's a near perfect 19 relationship with more votes cast for -- let me 20 start over. 21 In fact, the near perfect relationship 22 in figure one shows us that there are consistently 23 more votes cast for the Democratic presidential 24 candidate and fewer votes cast for the Democratic 25 assembly candidate; isn't that right?</p>

<p style="text-align: right;">Page 126</p> <p>1 A. That's what the regression line 2 indicates, but -- 3 Q. The regression actually proves to us that 4 the votes cast for the Democratic president do not 5 equal the votes cast for the Democratic assembly 6 candidate; isn't that right? 7 A. I never said that they were equal. My 8 claim here is based on the overall relationship. 9 Q. If they're not equal, shouldn't a 10 baseline -- a baseline partisanship measure make an 11 adjustment for that inequality? 12 A. That's not necessary. 13 Q. Why not? 14 A. Because if you look at my 2016 report, 15 where I actually did estimate the actual numbers of 16 votes that were cast for Democratic and Republican 17 assembly candidates, and you calculate the district 18 percentages using those actual numbers, that those 19 results are almost exactly what Professor Gaddie 20 produced using his baseline estimate. 21 So the numbers don't have to be one to 22 one to -- so that if there are a thousand votes for 23 the Democratic presidential candidate, there will 24 be exactly a thousand votes cast for the 25 Republican -- for the Democratic assembly</p>	<p style="text-align: right;">Page 128</p> <p>1 presidential votes, don't you have to make an 2 adjustment for the fact that there are more votes 3 cast for the Democratic presidential candidates 4 than votes cast for the Democratic assembly 5 candidates? 6 A. Well, if you're using regression to do 7 that, that is automatically going to be taken into 8 account when you're generating the predicted 9 values. 10 Q. You agree that the -- you're using the 11 Chen composite measure here to evaluate the 12 partisanship of districts in Act 43? 13 A. That's correct. 14 Q. You're using the Chen composite measure 15 to evaluate the partisanship of districts in Chen 16 simulated plan; correct? 17 A. That's correct. 18 Q. Does Dr. Chen's composite measure have an 19 adjustment for the fact that there are more votes 20 cast for Democratic presidential candidates than 21 votes cast for Democratic assembly candidates? 22 A. That's not a meaningful question, because 23 Professor Chen's baseline composite uses a mix of 24 races to generate a two party estimate. So in that 25 sense, he's not relying on a single race or the</p>
<p style="text-align: right;">Page 127</p> <p>1 candidate. If I know what that relationship is, 2 and what this graph and regression indicates is 3 that relationship is very close, I can predict or I 4 can infer what the partisanship election -- what 5 the result of a state assembly election will be 6 given the presidential result. 7 And the fact that those numbers aren't 8 going to be exactly equal, that doesn't -- that 9 doesn't negate the ability to make a forecast of 10 what is -- what is happening here. Could be that 11 there are fewer incumbents, it could be that the 12 races are less competitive. 13 But overall, the relationship between 14 the partisanship of a presidential vote and the 15 partisanship of the assembly vote is very strong. 16 That's the point. Because Professor Gaines is 17 arguing that you can't meaningfully estimate the 18 underlying partisanship of a district. And what 19 these graphs and what this analysis shows is that's 20 incorrect. 21 Q. To make a prediction about the underlying 22 partisanship of a district, don't you have to 23 adjust for using -- let me start over. 24 To make a prediction about the 25 underlying partisanship of a district using</p>	<p style="text-align: right;">Page 129</p> <p>1 results in a single district. So again, the fact 2 that the number of votes for president and 3 assemblies for parties are not exactly equal 4 doesn't mean you can't make a statement or draw an 5 inference about what the relationship between those 6 quantities is. If I know how many presidential 7 votes for a Democrat are cast in a ward, I can 8 generate a very accurate prediction of how many 9 assembly votes are cast in that ward. 10 And the fact that the regression line 11 slope is not exactly equal to one doesn't matter in 12 terms of the ability to generate a meaningful and 13 accurate predicted value of what the assembly vote 14 would be. 15 Q. Dr. Chen's composite measure assumes 16 there's a one-to-one relationship between votes 17 cast in the statewide elections he's using and 18 votes cast in the assembly; correct? 19 A. No, that's incorrect. 20 Q. Why is that incorrect? 21 A. Because Professor Chen's baseline is an 22 aggregate two party share of the vote. He's not 23 making a statement or a claim about the number of 24 votes that will be cast. The estimate and the 25 baseline is a function of the share of votes. So</p>

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<p>1 again, he's not assuming that there's a one-to-one 2 correspondence. 3 Q. But you chose here not to use the share 4 of votes; right? 5 A. That's correct. 6 Q. You told me that using aggregate votes 7 was better. 8 A. Well, because what I'm doing here is not 9 generating a baseline partisan index. The purpose 10 of this analysis is to demonstrate that those two 11 quantities are related. That it -- that if you 12 take Professor Gaines at face value, he's saying 13 it's essentially impossible to meaningfully 14 estimate the underlying partisanship of a district 15 because everybody's splitting their ticket and you 16 can't meaningfully measure what the -- what 17 partisanship is. 18 And these two charts, these two 19 figures and the analysis in my rebuttal report, 20 this is not intended to create a baseline 21 partisanship measure, this is to establish the fact 22 that there actually is a meaningful relationship 23 between voting for different elections, and that 24 you can estimate or can use votes for a statewide 25 race to generate meaningful estimates of the</p>	<p>1 form of the question. 2 BY MS. MEEHAN: 3 Q. I'll ask it again. You're relying on 4 Dr. Chen's composite measure to evaluate the 5 partisanship of the Act 43 districts in the 6 simulated plan districts? 7 A. My understanding of the reason Professor 8 Chen applied the uniform swing is that that made -- 9 that increased the predictive accuracy of the 10 baseline measure. 11 Q. Anything else? 12 A. That's my -- that's my understanding. 13 Q. Okay. Let's whiz through figure two 14 really fast. So figure two is like figure one, 15 except that it compares the Republican assembly 16 vote total to the Republican presidential vote 17 total; correct? 18 A. That's correct. 19 Q. Are you familiar with the concept of 20 heteroscedasticity? 21 A. Yes. 22 Q. And what is that concept? 23 A. Heteroscedasticity refers to a 24 nonconstant standard error of the -- or variance in 25 the -- in the data, or basically the spread</p>
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<p>1 baseline partisanship of a ward in a district. 2 Q. And if voters in those statewide races 3 consistently cast more votes for the Democrats in 4 those statewide races than the votes they cast in 5 it for Democrats in assembly elections, wouldn't 6 the baseline measure have to make an adjustment for 7 that fact? 8 A. Well, I don't know whether this -- this 9 pattern is actually repeated for other statewide. 10 Q. Assume that it is. Would you have to 11 make an adjustment? 12 A. It depends. 13 Q. Why does it depend? 14 A. Well, because I would have to go through 15 the -- would actually have to do the calculations, 16 but if -- if my -- if that were true, then the 17 baseline would -- would systematically over- or 18 underestimate. And if that's in fact the case, 19 then you could adjust for that, by, for example, 20 applying a uniform swing. 21 Q. Dr. Chen's uniform swing was not applied 22 to adjust for this phenomenon; correct? 23 A. I don't know. 24 Q. You don't know. 25 MR. POLAND: I'm going to object to the</p>	<p>1 increases. 2 Q. Right. So as you get farther along your 3 X axis, you actually see higher residuals; right? 4 A. Well, the absolute value of the residuals 5 will be higher. 6 Q. When you plotted figure two, did you not 7 observe any heteroscedasticity in figure two? 8 A. In the text of what I'm doing here, 9 heteroscedasticity is irrelevant, because what 10 heteroscedasticity does is affect the coefficient 11 estimates. And the reason I generated these graphs 12 is to show an overall relationship between two 13 quantities. I'm not making a claim that the -- 14 that the slope is exactly -- of the regression line 15 is exactly some quantity. This is just an 16 illustrative way of showing that the two quantities 17 are related. 18 I don't know, looking at this, whether 19 that would actually constitute a significant level 20 of heteroscedasticity, because there are some 21 outliers. But looking at this, it's not obvious to 22 me that this is a significant -- a material amount 23 of heteroscedasticity. But even if it were, even 24 if it was, it doesn't matter, because the overall 25 point here is that these two quantities are</p>

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<p>1 strongly related.</p> <p>2 Q. Did you look to see if they were strongly</p> <p>3 related by drawing a curves regression line, for</p> <p>4 example, or like a -- did you look at other</p> <p>5 regressions other than a by variate regression?</p> <p>6 A. Again, there's no reason to expect that</p> <p>7 the relationship here is nonlinear. And I'm not</p> <p>8 offering this as a way of proving that the</p> <p>9 coefficient is a particular quantity. You could go</p> <p>10 back to my 2016 report, where I did have a more</p> <p>11 sophisticated model that was used to generate</p> <p>12 predictions. I'm not using this to generate</p> <p>13 predictions. I'm offering this as a way of</p> <p>14 demonstrating that these two quantities are</p> <p>15 actually very strongly related.</p> <p>16 Q. Your 2016 work that you just referred to</p> <p>17 was work analyzing your partisan baseline and not</p> <p>18 Dr. Chen's; correct?</p> <p>19 A. That's correct.</p> <p>20 Q. Okay. So I'm hoping you can enlighten me</p> <p>21 on the way -- just elementary, statistical lesson</p> <p>22 in the way this bivariate regression works and how</p> <p>23 the line is fitted. So when you look -- the</p> <p>24 bivariate regression is fitted in a way such that</p> <p>25 the absolute value -- or the absolute value of the</p>	<p>1 distance from the line on the right side of the X</p> <p>2 axis? Do you understand what I'm asking?</p> <p>3 A. Yeah. So in this analysis, each ward is</p> <p>4 weighted equally irrespective of the number of</p> <p>5 votes that are cast in that ward.</p> <p>6 Q. So if you have a regression -- if you</p> <p>7 have a ward with 200 voters, and 50 voters in that</p> <p>8 district vote for their Republican candidate but</p> <p>9 don't for the Republican presidential candidate,</p> <p>10 that's one district. And then you have a ward with</p> <p>11 a thousand voters, where 50 voters vote for the</p> <p>12 Republican candidate, presidential candidate, but</p> <p>13 not the Republican assembly candidate.</p> <p>14 For purposes of fitting the</p> <p>15 regression, those wards are treated as having the</p> <p>16 same distance from the -- the same squared distance</p> <p>17 from the regression line?</p> <p>18 A. Each of the wards is weighted equally, so</p> <p>19 that's true.</p> <p>20 Q. So even though in the ward with 200</p> <p>21 voters, 25 percent of the voters didn't vote for</p> <p>22 the same party, and in a ward with a thousand</p> <p>23 voters only five percent didn't vote for the same</p> <p>24 party, those wards are treated equally?</p> <p>25 A. Well, again, and they're weighted equally</p>
<p>Page 135</p> <p>1 distances between the point -- all the points and</p> <p>2 the lines are equal on top and bottom; correct?</p> <p>3 A. No, that's incorrect.</p> <p>4 Q. Okay. Can you explain that to me then?</p> <p>5 A. The way that the regression, the</p> <p>6 bivariate regression line is drawn, is that it</p> <p>7 minimizes the squared value of the residuals.</p> <p>8 Q. That seems familiar from my -- and when</p> <p>9 you say the squared value of the residuals, are</p> <p>10 you -- we're just talking absolute values, right?</p> <p>11 So for example, if there's -- if the squared value</p> <p>12 is 50, you know, down here on the left side of the</p> <p>13 X axis and 50 up here on the right side of the X</p> <p>14 axis, those are treated as equal?</p> <p>15 A. Well, to put this in formal terms, when a</p> <p>16 point is above the line, the residual will be</p> <p>17 positive, when the point is below the line, the</p> <p>18 residual will be negative. But if you take the</p> <p>19 square, those are both going to be positive</p> <p>20 numbers.</p> <p>21 Q. Uh-huh. And so here, this might be</p> <p>22 easier. Is the fit of the regression line agnostic</p> <p>23 to the fact that the distance from the line on the</p> <p>24 left side of the X axis, where you have fewer</p> <p>25 votes, is -- represents fewer votes than the</p>	<p>Page 137</p> <p>1 in the regression. But I'm not offering this as</p> <p>2 saying this is the precise slope of the</p> <p>3 relationship. I'm saying you can look at this and</p> <p>4 it is just obvious that there's a very strong</p> <p>5 relationship.</p> <p>6 And the fact that there's going to be</p> <p>7 a little -- the fact that all of the points aren't</p> <p>8 precisely on a line, that doesn't prevent you from</p> <p>9 drawing an accurate inference about what the</p> <p>10 relationship is and what the baseline partisanship</p> <p>11 of a district would be.</p> <p>12 Q. But you agree that this regression treats</p> <p>13 a ward with 200 voters, 25 percent of whom didn't</p> <p>14 vote for the same party, the same as a ward with a</p> <p>15 thousand voters, five percent of whom didn't vote</p> <p>16 for the same party?</p> <p>17 A. Well, again, the bivariate regression</p> <p>18 line minimizes overall the -- the sum of the</p> <p>19 squared residuals. And so in this case, each ward</p> <p>20 is weighted equally. So a point that's above the</p> <p>21 line by five and a point that's below the line by</p> <p>22 five will both -- that will both have the same</p> <p>23 effect on the -- the estimates regardless of where</p> <p>24 they are on -- on the plot, 'cause they're weighted</p> <p>25 equally.</p>

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<p>1 Now, where that does make a difference</p> <p>2 is that the overall variance of the underlying</p> <p>3 data, that actually becomes important as well. But</p> <p>4 again, this is -- I'm not offering this as saying</p> <p>5 the exactly accurate coefficient is .98 or 1.02,</p> <p>6 I'm offering this as a demonstration of the fact</p> <p>7 that there's a very strong relationship between how</p> <p>8 people vote for different offices.</p> <p>9 Q. And here on page 6, with respect to</p> <p>10 figure two, you conclude that figure two indicates</p> <p>11 an extremely strong relationship between the 2016</p> <p>12 Republican presidential vote total and the 2016</p> <p>13 Republican assembly vote total; correct?</p> <p>14 A. That's what I wrote.</p> <p>15 Q. Did you analyze the slope of this line?</p> <p>16 A. That was not material to the point that I</p> <p>17 was trying to make.</p> <p>18 Q. Looking here at the slope of this line,</p> <p>19 do you agree that the slope of this line tells you</p> <p>20 that there were consistently more votes cast for</p> <p>21 Republican assembly candidates than votes cast for</p> <p>22 a Republican presidential candidate?</p> <p>23 A. The slope of this line appears to be</p> <p>24 greater than one.</p> <p>25 Q. Correct. So if you, for example, look at</p>	<p>1 one to one for this to be meaningful. And what</p> <p>2 this demonstrates that if -- if I know -- or the</p> <p>3 number of Republican or Democratic votes for</p> <p>4 president gives me a very good indication of the</p> <p>5 number of votes that are going to be cast for the</p> <p>6 Democratic and Republican assembly candidates.</p> <p>7 Those numbers don't have to be equal.</p> <p>8 It doesn't mean that if there are 800</p> <p>9 votes cast for a Republican candidate, there're</p> <p>10 going to be exactly 800 votes cast for a Republican</p> <p>11 assembly candidate for me to use that to draw a</p> <p>12 meaningful inference about what's likely to happen</p> <p>13 in those districts.</p> <p>14 It could be that these effects are --</p> <p>15 I mean, there are a number of different reasons why</p> <p>16 you're going to see variation around this. But</p> <p>17 it's just arb -- it's just wrong to say that</p> <p>18 because the slope of a line isn't one, that this</p> <p>19 is -- that you can't make a statement about the</p> <p>20 relationship between presidential vote and assembly</p> <p>21 vote.</p> <p>22 Q. That's not what I said. What I want to</p> <p>23 know is you say that this line with an R squared of</p> <p>24 .97 shows an extremely strong relationship. Is it</p> <p>25 correct that the extremely strong relationship is</p>
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<p>1 where the -- you know, let's look at the line where</p> <p>2 it intersects the Y axis at 800 votes for the</p> <p>3 Republican assembly candidate. When there -- the</p> <p>4 line tells us that 800 votes cast for assembly</p> <p>5 candidate translates to, I don't know, what would</p> <p>6 you call it, somewhere between 700 and 750 votes</p> <p>7 cast for the Republican presidential candidate;</p> <p>8 correct?</p> <p>9 A. I'm sorry, where are we? We're on figure</p> <p>10 two?</p> <p>11 Q. On figure two, take a look at the line</p> <p>12 where it crosses 800 votes cast for the Republican</p> <p>13 assembly cand --</p> <p>14 A. Okay, on the Y axis.</p> <p>15 Q. And then if we draw down to the X axis,</p> <p>16 it hits the X axis somewhere around 700 to 750</p> <p>17 votes for president; correct?</p> <p>18 A. It's closer to 750 than 700, but yes.</p> <p>19 Q. Okay, I'll give you 750. So when you say</p> <p>20 there's an extremely strong relationship, you mean</p> <p>21 there's an extremely strong relationship between</p> <p>22 more votes cast for an assembly candidate than for</p> <p>23 a Republican presidential candidate?</p> <p>24 A. No, that's incorrect, because the --</p> <p>25 again, the relationship does not have to be exactly</p>	<p>1 that there are more votes cast for Republican</p> <p>2 assembly candidates than for Republican</p> <p>3 presidential candidates in 2016?</p> <p>4 A. My conclusion about the relationship, the</p> <p>5 strength of the relationship, is based on the</p> <p>6 overall pattern in the R squared.</p> <p>7 Q. Can you answer my question?</p> <p>8 A. I did answer your question. I mean,</p> <p>9 if -- you want to argue that the results of this</p> <p>10 analysis is, on average, there are going to be</p> <p>11 slightly more Republican votes for assembly than</p> <p>12 there are for president, that's what it shows. But</p> <p>13 that's not -- that's not the conclusion that I --</p> <p>14 the meaningful conclusion or opinion that I formed</p> <p>15 based on this data.</p> <p>16 Q. Let's take a step back a minute, and</p> <p>17 let's just assume, for simplicity sake, that</p> <p>18 figures one and figure two did show a one-to-one</p> <p>19 relationship. So let's look back at figure one. I</p> <p>20 think this'll be easier to do using an actual</p> <p>21 point. So take a look at the ward where there were</p> <p>22 about 1,250, maybe a few more, votes cast for the</p> <p>23 2016 Democratic presidential candidate.</p> <p>24 And in that same ward it looks like</p> <p>25 there were slightly more than a thousand votes cast</p>

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<p style="text-align: right;">Page 142</p> <p>1 for the Democratic assembly candidate.</p> <p>2 A. May I see what you --</p> <p>3 Q. Yeah, sure.</p> <p>4 A. Okay. Thank you.</p> <p>5 Q. I just want to know what information I</p> <p>6 can glean from that particular point, so -- and all</p> <p>7 other points, for that matter, from figure one and</p> <p>8 figure two. What we know from this point is that</p> <p>9 in a ward there were a thousand votes cast for the</p> <p>10 Democratic assembly candidate, give or take a</p> <p>11 little bit, and that there were 1250 votes cast for</p> <p>12 the Democratic presidential candidate; correct?</p> <p>13 A. Correct.</p> <p>14 Q. We don't know whether those votes</p> <p>15 overlapped; correct? Meaning we don't know whether</p> <p>16 all thousand voters who cast Democratic votes for</p> <p>17 the -- who cast votes for the Democratic assembly</p> <p>18 candidate are part -- are all part of the 1,250</p> <p>19 votes who cast votes for the Republican -- or for</p> <p>20 the Democratic presidential candidate; correct?</p> <p>21 A. That's correct. That is an aggregate</p> <p>22 total.</p> <p>23 Q. Right. And so you agree that the voters</p> <p>24 who are counted on -- the votes that are counted on</p> <p>25 the X axis are not necessarily representative of</p>	<p style="text-align: right;">Page 144</p> <p>1 that in that ward, you had the exact same -- it's</p> <p>2 possible that everyone in this ward who voted for</p> <p>3 the Democratic presidential candidate voted for the</p> <p>4 Republican assembly candidate; right?</p> <p>5 A. It's theoretically possible.</p> <p>6 Q. Yeah. And all I'm trying to understand</p> <p>7 is that figure one and figure two doesn't help us</p> <p>8 understand whether there were a sizeable number of</p> <p>9 voters who cast votes for a Republican assembly</p> <p>10 candidate but a Democratic presidential candidate;</p> <p>11 correct?</p> <p>12 A. What figures one and two demonstrate is</p> <p>13 that those two aggregate quantities are very</p> <p>14 closely related.</p> <p>15 Q. But it doesn't tell us anything about the</p> <p>16 individual voters who cast votes making up those</p> <p>17 aggregate quantities; correct?</p> <p>18 A. Well, if I'm trying to estimate the</p> <p>19 baseline partisanship of a district, I don't need</p> <p>20 to examine every single voter. I need to look at</p> <p>21 aggregate outcomes. And that's what the baseline</p> <p>22 estimate of the baseline method produces, or that's</p> <p>23 what the -- that's what the result means.</p> <p>24 Q. You mentioned figure three. If you want</p> <p>25 to just turn the page and look at figure three on</p>
<p style="text-align: right;">Page 143</p> <p>1 the same voters who cast votes for the votes</p> <p>2 counted on the Y axis?</p> <p>3 A. It's possible, but again, I'm not making</p> <p>4 a statement about individual voters. I'm using</p> <p>5 this to make the point that you can generate</p> <p>6 accurate aggregate outcomes. And it could be that</p> <p>7 people who are switching, it cancels out. But the</p> <p>8 fact that people -- that there are voters who split</p> <p>9 their tickets, or the fact that the vote -- actual</p> <p>10 vote totals are not exactly one to one, that</p> <p>11 doesn't mean that you cannot generate accurate</p> <p>12 forecasts of what the district level votes are.</p> <p>13 That's what I did in 2012. Or not 2012, 2016.</p> <p>14 Figure three shows the relationship</p> <p>15 between my district level forecasts, which were</p> <p>16 based on a regression model, and Professor Gaddie's</p> <p>17 baseline estimates, which were formed using 2004 to</p> <p>18 2010 elections. These are estimates of the same</p> <p>19 underlying quantity. And that's -- that's the</p> <p>20 purpose of this demonstration.</p> <p>21 Q. You mentioned canceling out; right? So</p> <p>22 it's possible, for example, that you have this</p> <p>23 ward, the ward we're talking about, right, the ward</p> <p>24 where there were 1,250 or so votes cast for the</p> <p>25 Democratic presidential candidate, it's possible</p>	<p style="text-align: right;">Page 145</p> <p>1 page 7. Figure three examines your partisan</p> <p>2 baseline; correct?</p> <p>3 A. Correct.</p> <p>4 Q. Why doesn't figure three examine</p> <p>5 Dr. Chen's partisan baseline?</p> <p>6 A. Because I produced this in 2016.</p> <p>7 Q. Why, when you submitted your rebuttal</p> <p>8 report, didn't you update this analysis using</p> <p>9 Dr. Chen's partisan baseline instead of your</p> <p>10 partisan baseline?</p> <p>11 A. It was not something that was material to</p> <p>12 my conclusions.</p> <p>13 Q. Isn't the reliability of Chen's partisan</p> <p>14 baseline material to your conclusions?</p> <p>15 A. Well, given that Professor Chen's</p> <p>16 baseline is composed of elections over the same</p> <p>17 period, I imagine it would show very much the same</p> <p>18 thing. In fact, I don't imagine, I'm very</p> <p>19 confident that it would show a very similar</p> <p>20 relationship.</p> <p>21 Q. Why are you very confident?</p> <p>22 A. Because much of the underlying data that</p> <p>23 Professor Gaddie used and Professor Chen used are</p> <p>24 the same races.</p> <p>25 Q. Are you -- all right. Throughout your</p>

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<p>1 report, or your reports, excuse me, you use the</p> <p>2 term "neutral plan" or "neutral map." What makes a</p> <p>3 redistricting plan neutral?</p> <p>4 A. As I had indicated in my deposition, a</p> <p>5 neutral plan is one that is drawn without the</p> <p>6 intent of imposing a partisan effect, and/or</p> <p>7 without reference to underlying partisanship data.</p> <p>8 One that is drawn solely on the basis of</p> <p>9 traditional redistricting criterion, or criteria</p> <p>10 that is not intended or designed to create a</p> <p>11 particular advantage for one party.</p> <p>12 Q. So drawn without the intent of imposing a</p> <p>13 partisan effect and/or without reference to</p> <p>14 underlying partisan data; is that right?</p> <p>15 A. That's correct.</p> <p>16 Q. What do you mean by and/or?</p> <p>17 A. Well, my understanding of -- it is</p> <p>18 possible for a neutral plan to generate a</p> <p>19 nonneutral outcome. So someone might have the</p> <p>20 intent to draw a plan with an advantage, but not --</p> <p>21 or not have actual data relying more on</p> <p>22 impressions, and it is possible for -- it is</p> <p>23 possible, as I did in 2016, to draw a map that</p> <p>24 included partisan effects and baseline</p> <p>25 partisanship, but was drawn in a way that was not</p>	<p>1 "underlying partisan data." You might be, you</p> <p>2 know, forming impressions about areas without</p> <p>3 actually looking at accurate measures of underlying</p> <p>4 partisanship. So if you have -- if you have an</p> <p>5 intent, that -- and that would -- I would regard</p> <p>6 that as an effort to draw a nonneutral plan.</p> <p>7 Q. And in that scenario, where you have</p> <p>8 intent of imposing a partisan effect without</p> <p>9 reference to the underlying partisan data, does the</p> <p>10 resulting plan matter?</p> <p>11 A. It would depend on the context.</p> <p>12 Q. What do you mean, "depend on the</p> <p>13 context"?</p> <p>14 A. Well, these are not -- I think there</p> <p>15 would likely be some shades of gray. It depends on</p> <p>16 what the -- what the information, or what the --</p> <p>17 the map lines are actually based on. So you don't</p> <p>18 have to look at actual vote results to form an</p> <p>19 impression that this part of the state is going to</p> <p>20 be Democratic and that part of the state is going</p> <p>21 to be Republican.</p> <p>22 Q. If you have a map that is drawn with no</p> <p>23 intent of imposing a partisan effect, but the map</p> <p>24 makers do reference underlying partisan data, is</p> <p>25 that a neutral map?</p>
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<p>1 intended to generate an advantage for one side.</p> <p>2 Q. Okay. I'm -- I'll give you different</p> <p>3 scenarios based on your definition, and then I want</p> <p>4 you to tell me whether that would be a neutral plan</p> <p>5 or not. So a map is drawn with the intent of</p> <p>6 imposing a partisan effect, and the map is drawn</p> <p>7 with reference to underlying partisan data.</p> <p>8 Neutral or not neutral?</p> <p>9 A. That would, depending on the result,</p> <p>10 would be not neutral. But yes, that would -- as a</p> <p>11 rule, that would be a nonneutral plan.</p> <p>12 Q. You said depending on the result. What</p> <p>13 do you mean by that?</p> <p>14 A. Well, it would -- well, it would not --</p> <p>15 it would not depend on the result if you had</p> <p>16 intent. That would be sufficient.</p> <p>17 Q. All right. So just to make sure I'm</p> <p>18 clear, drawing the map with the intent of imposing</p> <p>19 partisan effect and with reference to underlying</p> <p>20 partisan data is not a neutral plan; correct?</p> <p>21 A. That's correct.</p> <p>22 Q. Okay. What about a map drawn with the</p> <p>23 intent of imposing a partisan effect but without</p> <p>24 reference to underlying partisan data?</p> <p>25 A. Well, depends on what you meant by</p>	<p>1 A. That would generally be considered a</p> <p>2 neutral map, because that's what I did in drawing</p> <p>3 the demonstration plan.</p> <p>4 Q. Okay.</p> <p>5 A. Can we take a break for three minutes?</p> <p>6 Q. Can I just -- can I finish this really</p> <p>7 fast?</p> <p>8 A. Sure, sure.</p> <p>9 Q. And then I would also like to take a</p> <p>10 break. Okay. If you have a map that has no intent</p> <p>11 and no reference to underlying partisan data,</p> <p>12 neutral map?</p> <p>13 A. That would be considered a neutral map.</p> <p>14 Q. Okay.</p> <p>15 A. And the reason I wanted to make it clear</p> <p>16 about outcomes, that it is possible for a</p> <p>17 neutral -- a neutral process to produce a map that</p> <p>18 has nonneutral outcomes.</p> <p>19 Q. And would a neutral process, meaning</p> <p>20 there's no intent that produces nonneutral</p> <p>21 outcomes, still be a neutral map?</p> <p>22 A. That would be -- that would -- I would</p> <p>23 consider that a neutral map.</p> <p>24 MS. MEEHAN: Okay. Want to take a break?</p> <p>25 THE WITNESS: Yeah. Thank you.</p>

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1 THE VIDEOGRAPHER: Going off the record
 2 at 2:49.
 3 (Break taken.)
 4 THE VIDEOGRAPHER: We're back on the
 5 record at 3:13.
 6 BY MS. MEEHAN:
 7 Q. Before the break you discussed drawing
 8 districts without the intent of imposing partisan
 9 effect. Do you remember that?
 10 A. Yes.
 11 Q. I want to understand -- can we call that
 12 partisan intent for purposes of this discussion?
 13 A. Yes.
 14 Q. So I want to understand what you mean by
 15 partisan intent. Is some partisan intent okay in
 16 redistricting?
 17 A. My conclusions are based on the data that
 18 I observed.
 19 Q. If a map maker acts with some partisan
 20 intent, will the resulting map not be neutral?
 21 A. So if someone who has the intent might
 22 produce a map that is -- I just want to make sure
 23 I -- I think there was a double negative in there.
 24 Q. If there's some partisan intent on the
 25 part of the map maker, will the map be neutral?

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1 A. It depends.
 2 Q. Uh-huh. And does it depend on the amount
 3 of partisan intent?
 4 A. Well, so partisan intent is something
 5 that you will observe but often not be able to
 6 quantify. You know, someone might have the intent
 7 or not have the intent, but I'm not sure there are
 8 meaningful degrees of some, a lot. And so if there
 9 is an observed intent to draw a map that is
 10 nonneutral, it would -- it would, in some degree,
 11 depend on the -- the actual result.
 12 Q. Is it your opinion that if there is an
 13 observed intent to use partisanship in
 14 redistricting -- I'm trying to actually ask a
 15 simple question, which is, you know, does how much
 16 partisan intent matter in determining whether a
 17 plan is neutral or not. So is it your opinion that
 18 as long as there's some observable partisan intent,
 19 that the resulting map would not be one that you
 20 would consider a neutral map?
 21 A. In that case, if we are -- I guess it
 22 is -- it would depend on some measure of the degree
 23 of partisan intent. But to be fair, that's not
 24 what we're talking about in this case.
 25 Q. And what would matter about -- why would

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1 the degree of partisan intent matter?
 2 A. The degree would be important in terms of
 3 evaluating the output. I mean, one of the
 4 possibilities of an attempt to gerrymander is that
 5 it might not just be a very good one, and that's
 6 something that the literature considers. But
 7 again, that's not what happened here.
 8 Q. Is there a certain degree of partisan
 9 intent required for a map to be nonneutral?
 10 A. If I were to establish a set of criteria
 11 that, you know, partisan intent in some degree is
 12 binary, it's either present or it's not, then
 13 the -- evaluating the effects would be the next
 14 stage, similar to what -- the test that the
 15 plaintiffs proposed, where it's an intent and
 16 effect and a justification test.
 17 Q. If a map maker generates a hundred
 18 different possible plans without considering
 19 partisanship, are all of those 100 different
 20 possible plans neutral?
 21 A. So if there were a hundred plans drawn
 22 with no consideration of intent?
 23 Q. No consideration of partisanship.
 24 A. Well, I want to be precise, that no
 25 consideration of partisan data or no intent to

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1 enact or to create a partisan advantage? If a --
 2 if there were a hundred maps drawn with neutral
 3 criteria, then those would typically be considered
 4 neutral maps.
 5 Q. If a map maker generated 100 different
 6 possible plans pursuant to neutral redistricting
 7 criteria and without considering any partisan data,
 8 are all of those 100 possible plans neutral?
 9 A. Well, again, if the -- if a map was drawn
 10 without the intent to create a partisan advantage,
 11 and according to neutral traditional redistricting
 12 criteria, then -- and without reference to any
 13 partisan data, then those would be considered
 14 neutral plans.
 15 Q. And so the map maker has generated a
 16 hundred different possible plans, and now the map
 17 maker has to choose one of those -- one of those
 18 100 plans; right?
 19 A. Okay.
 20 Q. You can only have one plan in a state;
 21 you can't have a hundred plans; right?
 22 A. That's correct.
 23 Q. And so the map maker chooses the plan out
 24 of the set of 100 that is most favorable to his
 25 preferred political party. Is that map neutral?

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<p>Page 154</p> <p>1 A. Well, you -- you're assuming that there 2 was some way to evaluate the partisan effect of a 3 map, which would mean that you would have to have 4 some type of basis for making that -- that 5 judgment. And -- and if we're going to extend the 6 hypothetical, if you were to generate every 7 possible map and, you know, the number was 8 astronomical, and you evaluate every one of those 9 maps and pick the one that is most favorable to -- 10 to your party, that is not a neutral map. 11 Q. But I want you to stick with my 12 hypothetical. So a map maker generates 100 plans, 13 and at the time that those 100 plans are generated, 14 there's no partisan intent. Just generate the 15 maps. And then step two, the map maker decides 16 which of the 100 maps will be the map for the 17 state. And the map maker chooses the one out of 18 100 because it is most favorable to his preferred 19 political party. 20 A. Well, from that I would actually then 21 infer a partisan intent, because that implies that 22 the map drawer is ignoring other criteria and 23 focusing on selecting a plan based on its partisan 24 advantage. And that's kind of the definition of 25 partisan intent.</p>	<p>Page 156</p> <p>1 Q. So let's say there are three maps all 2 drawn pursuant to neutral traditional redistricting 3 criteria, and then a map maker has to select among 4 the three maps, and they decide that they want the 5 map that is more likely to favor Republicans than 6 the two other maps, which are either, let's say, 7 more likely to favor Democrats. Is the selection 8 of the map more likely to favor Republicans, 9 what -- is that selection alone what creates the 10 partisan intent? 11 A. In that hypothetical, I think it's 12 reasonable to conclude, yes. 13 Q. Even though the three maps were all 14 generated pursuant to traditional redistricting 15 criteria? 16 A. Again, you're sort of switching the cart 17 and the horse. If I generate a map -- I mean, we 18 can think of it in a different sequence. I 19 generate one map using neutral criteria, and I look 20 at that and I conclude that that is not 21 sufficiently advantageous to my party, and so I 22 reject it and I draw another neutral map, and I 23 draw the maps one at a time, and I accept or reject 24 the maps based on my impression of whether that map 25 provides a sufficient advantage to my party.</p>
<p>Page 155</p> <p>1 Q. But you agreed that the generation of the 2 100 possible plans was neutral; correct? 3 A. Well, based on your hypothetical. But if 4 you generate a hundred plans and pick the one that 5 is most favorable -- 6 Q. Just step one. Just focus on step one. 7 Are the 100 possible plans generated without 8 reference to partisanship, are those plans all 9 neutral? 10 A. In terms of -- at that point, in terms of 11 intent, they would be regarded as neutral. If they 12 were actually drawn or, in the hypothetical, 13 hypothetically drawn without any partisan intent 14 and without reference to partisan data based on 15 traditional redistricting criteria, then those 16 would be regarded as neutral plans. 17 But if, to get to the second part, 18 then after those 100 plans are drawn, we know it is 19 generally accepted and established that a neutral 20 process can produce a nonneutral outcome. But if I 21 then look at each of those maps and then apply 22 partisan criteria to select the map that is most 23 favorable, that's certainly suggestive of partisan 24 intent. And I suppose if -- if you -- it would 25 remain the same if the number increased.</p>	<p>Page 157</p> <p>1 Even though each one of those maps is 2 drawn by neutral criteria, eventually I'm going to 3 produce a map that I will decide actually that 4 produces a sufficient advantage greater than the 5 other maps, I'm going to accept that one, that's 6 certainly suggestive of partisan intent. 7 Q. If -- 8 A. So we could even extend a little bit 9 more, because my acceptance of a provisional map 10 does not automatically enact the map that I need to 11 propose it. And then so we can -- 12 Q. Yep. 13 A. Intent can enter in at different points. 14 Q. What I'm trying to get at is to assess 15 the degrees of partisanship question I asked you 16 initially. So in my hypothetical, step one means 17 that we're applying all these neutral redistricting 18 criteria first, and then what breaks the tie 19 amongst all these neutral maps is partisanship. 20 And it's your view that even though we 21 applied neutral redistricting criteria first, that 22 the final application of partisanship transforms 23 those neutral plans to nonneutral? 24 A. That's correct. I mean, the alternative 25 would be I produce a hundred maps and I select the</p>

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<p>1 one that has the lowest partisanship, or I select 2 one at random. If I select a map at random and it 3 happens to have a partisan advantage, that's not a 4 partisan intent. 5 Q. Okay. If the drafters of a plan 6 consider -- if the drafters of a plan consider 7 partisanship to achieve political 8 heteroscedasticity, is that acting with partisan 9 intent? 10 A. What do you mean by "political 11 heteroscedasticity"? 12 Q. Let's take my example. Let's go back to 13 the hypothetical. So there's a hundred maps 14 generated pursuant to traditional redistricting 15 criteria, and then we will choose the map that 16 is -- that has an efficiency gap score of zero. Is 17 that, the efficiency gap score of zero we're using 18 because we think that that map might be polit -- 19 let me start over. Let me simplify. 20 You generate 100 maps pursuant to 21 neutral traditional redistricting criteria. The 22 map you select at the end of the day you select 23 because its efficiency gap is zero. Is selecting 24 because of the map's efficiency gap of zero using 25 partisan intent?</p>	<p>1 sequence of maps, and I pick the map that's most 2 favorable to Democrats, that would not be 3 interpreted in the literature as reflecting a 4 partisan intent. 5 Q. And it's your opinion that partisan 6 intent does not include choosing a map that 7 achieves political heterogeneity? 8 A. Again, I'm not sure I understand what 9 political heterogeneity means. 10 Q. Would you use partisan intent if you 11 chose a map that mirrors the proportional 12 representation of the state? 13 A. So -- well -- 14 Q. Let me rephrase that. So is it your 15 opinion that intending to choose a map -- 16 A. Can I -- go ahead. I'm sorry. Go ahead. 17 Q. Is it your opinion that choosing a map 18 with the intent to mirror the proportional 19 representation in a state is not acting with 20 partisan intent? 21 A. Well, proportional representation is not 22 the correct standard. A better standard would be I 23 draw a hundred maps using a neutral set of 24 principles, without reference to any partisan 25 advantage or any partisan data, and I look at those</p>
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<p>1 A. Well, in that case, given that an 2 efficiency gap of zero would imply a partisan bias 3 of zero and an equal opportunity to translate votes 4 into seats without -- without creating a partisan 5 advantage achieved through a particular way of 6 aggregating districts, I would -- in that case I 7 would say that that -- that does not reflect 8 partisan intent, because drawing a number of maps 9 and picking the one that is the most -- that has 10 the least partisan asymmetry, that suggests a lack 11 of partisan intent. 12 Q. Why is choosing a map because of its -- 13 what's the difference between choosing a map that's 14 likely to have political results -- let me start 15 over. 16 What's the difference between choosing 17 a map that's likely to benefit Republicans and 18 choosing a map that's likely to benefit neither 19 party? 20 A. I'm sorry, can you say that again? 21 Q. When you say partisan intent, do you only 22 mean the intent to benefit a particular party? 23 A. Well, in the literature, partisan intent 24 is understood to mean trying to benefit your party. 25 That if I'm a Republican and I generate a map, a</p>	<p>1 maps and I calculate the efficiency gap and the 2 average -- the mean efficiency gap is 1.5, which is 3 nonzero, and I choose a map with an efficiency gap 4 of 1.5. Right? There is -- there is a partisan 5 advantage included in there. 6 But in that case, I think most people 7 would agree, and I would agree, that that does not 8 reflect a partisan intent because you are -- you 9 are, in effect, selecting randomly. You were 10 selecting among a set of neutrally generated maps 11 that produce a particular mean of the efficiency 12 gap, and I'm going to pick one at the mean. In 13 that case it would be suggestive of some type of 14 underlying distributional effect of voters that 15 produces an efficiency gap. And we know that can 16 happen. 17 Q. If the mean efficiency gap in a state is 18 two percent, let's say, and a map maker chooses a 19 map that has an efficiency gap of zero percent, has 20 that map maker acted with partisan intent? 21 A. So I don't mean to be excessively 22 semantic here, but I just want to make sure I have 23 all the variables in my head. So in my sample of a 24 hundred maps, I'm a Republican, and the neutrally 25 drawn set of maps has a mean efficiency gap of two,</p>

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<p>1 and I choose a map that has an efficiency gap of 2 zero. So against. Sort of in the other direction. 3 I would not regard that as being drawn with 4 partisan intent. 5 Q. Because you're a Republican? 6 A. Because it goes against my -- my 7 interests, which is -- I mean, that -- in the real 8 world, nobody would do that. 9 Q. And if you're a Democrat is your answer 10 the same? 11 A. So a two percent -- moving from an 12 efficiency gap of two -- well, that would 13 generally, given what the literature on the 14 efficiency gap is, that that would be in the range 15 of an acceptable deviation. 16 Q. Well, earlier you said you either act 17 with partisan intent or you don't. So -- 18 A. But there's also an effects component to 19 that. That I can act with a partisan intent and 20 not do a very good job. So the partisan intent 21 would be there, but whether or not it's an actual 22 gerrymander would be -- would depend on the -- on 23 the outcome, or the results. 24 Q. Setting results aside for one second. If 25 a map maker is a Democrat and the map maker</p>	<p>1 party vote, which would be a ten percent margin of 2 victory; other people have used 60 percent. Again, 3 there's no absolute threshold. The rule is closer 4 to 50 is more competitive; farther away from 50 is 5 less competitive. 6 Q. For the opinions you're offering in this 7 case, what score constitutes a competitive district 8 in your opinion? 9 A. I'm not sure I specified an absolute 10 threshold, because in some cases it will depend on 11 what the alternatives are that -- in a district 12 that, under a neutral criteria, would produce a 13 50/50 district or a 51/49 district to benefit one 14 party. And I am able to draw a district that, 15 instead of a 51 percent, it's a 54 percent. That 16 would be a less competitive district than the 17 51 percent. 18 So it's a -- it's a matter of degree. 19 There's no -- there's no absolute threshold. It 20 would depend on what the possible alternatives are 21 in making a judgment about, in this context, 22 whether voters have been packed or cracked. 23 Q. How many districts in Chen's plan are 24 competitive, in your opinion? 25 A. I would have to look at the specific</p>
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<p>1 generates 100 maps pursuant to neutral 2 redistricting criteria, and the mean efficiency gap 3 of those maps is about two percent, and then the 4 map maker, in deciding which of the 100 maps he 5 will select, chooses the map with a zero percent 6 efficiency gap, has the map maker acted with 7 partisan intent? 8 A. In a sense, yes. 9 Q. Okay. Let's move on. What does it mean 10 for a district to be competitive? 11 A. There's no absolute threshold. People 12 who study them in the literature, there are 13 different -- different ways of thinking about that. 14 In general, competitive district is one in which 15 either party has a meaningful chance of winning it. 16 Q. To determine whether either party has a 17 meaningful chance of winning it, does that depend 18 on the partisan baseline score? 19 A. It can. In the context of analyzing 20 redistricting plans, it generally will. 21 Q. And what score would be competitive? 22 A. Well, again, there's no absolute cutoff. 23 As the baseline or the forecast gets closer to 50, 24 it becomes more competitive. There are some people 25 in the literature who use 55 percent in the two</p>	<p>1 districts. I don't recall off the top of my head 2 what that number is. 3 Q. How many districts in your demonstration 4 plan are competitive? 5 A. I would have to go back and check. One 6 of the things that I attempted to do, or did in the 7 demonstration plan, is drawing districts that were 8 approximately symmetric. So if I draw one district 9 with 55 percent and another district with 45 -- 10 with 45 percent, that can actually be a symmetric 11 plan. So the actual percentages in a single 12 district are not the only material metric. 13 Q. What does it mean to have a balanced 14 district? 15 A. A balanced district or a balanced plan? 16 Q. A balanced district. 17 A. Well, in the con -- I'm not sure I use 18 that term in my report. 19 Q. Go ahead and turn to your opening report 20 at page 4. Do you see the last bullet you say, 21 "The simulated plan 43,995, the alternative map 22 demonstrates in every case that it was possible to 23 create more neutral and balanced districts." 24 A. Yes. 25 Q. What did you mean by "balanced</p>

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Page 166	<p>1 districts"?</p> <p>2 A. So in that context it means looking at</p> <p>3 combinations of districts, looking at</p> <p>4 competitiveness. So again, one might say that a</p> <p>5 balanced district is one that is closer to 50/50.</p> <p>6 Another way of thinking about it is instead of</p> <p>7 creating three districts with 53 percent and one</p> <p>8 with 45 percent, which would give a -- or one with</p> <p>9 30 percent, given an overall partisanship of a</p> <p>10 region of 51 percent, in terms of in this context</p> <p>11 it refers to the opportunity to convert votes into</p> <p>12 seats in the absence of packing and cracking.</p> <p>13 Q. Would a 50/50 district covering the city</p> <p>14 of Madison be balanced?</p> <p>15 A. I don't think it would be possible to</p> <p>16 draw a 50/50 district in the city of Madison.</p> <p>17 Q. Would a 50/50 district covering the city</p> <p>18 of Madison be balanced?</p> <p>19 A. It would depend on the structure of the</p> <p>20 districts. If there was a district that</p> <p>21 included -- it depends.</p> <p>22 Q. Does the underlying partisanship of a</p> <p>23 district -- does the preexisting partisanship of a</p> <p>24 district determine what it means for that district</p> <p>25 to be balanced?</p>	Page 168	<p>1 simulations are neutral plans?</p> <p>2 A. In the context of the methods that he</p> <p>3 used, those are neutral plans.</p> <p>4 Q. What makes Dr. Chen's simulated plans</p> <p>5 neutral plans?</p> <p>6 A. The fact that my understanding of how</p> <p>7 they were drawn is it refers to nothing other than</p> <p>8 population, municipal splits and compactness, and</p> <p>9 that the estimates of the partisan effects comes in</p> <p>10 afterwards.</p> <p>11 Q. Okay. So you agree Dr. Chen's</p> <p>12 simulations are all neutral plans; right?</p> <p>13 A. My understanding is that they were all</p> <p>14 drawn according to neutral rules.</p> <p>15 Q. And do you agree -- is your demonstration</p> <p>16 plan also an example of a neutral plan?</p> <p>17 A. Yes.</p> <p>18 Q. And is the 2002 court drawn map an</p> <p>19 example of a neutral plan?</p> <p>20 A. Yes.</p> <p>21 Q. There are lots of ways to draw a neutral</p> <p>22 plan, would you agree with that?</p> <p>23 A. That's correct.</p> <p>24 Q. Can you take a look at your rebuttal at</p> <p>25 page 3? Near the end of the page, do you see where</p>
Page 167	<p>1 A. Well, depends on what you're referring to</p> <p>2 by "preexisting partisanship."</p> <p>3 Q. Madison, you agree, is an overwhelmingly</p> <p>4 Democratic area; correct?</p> <p>5 A. That's correct.</p> <p>6 Q. And so to determine whether a district is</p> <p>7 balanced in Madison will look different than</p> <p>8 whether a district is balanced in the north woods;</p> <p>9 correct?</p> <p>10 A. Well, in this context, it refers to</p> <p>11 combinations of districts. That if I have -- I</p> <p>12 mean, it's -- seems to be more or less synonymous</p> <p>13 with districts drawn with neutral criteria. If I</p> <p>14 draw a map with reference to nothing other than</p> <p>15 population, respect for municipal subdivisions and</p> <p>16 compactness, and I happen to draw a district that,</p> <p>17 reflecting the underlying partisanship of the area</p> <p>18 is 70 percent Democratic or 70 percent Republican,</p> <p>19 that can be a balanced district or it could not be</p> <p>20 a balanced district depending on what was going on</p> <p>21 in that district and the areas around it.</p> <p>22 Q. You're aware that Dr. Chen generated</p> <p>23 thousands of simulated plans in this case; correct?</p> <p>24 A. Yes.</p> <p>25 Q. Is it your opinion that all of Dr. Chen's</p>	Page 169	<p>1 you say what matters to the analysis of Act 43 is</p> <p>2 whether state assembly districts were drawn in a</p> <p>3 way that packs and cracks voters based on their</p> <p>4 partisanship?</p> <p>5 A. That's what it says.</p> <p>6 Q. And when you use partisanship here, are</p> <p>7 you referring to the Chen composite?</p> <p>8 A. Not necessarily. I'm referring to the</p> <p>9 underlying partisanship of the areas and what we</p> <p>10 know about the process that was used to draw Act</p> <p>11 43.</p> <p>12 Q. And when you say you're referring to the</p> <p>13 underlying partisanship of the areas, are you</p> <p>14 determining the underlying partisanship of the</p> <p>15 areas based on Dr. Chen's composite?</p> <p>16 A. In terms of my subsequent analysis of</p> <p>17 packing and cracking, that uses Professor Chen's</p> <p>18 baseline partisanship. But this particular</p> <p>19 sentence about the way that the districts were</p> <p>20 drawn is a reflection of what we know about the way</p> <p>21 that the districts were drawn.</p> <p>22 Q. In your analysis of partisanship, you did</p> <p>23 not consider the partisanship of individual voters;</p> <p>24 correct?</p> <p>25 A. That's correct.</p>

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<p>1 Q. Can you turn to page 13 of your opening 2 report? Do you see the first paragraph of page 13? 3 You write, "The party that controls how district 4 lines are drawn concentrates voters of the opposing 5 party in small number of districts where it wins by 6 overwhelming numbers packing." And then you go on 7 to discuss cracking; correct? Do you see that? 8 A. Correct. 9 Q. Based on the sentence I just read, is the 10 term packing, as used in your report, does that 11 term mean concentrating voters of the opposing 12 party in small number of districts where it wins by 13 overwhelming numbers? 14 A. That's what it says. 15 Q. And what is -- how many is a small number 16 of districts in a state with 99 districts? 17 A. It -- it depends. 18 Q. And what does it depend on? 19 A. It depends on the context, it depends on 20 the analysis of specific districts, it depends on 21 the overall partisanship of a region and a state. 22 But it has been known for 200 years that the way 23 you gerrymander is that you pack and crack, which 24 means that your party is more able to efficiently 25 translate votes into seats, and the other party's</p>	<p>1 Generally, sort of in the -- at the limit, packing 2 would involve creating a district where you would 3 ideally like to have a hundred percent of the 4 district be composed of the opposing partisans by 5 which they would -- votes over 50 percent are 6 wasted and you win all of your districts with 7 55 percent of the vote. 8 So with 55 percent of the vote you win 9 more districts than the other party does because 10 their votes -- voters have been packed and they are 11 less able to convert votes to seats. But there's 12 no -- there's no single number that -- that you can 13 point to. It depends. 14 Q. Is it your opinion that winning a 15 district by 55 percent could still mean that that 16 district is packed? 17 A. It can. 18 Q. In the same sentence you describe 19 cracking as disbursing opposition voters so that 20 they constitute a minority of voters in other 21 districts; is that right? 22 A. That's what I wrote. 23 Q. So a group of voters is going to 24 constitute a minority in every election; right? 25 Someone -- in every election, someone's -- someone</p>
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<p>1 at a disadvantage. 2 Q. Are there any -- you just listed some 3 factors. Are there any other factors you would 4 consider in deciding whether a district is packed? 5 A. Some of it has to do with the manner in 6 which a district is drawn. It's possible for a 7 district that doesn't have an 80 percent partisan 8 baseline to be cracked. It's possible for a 9 district with a much lower concentration to be 10 packed. It depends on the way that the district is 11 drawn. It depends on possible alternative 12 configurations. 13 So again, packing and cracking are 14 universally understood to be the phenomenon of how 15 gerrymandering occurs. There is no threshold, 16 there is no magic number that determines whether a 17 district constitutes packing or cracking. It 18 depends. And as I go through in the subsequent 19 analysis, I explain what I mean and the basis for 20 my opinions that a district is packed or cracked. 21 Q. In that same paragraph, in the sentence I 22 just read, you mention the opposing party winning 23 by overwhelming numbers. Do you see that? What 24 is -- what do you mean by "overwhelming numbers"? 25 A. Well, again, it depends on the context.</p>	<p>1 will win and someone will lose; right? 2 A. Correct. 3 Q. So how do you distinguish the losing 4 party from -- the losing party then is always in 5 the minority; right? The losing party is in the 6 minority for that election; right? 7 A. Well, for that district. 8 Q. Uh-huh. And so how do you distinguish 9 between the losing party in that district and 10 cracking voters of that party in that district? 11 A. Well, as I explain in the subsequent 12 analysis, if I take a Democratic area, or if I take 13 a Republican area and I split those voters into 14 three, four, five districts, so that Republicans 15 who might be majority in one or two districts now 16 constitute minorities in five districts, well, 17 that -- that's an example of how cracking occurs. 18 And packing and cracking are complementary. 19 That because I have cracked 20 Republicans in that case, and in other cases I 21 might want to concentrate Republicans so that they, 22 instead of being 55 percent in two districts, they 23 are a hundred percent in one and ten percent in the 24 other, so that way 55 percent of the vote produces 25 one -- one seat instead of two seats.</p>

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1 Q. How can the Chen composite tell you
 2 whether a voter is cracked?
 3 A. The Chen composite gives you a measure of
 4 aggregate outcomes. It doesn't necessarily tell
 5 you about a specific individual voter. It tells
 6 you about -- it tells you about the consequences or
 7 the outcomes in a district or set of districts.
 8 Q. Earlier you said that if the Chen
 9 composite was 50 percent or greater for
 10 Republicans, the Republican is a likely winner;
 11 correct?
 12 A. That's correct.
 13 Q. Is it also your opinion that if the Chen
 14 composite is 50 percent or greater for Republicans,
 15 that a Democrat -- that Democrats in that district
 16 are cracked?
 17 A. At 50 -- at 50 percent?
 18 Q. At 50 percent or greater for Republicans
 19 in a particular district, is it also your opinion
 20 that the Democrat is cracked?
 21 A. It would depend on the -- what you mean
 22 by "or greater."
 23 Q. If a Chen composite score for a
 24 particular district is 51 percent for Republicans,
 25 you agree that that means the Democrat will likely

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1 win; correct?
 2 A. If the 50 --
 3 Q. The Republican -- earlier we discussed
 4 the Chen composite. You said 50 percent or greater
 5 for Republicans, the Republican will likely win;
 6 correct?
 7 A. That's correct.
 8 Q. Okay. So let's take a particular
 9 district where the Chen composite is 51 percent for
 10 Republicans. Republican's likely going to win;
 11 correct?
 12 A. That's correct.
 13 Q. And is it also your opinion that in that
 14 district, with a 51 percent Chen composite for
 15 Republicans, the Democrats in that district are
 16 cracked?
 17 A. It -- just based on that piece of
 18 information, I'd say it's unlikely. But it's
 19 possible that if you are taking -- if you are
 20 splitting Democrats in a way that makes them less
 21 like -- that packs them -- that packs them in other
 22 districts and cracks them in one district, it is
 23 possible that a 51/49 district might be evidence of
 24 cracking. It's unlikely, but it's possible. And
 25 it depends on the -- it depends on the context.

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1 Q. Let's go through some -- I want to go
 2 through some of your regional analysis. We're not
 3 going to do all of it, but --
 4 MR. POLAND: Before you do that, can we
 5 take a real quick break? I think we might have a
 6 resolution of this if we can do that.
 7 MS. MEEHAN: Yeah, sure.
 8 THE VIDEOGRAPHER: Going off the record
 9 at 3:51.
 10 (Break taken.)
 11 THE VIDEOGRAPHER: We're back on the
 12 record at four o'clock.
 13 MS. MEEHAN: During the break, counsel
 14 for the Assembly and counsel for plaintiffs
 15 discussed whether we were comfortable producing --
 16 both parties were comfortable producing only
 17 materials relied on by experts rather than both
 18 materials relied on and considered. Mr. Keenan, as
 19 long as you're okay with that, can we all stipulate
 20 that we're producing only the reliance materials?
 21 MR. KEENAN: Yes, the Wisconsin Election
 22 Committee defendants are also fine with that.
 23 MR. POLAND: And the plaintiffs are too.
 24 MS. MEEHAN: Okay.
 25 BY MS. MEEHAN:

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1 Q. Go ahead and turn to your open report at
 2 page 16. On page 16, figures three and four
 3 compare Act 43, assembly district 21, to Chen's
 4 alternative map; correct?
 5 A. That's correct.
 6 Q. And the gray lines in figures three and
 7 four are county lines; correct?
 8 A. That's correct.
 9 Q. And the thinner black lines are the
 10 district lines; right?
 11 A. Correct.
 12 Q. And see in the paragraph, the first
 13 paragraph on page 16 you write, "This district,
 14 referring to assembly district 21, constitutes
 15 another classic case of cracking." Do you see
 16 that?
 17 A. Yes.
 18 Q. How does simulated -- how does Dr. Chen's
 19 simulated plan tell you that assembly district 21
 20 is a classic case of cracking?
 21 A. Well, the conclusion that this is a
 22 classic case of cracking does not rely solely on
 23 what the alternative map or what Professor Chen's
 24 alternative map produces. So the conclusion that
 25 Act 21 is cracked is the fact that the city of

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<p>1 South Milwaukee, which has a Democratic baseline of</p> <p>2 52.1 percent, is combined with the larger</p> <p>3 Republican area and population, which produces a</p> <p>4 Democratic baseline of 47.0, or a Republican</p> <p>5 baseline of 53 percent.</p> <p>6 And this is a pattern that is -- that</p> <p>7 is observed over and over again in Act 43, where a</p> <p>8 Democratic area, a municipality, even a subset of</p> <p>9 Democratic wards, is subsumed into a larger</p> <p>10 Republican population or area, taking a Democratic</p> <p>11 area and putting it in what amounts to a Republican</p> <p>12 district. And the conclusion of packing and</p> <p>13 cracking is not simply based on this single</p> <p>14 example, it is based on a pattern that is, as I</p> <p>15 note in my report, is observed over and over.</p> <p>16 Q. Does the simulated plan in figure four</p> <p>17 inform your opinion that Act 43, district 21, is a</p> <p>18 classic case of cracking?</p> <p>19 A. What the alternative map demonstrates is</p> <p>20 that this district configuration is not something</p> <p>21 that was produced with neutral criteria, and that</p> <p>22 it wasn't necessary because of political geography.</p> <p>23 Q. What do you mean by "wasn't necessary</p> <p>24 because of political geography"?</p> <p>25 A. Well, again, that's the claim that has</p>	<p>1 which I think that is almost certainly true.</p> <p>2 Q. Okay. So by crossing the county --</p> <p>3 district 23 crosses the Milwaukee county line;</p> <p>4 correct?</p> <p>5 A. That's correct.</p> <p>6 Q. And by crossing the county line,</p> <p>7 simulated plan district 23 pulls in more</p> <p>8 Republicans; correct?</p> <p>9 A. I don't know that the second part</p> <p>10 of -- so the -- district 23 is a Republican</p> <p>11 district. So it -- so I don't know if the phrasing</p> <p>12 that it pulls in more Republicans is the way that I</p> <p>13 would phrase it. But it's true that district 23 is</p> <p>14 a Republican district.</p> <p>15 Q. You can feel free to refer to Dr. Chen's</p> <p>16 tables as we go through this. So we've already</p> <p>17 introduced Exhibit 12, which is Dr. Chen's opening</p> <p>18 report. So district -- district 23, the Chen</p> <p>19 composite score, is 56.14 percent Republican;</p> <p>20 correct? That's on table four at page 18 of</p> <p>21 Exhibit 12.</p> <p>22 A. I'm sorry, which district?</p> <p>23 Q. District 23.</p> <p>24 A. 56.1.</p> <p>25 Q. Okay.</p>
<p>Page 179</p> <p>1 been made repeatedly, that the consequences of Act</p> <p>2 43 are the result of differences in how Republicans</p> <p>3 and Democratic voters were distributed around the</p> <p>4 state. So, you know, my conclusion that act --</p> <p>5 that district 21 constitutes a case of cracking has</p> <p>6 to do with the fact that a Democratic constituency</p> <p>7 was unnecessarily placed in a larger -- within a</p> <p>8 larger Republican area to produce a Republican</p> <p>9 district.</p> <p>10 Q. Looking at figure four, do you agree that</p> <p>11 simulated plan districts 4 and 23 cover the same or</p> <p>12 similar -- cover the same territory as district 21?</p> <p>13 A. It's not quite true, because district</p> <p>14 four extends a little bit farther north than what</p> <p>15 is seen in figure three, and district 23 includes</p> <p>16 areas to the -- well to the south of district 21.</p> <p>17 But -- and also parts of district 21 are placed in</p> <p>18 district 69. But this is for a -- sort of shows</p> <p>19 the -- a similar region. It's not identical.</p> <p>20 Q. It's not identical, but many of the</p> <p>21 voters in district 21 are now in districts four or</p> <p>22 23 in the simulated plan; correct? And let's throw</p> <p>23 in 69, so --</p> <p>24 A. Well, so I'm -- the reason I'm hesitating</p> <p>25 saying most, it would depend on the populations,</p>	<p>Page 181</p> <p>1 A. Just to be clear, usually I refer to the</p> <p>2 Democratic baseline in my report, where Dr. Chen</p> <p>3 refers to the Republican baseline. So those</p> <p>4 numbers aren't going to actually match.</p> <p>5 Q. Yeah, I'll make sure we're clear about</p> <p>6 that as we move through these. So why, based on</p> <p>7 that 56.14 percent baseline, don't you conclude</p> <p>8 that simulated plan district 23 packs Republican</p> <p>9 voters?</p> <p>10 A. Because it was drawn with purely neutral</p> <p>11 criteria.</p> <p>12 Q. Any other reason?</p> <p>13 A. Would likely be the -- the -- would want</p> <p>14 to look at the partisanship of that part of Racine</p> <p>15 county, which I think in a previous, district 20 --</p> <p>16 areas of Racine county, that those are Republican</p> <p>17 areas, and so that would be an expectation that you</p> <p>18 would generally see. But -- but the primary</p> <p>19 criterion is that it was drawn based on neutral</p> <p>20 principles.</p> <p>21 Q. We're going to come back to that, but I</p> <p>22 want to get your opinions on district four quickly.</p> <p>23 So district four, do you agree, moves eastward into</p> <p>24 Milwaukee county and picks up more Republican</p> <p>25 leaning areas; correct?</p>

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<p>Page 182</p> <p>1 A. So more Republican areas compared to 2 what? Compared to district 21, or -- 3 Q. Compared to the other areas of district 4 four we can see in figure four. 5 A. That's correct. 6 Q. And the Chen composite score for 7 simulated plan for district four is 47.8 percent 8 Republican; isn't that right? 9 A. So that would be 52.2 Democratic. So 10 correct, yeah. 11 Q. Why don't you conclude that simulated 12 plan district four cracks Republican voters? 13 A. Again, it's because of the -- the way in 14 which the -- the district lines were drawn in the 15 simulated plan. 16 Q. Is it your opinion that any simulation 17 generated by computer cannot pack or crack voters? 18 A. No. 19 Q. Why not? 20 A. It depends on the -- the nature of the 21 algorithm and whether -- you could certainly design 22 or write a computer program or computer code that 23 intentionally creates, or has the -- that is 24 intended to create a partisan advantage. 25 Q. If the algorithm does not consider</p>	<p>Page 184</p> <p>1 criteria and then selecting the one that was most 2 advantageous to Republicans, that actually could 3 lead to an inference of partisan intent. 4 Q. If Act 43 was generated by a computer 5 pursuant to an algorithm that did not consider 6 partisanship and then was selected randomly, is it 7 your opinion that Act 43 does not crack or pack 8 voters? 9 A. So just want to make sure I understand. 10 So the question is that there were a number of maps 11 drawn according to neutral criteria, and one was 12 selected at random. My conclusion is that that 13 would not be evidence of partisan intent. 14 Q. Even if the map selected at random was 15 the Act 43 map? 16 A. In that hypothetical, I don't think that 17 you would ever get a map like Act 43 with neutral 18 criteria. But if that was what a completely 19 neutral algorithm picked, and that was the only 20 map, or it was selected at random, that would not 21 be evidence of partisan intent. 22 Q. What if, instead of selecting Act 43 at 23 random, the legislature evaluates the hundreds of 24 plans generated by a computer pursuant to an 25 algorithm that did not consider partisanship, and</p>
<p>Page 183</p> <p>1 partisanship, is it your opinion that all 2 simulations generated pursuant to that algorithm 3 cannot pack or crack voters? 4 A. Well, what I would say is that given that 5 the essence of a gerrymander is cracking and 6 packing, if you draw a map according to neutral 7 criteria, the mere fact that there are going to be 8 Republican voters in a Democratic district or 9 Democratic voters in a Republican district, that 10 would not be sufficient evidence to infer packing 11 and cracking. 12 Q. If the Act 43 map were generated by a 13 computer pursuant to an algorithm that did not 14 consider partisanship, is it your opinion that Act 15 43 would not crack or pack voters? 16 A. I suppose. But that's not how Act 43 was 17 drawn. 18 Q. I want you to answer my question. If the 19 Act 43 map were generated by a computer pursuant to 20 an algorithm that did not consider partisanship, is 21 it your opinion that Act 43 would not crack or pack 22 voters? 23 A. Well, consistent with our previous 24 discussion, that if the -- if Act 43 was created by 25 generating a hundred maps according to neutral</p>	<p>Page 185</p> <p>1 out of all of those hundreds of plans, the 2 legislature picks Act 43 because it's more 3 favorable to Republicans than some of the other 4 plans? 5 A. So if a -- if a legislature did what in 6 the previous hypothetical a person did, if the 7 legislature examined a large number of maps and 8 selected the one that was most -- most beneficial, 9 that -- I think that would be considered evidence 10 of partisan intent. 11 Q. And that transforms the set of neutral 12 maps into a nonneutral final map; correct? 13 A. In that example, that's correct. 14 Q. Didn't Chen, Dr. Chen, also pick 15 simulated plan 43,995 because of that plan's 16 partisan effect? 17 A. So I'm not completely certain why that 18 particular map was drawn. So my understanding is 19 that that was a map that was more neutral in terms 20 of its partisan effect. But I'm not actually -- I 21 don't know in detail why that map was selected as 22 the demonstration map out of all of the maps that 23 were generated. 24 Q. Earlier when we were discussing figure 25 four, you said act -- you said simulated plan</p>

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<p>1 district four was not cracked because it was drawn 2 pursuant to purely neutral criteria, and voters in 3 simulated plan district 23 were not packed because 4 district 23 was drawn pursuant to purely neutral 5 criteria. 6 A. That's my understanding. 7 Q. But you don't have an opinion on whether 8 Dr. Chen selected simulated plan 43,995 because of 9 its partisan effect? 10 A. That's a question that you'll have to ask 11 him. I don't recall seeing an explanation about 12 why this particular map was chosen. 13 Q. But how do we know whether Dr. Chen's 14 choosing simulated plan 43,995 doesn't transform 15 that plan into a nonneutral plan in the same way in 16 our hypothetical choosing Act 43 because of its 17 partisan effect does not transform Act 43 into a 18 nonneutral plan? 19 A. That's a question you should put to him. 20 Q. But I've just asked you a series of 21 questions about whether you think certain districts 22 in the simulated plans pack or crack voters. I 23 don't see how you can answer that question without 24 having an opinion about whether the Chen 43,995 25 plan is neutral.</p>	<p>1 speaking, though, choosing -- when selecting from 2 among maps, choosing one that is more neutral in 3 its effects than others would generally not be 4 evidence of partisan intent. 5 Q. I'm trying to understand what you mean 6 by -- as you use -- as you just used neutral in 7 that answer, do you mean an efficiency gap of zero? 8 A. Not necessarily. 9 Q. When Chen selected simulated plan 43,995 10 because of its efficiency gap, was Dr. Chen acting 11 with partisan intent? 12 MR. POLAND: I'm going to object to the 13 form of that question, it assumes facts not in 14 evidence. 15 THE WITNESS: My understanding is that 16 the method he used was based on neutral criteria, 17 and that the selection of the map offered as a 18 demonstration was, among other reasons, chosen 19 because it was more neutral. But that's -- in 20 terms of intent, that's something that you should 21 ask him. I don't think he did, but I was not there 22 when he selected this map. 23 BY MS. MEEHAN: 24 Q. If a map maker selects a map of hundreds 25 of maps generated pursuant to neutral redistricting</p>
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<p>1 MR. POLAND: I'm going to object. That's 2 not a question, that's a statement. 3 BY MS. MEEHAN: 4 Q. Okay. You understand I've asked you a 5 series of questions about whether you think certain 6 districts in the simulated plans crack or pack 7 voters; correct? 8 A. That's correct. 9 Q. How can you answer those questions 10 without first having an opinion about whether the 11 Chen 43,995 plan is a neutral plan? 12 A. Because my understanding of that process 13 is that Professor Chen generated a large number of 14 maps and did not choose a map that maximized 15 benefits for Democrats. That I believe the 16 criteria, although I'm not certain, was that that 17 map was selected, among other reasons, because it 18 was more balanced. 19 Q. Is it your opinion that selecting a map 20 because it was more balanced is not acting with 21 partisan intent? 22 A. Well, in this case, rather than use the 23 term balanced, I will use the term more neutral. 24 And it would -- it depends on the standards and 25 the -- and the direction that -- generally</p>	<p>1 criteria because the efficiency gap of that map is 2 zero, does that map maker act with partisan intent? 3 A. I would say generally, no. When I drew 4 my demonstration plan that had an efficiency gap of 5 2.2, I didn't -- I was not acting with partisan 6 intent to create an advantage by purposely packing 7 and cracking to increase the partisan bias of a 8 plan. 9 Q. Earlier you said that district four did 10 not crack Republican voters because it was drawn 11 pursuant to purely neutral criteria, and district 12 23 did not pack Republican voters because it was 13 drawn purely with respect to purely neutral 14 criteria; correct? 15 A. That's correct. 16 Q. But do you agree that even if -- let's 17 just move on. Can you go to page 30 -- pardon 18 me -- page 17 of your opening report. You see on 19 page 17 you're discussing assembly districts 13, 20 22, 23, and 24? 21 A. Yes. 22 Q. And do you see at the very end of page 17 23 you say it would have been a trivial task to take 24 the geographic area of the districts and the region 25 and draw a more balanced map that preserved an</p>

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<p style="text-align: right;">Page 190</p> <p>1 additional district entirely within Milwaukee 2 county and that avoided cracking Democratic voters. 3 Do you see that? 4 A. Yes. 5 Q. What do you mean by "trivial"? 6 A. Well, figure five demonstrates such 7 obvious and blatant examples of packing and 8 cracking that there is just absolutely no dispute. 9 If you look at the districts 23, 24, 13 -- 13, 22, 10 23, and 24, they all have the following 11 characteristics -- 12 Q. I'm not asking you about the 13 characteristics of the district, I'm asking what 14 you mean by it would be a trivial task to take 15 those geographic areas. 16 A. I'm getting to that. That if you look at 17 22, 23, and 24, those districts are all contiguous. 18 They all attach to each other. That it would have 19 been -- and also district twelve, which was -- 20 well, the point that I make is that it would have 21 been possible to re-draw districts 23 and 24, for 22 example, so that the two Democratic regions in 23 Milwaukee county were actually in a single 24 district. 25 And that would have likely produced a</p>	<p style="text-align: right;">Page 192</p> <p>1 district Democratic baseline is 43.9 percent. And 2 that's achieved by taking 25,111 people in 3 Milwaukee county, a region with a Democratic 4 baseline of 53.7, combining it with the larger 5 population, and outside Milwaukee county, in this 6 case Ozaukee county, with a Democratic baseline of 7 34.3, taking those Democratic voters and plopping 8 them into a reliably Republican district. That's 9 what happened in 13, that's what happened in 22, 10 that's what happened in 23, and that's what 11 happened in 24. So that is the basis for my 12 opinion that it would -- these -- that this 13 particular configuration was both egregious and 14 unnecessary. 15 Q. Are you aware whether the 2000 -- did you 16 consider whether the 2002 court drawn map crossed 17 the Ozaukee county/Milwaukee county line? 18 A. I don't -- it might have. But again, 19 this is the -- the map that I was asked to analyze. 20 Q. Did your demonstration plan cross the 21 Ozaukee county/Milwaukee county line? 22 A. I would have to look. It might have. 23 But not -- not to this degree. 24 Q. What do you mean by "not to this degree"? 25 A. Well, that it -- that I avoided packing</p>
<p style="text-align: right;">Page 191</p> <p>1 district with a Democratic majority, or one that 2 was more competitive. Instead, the pattern -- and 3 it's not just 23 and 24. It's 23, 24, 22. Every 4 one of the districts surrounding Milwaukee county 5 includes a region of either Ozaukee county, 6 Washington county or Waukesha county, which are the 7 three most Republican regions in the entire state, 8 and include little fingers or little extensions 9 reaching into Milwaukee county to pick up 10 Democratic regions. 11 And this is just such a blatant 12 example of unnecessary cracking that it's -- I 13 described it as particularly egregious. And it is, 14 because the areas in Milwaukee county in assembly 15 districts 23 and 24, those could easily have been 16 combined in a single district, and then reaching 17 into Ozaukee county would not have required any 18 downstream shifts in any other districts. 19 And -- and in fact, if you -- as I 20 note down at the bottom, the populations in 21 Milwaukee county that are split into the 22 surrounding counties is actually sufficient to 23 create at least one entirely Democratic district. 24 And the demonstration of that is in table seven. 25 So if we look at district 23 on table seven, the</p>	<p style="text-align: right;">Page 193</p> <p>1 and cracking in my demonstration plan. So I don't 2 recall what the particular configuration was in 3 this region. And the fact that a map -- well, I'll 4 just stop there. 5 Q. If the 2002 court drawn map crossed the 6 Ozaukee/Milwaukee county line, would that change 7 your opinion about whether districts 24 and 23 are 8 egregious examples of cracking? 9 A. I would say no. 10 Q. Why not? 11 A. Well, because the 2002 plan was, by 12 definition, not drawn with partisan intent, you 13 know? And again, it's not just district 23 and 14 district 24. This pattern of cracking Democratic 15 voters is repeated all over the state. 16 Q. Can you turn to opening report page 25? 17 And on page 25 you're discussing assembly district 18 93; isn't that right? 19 A. That's correct. 20 Q. The Chen composite in assembly district 21 93 is 49.3 percent Democrat or 57.7 percent 22 Republican; correct? 23 A. That's correct. 24 Q. In your opinion, the Democrats are 25 cracked in a district that's 49.3 percent Democrat;</p>

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<p>1 correct?</p> <p>2 A. Just want to make sure that I use the</p> <p>3 precise language I used. Yes, this is a district</p> <p>4 that I concluded was cracked.</p> <p>5 Q. District -- do you see on page 25, right</p> <p>6 above figure 15, you talk about the city of River</p> <p>7 Falls?</p> <p>8 A. Yes.</p> <p>9 Q. The city of River Falls straddles the</p> <p>10 Pierce county line; correct?</p> <p>11 A. I'm actually not sure it straddles. It</p> <p>12 could be that that pink region above Pierce county</p> <p>13 is actually part of River Falls.</p> <p>14 Q. Do you see where --</p> <p>15 A. Yes, so it is. It is split between the</p> <p>16 two counties.</p> <p>17 Q. Okay. And then on page 26 you</p> <p>18 compare -- figure 16 is Dr. Chen's simulated plan.</p> <p>19 So we're comparing simulated plan district 77,</p> <p>20 correct, to Act 43 district 93?</p> <p>21 A. Not entirely. But district 77 captures</p> <p>22 most of the area, or much of the area in district</p> <p>23 93.</p> <p>24 Q. And you agree that simulated plan</p> <p>25 district 77 splits the city of River Falls by</p>	<p>1 77 is 50.5 percent Democrat, not cracked. Can you</p> <p>2 explain that?</p> <p>3 A. Well, the difference, as I explain in the</p> <p>4 report, is based on an analysis of the boundaries</p> <p>5 of district 93, which includes notches here and</p> <p>6 there that pick up -- or that pick up Republican</p> <p>7 areas and exclude Democratic areas. And as I noted</p> <p>8 before, you -- depending on the context, a district</p> <p>9 that is 51 percent or 52 percent actually could</p> <p>10 constitute packing or cracking depending on the</p> <p>11 context. And the reason district 77 I did not</p> <p>12 regard as packed is -- or cracked is that that</p> <p>13 is -- that was a district that was drawn with</p> <p>14 neutral criteria.</p> <p>15 Q. You mentioned the notches in district 23</p> <p>16 are one of the reasons -- you mentioned that the</p> <p>17 notches in Act 93 -- district 93 -- sorry.</p> <p>18 You mentioned that the notches in Act</p> <p>19 43, district 93, were one of the reasons why you</p> <p>20 concluded that district 93 is cracked. Do you</p> <p>21 agree that the notch in the northwest corner of</p> <p>22 district 93 is a notch that carves out the city of</p> <p>23 River Falls -- the portion of the city of River</p> <p>24 Falls falling within Pierce county?</p> <p>25 A. That's what I wrote.</p>
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<p>1 drawing the district line at Pierce county instead</p> <p>2 of drawing around the city of River Falls; correct?</p> <p>3 A. That's what it shows.</p> <p>4 Q. Does district 77 look compact to you?</p> <p>5 A. It depends on what metric you're using.</p> <p>6 I would regard that that is not a particularly</p> <p>7 regular shape. But again, you cannot make an</p> <p>8 inference about compactness or lack of compactness</p> <p>9 by looking at a single district. On average, the</p> <p>10 demonstration that -- Professor Chen's</p> <p>11 demonstration map has a higher -- has higher</p> <p>12 compactness as a whole than Act 43 does.</p> <p>13 Q. You can take a look at Chen's table four</p> <p>14 if you need, but the Democratic baseline of Chen's</p> <p>15 district 77 is 50.5 percent; correct?</p> <p>16 A. I have it as 50 point -- the Democratic</p> <p>17 baseline is 50.5.</p> <p>18 Q. Correct.</p> <p>19 A. 50.51.</p> <p>20 Q. That's on page 26 of your report too;</p> <p>21 right?</p> <p>22 A. Right.</p> <p>23 Q. So Act 43 covers similar territory,</p> <p>24 district 93, and its baseline is 50.7 Republican.</p> <p>25 And you conclude that it's cracked. But district</p>	<p>1 Q. Go ahead and go to opening report</p> <p>2 page 31. Here you're discussing LaCrosse; correct?</p> <p>3 A. Correct.</p> <p>4 Q. Do you agree that Chen's simulated plan</p> <p>5 on districts 89 and 59 split the city of LaCrosse?</p> <p>6 A. That's correct.</p> <p>7 Q. Is district 59 in Chen's simulated plan</p> <p>8 contiguous?</p> <p>9 A. Is it contiguous?</p> <p>10 Q. Correct.</p> <p>11 A. As far as I'm aware, it is.</p> <p>12 Q. Is your opinion that there's a very thin</p> <p>13 amount of land between the Minnesota border and the</p> <p>14 district 89 border -- district 59, that's how it's</p> <p>15 contiguous?</p> <p>16 A. Yeah, I'm not sure actually how thin that</p> <p>17 line is, because we're talking about a pretty small</p> <p>18 graphical representation of what amounts to an</p> <p>19 entire county. But, yeah, 59, the southern and</p> <p>20 northern portions of the district are connected</p> <p>21 through that portion of the district that passes</p> <p>22 through the western part of the city of LaCrosse.</p> <p>23 Q. On page 31 of your report you conclude</p> <p>24 that voters are packed into assembly district 95;</p> <p>25 isn't that right?</p>

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<p>1 A. That's what it says.</p> <p>2 Q. Isn't one reason why district 95 is drawn</p> <p>3 the way -- isn't one possible reason why district</p> <p>4 95 is drawn the way it is because the map makers</p> <p>5 wanted to keep the city of LaCrosse in one</p> <p>6 district?</p> <p>7 A. Well, as I note in the report, that there</p> <p>8 are areas of district 95 that constitute the most</p> <p>9 Democratic areas outside the city of LaCrosse.</p> <p>10 And in other cases where the map drawers were able</p> <p>11 to generate a partisan advantage by splitting a</p> <p>12 Democratic city, they didn't hesitate to do that.</p> <p>13 So as I note on the top of page 31, that the</p> <p>14 evidence of packing emerges from the fact that the</p> <p>15 areas outside of LaCrosse that are attached to</p> <p>16 district 95 include some of the most Democratic</p> <p>17 parts of the region, including the town -- the city</p> <p>18 of Shelby, the factors that I list in the report.</p> <p>19 Q. And to avoid packing Democratic voters in</p> <p>20 district 95, what cities adjacent to the city of</p> <p>21 LaCrosse should the map makers have included</p> <p>22 instead of the city of Shelby or Campbell?</p> <p>23 A. Well, I'm not offering an opinion of what</p> <p>24 they should have done, I'm offering an opinion of</p> <p>25 what they did. And the evidence that it was</p>	<p>1 the city of LaCrosse together, or keep it in a</p> <p>2 single district. But again, the evidence of</p> <p>3 packing and cracking comes not from just looking at</p> <p>4 this one district, it comes from the overall</p> <p>5 effect, which we know was -- was drafted with a</p> <p>6 partisan intent and includes examples all over the</p> <p>7 state.</p> <p>8 So if I were looking at a randomly</p> <p>9 generated map, a neutral map that in fact kept the</p> <p>10 city of LaCrosse entirely in one district -- I'm</p> <p>11 not sure, that might have been in the demonstration</p> <p>12 map that I drew, that the city of LaCrosse was</p> <p>13 contained in a single district. But the mere fact</p> <p>14 that a city is split or not split on its own in</p> <p>15 isolation is not the relevant criteria, or not the</p> <p>16 only criterion.</p> <p>17 Q. Do you see the second paragraph on</p> <p>18 page 31? You say, "Evidence of packing emerges</p> <p>19 from the fact that of the municipalities that are</p> <p>20 contiguous to LaCrosse, there are two with</p> <p>21 Democratic majorities."</p> <p>22 What -- what cities, other than these</p> <p>23 two, should the map makers have included in</p> <p>24 district 95 that would change your opinion about</p> <p>25 packing?</p>
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<p>1 unnecessary comes from the -- from Professor Chen's</p> <p>2 alternative, or demonstration, plan.</p> <p>3 Q. So you think that the only way to draw</p> <p>4 the district covering the city of LaCrosse and</p> <p>5 LaCrosse county, more broadly -- let me start over.</p> <p>6 You think the only way to draw</p> <p>7 districts in LaCrosse county in a way that doesn't</p> <p>8 pack Democratic voters is to split the city of</p> <p>9 LaCrosse?</p> <p>10 A. That's not what I said.</p> <p>11 Q. Well, you said that you were relying on</p> <p>12 Dr. Chen's demonstration plan. So you've got Act</p> <p>13 43, and then your conclusion is that Act 43 packs</p> <p>14 voters because it picks the town of Shelby and it</p> <p>15 picks part of Campbell. And then we've got Chen's</p> <p>16 demonstration plan, which splits the city of</p> <p>17 LaCrosse.</p> <p>18 Is there a way to draw the districts</p> <p>19 and the county of LaCrosse that keeps the city of</p> <p>20 LaCrosse together but doesn't pack Democratic</p> <p>21 voters, in your opinion?</p> <p>22 A. In my opinion, it would have been -- yes,</p> <p>23 it would have been possible.</p> <p>24 Q. How?</p> <p>25 A. Well, one of the options would be to keep</p>	<p>1 A. I'm not offering an opinion about what</p> <p>2 they should have done, I'm offering an opinion</p> <p>3 about what they did do.</p> <p>4 Q. Can you go to your opening report at</p> <p>5 pages eight and nine?</p> <p>6 A. Eight and nine?</p> <p>7 Q. Uh-huh. This is the portion of your</p> <p>8 opening report discussing campaign contributions;</p> <p>9 correct?</p> <p>10 A. That's correct.</p> <p>11 Q. What are the reasons a person might</p> <p>12 contribute to a particular candidate?</p> <p>13 A. Well, in the -- there are a number of</p> <p>14 possibilities. The academic literature talks about</p> <p>15 ideological support for a candidate, whether</p> <p>16 someone believes their contribution might be</p> <p>17 important to the success of that candidate, whether</p> <p>18 someone knows a candidate, whether they have an</p> <p>19 interest in that candidate winning election. There</p> <p>20 are a variety of reasons that people make the</p> <p>21 decision to contribute to a candidate or party.</p> <p>22 Q. Do you agree that voters don't have</p> <p>23 unlimited resources when it comes to campaign</p> <p>24 contributions?</p> <p>25 A. I would -- I would think that is</p>

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<p>1 obviously correct.</p> <p>2 Q. And do you agree that a voter, because of</p> <p>3 limited resources, might choose to donate to a</p> <p>4 presidential candidate, for example, instead of an</p> <p>5 assembly candidate?</p> <p>6 A. That's possible.</p> <p>7 Q. Or do you agree that a voter might choose</p> <p>8 to donate to a cause, you know, like Act 10 in</p> <p>9 Wisconsin as opposed to particular candidates?</p> <p>10 A. Yes.</p> <p>11 Q. So at table one on page 9, you compare</p> <p>12 fundraising by the Assembly Democratic Campaign --</p> <p>13 fundraising to the Assembly Democratic Campaign</p> <p>14 Committee to fundraising to the Republican Assembly</p> <p>15 Campaign Committee; correct?</p> <p>16 A. That's correct.</p> <p>17 Q. So the donations to the Assembly</p> <p>18 Democratic Campaign Committee are -- that are</p> <p>19 included in these totals here, those are only</p> <p>20 donations to the Assembly Democratic Campaign</p> <p>21 Committee; correct?</p> <p>22 A. That's my understanding of the National</p> <p>23 Institute of Money in State Politics.</p> <p>24 Q. They don't include donations to</p> <p>25 individual state assembly candidates; correct?</p>	<p>1 shows cycle.</p> <p>2 Q. And the contributor's column then refers</p> <p>3 to the number of individuals or entities who</p> <p>4 contributed to the total amount reported for each</p> <p>5 cycle; correct?</p> <p>6 A. That's correct.</p> <p>7 Q. So every year table one shows there were</p> <p>8 more contributors to the Assembly Democratic</p> <p>9 Campaign Committee than contributors to the</p> <p>10 Republican Assembly Campaign Committee; isn't that</p> <p>11 right?</p> <p>12 A. That's correct.</p> <p>13 Q. In 2018, for example, there were 2,868</p> <p>14 contributors to the ADCC, and only 1,803</p> <p>15 contributors to the RACC; correct?</p> <p>16 A. That's correct.</p> <p>17 Q. In 2012, for example, there were 5,947</p> <p>18 contributors to the ADCC, but only 1,560</p> <p>19 contributors to the RACC; correct?</p> <p>20 A. That's correct.</p> <p>21 Q. Table two compares total contributions to</p> <p>22 state assembly candidates; is that correct?</p> <p>23 A. That's correct.</p> <p>24 Q. So does this table aggregate all</p> <p>25 donations to individual assembly candidates running</p>
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<p>1 A. That's correct.</p> <p>2 Q. So this is -- donating to the Assembly</p> <p>3 Democratic Campaign Committee is just one of many</p> <p>4 ways a voter could contribute to -- to the</p> <p>5 Democratic assembly elections; correct? Or to</p> <p>6 assembly elections; correct?</p> <p>7 A. So I would say I don't know if there</p> <p>8 would be many, but there's more than one.</p> <p>9 Q. Yeah, an individual could separately</p> <p>10 donate to a group like Act Blue; correct?</p> <p>11 A. Certainly.</p> <p>12 Q. The contributors column in table one</p> <p>13 refers to the number of individuals or entities who</p> <p>14 contributed to the total column on any given year;</p> <p>15 correct?</p> <p>16 A. That's correct. Although I think that</p> <p>17 what I did is combined the off year and on year.</p> <p>18 So that 2016, it's the cycle. So it would include</p> <p>19 contributions made in 2015 for 2015, 2016.</p> <p>20 Q. And likewise for 2012, for example, it</p> <p>21 includes 2011 contributions and 2012 contributions?</p> <p>22 A. I believe that's what I did.</p> <p>23 Q. And is that -- did you combine cycles for</p> <p>24 both tables one and table two?</p> <p>25 A. Yes, 'cause that column for the date</p>	<p>1 as Democrats in the second column and then</p> <p>2 aggregates all donations to individual assembly</p> <p>3 candidates running as Republicans in the third</p> <p>4 column?</p> <p>5 A. That's correct.</p> <p>6 Q. Why don't you have a contributors column</p> <p>7 in table two like you did for table one?</p> <p>8 A. In part because the -- in table one</p> <p>9 there's -- there's one possible recipient of the</p> <p>10 contributions. There's one Democratic recipient</p> <p>11 and one Republican recipient. For Democratic and</p> <p>12 Republican candidates, it can be reflective of the</p> <p>13 number of candidates who are running. And so I</p> <p>14 concluded that the total was the more material</p> <p>15 quantity, the total contributed.</p> <p>16 Q. I'm handing you a document marked</p> <p>17 Assembly Dep Exhibit No. 13.</p> <p>18 (Exhibit 13 marked for identification.)</p> <p>19 BY MS. MEEHAN:</p> <p>20 Q. Just to orient you, on page 8 of your</p> <p>21 report, your opening report, you say table one uses</p> <p>22 data from the National Institute on Money in State</p> <p>23 Politics; do you see that?</p> <p>24 A. What page are we on?</p> <p>25 Q. Sorry. On page 8 of your opening report.</p>

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<p>1 It's like the first --</p> <p>2 A. Yeah, follow the money -- yeah, that's</p> <p>3 the national institute.</p> <p>4 Q. And does table two also use data from the</p> <p>5 National Institute on Money in State Politics?</p> <p>6 A. I believe so. I might be able to check</p> <p>7 that real quick.</p> <p>8 Q. Does this -- does the spreadsheet I've</p> <p>9 marked as Assembly Dep Exhibit 13 look like the</p> <p>10 data from the National Institute of Money in State</p> <p>11 Politics?</p> <p>12 A. Yes.</p> <p>13 Q. You recognize Assembly Exhibit 13 as the</p> <p>14 data you looked at to create both table one and</p> <p>15 table two, or --</p> <p>16 A. I'm not sure if I -- go ahead. I'm</p> <p>17 sorry.</p> <p>18 Q. Yeah, sorry. Sorry. Do you recognize</p> <p>19 Assembly Exhibit 13 as the data you looked at to</p> <p>20 generate table two?</p> <p>21 A. I'm not sure if this is the specific data</p> <p>22 I looked at, but it looks -- this does look like</p> <p>23 it.</p> <p>24 Q. Do you think that there's any other data</p> <p>25 you might have looked at that's not on this</p>	<p>1 A. That's correct.</p> <p>2 Q. So those numbers for the years for 2011</p> <p>3 would be included with the data for the years for</p> <p>4 2012; right?</p> <p>5 A. That's correct.</p> <p>6 Q. Okay. General party. For purpose of</p> <p>7 your analysis, you're just looking at the rows with</p> <p>8 Democratic or Republican candidates; correct?</p> <p>9 A. That's correct.</p> <p>10 Q. And general office means that you're</p> <p>11 looking at data only involving the state house or</p> <p>12 assembly candidates; correct?</p> <p>13 A. That's correct.</p> <p>14 Q. What does number of records mean?</p> <p>15 A. So that, I believe, is the number of</p> <p>16 separate contributions. Doesn't necessarily</p> <p>17 reflect the number of individuals, but it's the --</p> <p>18 it's the number of contributions that are recorded</p> <p>19 for candidates to the state house or the state</p> <p>20 assembly.</p> <p>21 Q. Did you evaluate the number of</p> <p>22 contributions in the 2016, 2014, 2012, 2010, 2008</p> <p>23 election cycles for the Democratic candidates and</p> <p>24 the Republican candidates?</p> <p>25 A. You said did I evaluate them?</p>
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<p>1 spreadsheet, Assembly Exhibit 13?</p> <p>2 A. So this is from over the summer. I think</p> <p>3 this is the data file that I relied on.</p> <p>4 Q. If the file name of this -- of this data</p> <p>5 is NIMSP candidate contributions, does that mean to</p> <p>6 you that this is the data you relied on to generate</p> <p>7 table two?</p> <p>8 A. I'm just checking one --</p> <p>9 Q. That's okay.</p> <p>10 A. The numbers seem to match, so --</p> <p>11 Q. Most of the columns are self-explanatory.</p> <p>12 So on the left-hand column gives you the state</p> <p>13 name; correct?</p> <p>14 A. That's correct.</p> <p>15 Q. And so pages 20 and 21 of Exhibit 13 are</p> <p>16 the pages covering the Wisconsin data; correct?</p> <p>17 A. That's correct.</p> <p>18 Q. So let's turn to those pages. Election</p> <p>19 year tells you what election year you're in;</p> <p>20 correct?</p> <p>21 A. Tells you the cycle.</p> <p>22 Q. Uh-huh. So for example, if you turn to</p> <p>23 page 21, do you see five or six rows down on</p> <p>24 page 21 there's two rows regarding election year</p> <p>25 2011?</p>	<p>1 Q. Uh-huh.</p> <p>2 A. I did not include them in this. The</p> <p>3 reason was that the -- in my judgment, there were a</p> <p>4 number of different candidates, and so I concluded</p> <p>5 that it was the overall number that was the</p> <p>6 material quantity, which is also what I did in</p> <p>7 table three, looking at the average contributions</p> <p>8 by candidate status.</p> <p>9 Q. Do you know whether in the reported</p> <p>10 election cycles there were more contributions to</p> <p>11 Democratic candidates than to Republican</p> <p>12 candidates?</p> <p>13 A. Well, looking at this, in some years</p> <p>14 there are more Republican candidates, in other</p> <p>15 years there are more Democratic contributions. But</p> <p>16 the -- the numbers don't differ dramatically until</p> <p>17 you get to 2016.</p> <p>18 Q. Do you agree we could use this data in</p> <p>19 Assembly Exhibit 13 to assess whether there were</p> <p>20 more contributions to Democratic candidates in the</p> <p>21 election cycles reported than contributions to</p> <p>22 Republican candidates?</p> <p>23 A. That's correct.</p> <p>24 Q. Well, let's take a look at 2016. So 2016</p> <p>25 would include all data for both election years 2015</p>

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<p>1 and 2016; correct?</p> <p>2 A. With the exception that there's a</p> <p>3 separate column for Republicans in 2015. But that</p> <p>4 does not -- that doesn't have a material effect on</p> <p>5 the number.</p> <p>6 Q. But the 2015 -- your -- if you look at</p> <p>7 your table two, your 2016 number for -- for the</p> <p>8 total donated to Republican candidates adds the</p> <p>9 2015 \$79,481.25, plus \$4,747,232.86; correct?</p> <p>10 A. That's correct.</p> <p>11 Q. Okay. And if we add the total number of</p> <p>12 contributions to these Republican candidates, we</p> <p>13 get somewhere around, let's say 21,450</p> <p>14 contributions, roughly; right?</p> <p>15 A. 451. So close enough.</p> <p>16 Q. So exactly 21,451 contributions to</p> <p>17 Republicans in the 2016 cycle. How many</p> <p>18 contributions were there for Democrats in the --</p> <p>19 Democratic assembly candidates in the 2016 cycle?</p> <p>20 A. It indicates 42,412.</p> <p>21 Q. So there were nearly two times as many</p> <p>22 contributions to Democratic candidates in 2016 than</p> <p>23 there were to Republican candidates in 2016 cycle;</p> <p>24 correct?</p> <p>25 A. That's correct.</p>	<p>1 starts on page 18.</p> <p>2 A. That's correct.</p> <p>3 Q. And on pages 21 to 22, you list various</p> <p>4 policy changes. Let's see, one, two, three,</p> <p>5 four -- we've got ten bullets there. Policy</p> <p>6 changes; correct?</p> <p>7 A. That's correct.</p> <p>8 Q. Did you read any of the enacted</p> <p>9 legislation you've summarized on page 21 to 22?</p> <p>10 A. Did I look at the specific text? I</p> <p>11 believe so.</p> <p>12 Q. For every -- for every policy change</p> <p>13 listed on pages 21 to 22?</p> <p>14 A. I don't think it was for every one.</p> <p>15 Q. For which ones did you read the actual?</p> <p>16 A. This summary was based on the sources</p> <p>17 cited in footnote eleven. So I did look at some of</p> <p>18 the legislation, but this -- this list of bullet</p> <p>19 points is based on those memos from the Wisconsin</p> <p>20 Legislative Council which summarized the various</p> <p>21 acts.</p> <p>22 Q. Did you produce the source cited in</p> <p>23 footnote eleven to your lawyers?</p> <p>24 A. I regarded that as publicly available, so</p> <p>25 like a -- like a website. So I don't know that I</p>
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<p>1 Q. Seem pretty significant to you that there</p> <p>2 were two times -- nearly two times as many?</p> <p>3 A. Well, as I note in the report, there are</p> <p>4 a variety of reasons why people can contribute.</p> <p>5 The average contribution to Republican candidates</p> <p>6 was more than twice as large for Democrats. But</p> <p>7 it's true that there were significantly more</p> <p>8 contributions to Democratic candidates in 2016 than</p> <p>9 there were for Republican candidates.</p> <p>10 Q. Table three on page 10. Where is this</p> <p>11 data from, do you recall?</p> <p>12 A. This is also from the National Institute</p> <p>13 of Money in State Politics.</p> <p>14 Q. Is it -- is it included -- are you able</p> <p>15 to generate table three based on the data in</p> <p>16 assembly district -- in Assembly Deposition</p> <p>17 Exhibit 13, or is it a different data set?</p> <p>18 A. Well, it's the same data, but you can't</p> <p>19 do those calculations with that data, 'cause this</p> <p>20 is aggregate. There is a separate inquiry that you</p> <p>21 can do for whether a candidate is an incumbent, a</p> <p>22 challenger -- incumbent, challenger, or open seat.</p> <p>23 Q. Okay. Can you go to page 21 and 22 of</p> <p>24 your rebuttal report? So pages 21 and 22 are in a</p> <p>25 section titled policy changes; right? Section</p>	<p>1 turned over specific copies of those -- those ag</p> <p>2 memos.</p> <p>3 Q. Does the source in footnote eleven</p> <p>4 include the full bill text for each of the policies</p> <p>5 listed on pages 21 to 22?</p> <p>6 A. I don't think so.</p> <p>7 Q. Did you separately look for the bill</p> <p>8 text? Did you separately -- did you separately</p> <p>9 look for the bill text for the policy changes</p> <p>10 listed on pages 21 to 22?</p> <p>11 A. I may have done it for some of them.</p> <p>12 Q. But not for all of them?</p> <p>13 A. No.</p> <p>14 Q. Did you talk to any legislators about the</p> <p>15 policy changes listed on pages 21 to 22?</p> <p>16 A. No.</p> <p>17 Q. Did you talk to any legislative staff</p> <p>18 members about these policy changes?</p> <p>19 A. No.</p> <p>20 Q. Do you think all these policy changes are</p> <p>21 bad policies?</p> <p>22 A. It's not a matter of whether I think</p> <p>23 they're good or bad policies. The relevant metric</p> <p>24 is whether these policies reduce the power of the</p> <p>25 governor and attorney general.</p>

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<p>Page 214</p> <p>1 Q. Do you think reducing the power of the 2 governor and attorney general is bad policy? 3 A. I'm not making a normative judgment here 4 on these policies. As I note in the report, that 5 this was a response to the fact that Democratic 6 candidates swept all five statewide races, 7 including the governor, attorney general, secretary 8 of state, treasurer, and US senate. And the 9 response by the state legislature was a lame-duck 10 session that reduced the powers of the office. 11 Q. When you say you're not making a 12 normative judgment here on these policies, what do 13 you mean by "normative judgment"? 14 A. I'm not making a specific judgment about 15 whether each of these changes was good or bad. 16 What I am saying is, as I note in the middle 17 paragraph, or the first full paragraph of page 22, 18 that taken together, these actions corrode what 19 Robert Dahl, who is probably one of the most 20 prominent political theorists of the 20th Century, 21 called the Democratic bargain, or the norm, that 22 election winners will not lose their power to deny 23 rights to losers, and that election losers will 24 transfer political power voluntarily and will not 25 change the rules post-hoc to prevent the winners</p>	<p>Page 216</p> <p>1 43." Do you see that? 2 A. Yes. 3 Q. Is it also your opinion that Baldus is 4 the basis of your opinion that the listed policy 5 changes on page 21 and 22 appear to allow the 6 legislature to employ the same practices? 7 A. That's correct. 8 Q. Does the Baldus opinion comment on the 9 legislative changes on pages 21 and 22? 10 A. My recollection is that there were a 11 number of elements of that process when the court 12 ruled on other elements of it. But that seems to 13 me strikes -- that's a matter of public record. 14 Q. The redistrict -- Baldus discusses the 15 redistricting process in 2011; correct? 16 A. That's correct. And also want to point 17 out that the -- the piece of those lame-duck 18 changes allowing the legislature to retain private 19 counsel instead of relying on legal representation 20 by the Wisconsin DOJ, and another allowing 21 legislature to secure building space outside the 22 Wisconsin state capitol without the approval of the 23 Department of Administration, are similar to if not 24 identical to the practice that was used in the 25 process of drawing the Act 43 maps, in which</p>
<p>Page 215</p> <p>1 from exercising legitimate authority. 2 Q. What is your basis of the opinion that 3 you just quoted to me? 4 A. That is the source that was cited, the 5 Schmitter and Karl article from 1991. 6 Q. Anything else? 7 A. The report says what it says. 8 Q. Do you see later on in page 22 you say, 9 "These changes appear to allow the legislature to 10 employ the same practices that it used in 2011, 11 when it retained a private law firm to advise it in 12 the creation of the maps used in Act 43 and use 13 that law firm's private office space to conduct 14 legislative work restricting access to only a 15 handful of Republican legislative aides, 16 consultants, legislative leaders, and their private 17 attorneys." 18 A. That's what I wrote. 19 Q. What is your basis for that opinion? 20 A. That is from, as I note, from the -- the 21 court decision in the Baldus litigation. 22 Q. I see that you've cited the Baldus 23 decision for the next sentence, where you say, 24 "This practice came under heavy criticism by the 25 three judge panel in the Baldus litigation over Act</p>	<p>Page 217</p> <p>1 legislative staffers were located within offices of 2 a private law firm and the only people who had 3 access to it are -- were those staffers and several 4 legislative leaders. 5 Q. Are the similarities between the policy 6 changes listed on 21 and 22 and the similarities -- 7 the similarities between the policy changes 8 discussed on pages 21 and 22 and the redistricting 9 procedure discussed in Baldus, is the basis of your 10 opinion that the policy changes listed on pages 21 11 and 22 appear to allow the legislature to employ 12 the same practices? 13 A. No, that paragraph refers to the two 14 bullet points allowing legislature to retain 15 private counsel at its own discretion and allowing 16 the legislature to secure building space outside 17 the capitol without the approval of the Department 18 of Administration. So that paragraph is referring 19 to a subset of those changes that were made after 20 the 2018 election. 21 Q. And in that opinion -- your opinion is 22 based on Baldus. Is it based on anything else? 23 A. It's based on the record in Baldus. 24 Q. You also say, "This practice came under 25 heavy criticism by the three judge panel in the</p>

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<p style="text-align: right;">Page 218</p> <p>1 Baldus litigation over Act 43"; correct? 2 A. That's correct. 3 Q. You're not a legal expert; correct? 4 A. I can read. 5 Q. Do you know what the holding was of the 6 Baldus opinion, the particular Baldus opinion 7 you're citing on page 22 of your report? 8 A. The holding of the Baldus opinion, as I 9 recall, was that the portions of Act 43 that the 10 court overturned were the composition of districts 11 eight and nine. 12 Q. What is the holding -- you can read. 13 What is the holding of the particular Baldus 14 opinion you're citing on page 22? 15 MR. POLAND: I'm going to object. If you 16 want to put a copy of the opinion in front of him 17 and ask him that question, I think it's fair. I 18 think he needs a copy of the opinion. 19 MS. MEEHAN: I can pull it up -- 20 BY MS. MEEHAN: 21 Q. Did you -- did you read the opinion cited 22 here? Did you read that opinion before you cited 23 it? 24 A. Yes. 25 Q. Okay. What's a holding of a court?</p>	<p style="text-align: right;">Page 220</p> <p>1 opinion about uncontested elections here on page 10 2 of your report? 3 A. No. 4 Q. Why not? 5 A. Because whether or not a district is 6 contested is determined by multiple factors, of 7 which, as I note, something like Act 43 is one. 8 But the difference would be -- I mean, one way to 9 read this data is that the Democrats contested 95 10 of 99 districts in 2012, and they won 36. In 2016, 11 or 2018, they might have contested a similar 12 amount, and they won fewer. So this is -- this is 13 one indicator of -- of an effect. 14 But it doesn't negate the fact that 15 even when Democrats contest every district, the 16 number of seats that they win reflects more than 17 their votes -- the way that voters have been -- 18 Democratic voters have been packed and cracked as a 19 result of Act 43. I mean, the other thing to note 20 here is that the Democratic statewide share of the 21 vote from 2012 to 2018 is varied from probably 47 22 to 52 percent, and the number of seats that they 23 win has stayed roughly the same. 24 Q. Do you see on page 10 you write, "The 25 most plausible explanation for this is that the</p>
<p style="text-align: right;">Page 219</p> <p>1 A. My understanding is that's the decision 2 of the court. 3 Q. Is it your opinion that the holding of 4 the decision cited here -- okay, let's go to 5 table -- your report at table four, which is on 6 page 10. 7 MR. POLAND: Of the original report, 8 Taylor? 9 MS. MEEHAN: Oh. Yeah. Thank you. 10 BY MS. MEEHAN: 11 Q. Your opening report. 12 A. Oh, okay. 13 Q. Here you're analyzing uncontested 14 elections; correct? 15 A. Correct. 16 Q. And you have not updated your analysis of 17 uncontested elections with 2018 elections; correct? 18 A. I don't -- I don't know. But this went 19 through 2016. 20 Q. Are you familiar with the number of 21 uncontested elections for Democrats versus 22 Republicans in the 2018 election? 23 A. Not off the top of my head. 24 Q. If Democratic candidates ran in 90 or 25 more districts in 2018, would that change your</p>	<p style="text-align: right;">Page 221</p> <p>1 electoral environment of assembly elections became 2 increasingly unfavorable." Do you see that? 3 A. That's what I wrote. 4 Q. And the pronoun "this" in that sentence 5 refers to the fluctuation and the raw number of 6 elections contested by Democrats between 2008 -- 7 A. 2012 and 2016. 8 Q. Your opinion about the most plausible 9 explanation for this does not also apply to 10 patterns between 2008 -- 11 A. As I note, that this goes back to 2006. 12 And I note that the pattern changed in 2014 and 13 2016. 14 Q. I see. I see. So the -- is another way 15 of saying what you've written here on page 10 the 16 most plausible explanation for the change in 2014 17 and in 2016 is that the electoral environment of 18 assembly elections became increasingly unfavorable? 19 A. That's correct. 20 Q. If you had included -- if the 2018 21 elections show that the number of Democratic 22 candidates running was 90 candidates or more, would 23 that change your opinion about the most plausible 24 explanation for the 2014 change? 25 A. No.</p>

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Page 222	<p>1 Q. What would you expect to be the rate of</p> <p>2 contested elections under a neutral plan?</p> <p>3 A. Well, as I note in my rebuttal report, I</p> <p>4 did conduct an analysis of looking at the effects</p> <p>5 of the number of races that are contested and doing</p> <p>6 some calculations about what the example would be</p> <p>7 under a neutral plan. And this is on page 18 of my</p> <p>8 rebuttal report.</p> <p>9 Q. The analysis on page 18 of your rebuttal</p> <p>10 report uses the efficiency gap as an independent</p> <p>11 variable -- as a dependent variable; correct?</p> <p>12 A. Not exactly. This is generating</p> <p>13 predicted values of the dependent variables</p> <p>14 calculated using the estimates of the effect of the</p> <p>15 efficiency gap and varying what the gap actually</p> <p>16 is. And again, this is a generalized effect, not</p> <p>17 specific to Wisconsin, because those estimates in</p> <p>18 the previous few pages are generated looking at</p> <p>19 estimates in a number of different states.</p> <p>20 Q. Okay. Can you turn to page 11 and 12 of</p> <p>21 your opening report? And beginning with the</p> <p>22 section called Policy. Here you're relying on the</p> <p>23 Caughey and Warshaw data -- or Caughey and Warshaw</p> <p>24 article from 2016; correct?</p> <p>25 A. That's correct.</p>	Page 224	<p>1 outputs. And so -- so it does look like they refer</p> <p>2 to regulations. So I'm not -- I was under the</p> <p>3 impression that that was referring to laws, but I</p> <p>4 think it's possible that it also reflected some</p> <p>5 kind of executive action, 'cause it does -- so</p> <p>6 it -- my understanding is that the primary data</p> <p>7 include -- constitute laws. But I -- it's possible</p> <p>8 that there are some things like regulations or</p> <p>9 interpretations of laws that are included.</p> <p>10 Q. And so the policy measures of this --</p> <p>11 measuring policy in this article is not synonymous</p> <p>12 with measuring the output of a specific -- one body</p> <p>13 of the state legislature; is that right?</p> <p>14 A. That's correct.</p> <p>15 Q. And I notice they talk about liberalism.</p> <p>16 In your opinion, is liberal different than</p> <p>17 Democrat?</p> <p>18 A. Well, in this context, liberalism does</p> <p>19 not mean liberal, it is -- it refers to a metric.</p> <p>20 And this is the definition -- you could have</p> <p>21 reversed the sign and called it a policy of</p> <p>22 conservatism. So it's important to note that the</p> <p>23 root of liberalism is not liberal as a normative</p> <p>24 thing. It is simply a way of describing policy</p> <p>25 out -- outcomes along a comparable and uniform</p>
Page 223	<p>1 Q. Am I saying his name correct?</p> <p>2 A. I think so.</p> <p>3 Q. Okay. I just want to show you that</p> <p>4 article.</p> <p>5 (Exhibit 14 marked for identification.)</p> <p>6 BY MS. MEEHAN:</p> <p>7 Q. Okay, I'm handing you a document marked</p> <p>8 Assembly Dep Exhibit No. 14. Do you recognize this</p> <p>9 as the 2016 article you're relying on in this</p> <p>10 portion of your report on pages ten and eleven?</p> <p>11 A. Yes.</p> <p>12 Q. Okay. This article measures policy</p> <p>13 liberalism; correct?</p> <p>14 A. That's correct.</p> <p>15 Q. And "policy" means enacted legislation;</p> <p>16 correct?</p> <p>17 A. Correct.</p> <p>18 Q. Could a policy also mean executive</p> <p>19 measures by the governor, for example?</p> <p>20 A. I don't think so. Let me just</p> <p>21 double-check.</p> <p>22 Q. We could look at the article to figure</p> <p>23 out; right?</p> <p>24 A. Yeah. I'm just trying to -- 'cause I</p> <p>25 know that they do measure policies rather than</p>	Page 225	<p>1 scale.</p> <p>2 Q. When you talk about liberalism versus</p> <p>3 conservatism, we're talking about a spectrum of</p> <p>4 ideologies. Is that a proper way to describe it?</p> <p>5 A. Well, in this it would be a spectrum of</p> <p>6 outcomes that are frequently associated with</p> <p>7 liberal and conservative. But that's not</p> <p>8 necessary. It could be they're just different.</p> <p>9 Q. And one step further removed from that</p> <p>10 would be Democrat and Republican outcomes; correct?</p> <p>11 A. That's correct. This is -- this is a</p> <p>12 measure of policy outputs, which is different from</p> <p>13 saying Democrat -- Democratic versus Republican in</p> <p>14 terms of partisanship, although they will</p> <p>15 frequently line up.</p> <p>16 Q. Not always; right?</p> <p>17 A. Not always.</p> <p>18 Q. The Warshaw, Christopher Warshaw, is this</p> <p>19 the same Warshaw we discussed earlier today?</p> <p>20 A. Yes.</p> <p>21 Q. Could you turn to figure four in this</p> <p>22 article? It's on page 908. Figure four compares</p> <p>23 the article's author's policy liberalism measures</p> <p>24 to a measure by Shor and McCarty 2011; do you see</p> <p>25 that?</p>

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<p>1 A. Yes.</p> <p>2 Q. Are you familiar with the Shor and</p> <p>3 McCarty 2011 article?</p> <p>4 A. Yes.</p> <p>5 Q. And what are -- what -- what's the thesis</p> <p>6 of that article?</p> <p>7 A. So the Shor and McCarty article is</p> <p>8 application of a commonly used metric of ideology</p> <p>9 that is most commonly used to study congressional</p> <p>10 voting behavior and the ideology of members of the</p> <p>11 house and the senate. And what they did is used</p> <p>12 this method to investigate state legislatures. So</p> <p>13 this is an analysis of whether the index of policy</p> <p>14 liberalism lines up with or is comparable to</p> <p>15 studies of the median member of a lower chamber of</p> <p>16 the state legislature.</p> <p>17 (Exhibit 15 marked for identification.)</p> <p>18 BY MS. MEEHAN:</p> <p>19 Q. Okay, I'm handing you an exhibit marked</p> <p>20 Assembly Dep Exhibit No. 15. Does this look to you</p> <p>21 like the Shor and McCarty article discussed in</p> <p>22 figure four and on page 908?</p> <p>23 MR. POLAND: Taylor, I'm sorry to</p> <p>24 interrupt. What did you say you marked this one?</p> <p>25 MS. MEEHAN: 15.</p>	<p>1 A. No.</p> <p>2 Q. Why not?</p> <p>3 A. Because I was -- I used the Caughey and</p> <p>4 Warshaw data. I didn't think it was necessary to</p> <p>5 go back and look at this data. And also because</p> <p>6 this article I believe ends in 2008, so it would</p> <p>7 not cover the time period of the -- of state</p> <p>8 legislature after Act 43.</p> <p>9 Q. Did you look to see if the Shor and</p> <p>10 McCarty data has been updated since -- if there's</p> <p>11 publicly available and updated data for Shor and</p> <p>12 McCarty after 2008?</p> <p>13 A. I don't recall looking.</p> <p>14 Q. Okay. Just a few more questions. Take a</p> <p>15 look at your rebuttal report on page 20,</p> <p>16 figure seven. One more question. Why -- why did</p> <p>17 you decide that Caughey and Warshaw's data about</p> <p>18 policy liberalism was more relevant to your expert</p> <p>19 opinions here than Shor and McCarty's data about</p> <p>20 the median individual legislator in state</p> <p>21 legislatures?</p> <p>22 A. As I noted, as far as I'm aware, the Shor</p> <p>23 and McCarty data stopped in 2008.</p> <p>24 Q. Any other reason?</p> <p>25 A. That the -- I was interested in policy</p>
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<p>1 MR. POLAND: Isn't it 17? I don't know,</p> <p>2 what are we up to? Let me see what the Warshaw</p> <p>3 was. I'm sorry, I didn't mean to interrupt. No,</p> <p>4 you're right, I'm wrong. Thank you.</p> <p>5 BY MS. MEEHAN:</p> <p>6 Q. Okay. So Caughey and Warshaw's article</p> <p>7 is Exhibit 14; correct?</p> <p>8 A. Correct.</p> <p>9 Q. And is Exhibit 15 a Shor and McCarty</p> <p>10 article from 2011, the same Shor and McCarty</p> <p>11 article cited in Caughey and Warshaw's article?</p> <p>12 A. Yes.</p> <p>13 Q. And the way that Shor and McCarty look at</p> <p>14 legislators is they're roll call votes; correct?</p> <p>15 A. Yes.</p> <p>16 Q. And in looking at those roll call votes,</p> <p>17 Shor and McCarty estimate conservatism of members</p> <p>18 of state legislative lower houses; correct?</p> <p>19 A. I don't know if they do it for both</p> <p>20 houses, but it is a measure of the -- this is a</p> <p>21 method of estimating the ideology of members of</p> <p>22 state legislatures. I'm not sure if they look at</p> <p>23 only the lower house.</p> <p>24 Q. And did you look at Shor and McCarty data</p> <p>25 for your report?</p>	<p>1 outputs, so I don't think it would have mattered if</p> <p>2 the data weren't available after 2008. And I'm not</p> <p>3 aware that it is.</p> <p>4 Q. Okay. Looking at figure seven on page 20</p> <p>5 of your rebuttal report. You say that the red bar</p> <p>6 on figure seven is clearly an outlier; correct?</p> <p>7 A. That's what it says.</p> <p>8 Q. And the red bar on figure seven shows a</p> <p>9 trend in state policy liberalism in the more</p> <p>10 conservative direction; correct?</p> <p>11 A. What this shows is the four-year change</p> <p>12 from 2010 to 2014.</p> <p>13 Q. Uh-huh. And it shows that the policy</p> <p>14 liberalism became more --</p> <p>15 A. The policy became more conservative.</p> <p>16 Q. Uh-huh. And do you see on the left side</p> <p>17 of figure seven there's a bar between negative .4</p> <p>18 and negative .5? Do you also consider that bar to</p> <p>19 be clearly an outlier?</p> <p>20 A. That would also be an outlier.</p> <p>21 Q. And do you recall -- and that would be an</p> <p>22 outlier in the other direction; right?</p> <p>23 A. That's correct.</p> <p>24 Q. That's a four-year shift showing an even</p> <p>25 more extreme change in the liberal direction;</p>

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Page 230	<p>1 correct?</p> <p>2 A. That's correct.</p> <p>3 Q. Would you consider the next -- the -- the</p> <p>4 second leftmost bar, it's between negative .3 and</p> <p>5 negative .4, with a frequency of two in figure</p> <p>6 seven, would you consider that to also be an</p> <p>7 outlier?</p> <p>8 A. It's approaching that. It is more</p> <p>9 consistent with the overall distribution.</p> <p>10 Q. And by "more consistent with the overall</p> <p>11 distribution," do you mean that there -- the</p> <p>12 distribution leans left; correct?</p> <p>13 A. That's what this histogram -- I did not</p> <p>14 draw the kernel density, which is a continuous</p> <p>15 representation of a histogram. But the -- it looks</p> <p>16 like the kernel density would have a maximum below</p> <p>17 zero, which would indicate a slight</p> <p>18 leftward -- slight liberal direction to the</p> <p>19 four-year changes over the last 80 years.</p> <p>20 Q. And the bar between negative .4 and</p> <p>21 negative .5, what four-year span of time was that?</p> <p>22 A. I don't recall.</p> <p>23 Q. Why didn't you choose to put the years in</p> <p>24 figure -- identify the bars by the years in figure</p> <p>25 seven?</p>	Page 232	<p>1 data underlying your analysis on pages 15, 16, 17,</p> <p>2 and 18 of your report?</p> <p>3 A. That's correct.</p> <p>4 Q. Did you -- when you obtained this data</p> <p>5 from Chris Warshaw, did you all discuss how -- did</p> <p>6 you discuss using the data in his expert report in</p> <p>7 the Michigan redistricting cases?</p> <p>8 A. No.</p> <p>9 Q. Did Chris Warshaw manipulate the data in</p> <p>10 this spreadsheet?</p> <p>11 A. What do you mean by "manipulate"?</p> <p>12 Q. Okay. So Chris Warshaw sent you this</p> <p>13 data. Where did Chris Warshaw get it?</p> <p>14 A. As a combination of places. It's data --</p> <p>15 some of the data comes from work that professor</p> <p>16 Simon Jackman did in this case in 2016, some of it</p> <p>17 comes from a person named Carl Klarner, who</p> <p>18 collects data on state legislative outcomes and</p> <p>19 makes it publicly available to -- to academics and</p> <p>20 researchers, some of it -- the contribution data</p> <p>21 came from a professor at Stanford named Adam</p> <p>22 Bonica, and some of it came from data that -- so</p> <p>23 actually, I think those are the three sources:</p> <p>24 from Professor Bonica at Stanford, Professor</p> <p>25 Jackman in this case, and from Carl Klarner.</p>
Page 231	<p>1 A. Because this is a histogram, and there</p> <p>2 are going to be multiple four-year periods in each</p> <p>3 of the bars where the number is greater than one.</p> <p>4 Q. I just want to make sure I understand</p> <p>5 what the backup data is for one more thing in your</p> <p>6 rebuttal report. So your rebuttal report at 15.</p> <p>7 You say, "I obtained from Dr. Christopher Warshaw</p> <p>8 George Washington University data on lower state</p> <p>9 housing redistricting in 41 states in election</p> <p>10 cycles from 1972 to 2016."</p> <p>11 A. Yes. Or I see that.</p> <p>12 Q. Okay.</p> <p>13 (Exhibit 16 marked for identification.)</p> <p>14 BY MS. MEEHAN:</p> <p>15 Q. And do you recall obtaining from</p> <p>16 Christopher Warshaw that data?</p> <p>17 A. Yes.</p> <p>18 Q. I'm handing you a dep exhibit marked</p> <p>19 Assembly Dep Exhibit No. 16. The title -- the file</p> <p>20 name for this exhibit was gerrymandering state</p> <p>21 house underscore Mayer, and it's a CSC -- it was a</p> <p>22 CSC file. Is this the data you obtained from Chris</p> <p>23 Warshaw?</p> <p>24 A. Yes.</p> <p>25 Q. Okay. So you recognize Exhibit 16 as the</p>	Page 233	<p>1 Q. Who's Carl Klarner?</p> <p>2 A. As I -- he's a person who -- basically</p> <p>3 his profession, he runs a business collecting this</p> <p>4 data and making it available. It's widely used.</p> <p>5 Q. What's the name of his business?</p> <p>6 A. I don't know what the -- what the</p> <p>7 specific name is, but his last name is</p> <p>8 K-L-A-R-N-E-R.</p> <p>9 Q. Okay. Carl with a C or Carl with a K?</p> <p>10 A. C.</p> <p>11 Q. Okay. Really quickly, the EG column on</p> <p>12 this date, is that Dr. Simon Jackman's EG</p> <p>13 calculation?</p> <p>14 A. That's correct.</p> <p>15 Q. Dem_UNC is Democratic uncontested;</p> <p>16 correct?</p> <p>17 A. That's correct.</p> <p>18 Q. And does that mean Democratic uncontested</p> <p>19 assembly lower state house districts?</p> <p>20 A. Yes.</p> <p>21 Q. Democratic_UNC_PCT is the percentage of</p> <p>22 Democratic uncontested districts in lower state</p> <p>23 house district races?</p> <p>24 A. That's correct.</p> <p>25 Q. N is the number of district elections in</p>

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1 any given year; correct?

2 A. I believe that's the number of -- number

3 of seats in the legislature. I don't know that it

4 draws a distinction.

5 Q. Okay. Unified means the majority of the

6 legislature is the same as the majority -- as the

7 governor?

8 A. So unified refers to whether a

9 redistricting plan was implemented at a time of

10 unified party control of government.

11 Q. Okay. Contrib_dem, what does this refer

12 to?

13 A. This is the dollar amount of

14 contributions to Democratic assembly -- or

15 Democratic lower house candidates.

16 Q. And this should match the data in

17 Assembly Exhibit 13, which is the National

18 Institute For Money in State Politics data?

19 A. Not necessarily, because this -- this

20 comes from Professor Bonica's work. And I'm not

21 sure that he -- he may have processed the national

22 institute data or collected some of it himself. So

23 I imagine this is going to be close, but I don't

24 know that they would match up exactly.

25 Q. Okay. And D held, what does that mean?

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1 A. That's the number of seats in the

2 legislature that were -- where a Democrat was in

3 the seat.

4 Q. But what does it mean by "held"?

5 A. Occupied.

6 Q. Okay. And D-I-N-C win, what does that

7 mean?

8 A. That's the number of Democratic

9 incumbents who ran and won.

10 Q. And D_ran_PCT, what does that mean?

11 A. That's the number of Democratic

12 incumbents who win divided by the number of

13 Democratic incumbents in the previous legislature

14 or --

15 Q. So I think I have one more question for

16 you. Earlier you had said that table three in your

17 opening report was based on the National Institute

18 on Money In State Politics data. Do you think --

19 could table three have instead been based on this

20 data you obtained from Chris Warshaw?

21 A. Table -- so table three with the

22 Republican and incumbents?

23 Q. Correct.

24 A. You would not be able to do that from

25 this, because this lists total contributions

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1 without breaking out incumbents and challengers

2 separately.

3 Q. Got it.

4 MS. MEEHAN: Okay. Those are all the

5 questions I have. You want to take a break?

6 MR. KEENAN: Yeah.

7 MR. POLAND: Let's take a break.

8 THE VIDEOGRAPHER: Going off the record

9 at 5:30.

10 (Break taken.)

11 THE VIDEOGRAPHER: We're back on the

12 record at 5:43.

13 E X A M I N A T I O N

14 BY MR. KEENAN:

15 Q. Good afternoon, Professor Mayer.

16 A. Good afternoon.

17 Q. I don't think we need anymore

18 introductions.

19 A. Good to see you again.

20 Q. Yes, good to see you again. So you

21 understand that you submitted a rebuttal report to

22 a report that Sean Trende did on behalf of certain

23 defendants?

24 A. That's correct.

25 Q. Okay. So I marked and will put before

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1 you Exhibit 17, which is a copy of Mr. Trende's

2 original report which you provided a rebuttal to.

3 I don't really plan to ask you questions about it,

4 but just in case you need to refer to it in dealing

5 with your own report. All right.

6 So if you could pull out Exhibit 2,

7 which is the rebuttal report you provided. I was

8 going to start asking questions on that. And start

9 on, let's see, page 11, where there's a section

10 dealing with causal inferences. And I was going to

11 start at the last full paragraph on page 11, or the

12 last paragraph on page 11 begins, "The standard

13 Trende proposes." Do you see that?

14 A. Yes.

15 Q. Okay. What do you understand the

16 standard that Trende proposed to be?

17 A. So what Mr. Trende -- what I understood

18 that he was arguing in his report was that it is,

19 as he put it, uniquely difficult to draw causal

20 inferences on the basis of observational data and

21 seemed to propose a standard that the only reliable

22 way of drawing causal inferences is using

23 experimental data where you can randomize treatment

24 and controls. And in this section of my rebuttal

25 report I'm responding to that claim. And my

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<p>1 position is that that overstates the case</p> <p>2 considerably.</p> <p>3 Q. All right. And on that following page,</p> <p>4 page 12, you reference a nihilist position. Do you</p> <p>5 see that in the first full paragraph there?</p> <p>6 A. Yes.</p> <p>7 Q. Okay. And so a nihilist position would</p> <p>8 be one that it's just impossible to determine</p> <p>9 causal relations without a controlled experiment.</p> <p>10 Is that what you're referring to?</p> <p>11 A. That is what Trende appeared to be</p> <p>12 arguing.</p> <p>13 Q. Okay. And do you understand that that is</p> <p>14 actually his argument, or not?</p> <p>15 A. Well, so -- we've got his report. And</p> <p>16 then he had also submitted, as I understand it, a</p> <p>17 rebuttal report or a response to -- to this. And</p> <p>18 so Mr. Trende's response to this came in a</p> <p>19 subsequent report that he submitted. So here I was</p> <p>20 responding to what he was arguing in his initial</p> <p>21 report.</p> <p>22 Q. Okay. Did you take his -- his rebuttal</p> <p>23 report to make clear that he was not advancing the</p> <p>24 nihilist position?</p> <p>25 A. Well, I think he backed away from that</p>	<p>1 critiquing you on the basis that you just did not</p> <p>2 sufficiently support the causal claims you were</p> <p>3 making?</p> <p>4 A. Well, that's -- that's his argument.</p> <p>5 Q. All right.</p> <p>6 A. As I note in this report, I disagree with</p> <p>7 that position.</p> <p>8 Q. I understand that, but -- if we go down</p> <p>9 further on page 12, and then there's a subheading</p> <p>10 of sorts. That's a letter A in the middle there.</p> <p>11 And it says, "Act 43 was intentionally designed to</p> <p>12 create maximum partisan advantage for assembly</p> <p>13 Republicans," and it continues on. What do you</p> <p>14 mean, maximum partisan advantage for assembly</p> <p>15 Republicans?</p> <p>16 A. Well, that was, from my experience in</p> <p>17 reading of the record in the 2016 trial, when the</p> <p>18 evidence was that there were repeated and iterative</p> <p>19 attempts to increase the number of seats that</p> <p>20 Republicans would win and it -- it topped out. And</p> <p>21 my conclusion was that they had -- that Act 43 had</p> <p>22 extracted, in my view, the maximum possible</p> <p>23 partisan advantage. And that actually turned out</p> <p>24 to be an underestimate.</p> <p>25 So that's -- that's what that based --</p>
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<p>1 and insisted that he was not making -- not making</p> <p>2 the claim that -- that he was calling into question</p> <p>3 decades worth of research, although he even backed</p> <p>4 away from that a little bit by saying it's -- it's</p> <p>5 not clear that you wouldn't want to challenge</p> <p>6 decades worth of research on this ground.</p> <p>7 But as I argued here, that -- that</p> <p>8 there have been decades of research done on</p> <p>9 redistricting, virtually all of which uses</p> <p>10 observational data. There have been some --</p> <p>11 there's been some work that tries to apply a</p> <p>12 natural experiment or to rely on controls and</p> <p>13 treatments or using methods that are designed to</p> <p>14 make specific causal inferences.</p> <p>15 But if you take him at his -- at his</p> <p>16 word, he is arguing that you rarely, if ever, and</p> <p>17 cannot make causal inferences on the basis of</p> <p>18 observational data.</p> <p>19 Q. Do you think that's his position, or that</p> <p>20 he just thinks that you did not sufficiently</p> <p>21 support the inferences you were trying to draw from</p> <p>22 the data you have?</p> <p>23 A. Well, I'm going on what he wrote. He</p> <p>24 made both arguments.</p> <p>25 Q. Okay. So you do understand him to be</p>	<p>1 that was based on. And that's from what -- the</p> <p>2 record is quite clear about what the staffers who</p> <p>3 drafted the Act 43 map said what they -- about what</p> <p>4 they were doing.</p> <p>5 Q. So you think that they, the drafters,</p> <p>6 said they drew the most favorable map to</p> <p>7 Republicans possible?</p> <p>8 A. Well, they tried to.</p> <p>9 Q. You said you actually underestimated the</p> <p>10 effects of Act 43. Is that what you said?</p> <p>11 A. That's correct. 'Cause I believe the</p> <p>12 trial -- the trial was held in May of 2016, and</p> <p>13 both Professor Jackman and I were -- had made some</p> <p>14 forecasts about what the number of seats</p> <p>15 Republicans would win under various statewide vote</p> <p>16 percentages. And our estimate, we actually</p> <p>17 underestimated the number of seats that Republicans</p> <p>18 would win.</p> <p>19 Q. And is that underestimation -- do you</p> <p>20 know what caused that underestimation?</p> <p>21 A. Estimates are probabilistic. And there's</p> <p>22 always some uncertainty. Or forecasts are</p> <p>23 probabilistic and inherently uncertain.</p> <p>24 Q. Is part of the cause that the state has</p> <p>25 actually trended towards the Republicans in the</p>

61 (Pages 238 to 241)

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<p>1 years of -- in the 2016 and 2018 elections?</p> <p>2 A. I would say no, because the vote</p> <p>3 percentage that Democrats won statewide in both</p> <p>4 2016 and 2018 was higher than what they received in</p> <p>5 2014.</p> <p>6 Q. Okay. Did the distribution of the votes</p> <p>7 across the state, even if they stayed constant or</p> <p>8 improved for Democrats on a statewide basis, did</p> <p>9 the distribution of those votes get worse for</p> <p>10 Democratic assembly candidates?</p> <p>11 A. Can you clarify what you mean by</p> <p>12 distribution of votes?</p> <p>13 Q. Sure. The number of districts in which</p> <p>14 the Democrats would have a majority of the vote.</p> <p>15 A. Well, the number of districts the</p> <p>16 Democrats won, it's about the same now. I think</p> <p>17 they were at 63 -- Republicans were at 63, or even</p> <p>18 64 after 2016, and they -- the Democrats picked up</p> <p>19 one seat in 2018. So under a variety of Democratic</p> <p>20 statewide percentages ranging from close to</p> <p>21 53 percent in 2012 to 47 or 48 percent in 2014, the</p> <p>22 share of seats that they -- that they won barely</p> <p>23 budged.</p> <p>24 Q. But the bottom line is that the Act 43</p> <p>25 actually performed better than even you would have</p>	<p>1 insisting that that alone is evidence of a causal</p> <p>2 effect, the causal -- the causal effects are based</p> <p>3 on a well-documented literature that has</p> <p>4 demonstrated conclusively, in my view, that there</p> <p>5 is a relationship between cause and effect</p> <p>6 along -- or using factors like partisan baseline</p> <p>7 and partisan advantage and asymmetry, and that Act</p> <p>8 43 was intentionally designed as part of the record</p> <p>9 to create those effects and to create those</p> <p>10 advantages, and that the phenomena that I observe</p> <p>11 and cite in my report is entirely consistent with</p> <p>12 that.</p> <p>13 I am not arguing that, as I note in</p> <p>14 the report, that Act 43 is the only thing that</p> <p>15 could have caused these patterns. Frequently when</p> <p>16 there are questions about estimation, it involves</p> <p>17 the more precise calculation of how big the effect</p> <p>18 actually is. What is the coefficient, what is the</p> <p>19 precise numerical relationship between an</p> <p>20 independent and dependent variable. And I'm not</p> <p>21 making that claim.</p> <p>22 What I am pointing out is that all of</p> <p>23 these factors are consistent with that explanation,</p> <p>24 that Act 43, as a redistricting plan that was</p> <p>25 intentionally designed to create a partisan</p>
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<p>1 predicted for the Republicans?</p> <p>2 A. Well, that was what was observed in 2016.</p> <p>3 Q. All right. We can go to the next page,</p> <p>4 page 13. And it says -- this is the second</p> <p>5 paragraph. It says, "In making the claims in my</p> <p>6 report, I am not insisting that Act 43 is the only</p> <p>7 factor that explains the data, nor am I making</p> <p>8 claim about the precise size of the effect."</p> <p>9 Did you do an analysis of what the</p> <p>10 other factors that might explain the data or that</p> <p>11 might explain the data?</p> <p>12 A. Well, as I -- as I pointed out in this</p> <p>13 report, and my original report, that there are a</p> <p>14 variety of factors that are known and well</p> <p>15 understood to effect election outcomes. It is</p> <p>16 incorrect, as Mr. Trende claims, that, as he</p> <p>17 writes, "Elections are enormously complicated</p> <p>18 events which political scientists frequently</p> <p>19 struggle to unravel." That overstates the case by</p> <p>20 quite a margin. Elections provide a wealth of data</p> <p>21 that have been used to understand outcomes and to</p> <p>22 forecast outcomes.</p> <p>23 And the -- the causal claim that I</p> <p>24 make in my report and in my rebuttal report is not</p> <p>25 that I am simply observing a correlation and</p>	<p>1 advantage, had aggregate effects on both parties</p> <p>2 and -- well, we'll limit it to the aggregate effect</p> <p>3 on -- on political parties and candidates.</p> <p>4 Q. You mentioned a well-developed literature</p> <p>5 about this topic. Can you tell me which articles</p> <p>6 you cite are a part of that well-developed</p> <p>7 literature?</p> <p>8 A. Well, I mean, I would refer to the</p> <p>9 portions of the report and the citations. So in my</p> <p>10 original report, the -- my summary of the</p> <p>11 literature is on pages four through -- four</p> <p>12 through eight. And those -- the citations that I</p> <p>13 make are not designed to be comprehensive, they are</p> <p>14 illustrative. And I cite more literature in my</p> <p>15 rebuttal report.</p> <p>16 So, I mean, this is -- this is a</p> <p>17 literature that goes back decades. And there's</p> <p>18 nothing particularly novel or unusual about the</p> <p>19 expectations that this -- that this literature</p> <p>20 has -- has predicted and found and observed.</p> <p>21 Q. And then continuing on it says, "Instead</p> <p>22 I am putting out numerous aggregate measures that</p> <p>23 are consistent with a broad and generally accepted</p> <p>24 peer-reviewed published academic literature," and</p> <p>25 continues on. But I just wanted to ask you about</p>

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1 the numerous aggregate measures. What are those?
 2 A. Those are the things that I mentioned in
 3 my report: fundraising, policy outcomes,
 4 contestedness, the number of Democrats who -- who
 5 return. Basically all of the indicators or all of
 6 the measures that I refer to in my reports are
 7 aggregate measures. They're not estimates on -- my
 8 conclusions are based on aggregate effects rather
 9 than effects on specific individuals.
 10 Q. Okay. We got into a lot of that in the
 11 first part of the deposition, so we won't retrace
 12 that ground. Moving to the first aggregate measure
 13 in the rebuttal report is about fundraising
 14 disadvantages. And your rebuttal report goes into
 15 analyzing the fundraising for the Republican and
 16 Democratic campaign committees. Do you see that
 17 section?
 18 A. Yes.
 19 Q. Okay. And you note that, I guess this is
 20 the first -- maybe I could just -- we can look at
 21 figure six. And there's a blue band in the middle,
 22 and that shows when -- the only time in this
 23 time -- the only span in this timeframe where the
 24 Democrats controlled the majority of the assembly;
 25 is that correct?

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1 A. That's correct.
 2 Q. Okay. And then the figure shows the GOP
 3 advantage in committee fundraising. So I
 4 understand that the -- the points on the graph are
 5 GOP committee fundraising minus Democrat committee
 6 fundraising; is that correct?
 7 A. It's the Republican assembly --
 8 Republican -- I can't remember what the exact name
 9 is, but it's the Republican caucus fundraising
 10 minus the Democratic caucus fundraising.
 11 Q. And that's in dollar amounts; correct?
 12 A. That's in absolute amounts, that's
 13 correct.
 14 Q. And so when the -- there's some negative
 15 values here, and that shows Democrats raised -- the
 16 Democratic committee raised more than the
 17 Republican committee; correct?
 18 A. That's correct.
 19 Q. Okay. And you note that the Democrats
 20 raised more money from 1998 through 2012; correct?
 21 A. That's correct.
 22 Q. And this occurred when they were in the
 23 minority, except during that two-year timeframe in
 24 blue there; correct?
 25 A. That's correct.

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1 Q. Okay. Now, it's true that majority
 2 parties generally out-raise the minority parties;
 3 is that correct?
 4 A. Well, that is typically the case,
 5 although it depends on how you calculate it,
 6 whether it's total contributions. But generally
 7 being in the majority is associated with more
 8 fundraising advantages. That was not the case in
 9 Wisconsin between 1998 and 2012, except for the
 10 period where the Democrats raised more money.
 11 Q. In your initial report you said that
 12 majority parties generally out-raise the minority
 13 parties because donors want to support candidates
 14 that win; is that correct?
 15 A. That's part of it.
 16 Q. And then also that interest groups or
 17 other donors want access to office holders who have
 18 decision-making authority, and those would be the
 19 ones in the majority; is that correct?
 20 A. That's correct.
 21 Q. Okay. So you would admit that the
 22 Democratic campaign committee out-raising
 23 Republicans while in the minority was an exception
 24 to that general rule?
 25 A. That's correct.

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1 Q. Okay. And, I mean, would you
 2 characterize it as an anomaly?
 3 A. It is -- it's not what you would expect
 4 given the factors that are normally associated.
 5 But it can reflect a number of other factors,
 6 emphasis, things like that.
 7 Q. Okay. You say emphasis. What do you
 8 mean by that?
 9 A. Just the effort that was devoted to it.
 10 So there's a -- there's a demand side and a supply
 11 side.
 12 Q. So would it be that the -- a certain
 13 campaign committee spent more time and effort
 14 trying to raise money for itself?
 15 A. Correct.
 16 Q. But you haven't provided any analysis as
 17 to the specific reasons why Democrats were able to
 18 raise -- the Democratic committee was able to raise
 19 more money while it was in the minority during this
 20 timeframe?
 21 A. No. This is based on the -- on the time
 22 series.
 23 Q. Okay. And are you offering an opinion on
 24 whether the -- a party's committee out-raising the
 25 other party's committee has any sort of effect on

Page 250 1 electoral outcomes? 2 A. Well, the relationship between spending 3 and outcomes is complex. But other things being 4 equal, being able to raise more money, there is a 5 clear electoral advantage to doing that. 6 Q. Okay. But in Wisconsin, Democrats raised 7 more money than Republicans from 1998 through 2006 8 and never secured the majority in the state 9 assembly; correct? 10 A. That's correct. 11 Q. And then the Democrats out-raised 12 Republicans in 2008 and did win the assembly; 13 correct? 14 A. That's correct. 15 Q. And then they -- the highest Democratic 16 advantage occurred in 2010; is that correct? 17 A. In the time period covered by this 18 figure, that's correct. 19 Q. Okay. And then in 2010 the Democrats 20 lost control of the assembly and Republicans won 60 21 seats; correct? 22 A. I think that's right. 23 Q. And then in 2012 Democrats still 24 maintained the -- an advantage in fundraising over 25 the Republican campaign committee?	Page 252 1 campaign committee; correct? 2 A. That's correct. 3 Q. And then table two lists contributions to 4 individual candidates; correct? 5 A. That's correct. 6 Q. Okay. Now, it's true that state assembly 7 candidates raised more money than the campaign 8 committees; is that correct? 9 A. In the aggregate, that's true. 10 Q. Correct. And so to find the total 11 amounts raised by Democratic and Republican 12 candidates, we would like add up for 2016, for 13 example, there's four -- over four million for 14 Democratic candidates and then over 4.8 million for 15 Republican candidates; correct? 16 A. In 2016? 17 Q. Yes. 18 A. That's correct. 19 Q. So there would be something like 20 8.8 million total money raised by candidates; is 21 that correct? 22 A. In general election -- well, I believe 23 this is general election candidates. 24 Q. Okay. But the total listed is over 25 \$8.8 million between the two parties' candidates?
Page 251 1 A. Although it had shrunk considerably. 2 Q. Yeah. But wouldn't you expect the 3 advantage the Democrats enjoyed in 2010 to decrease 4 just by nature of the fact that it would regress to 5 the mean, and that 2010 was a high point for 6 Democrats? 7 A. Well, I don't know that I would use the 8 term regressed to the mean, but one would expect 9 that the Democratic advantage would -- would shrink 10 based on shifting from the majority to minority 11 status. 12 Q. Okay. All right. So the Democratic 13 advantage in 2012 is about \$250,000; correct? 14 A. That looks about right. 15 Q. And that is comparable to the advantage 16 Democrats enjoyed in 2006; correct? 17 A. That's approximately right. 18 Q. Okay. And -- okay. Now the -- we can go 19 back to your original report. On page 9, I think. 20 And look at tables one and two. And so table one 21 lists at least your totals of the assembly campaign 22 committee fundraising; correct? 23 A. I'm sorry, say that again. 24 Q. Sure. Table one lists totals for the 25 Democratic campaign committee and the Republican	Page 253 1 A. Correct. 2 Q. And then the totals listed in 2016 for 3 the campaign committees are 1.67 million for 4 Democrats and 1.79 million for Republicans; do you 5 see that? 6 A. Yes. 7 Q. So that's going to be like under \$4 8 million between the two campaign committees; 9 correct? 10 A. That's correct. 11 Q. Okay. And are you offering any sort of 12 opinion on the actual effect on the Democrats' 13 ability to elect candidates based on the levels of 14 campaign committee fundraising? 15 A. I'm sorry, the Democrats' ability to 16 what? 17 Q. Elect candidates. 18 A. Elect candidates. Well, that is an 19 observable outcome. 20 Q. You've observed that they had a difficult 21 time electing candidates; correct? 22 A. Correct. And then the literature that I 23 cite draws a connection that the difficulty in 24 electing candidates has a downstream effect on 25 subsequent ability to raise money. And this is

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<p>1 consistent with the expectations of the academic 2 literature. 3 Q. Okay. And that's true as a general 4 matter, but would it necessarily be true in each 5 individual election? 6 A. What would be true? 7 Q. Well, for example, the Democratic 8 disadvantage in campaign committee fundraising 9 actually shrinks between 2014 and 2016; do you see 10 that? 11 A. That's true. 12 Q. Okay. And so how would you explain that 13 if there's these downstream effects that Democrats 14 are -- 15 A. Well, as I note in the report, the 16 fundraising ability will depend on other things. 17 2016 was a presidential election. But the -- the 18 fact that figure six and my rebuttal report shows 19 a dramatic swing is consistent with the explanation 20 -- or consistent with the expectation that putting 21 Democrats at a disadvantage had negative effects on 22 the Democrats -- Democratic assembly caucus, their 23 ability to maintain fundraising and stay 24 competitive with what Republican -- the Republican 25 committee was able to do.</p>	<p>1 on the bottom of page 14 but then continues on to 2 the top of page 15. 3 MR. POLAND: Brian, which exhibit are you 4 on? 5 MR. KEENAN: I'm sorry, we're back on the 6 rebuttal report, Exhibit 2. 7 MR. POLAND: Okay. 8 BY MR. KEENAN: 9 Q. And it says at the bottom of page 14, "It 10 was not the immediate effect of the vote swing in a 11 single election. As based on votes for statewide 12 office, Democrats performed better electorally in 13 2016 and 2018 than they did in 2014 or 2010, but 14 faced dramatically worse fundraising 15 competitiveness." All right. 16 So I was just going to ask you about 17 several parts of this sentence. So you say as 18 based on votes for statewide office, Democrats 19 performed better. So what votes for statewide 20 office were you relying on in this sentence? 21 A. Essentially all of them. The governor -- 22 well, I don't know if it's all of them, but 23 certainly the Democratic percentage of the 24 statewide vote for -- for president and -- in 2018 25 was better than it was in 2014 or 2010. But they</p>
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<p>1 Q. Well, the Democratic campaign committee 2 has been able to maintain its level of fundraising; 3 correct? 4 A. Well, they have gone -- it's gone up and 5 down, but the Republican ability -- so the 6 Republican -- it's essentially almost a monotonic 7 increase over a ten-year period. 8 Q. Yeah, so the cause of the discrepancy is 9 that Republicans are raising more money for their 10 assembly campaign committee; correct? 11 A. That's a cause. 12 Q. Yeah. And Democrats, for example in 13 2016, actually raised the highest amount of money 14 in your table one of any year for their Assembly 15 Democratic Campaign Committee; correct? 16 A. That's correct. 17 Q. And the total for 2018 is still higher 18 than any other year other than 2016 listed in table 19 one? 20 A. That's correct. 21 Q. But they're at a disadvantage because 22 Republicans have raised even more money than the 23 Democrats? 24 A. That's correct. 25 Q. Okay. We can turn to the sentence starts</p>	<p>1 were less competitive with the Republicans in 2 fundraising. 3 Q. Now, when you say they were less 4 competitive with the Republicans in fundraising, 5 are you just referring to the assembly campaign 6 committees? 7 A. That's correct. That's what this is 8 referring to. 9 Q. Okay. And now you didn't analyze whether 10 the state's -- whether the statewide Democrats who 11 were the ones performing better electorally faced 12 any sort of worse fundraising competitiveness with 13 the Republican challengers? 14 A. Well, typically the downstream effects 15 will not flow up, they'll flow down. So one 16 wouldn't necessarily expect the ability of the 17 Assembly Democratic Campaign Committee to raise 18 money to affect the US senate or presidential race. 19 Q. Yeah, but would you necessarily expect 20 better performance at statewide presidential 21 offices to flow down to the Democratic Assembly 22 Campaign Committee? 23 A. Well, so the issue here is that better 24 statewide performance was not reflected in 25 performance in assembly election because of Act 43.</p>

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<p>1 And figure six shows a pattern of caucus 2 fundraising that is entirely consistent with that 3 explanation. 4 Q. But did assembly Democrats actually 5 perform better statewide in vote shares in 2016 and 6 2018 than they did in 2014 or 2010? 7 A. I believe that in -- well, on most 8 statewide elections, governor or attorney general, 9 Republicans did better in 2010 and 2014 than they 10 did in 2016 and 2018. 11 Q. And I understand that. But you 12 understand that assembly Democrats could possibly 13 run behind the statewide Democrats in terms of 14 statewide vote share? 15 A. Well, if we were -- if you're looking at 16 actual vote totals. The difficulty is that the 17 vote totals for assembly candidates is endogenous 18 to the districting plan. So that's the purpose of 19 using a baseline measure. And another perspective 20 on this is that as the Democratic statewide share 21 of the vote went -- went up, their share of the 22 seats that they won in assembly elections did not 23 go up. In fact, in some cases it went down. 24 Q. Yeah, but are you sure they received more 25 statewide assembly votes?</p>	<p>1 Q. Correct. 2 A. I -- I don't recall. 3 Q. Okay. 4 A. Though I have to say, it wouldn't 5 surprise me if assembly candidates did better. But 6 the key is that better performance on a district or 7 statewide basis was not reflected in any change in 8 the number of seats, and so -- 9 Q. Okay. So I was going to get into the 10 Warshaw data now, and we already marked that 11 exhibit. So if we can get a -- what was it? 12 MR. POLAND: The data itself, Brian? 13 MR. KEENAN: Yeah, the spreadsheet with 14 the data. 15 MR. POLAND: Yeah, 16. 16 MR. KEENAN: 16. 17 BY MR. KEENAN: 18 Q. Are you able to kind of make out that 19 data? I have a different copy with a slight grid 20 pattern; it's a little bigger. If you're fine 21 using that -- 22 A. If I have trouble, I'll let you know and 23 we can -- can I have a piece of paper or something 24 that allows me to move across? 25 Q. That's why I was -- I don't know if you</p>
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<p>1 A. Well, as I noted, that that's the wrong 2 metric, because there are a number of races where 3 their races were uncontested, and so voters in a 4 number of districts didn't have an opportunity to 5 register a preference for candidates for the party 6 not on the ballot. 7 So again, this is one of the reasons 8 why the baseline method is commonly used to analyze 9 redistricting plans, because it is not endogenous 10 to a particular configuration of districts, and 11 allows you to compare alternative districting 12 configurations. 13 Q. But you understand that Simon Jackman 14 computed statewide vote shares in the way he 15 calculated his efficiency gaps? 16 A. Well, he also imputed vote shares and 17 uncontested districts using statewide -- or methods 18 that used other election results. 19 Q. Exactly. And so are you aware of whether 20 his statewide vote share in 2016 actually showed 21 any sort of increase in assembly Democratic 22 performance? 23 A. In terms of the number of votes that 24 assembly candidates were -- received or were 25 imputed to receive?</p>	<p>1 prefer a copy that has the grid lines on. That 2 might be easier to use. 3 A. Sure. 4 Q. We'll mark this as Exhibit 18. 5 (Exhibit 18 marked for identification.) 6 BY MR. KEENAN: 7 Q. I'll represent to you that I did the same 8 thing that Ms. Meehan did, where I printed out that 9 spreadsheet Mayer gerrymandering, I'm forgetting 10 the name, but -- so it should be identical to 11 exhibit -- the other exhibit, just bigger and with 12 the lines on it. I was going to -- she already -- 13 counsel already went through the meanings of all 14 the columns, so we can just go straight in now to 15 the Wisconsin data, which is on the last two pages. 16 Was going to focus on, I guess it 17 starts on line 800, the top -- top entry for 18 Wisconsin is year 2000. Do you see that? 19 A. Yes. 20 Q. And then if we go -- it looks like that 21 is the first year that has campaign contribution 22 data for Wisconsin? 23 A. That's correct. 24 Q. Okay. And then do you know is the year 25 2000 the first year for campaign contribution data</p>

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<p>Page 262</p> <p>1 in this data set?</p> <p>2 A. In this data set?</p> <p>3 Q. Correct.</p> <p>4 A. That's correct.</p> <p>5 Q. Okay. So the efficiency gap data and the</p> <p>6 uncontested seats data goes back through 1972; is</p> <p>7 that correct?</p> <p>8 A. That's correct.</p> <p>9 Q. Okay. But then the fundraising data only</p> <p>10 goes back to 2000?</p> <p>11 A. That's correct.</p> <p>12 Q. And the efficiency gap data, who entered</p> <p>13 the efficiency gap data in column G?</p> <p>14 A. This was based on work that Professor</p> <p>15 Jackman had done in the 2016 -- the data set that</p> <p>16 he created in this case.</p> <p>17 Q. Correct. But I was just wondering, did</p> <p>18 you put that data in there or did it come with</p> <p>19 these efficiency gaps in it when you downloaded it?</p> <p>20 A. These figures were in the file when I</p> <p>21 downloaded it.</p> <p>22 Q. Okay. And then just so we can -- so from</p> <p>23 Wisconsin 2000 through 2016, we can look at these</p> <p>24 columns here and determine the number of</p> <p>25 uncontested seats, correct, in Wisconsin?</p>	<p>Page 264</p> <p>1 Q. And then column S can determine the</p> <p>2 percentage of Democratic incumbents that returned</p> <p>3 to office; is that true?</p> <p>4 A. Correct.</p> <p>5 Q. All right. Now, for the D incumbent</p> <p>6 wins, I'm trying to -- so the difference between</p> <p>7 the D held and the D incumbent wins is just any</p> <p>8 Democrat who held the seat but then did not hold</p> <p>9 the seat after the election; correct?</p> <p>10 A. Or they didn't run, they retired, and --</p> <p>11 Q. Correct. So it could be that they</p> <p>12 retired, or it could be that they lost the seat,</p> <p>13 either in a primary or a general election; is that</p> <p>14 correct?</p> <p>15 A. Correct.</p> <p>16 Q. Okay. Could it also include a Democratic</p> <p>17 member of the legislature who ran for another</p> <p>18 higher office and then was no longer in the seat?</p> <p>19 A. Yeah, it would include anyone who did</p> <p>20 not -- any incumbent who did not maintain the seat,</p> <p>21 either through defeat or retirement or running for</p> <p>22 another office.</p> <p>23 Q. So some of these Democratic incumbents</p> <p>24 who did not return to office would have left for</p> <p>25 reasons that had nothing to do with the districting</p>
<p>Page 263</p> <p>1 A. That's -- the number of seats that are</p> <p>2 uncontested by --</p> <p>3 Q. Democrats?</p> <p>4 A. -- Democrats.</p> <p>5 Q. Okay. And then we can also determine the</p> <p>6 campaign contributions total to all Democratic and</p> <p>7 Republican candidates; is that correct?</p> <p>8 A. That's correct.</p> <p>9 Q. Okay. Although I think you noted these</p> <p>10 numbers may be slightly different from the ones</p> <p>11 from the National Institute of Money In State</p> <p>12 Politics?</p> <p>13 A. That's correct.</p> <p>14 Q. Okay. And then we can also determine the</p> <p>15 percent of the contributions that Democrats</p> <p>16 received in column P?</p> <p>17 A. Correct.</p> <p>18 Q. And then we can determine the number of</p> <p>19 seats held by Democrats going into the election,</p> <p>20 column Q; is that correct?</p> <p>21 A. Correct.</p> <p>22 Q. And then the column R is the number of</p> <p>23 seats that a Democratic incumbent won; is that</p> <p>24 true?</p> <p>25 A. Correct.</p>	<p>Page 265</p> <p>1 plan that was in place at that time?</p> <p>2 A. Well, I don't know if I would make a</p> <p>3 statement that strong, because a decision to retire</p> <p>4 or a decision to try to run for another office</p> <p>5 might well have been driven by a sense that they</p> <p>6 were not accomplishing anything or were -- so</p> <p>7 it's -- I would not make the claim that -- that</p> <p>8 even someone who retired or ran for another office,</p> <p>9 that that had nothing to do with district</p> <p>10 configurations. But that's -- that's an empirical</p> <p>11 claim.</p> <p>12 Q. Okay. But you couldn't be certain that</p> <p>13 all the Democratic incumbents who then did not hold</p> <p>14 a seat were in fact driven by something having to</p> <p>15 do with the districting plan?</p> <p>16 A. That's correct.</p> <p>17 Q. Okay. All right. So going then into</p> <p>18 the -- your analysis of this data. And this is</p> <p>19 page 15 of the rebuttal report. It's -- I was</p> <p>20 looking at the third paragraph under heading C, and</p> <p>21 the second sentence talks about state and year</p> <p>22 variables, control for state-specific and</p> <p>23 cycle-specific factors generally. We'll isolate</p> <p>24 the effect of efficiency gap values on aggregate</p> <p>25 party outcomes beyond actual election results.</p>

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<p style="text-align: center;">Page 266</p> <p>1 Could you explain the variables, the 2 state and year variables that are controlling for 3 these state-specific and cycle-specific factors? 4 A. So a fixed effects model is a regression 5 technique that adds variables for each cycle and 6 each state. And what those do is, in a data set 7 like this where it's arranged by state and year, 8 there could easily be effects that are unique to a 9 state or unique to a year or unique to a state and 10 year. And the fixed effect model adds those 11 variables to the analysis. 12 And what's -- what that does is that 13 the efficiency gap, which is included, that the 14 efficiency -- the estimate for the coefficient for 15 the efficiency gap is after controlling for the 16 effects that might have happened in the state in a 17 particular -- in a particular state or a particular 18 year or a particular state and year. So it 19 isolates the effect of the efficiency gap, as I 20 note, beyond the specific outcome -- comes in 21 that -- in that state or in that year. 22 Q. And did you develop the fixed 23 effects model, or is that something that came 24 with -- that Mr. Warsaw or whoever else developed 25 this data came up with?</p>	<p style="text-align: center;">Page 268</p> <p>1 percentage of Democratic incumbents who win, and 2 the coefficient, the numbers for the current 3 efficiency gap, that's -- that is the result of the 4 estimation, and it shows how these dependent 5 variables are affected by the efficiency gap scores 6 or efficiency gap calculations. 7 Q. Okay. And so the -- the dependent 8 variables in both table two and three that relate 9 to number of seats uncontested by Democrats, those 10 would include elections going all the way back to 11 1972? 12 A. Correct. 13 Q. And the same with the percentage of 14 Democratic incumbents who return; is that correct? 15 A. That's correct. 16 Q. Okay. And then table -- can you explain 17 the difference between table -- or table three and 18 table two? 19 A. So table two includes all of the 20 observations where there is data. Table three 21 limits the estimation to elections held under 22 redistricting plans that were enacted by -- under 23 unified party control. So if you go back to the 24 spreadsheet, table three includes only those 25 elections where the variable unified has the value</p>
<p style="text-align: center;">Page 267</p> <p>1 A. Well, the fixed effect model is -- the 2 fixed effects model is a common analytical 3 technique that -- that I applied to this data. 4 Q. Okay. All right. And then underneath 5 the bullet points you talk about the key 6 independent variable is the efficiency gap 7 calculation for each state and year in lower house 8 elections using the Jackman method. It says "key 9 independent variable." Are there other independent 10 variables? 11 A. Well, that -- that refers to this. And 12 the other independent variables are the state and 13 the year fixed effects variables. 14 Q. Okay. Then you have your models in 15 tables two and three, so they're very similar. But 16 we can start out with table two. Could you just 17 explain how you came up with the dependent vary -- 18 the -- I guess the data that you have in table two, 19 generally? 20 A. So that is the fixed effects model using 21 the code, the stated code. And this -- each of 22 these regressions uses a different dependent 23 variable. The Democratic percentage of campaign 24 contributions, the percentage of uncontested 25 Democrat seats uncontested by Democrats, and the</p>	<p style="text-align: center;">Page 269</p> <p>1 of one. So that means that the elections were held 2 under a redistricting plan that was enacted through 3 unified control. 4 Q. All right. And then when you say on the 5 next page, where you go through the results of 6 table three, and it says that, I guess this is the 7 third sentence, the effect of the negative 0.13 8 efficiency gap is associated with a 14.3 decrease 9 in the Democratic share of campaign contributions. 10 Do you see that? The top of page 18. 11 A. Yes. 12 Q. Okay. So 14.3 percent decrease compared 13 to what? 14 A. So I think there's a -- there's a typo 15 that the -- 16 Q. Okay. 17 A. -- the numbers 14.3, 13.3 and 2.3 are 18 actually not the values that are reported in the 19 table. So that should be 9.2. A 9.2 decrease in 20 Democratic share of campaign contributions, 21 10.5 percent decrease -- or increase in the share 22 of uncontested seats, and 4.6 percent decrease in 23 the percentage of Democratic incumbents. 24 Q. Well, I just want to stop you, 'cause in 25 the paragraph under table four it summarizes values</p>

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<p>1 that are contained in table four.</p> <p>2 A. So -- oh, I'm sorry. That's -- that's</p> <p>3 correct. So the -- so the effect of a 13 -- a</p> <p>4 13 -- a minus 13 percent efficiency gap is</p> <p>5 multiplying through those variables. And the table</p> <p>6 four shows the comparison with the median values of</p> <p>7 these -- of Democratic share of campaign</p> <p>8 contributions, percentage of seats uncontested, and</p> <p>9 the percentage of incumbents. And the -- the</p> <p>10 expected value in the gap is minus .3. So there</p> <p>11 are two different ways of estimating the effects.</p> <p>12 They are -- they are -- they are</p> <p>13 related. But table three is looking at the --</p> <p>14 basically multiplying the coefficient times minus</p> <p>15 .13, and that produces those. And the table four</p> <p>16 looks at the -- the effect of a -- of the median</p> <p>17 efficiency gap. So it compares the efficiency gap</p> <p>18 of minus .13 against the efficiency gap of</p> <p>19 essentially positive .01.</p> <p>20 Q. So if I understand then, the numbers here</p> <p>21 in the paragraph on top of page 18, it's -- for the</p> <p>22 campaign contributions it's 1.1 times .13 for the</p> <p>23 efficiency gap, or 13, I guess?</p> <p>24 A. Correct.</p> <p>25 Q. And you get 14.3. And then we would get</p>	<p>1 zero, Democrats would raise 56 percent of campaign</p> <p>2 contributions, and that would decrease to</p> <p>3 46.8 percent when the efficiency gap is minus .13.</p> <p>4 And that's the same with the -- the same method</p> <p>5 using -- looking at the percentage of seats and</p> <p>6 expectation uncontested by Democrats under a</p> <p>7 neutral plan, or the percentage of Democratic</p> <p>8 incumbents who return under a neutral plan, as</p> <p>9 opposed to a plan with an efficiency gap of minus</p> <p>10 .13.</p> <p>11 Q. Now, here we talked a lot about neutral</p> <p>12 plans earlier, but in table four, does neutral map,</p> <p>13 neutral plan, mean efficiency gap of less than</p> <p>14 0.01?</p> <p>15 A. An absolute value of minus .00. And it's</p> <p>16 not -- the median value is actually not zero, but</p> <p>17 that's -- that's large -- that is essentially the</p> <p>18 equivalent of a perfectly neutral plan.</p> <p>19 Q. Okay, so -- and this is probably that I</p> <p>20 don't know as much about statistics, but when you</p> <p>21 say actual median value, is that actually like a</p> <p>22 plan in the data set that is the median, or is it,</p> <p>23 like, applying your regression model to an</p> <p>24 efficiency gap with 0.01?</p> <p>25 A. So I believe what I did is extracted all</p>
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<p>1 1.02 times 13, and you get a 13.3 percent for the</p> <p>2 share of seats uncontested by Democrats.</p> <p>3 A. Correct.</p> <p>4 Q. Okay. All right. So you started talking</p> <p>5 about table four, but I had some questions about it</p> <p>6 specifically. So the -- the third row, it says</p> <p>7 actual median value when efficiency gap -- it looks</p> <p>8 like the absolute value of the efficiency gap is</p> <p>9 less than 0.01.</p> <p>10 A. Right.</p> <p>11 Q. So what does the actual median value</p> <p>12 mean?</p> <p>13 A. So that's looking at the actual</p> <p>14 percentages. It's not looking at the absolute</p> <p>15 change, but it's looking at the -- the -- as I</p> <p>16 note, the change in expectation of the actual</p> <p>17 percentage. So essentially table four is absolute,</p> <p>18 table three is relative. I suspect if you divided</p> <p>19 9.2 by 56 percent you would wind up with the same</p> <p>20 14.3 percent decrease. But it's just a different</p> <p>21 way of showing what is the -- table three looks at</p> <p>22 the change, the marginal effect, table four looks</p> <p>23 at an estimate of the actual effect.</p> <p>24 So in expectation, under an efficiency</p> <p>25 gap or a plan with an efficiency gap of basically</p>	<p>1 of the -- the election years that had an efficiency</p> <p>2 gap of -- between plus or minus .01 and calculated</p> <p>3 the median values of these variables and then</p> <p>4 calculated what they would be under an efficiency</p> <p>5 gap of minus .13. So the actual median is the</p> <p>6 median of the actual values that you observed under</p> <p>7 neutral plans. And then the row below that is what</p> <p>8 you would expect given an efficiency gap of minus</p> <p>9 .13.</p> <p>10 Q. Okay. So the set that's -- that makes</p> <p>11 absolute value of an efficiency gap less than 0.01</p> <p>12 would be whatever elections listed in Exhibits 16</p> <p>13 and 18 that have an EG of 0.01 or zero?</p> <p>14 A. Or between that. 'Cause if you look at</p> <p>15 that, I don't think there are many plans that have</p> <p>16 an efficiency gap of actually zero.</p> <p>17 Q. Okay.</p> <p>18 A. And so I don't know that they would</p> <p>19 change much if you went plus or minus .02.</p> <p>20 Q. Okay. Do you know if that's actually</p> <p>21 different from what the expected values would be</p> <p>22 of -- if you plugged an efficiency gap of zero in</p> <p>23 the regression model, you know, in tables two or</p> <p>24 three?</p> <p>25 A. Well, you would have to -- I don't report</p>

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Page 274	<p>1 the values of the other coefficients or the -- or</p> <p>2 the constants, so you wouldn't be able to calculate</p> <p>3 the absolute predicted value just looking at the</p> <p>4 coefficients for the efficiency gap.</p> <p>5 Q. But the expected value when an efficiency</p> <p>6 gap is negative 0.13, is that generated from</p> <p>7 applying the regression model in table three?</p> <p>8 A. Yes.</p> <p>9 Q. Okay. But the actual median value is not</p> <p>10 calculated by using the regression model in table</p> <p>11 three?</p> <p>12 A. That's correct.</p> <p>13 Q. Okay. Do you know how many elections</p> <p>14 were in the data set that made up the -- the set</p> <p>15 from which you derived the median value?</p> <p>16 A. Not off the top of my head.</p> <p>17 Q. Okay. But the analysis in tables -- in</p> <p>18 this section of tables two, three and four is</p> <p>19 related to general effects observed across all</p> <p>20 states; correct?</p> <p>21 A. All states, and all states with unified</p> <p>22 control.</p> <p>23 Q. Okay. Or at least all states that are in</p> <p>24 the data set. I believe there's only 41 or</p> <p>25 something like that.</p>	Page 276	<p>1 from non-unified party control to unified party</p> <p>2 control by comparing for Act 43 and after?</p> <p>3 A. In terms of the effects of a particular</p> <p>4 value of the efficiency gap, you could generate</p> <p>5 those estimates, I suppose. Actually, you could</p> <p>6 generate those estimates.</p> <p>7 Q. All right. We can move on to policy</p> <p>8 changes. And I was going to start at -- well,</p> <p>9 first we can go to the figure seven, which was</p> <p>10 discussed earlier in the deposition. In looking at</p> <p>11 the histogram, do you know where the period from</p> <p>12 2006 to 2010, that four-year period, that four-year</p> <p>13 change, appears on figure seven?</p> <p>14 A. Not off the top of my head.</p> <p>15 Q. Do you know whether it's one of the two</p> <p>16 that's in the -- in the column that's the second to</p> <p>17 the furthest left?</p> <p>18 A. I don't.</p> <p>19 Q. Okay. Do you understand that the policy</p> <p>20 liberalism in Wisconsin in 2010 was at a high water</p> <p>21 mark, so to speak, in recent history?</p> <p>22 A. It was -- it reflected a -- that's</p> <p>23 correct.</p> <p>24 Q. And that's because the Democrats had won</p> <p>25 control of the state legislature and had the</p>
Page 275	<p>1 A. Right, 'cause there were some states that</p> <p>2 Professor Jackman was not able to calculate</p> <p>3 estimates because of idiosyncratic character of</p> <p>4 elections.</p> <p>5 Q. Okay. And the -- sorry, I lost my train</p> <p>6 of thought. What was I going to say? Oh. So this</p> <p>7 analysis is not actually specific to Wisconsin;</p> <p>8 correct?</p> <p>9 A. That's correct.</p> <p>10 Q. Okay. Is there a reason you didn't</p> <p>11 compare the data for the Wisconsin prior plan that</p> <p>12 was contained in the data that Mr. Warshaw sent you</p> <p>13 with the pre-Act 43 and then post-Act 43?</p> <p>14 A. Sorry, can you ask that again?</p> <p>15 Q. Sure. Is there a reason you didn't</p> <p>16 analyze all these factors, the percent of campaign</p> <p>17 contributions, percent of seats uncontested by</p> <p>18 Democrats, percent of returning Democratic</p> <p>19 incumbents, just with respect to Wisconsin in the</p> <p>20 data set?</p> <p>21 A. In part because the -- the judicially</p> <p>22 drawn plan was not drawn under unified party</p> <p>23 control.</p> <p>24 Q. Okay. But couldn't you determine</p> <p>25 the -- at least determine the effect of the change</p>	Page 277	<p>1 governorship after the 2008 election through the</p> <p>2 2010 election?</p> <p>3 A. I believe it was the first time they had</p> <p>4 had unified party control since the 1980s.</p> <p>5 Q. Okay. So you would agree that some of</p> <p>6 the change from 2010 to 2014 was a new Republican</p> <p>7 governor and legislature rolling back, so to speak,</p> <p>8 policy liberalism that had been enacted in the</p> <p>9 previous two years?</p> <p>10 A. I don't know if I would characterize</p> <p>11 that, but there was a conservative shift. But as I</p> <p>12 noted in both of my reports, there's a difference</p> <p>13 between the shift that is triggered or is caused by</p> <p>14 changes in voter preferences and changes in</p> <p>15 attitudes, and one that is caused by an intentional</p> <p>16 attempt to secure a partisan advantage, which is</p> <p>17 the case in the post-Act 43 elections.</p> <p>18 Q. All right. And this figure seven just</p> <p>19 shows the change in a four-year period; correct?</p> <p>20 A. That's correct.</p> <p>21 Q. It doesn't show what the relative</p> <p>22 starting or end points were in terms of how</p> <p>23 conservative the start was or how liberal the start</p> <p>24 was?</p> <p>25 A. That's correct.</p>

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<p style="text-align: right;">Page 278</p> <p>1 Q. Okay. All right. In the paragraph, the 2 first full paragraph talking about the standard 3 deviation, looking at the sentence that starts 4 "instead," it says, "Instead, the standard 5 deviation reflects uncertainty in how the 6 underlying quantities reflect an unobserved 7 variable." What would -- what is the unobserved 8 variable or variables? 9 A. Well, so in many instances, the standard 10 deviation is something that you can explicitly 11 calculate, or the -- calculating a difference or a 12 statistical significance, it makes an assumption 13 about the distribution of the underlying data. The 14 way that Caughey and Warshaw conducted this 15 analysis, they used a different technique that does 16 not make an assumption about the underlying 17 distribution, essentially not making an assumption 18 that the distribution is normal, or normal like. 19 And so what you have to do in order to 20 calculate probabilities is to do repeated draws 21 from the observed distribution. And so the reason 22 is that the policy liberalism index is done using 23 Bayesian methods rather than frequentist methods. 24 And so you have to use different techniques to 25 analyze statistical significance. And so Trende</p>	<p style="text-align: right;">Page 280</p> <p>1 metrics. The one that I'm speaking of here is 2 comparing the state policy index for 2014 and the 3 difference between the 2014 measure and the 2010 4 measure. 5 Q. And there's an 84 percent chance that the 6 2014 policy index is more conservative than the 7 2010 index. But do we know for sure the exact 8 extent of that conservative shift? 9 A. Well, that's reflected in the size of the 10 shift, which is about .38 in the conservative 11 direction. I should note that the only state that 12 has a larger conservative shift over that four 13 years in the US is South Carolina. So the notion 14 that -- and nationally, the index barely changed at 15 all, so -- 16 Q. But does the standard deviation affect 17 how much confidence we could have in that specific 18 number being accurate, or does it just tell us that 19 we know that's more conservative but we're a little 20 bit unsure about the precise extent? 21 A. Well, the point estimate is the most 22 likely measure. I think that it would be 23 considered laughable to argue that policy in 24 Wisconsin is not more conservative now or was in 25 2014 than it was in 2010. This is a particular</p>
<p style="text-align: right;">Page 279</p> <p>1 argued in his report that he didn't think there was 2 any difference in policy outcomes, and that's 3 inconsistent with what is universally recognized 4 about what has occurred in Wisconsin over the last 5 four to eight years. 6 And it's also using the -- the method 7 of calculating the probability that two quantities 8 are -- from a distribution are different. That 9 using that method, the probability is about 10 84 percent. That even accounting for the standard 11 deviation or a measure of uncertainty, that 2014 is 12 actually different than 2010. So Mr. Trende is 13 incorrect when he raises questions about whether 14 2014 is actually any different than 2010. 15 Q. So it's 84 percent that 2014 is more 16 conservative than 2010. But what about the precise 17 level of the change from liberal to conservative? 18 A. Well, this would -- the 84 percent 19 probability is an estimate of the likelihood that 20 it is actually different given the uncertainties 21 that go into the estimation method and the model. 22 Q. But your opinion is based on specific 23 numbers in terms of the change from year to year; 24 correct? 25 A. Well, I -- I use a variety of different</p>	<p style="text-align: right;">Page 281</p> <p>1 metric of policy liberalism or policy conservatism 2 that is comparable across all states. And so this 3 allows for -- it's a common measure across time and 4 across space that allows for more general 5 inferences about what has happened in Wisconsin and 6 what has happened nationwide over an 80-year 7 period. 8 Q. Okay. Moving on to the next paragraph 9 that references a Caughey, Tausonovitch and Warshaw 10 article. Moving to, like, sub two, it says, "Even 11 after controlling for legislative majority, 12 statewide voting behavior and the party of 13 governor, the efficiency gap by itself has a 14 significant effect on the median legislator's 15 etiology." 16 Does that just mean that a high 17 efficiency gap favoring Republicans, for example, 18 shows a correlation with the median legislator's 19 etiology being more conservative? 20 A. So, I mean, this summarizes some 21 additional work that Caughey and Warshaw, and in 22 this case Tausonovitch, have done that the -- the 23 poli -- the change in -- the shift in policy 24 liberalism, either in the conservative or liberal 25 direction, is a function of the efficiency gap.</p>

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<p style="text-align: right;">Page 282</p> <p>1 Doesn't depend on the margin of victory in a 2 district, it doesn't depend on the party of the 3 governor or statewide. 4 You know, it says that even after you 5 control for legislative majority, statewide votes, 6 and the governor's party, that the efficiency gap 7 by itself has a significant effect on state policy 8 conservatism, with higher efficiency gaps or larger 9 efficiency gaps producing larger shifts in policy. 10 And so that closes the circle here. That shows 11 that we know that there has been a significant 12 shift in the conservative direction in Wisconsin. 13 We know that the efficiency gap by 14 itself, even after controlling for a number of 15 other variables -- and this is not just in 16 Wisconsin, this is nationwide -- that larger 17 efficiency gaps produce larger shifts in policy. 18 So as I note in the report, the degree of 19 gerrymandering, the size of the efficiency gap, and 20 the way that gerrymanders insulate advantage 21 legislators, legislative majorities, from electoral 22 consequences, by itself has a significant effect on 23 the size of the majorities, legislature ideology 24 and policy, and locks in those consequences. And 25 that's a direct citation from that article.</p>	<p style="text-align: right;">Page 284</p> <p>1 For, like, right ahead of number three it says, 2 "Larger efficiency gaps produce larger changes in 3 the aggregate etiology of the legislative 4 majority." Is that related to the Caughey Warshaw 5 measure, or is it something else? 6 A. That is referring to the median -- the 7 ideology of the median legislator. Or basically 8 the legislator who's right in the middle of -- 9 numerically of the -- so Wisconsin it would be -- 10 Q. 50th. 11 A. -- the 50th. 12 Q. Okay. All right. So if we look at, 13 going on, you mention about the 2018 election and 14 Wisconsin Democrats winning majorities in all five 15 statewide races. Would you agree that the 16 governor's race was a close election? 17 A. Don't remember -- recall what the precise 18 margin was, but it was within a couple of 19 percentage points. 20 Q. And the same thing with the attorney 21 general race? 22 A. I believe that's true. 23 Q. Okay. Now, are you offering an opinion 24 that with, you know, the governor and attorney 25 general winning narrow victories that Wisconsin</p>
<p style="text-align: right;">Page 283</p> <p>1 Q. All right. So is it your opinion that 2 the degree of gerrymandering is shown by the size 3 of the efficiency gap? 4 A. That is a metric of gerrymandering. 5 Q. But it can -- large efficiency gaps can 6 also take place when there's no gerrymandering; 7 correct? 8 A. It's possible for a non-gerrymandering 9 plan to produce a nonzero efficiency gap. 10 Q. Do you know if Caughey, Tausonovitch and 11 Warshaw were looking just at plans enacted in a 12 partisan manner, or are they looking at all plans? 13 A. I would have to go back and look. They 14 may have done it both ways. Sitting here, I'm 15 not -- I don't quite recall. 16 Q. All right. And when they were using 17 their -- showing changes in aggregate etiology, 18 were they using the Caughey Warshaw measure of 19 policy liberalism? 20 A. Well, that would -- that was referring to 21 legislature ideology, which is not part of their 22 liberalism index. That's a measure of policy 23 outcomes. So I don't quite recall how they 24 estimated legislature ideology. 25 Q. Well, I was just looking at -- sorry.</p>	<p style="text-align: right;">Page 285</p> <p>1 Democrats, you know, under a neutral plan would win 2 a majority of the state assembly? 3 A. Not in this case. But what this -- what 4 this indicates is the Democratic share of the 5 statewide vote in the top ticket race, the 6 president in 2016 or the governor in 2018, actually 7 went up, and the number of seats they won barely 8 budgeted. 9 And so -- in particular, the fact that 10 it's close doesn't change the outcome that 11 Democrats won majorities in all five statewide 12 races. I think they picked up a single state 13 legislative seat. So in an election year where 14 Democrats got more than 50 percent of every 15 statewide race that was on the ballot, they have 16 basically 37 percent of legislative seats, 17 36 percent of legislative seats. 18 And that's entirely consistent with 19 everything that has gone before about Act 43, how 20 the intentional drawing of district lines to 21 advantage the Republican party, this is -- this is 22 how it works. This is the effect that you observe 23 and would expect when a party that wins majorities 24 is not able to translate those votes into 25 legislative seats.</p>

<p>Page 286</p> <p>1 Q. Okay. Now just one question. In 2016, 2 the Democratic presidential candidate actually did 3 worse than the 2012 presidential candidate in 4 Wisconsin; correct? 5 A. That's correct. 6 Q. Because Hillary Clinton lost and Obama 7 won with, like, 53 and a half percent of the two 8 party vote; correct? 9 A. I don't know what the exact percentage 10 was, but Clinton did receive a lower percentage of 11 the two party vote than Obama did in 2012. 12 Q. I guess the same would be true of the 13 senate candidates too? Ron Johnson won in 2016 and 14 Tammy Baldwin won in 2012; correct? 15 A. That's correct. 16 Q. We'll skip over the lame-duck bills, 17 those were gone over in the other examination, and 18 just move on to last few questions on section E, 19 then I'll be done, so -- okay. 20 So you say, moving on to the last 21 page, page 23, that -- I'm looking at the first 22 full paragraph, the third sentence. It says, "In 23 the ten districts with baselines of less than 24 50 percent, Republicans won all of them in 2016 and 25 2018." Are you referring to a Democratic baseline</p>	<p>Page 288</p> <p>1 districts with a Democratic baseline of less than 2 50 percent, and the one district above 50 percent, 3 the Democratic candidate won in 2016 and 2018. 4 So as I noted, in every district the 5 result was what the baseline forecast eight years 6 after the district lines were drawn. So if I'm 7 trying to draw a gerrymandered map and I'm thinking 8 about election outcomes in the future, we can go by 9 what the -- what the map drawers said, that they 10 wanted to lock in partisan advantages for a decade. 11 And the results in the district that 12 Trende is sort of arguing, because the election 13 results in 2018 weren't exactly what they were, or 14 what the baseline would have predicted in 2011, my 15 argument is, it still gives you the right answer. 16 It still allows you to forecast and to generate an 17 outcome that is entirely consistent with the -- 18 with the intent in which you were trying to do 19 eight years earlier. 20 Q. Now, you understand that Republicans have 21 won a number of Chen composite seats that, at least 22 according to the Chen composite they shouldn't win 23 because they're under 50 percent Republican? 24 A. Well, I would disagree with the language 25 "shouldn't win." The expected result would be that</p>
<p>Page 287</p> <p>1 of less than 50 percent? 2 A. That's correct. 'Cause I've used the 3 Democratic baseline as my measure, which is a 4 little different than what Professor Chen used. 5 Basically you subtract the Republican measure from 6 the Democrat -- from 100 percent to get the 7 Democratic baseline. 8 Q. All right. And I understand that your 9 earlier testimony that -- that the candidate 10 who the Chen composite score favored still won 11 these districts in 2016 and 2018. But do you think 12 the difference is, from the Chen composite to the 13 actual results, is relevant at all to whether a 14 voter is cracked or packed at this time? 15 A. Well, the issue here is that I'm 16 responding to Trende's argument sort of arguing 17 that you can't really use a baseline to predict 18 elections, that the relationship between the 19 baseline measure and outcomes, as he points, too 20 unpredictable to forecast the long-term effect of 21 gerrymanders. That's simply wrong. He mentions 22 eleven districts. And in those eleven districts we 23 have 22 elections in 2016 and 2018. In every one 24 of these 22 cases, the results are what the 25 baseline would predict. Republicans won all of the</p>	<p>Page 289</p> <p>1 composite over 50 percent the Democratic candidate 2 would win. But the fact that it doesn't exactly 3 pick up the result in every district, right -- all 4 forecasts are probabilistic and have a degree of 5 uncertainty. 6 And the fact that there were some 7 districts where the result changed in 2018, is 8 different than what was predicted or what the 9 baseline was in 2011, that doesn't diminish the 10 effect of the -- of the gerrymander, or undercut or 11 undermine the value of the baseline in trying to 12 forecast the likely effects of a district plan 13 elections into the future. 14 And in my view, the 2018 election 15 results demonstrate that Act 43 has -- it operates 16 exactly as it was intended to operate when the 17 people who drew it drew the map. 18 Q. Do you think the fact that Republicans 19 are winning seats they would not be predicted to 20 win by the Chen score, and Democrats are winning 21 relatively few seats that they would not be 22 predicted to win by the Chen score, shows any sort 23 of trend in the state from 2011 through now? 24 A. I don't know that that's actually 25 accurate. But the fact that there are elections</p>

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Page 290	<p>1 where the outcome is different from what you would</p> <p>2 expect or what was the baseline would have</p> <p>3 predicted in 2011, you know, the fact that there</p> <p>4 are some -- some misses, that doesn't undermine the</p> <p>5 value of the method or demonstrate that outcomes</p> <p>6 are difficult to forecast or that the people who</p> <p>7 drew Act 43, right, that they were basically just</p> <p>8 guessing about election results.</p> <p>9 Q. But does it impact at all the ability to</p> <p>10 say that a voter right now is packed or cracked in</p> <p>11 a particular district?</p> <p>12 A. Not -- a single election result that is</p> <p>13 different from an outcome of the baseline eight</p> <p>14 years earlier would not affect my conclusion about</p> <p>15 whether a specific district was packed or cracked.</p> <p>16 Q. Okay. And would it affect the ability to</p> <p>17 remedy alleged packing and cracking by drawing a</p> <p>18 different district, as suggested by Dr. Chen?</p> <p>19 A. I believe it would.</p> <p>20 Q. Because that would -- in order to remedy,</p> <p>21 someone would have to give, you know, the cracked</p> <p>22 party an opportunity to win the district; is that</p> <p>23 correct?</p> <p>24 A. Well, as I understood the question, that</p> <p>25 the fact that there is one or a small number of</p>	Page 292	<p>1 you take a district that is cracked, with a</p> <p>2 Democratic baseline of 43, and the neutrally drawn</p> <p>3 district is a Democratic baseline of 51 or 52, yes,</p> <p>4 that remedies the cracking. It could also remedy</p> <p>5 the packing.</p> <p>6 But you -- you can't look at a</p> <p>7 single -- or I would not form an opinion about</p> <p>8 packing and cracking just because an election</p> <p>9 result in one district is not what the baseline</p> <p>10 would have predicted eight years before.</p> <p>11 Q. What if that's shown over a number of</p> <p>12 districts over a number of years, though, wouldn't</p> <p>13 that be relevant?</p> <p>14 A. That could be relevant, but that's not</p> <p>15 what happened.</p> <p>16 MR. KEENAN: I don't have anymore</p> <p>17 questions.</p> <p>18 MR. POLAND: Okay. I think we're done.</p> <p>19 THE VIDEOGRAPHER: Going off the record</p> <p>20 at 7:02.</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>
Page 291	<p>1 election results that are -- that are not what the</p> <p>2 baseline method or the baseline estimate would have</p> <p>3 predicted, that -- a small number of results</p> <p>4 wouldn't affect my conclusion about packing and</p> <p>5 cracking, nor would it affect my conclusion that a</p> <p>6 neutrally drawn map would -- would not have packed</p> <p>7 and cracked voters in that area.</p> <p>8 Q. But it could affect what someone would</p> <p>9 have to do to remedy those alleged packing and</p> <p>10 crackings; correct?</p> <p>11 A. But -- remedy alleged packing and</p> <p>12 cracking. Remedy how?</p> <p>13 Q. Well, would it make sense to take a</p> <p>14 person who's allegedly cracked, stick them in a new</p> <p>15 district that's slightly more Democratic, that's</p> <p>16 only going to elect a Republican, would that remedy</p> <p>17 the cracking?</p> <p>18 A. I don't understand the question.</p> <p>19 Q. Okay. So if -- do you think it's</p> <p>20 worthwhile to put someone in a Chen composite score</p> <p>21 district of 51 percent Democratic if that change</p> <p>22 really isn't going to affect the ability of that</p> <p>23 voter to elect a Democrat to the assembly?</p> <p>24 A. Well, that would depend on what the</p> <p>25 district was -- the alternative district was. If</p>	Page 293	<p>1 STATE OF WISCONSIN)</p> <p>2) ss.</p> <p>3 COUNTY OF MILWAUKEE)</p> <p>4 I, ANITA KORNBURGER, Registered</p> <p>5 Professional Reporter and Notary Public in and</p> <p>6 for the State of Wisconsin, do hereby certify</p> <p>7 that the preceding deposition was recorded by</p> <p>8 me and reduced to writing under my personal</p> <p>9 direction.</p> <p>10 I further certify that said deposition was</p> <p>11 taken at 5325 Wall Street, Madison, Wisconsin,</p> <p>12 on April 9, 2019, commencing at 9:58 a.m. and</p> <p>13 concluding at 7:02 p.m.</p> <p>14 I further certify that I am not a relative</p> <p>15 or employee or attorney or counsel of any of</p> <p>16 the parties, or a relative or employee of such</p> <p>17 attorney or counsel, or financially interested</p> <p>18 directly or indirectly in this action.</p> <p>19 In witness whereof, I have hereunto set my</p> <p>20 hand and affixed my seal of office at</p> <p>21 Milwaukee, Wisconsin, this 24th day of April,</p> <p>22 2019.</p> <p>23 ANITA KORNBURGER, RPR - Notary Public</p> <p>24 My commission expires May 24, 2021.</p> <p>25</p>

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<p>1 -----</p> <p>2 E R R A T A</p> <p>3 -----</p> <p>4 PAGE LINE CHANGE</p> <p>5 _____</p> <p>6 REASON: _____</p> <p>7 _____</p> <p>8 REASON: _____</p> <p>9 _____</p> <p>10 REASON: _____</p> <p>11 _____</p> <p>12 REASON: _____</p> <p>13 _____</p> <p>14 REASON: _____</p> <p>15 _____</p> <p>16 REASON: _____</p> <p>17 _____</p> <p>18 REASON: _____</p> <p>19 _____</p> <p>20 REASON: _____</p> <p>21 _____</p> <p>22 REASON: _____</p> <p>23 _____</p> <p>24 REASON: _____</p> <p>25</p>	
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<p>1 ACKNOWLEDGMENT OF DEPONENT</p> <p>2</p> <p>3 I, _____, do hereby</p> <p>4 certify that I have read the foregoing pages, and that</p> <p>5 the same is a correct transcription of the answers</p> <p>6 given by me to the questions therein propounded, except</p> <p>7 for the corrections or changes in form or substance, if</p> <p>8 any, noted in the attached Errata Sheet.</p> <p>9</p> <p>10</p> <p>11 _____</p> <p>12 Kenneth R. Mayer, Ph.D. DATE</p> <p>13</p> <p>14</p> <p>15 Subscribed and sworn to</p> <p>16 before me on this ____ day</p> <p>17 of _____, 20__, by _____</p> <p>18 _____</p> <p>19 proved to me on the basis of satisfactory</p> <p>20 evidence to be the person(s) who appeared before me.</p> <p>21 Signature _____</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	
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