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FIRST JUDICIAL DISTRICT COURT

CARSON CITY, NEVADA

JOEY GILBERT, an individual,

Plaintiff,

vs.

JOSEPH LOMBARDO, putative Republican  
candidate for Governor of Nevada.

Defendant.

CASE NO. 22 OC 000851B

DEPARTMENT 2

**APPENDIX THREE TO CONTESTANT’S OPPOSITION TO  
DEFENDANT’S MOTION FOR SANCTIONS**

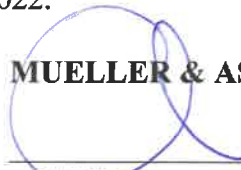
COMES NOW, Contestant, Joey Gilbert, by and through his attorney CRAIG MUELLER, ESQ. of MUELLER & ASSOCIATES, INC., and hereby submits his APPENDIX TO CONTESTANT’S OPPOSITION TO DEFENDANT’S MOTION FOR SANCTIONS, as follows:

EX.	APPX.	DESCRIPTION	PAGES
1.	I.	Statement of Contest filed July 15, 2022	On File
2.	I.	Deposition Transcript of Mark Wlaschin (Excerpts)	001-007
3.	I.	Deposition Transcript of Joe Gloria (Excerpts)	008-011
4.	I.	(Initial) Expert Report of Oliver A. Hemmers, Ph.D. dated July 2, 2022	012-016
5.	I.	Deposition Transcript of Oliver A. Hemmers (Excerpts)	017-032
6.	I.	(Initial) Expert Declaration of Walter C. Daugherity, Ph.D. dated July 14, 2022, and C.V. of Walter C. Daugherity, Ph.D.	033-054
7.	I.	Deposition Transcript of Walter C. Daugherity (Excerpts)	055-066
8.	I.	(Initial) Expert Declaration of G. Donald Allen, Ph.D. (undated)	067-071

9.	II.	C.V. of G. Donald Allen, Ph.D.	072-121
10.	II.	Clark County, 2022, Primary Precinct Analysis, by Edward Solomon	122-162
11.	II.	(Revised) Expert Declaration of G. Donald Allen (undated)	163-169
12.	II.	Deposition Transcripts of G. Donald Allen (Excerpts)	170-185
13.	III.	(Revised) Expert Declaration of Walter C. Daugherity, dated July 25, 2022	186-193
14.	III.	Deposition Transcript of Walter C. Daugherity (Excerpts)	194-210
15.	III.	Deposition Transcript of Michael C. Herron (Excerpts)	211-221
16.	III.	Expert Report of Michael C. Herron, dated August 1, 2022 (without Appendices)	222-273
17.	III.	Amended Expert Report of Oliver C. Hemmers, dated August 9, 2022	274-278
18.	IV.	Expert Report of Justin R. Grimmer, dated August 1, 2022	279-283
19.	IV.	Transcript of Aug. 10, 2022 Hearing on Motion for Summary Judgment	284-334
20.	IV.	Demand Letter to Contestant's Counsel, dated July 27, 2022	335-336

DATED this 2<sup>nd</sup> day of September 2022.

**MUELLER & ASSOCIATES, INC.**

  
 CRAIG A. MUELLER, ESQ.  
 Nevada Bar No. 4703  
 808 S. 7<sup>th</sup> Street  
 Las Vegas, Nevada 89101  
*Counsel for Contestant, Joey Gilbert*

**DECLARATION OF CRAIG A. MUELLER, ESQ.**

I, CRAIG A. MUELLER, ESQ., declare under penalty of perjury as follows:

1. I am an attorney licensed to practice law in the State of Nevada, the owner of the law firm of MUELLER & ASSOCIATES, INC., and I represent the Contestant in this matter. I make this declaration in support of Contestant's Opposition to Defendant's Motion for Sanctions. I am over eighteen years of age, have personal knowledge of the facts set forth herein, and am competent to testify to the facts stated herein.

1           2.     Attached hereto as Exhibit 1 is a true and correct copy of the Statement of  
2 Contest, filed with the Court on July 15, 2022 (the Statement of Contest is on file with the  
3 Court and therefore is not reproduced with these exhibits).

4           3.     Attached hereto as Exhibit 2 is a true and correct copy of excerpts from the  
5 deposition transcript of Mark Wlaschin.  
6

7           4.     Attached hereto as Exhibit 3 is a true and correct copy of excerpts from the  
8 deposition transcript of Joe Gloria.

9           5.     Attached hereto as Exhibit 4 is a true and correct copy of the (Initial) Expert  
10 Report of Oliver A. Hemmers, Ph.D. dated July 2, 2022.  
11

12          6.     Attached hereto as Exhibit 5 is a true and correct copy of excerpts from the  
13 deposition transcript of Oliver A. Hemmers.

14          7.     Attached hereto as Exhibit 6 are true and correct copies of the (Initial) Expert  
15 Declaration of Walter C. Daugherty, Ph.D. dated July 14, 2022, and the C.V. of Walter C.  
16 Daugherty, Ph.D.  
17

18          8.     Attached hereto as Exhibit 7 is a true and correct copy of excerpts from the  
19 deposition transcript of Walter C. Daugherty.

20          9.     Attached hereto as Exhibit 8 is a true and correct copy of the (Initial) Expert  
21 Declaration of G. Donald Allen, Ph.D.  
22

23          10.    Attached hereto as Exhibit 9 is a true and correct copy of the C.V. of G. Donald  
24 Allen, Ph.D.

25          11.    Attached hereto as Exhibit 10 is a true and correct copy of the Clark County,  
26 2022, Primary Precinct Analysis, prepared by Edward Solomon.

27          12.    Attached hereto as Exhibit 11 is a true and correct copy of the (Revised) Expert  
28 Declaration of G. Donald Allen.

1 13. Attached hereto as Exhibit 12 is a true and correct copy of excerpts from the  
2 deposition transcripts of G. Donald Allen.

3 14. Attached hereto as Exhibit 13 is a true and correct copy of the (Revised) Expert  
4 Declaration of Walter C. Daugherty, dated July 25, 2022.  
5

6 15. Attached hereto as Exhibit 14 is a true and correct copy of excerpts from the  
7 deposition transcript of Walter C. Daugherty.

8 16. Attached hereto as Exhibit 15 is a true and correct copy of excerpts from the  
9 deposition transcript of Michael C. Herron.  
10

11 17. Attached hereto as Exhibit 16 is a true and correct copy of the Expert Report of  
12 Michael C. Herron, dated August 1, 2022, without appendices.

13 18. Attached hereto as Exhibit 17 is a true and correct copy of the Amended Expert  
14 Report of Oliver C. Hemmers, dated August 9, 2022.

15 19. Attached hereto as Exhibit 18 is a true and correct copy of the Report of Justin  
16 R. Grimmer, dated August 1, 2022.  
17

18 20. Attached hereto as Exhibit 19 is a true and correct copy of the Transcript of  
19 August 10, 2022 Hearing on Motion for Summary Judgment.

20 21. Attached hereto as Exhibit 20 is a true and correct copy of a letter sent by J.  
21 Colby Williams, Esq. to Craig Mueller, Esq. on July 27, 2022.  
22

23 I declare under penalty of perjury under the law of the State of Nevada that the  
24 foregoing is true and correct.

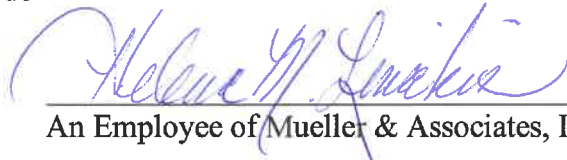
25 DATED this 2<sup>nd</sup> day of September 2022.

26  
27  
28   
CRAIG A. MUELLER, ESQ.

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that the service of the foregoing **APPENDIX TO CONTESTANT'S OPPOSITION TO DEFENDANT'S MOTION FOR SANCTIONS** was served on the 2<sup>nd</sup> day of August 2022 via email to all parties on the e-service list as follows:

- CAMPBELL & WILLIAMS
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- Attorneys for Defendant Joseph Lombardo

  
 An Employee of Mueller & Associates, Inc.

**EXHIBIT 13**

**EXHIBIT 13**

**FIRST AMENDED DECLARATION OF**  
**EXPERT WALTER C. DAUGHERITY**

WALTER C. DAUGHERITY declares, under penalty of perjury, that the following is true and correct.

1. This First Amended Declaration supersedes in its entirety my previous declaration signed and dated July 14, 2022.
2. I am a Senior Lecturer Emeritus in the Department of Computer Science and Engineering at Texas A&M University and also a computer consultant to major national and international firms, as well as to government agencies, including classified work.
3. Prior to my retirement in 2019, I taught computer science and engineering at both the undergraduate and graduate levels for 37 years, the last 32 years being at Texas A&M University. Courses I developed and taught include courses in artificial intelligence, expert systems, programming and software design, quantum computing, and cyberethics.

4. I have published 26 research articles related to expert systems, fuzzy logic, noise-based logic, and quantum computing from over \$2.8 million in funded research projects, plus conference papers and other publications.

5. As a computer expert I have consulted for major national and international firms, including IBM Federal Systems Division, *New York Times*, *Washington Post*, *Los Angeles Times*, Southwestern Bell Telephone, Fulbright & Jaworski (Houston), and Phonogram B.V. (Amsterdam), and also for government agencies such as Cheyenne and Arapaho Tribes of Oklahoma, Texas Department of Agriculture, U. S. Customs Service, and classified work.

6. Further details about my qualifications are included in my Curriculum Vitae attached as Exhibit A.

7. I have reviewed the reports by Edward Solomon (“Solomon reports”) furnished to me which mathematically analyze the June 14, 2022, Republican gubernatorial primary in Clark County, Nevada, as well as other races. In order to check results in those Solomon reports I downloaded the official election data posted by the Clark County Election Department at [https://www.clarkcountynv.gov/government/departments/elections/past\\_elections.php](https://www.clarkcountynv.gov/government/departments/elections/past_elections.php).

8. In my expert opinion these Solomon reports overwhelmingly demonstrate clear and convincing evidence that the official election results, analyzed in these Solomon reports, were not produced by accurate counting of the votes cast, but were instead artificially contrived according to a predetermined plan or algorithm.

9. The first key finding of the Solomon reports for the June 14, 2022, Republican gubernatorial primary in Clark County, Nevada, is that certain ratios calculated from the mail-in and in-person totals, which should be independent, are in fact dependent. (Independent variables cannot be predicted from one another; for example, knowing that the time the first



person in line at precinct 1 voted was at an even number of minutes past the hour, say 7:04 or 7:06 A.M., does not allow us to predict whether the first person in line at precinct 2 voted at an even number of minutes past the hour or an odd number of minutes past the hour.)

10. In this primary race, as in each election, votes for each candidate are reported in three categories: mail-in (absentee), early vote (in-person), and election day (in-person). Since each voter choosing a particular candidate can vote in any of these three ways, the totals should be independent. For example, knowing how many mail-in and early in-person votes Joey Gilbert received does not provide enough information to know how many election day in-person votes he received. In other words, you could not bet on a particular number of election day in-person votes and expect to win the bet, since that number is unpredictable.

11. Since there were so many candidates in addition to Joey Gilbert, the following precinct analysis divides all the votes into two categories, “Lombardo” and “Gilbert et al.” Using the same variable names as in the Solomon reports, and considering only votes prior to election day, let

*a* be Lombardo’s mail-in vote total,

*b* be Gilbert et al.’s mail-in vote total,

*c* be Lombardo’s early in-person vote total, and

*d* be Gilbert et al.’s early in-person vote total.

12. Clearly these numbers should be independent, that is, knowing some of the numbers should not allow almost exactly predicting the other numbers. For example, knowing that in precinct 1000, *b*=13, *c*=21, and *d*=32 should not allow an exact prediction of *a*, Lombardo’s mail-in vote total. In an honest and fair election we could only estimate that since Lombardo received  $c/(c+d)=0.396226$ , that is, 39.6% of the early in-person vote, we would

expect that Lombardo would also receive about 39.6% of the mail-in vote, since the way people cast ballots does not influence their choice.

13. Solving  $a/(a+b)=0.396226$  for  $a$  yields 8.53125, which rounds up to 9 votes. This estimate is only a “best guess,” and the true number of mail-in votes for Lombardo could be anything: 9, or higher, or lower, so a bet on 9 would only win once in a while, not very often.

14. In actuality, for precinct 1000 the value of  $a$ , Lombardo’s mail-in vote total, was 25, so a bet on 9 would be way off.

15. However, in the June 14, 2022, Republican gubernatorial primary in Clark County, Nevada, the four numbers  $a$ ,  $b$ ,  $c$ , and  $d$  were not only not independent, as they should be in a fair and honest election, they were so tightly dependent that  $a$  can be almost exactly predicted from  $b$ ,  $c$ , and  $d$  in almost every single precinct in the entire county.

16. After omitting precincts with zero votes or missing data on the Clark County Elections Department’s website, this is a total of 669 precincts with an almost exact prediction.

17. I calculated the ratios the Solomon reports name  $g$ ,  $h$ , and  $alpha$  for each ballot style (*i.e.*, split precinct) for Clark County in the same way, namely,

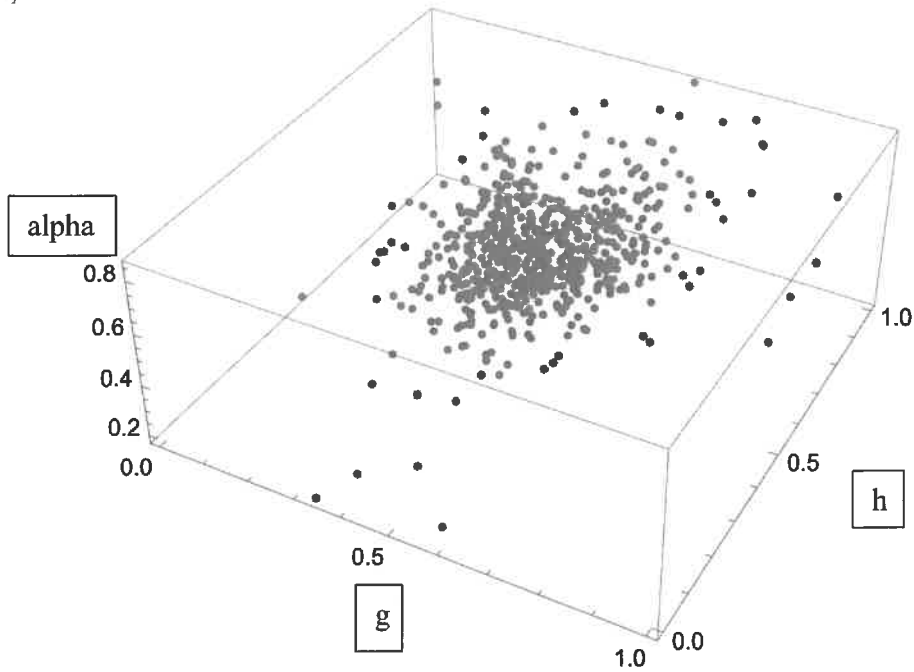
$$g = d/(a+d),$$

$$h = b/(b+c), \text{ and}$$

$$alpha = (b+d)/(a+b+c+d),$$

and graphed  $(g, h, alpha)$  as  $(x, y, z)$ , respectively. This produced the following graph, where each point is one precinct:

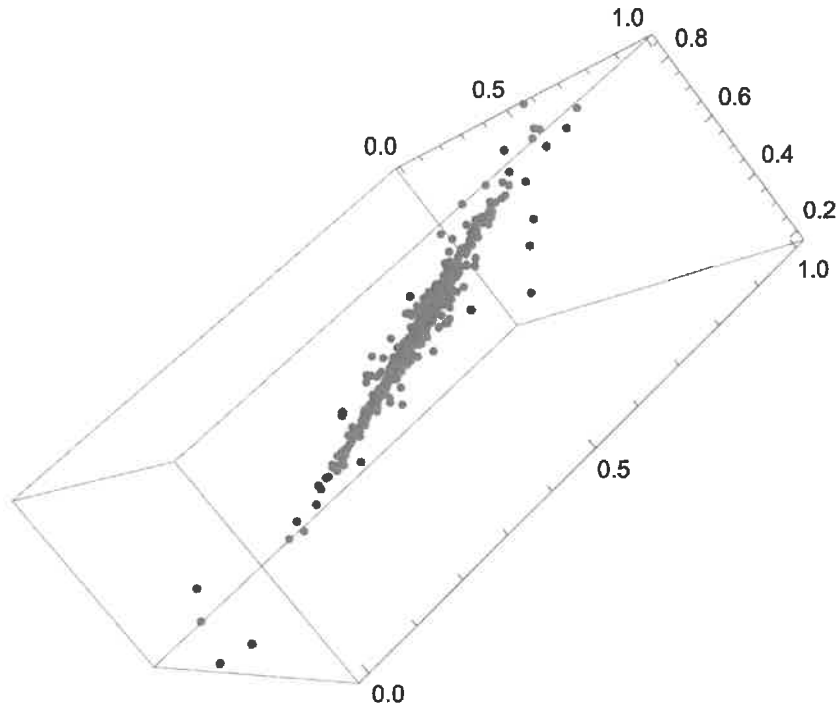
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18. From the initial vantage point, the graphed data appears to be uncorrelated (independent), as it should in a fair election, but by rotating the 3-dimensional graph it becomes clear that the points lie very close to a 2-dimensional plane, indicating strong correlation (dependence) which should not occur in a fair election.

19. Here is the same graph rotated to a different point of view, looking at the plane edge-on:

Out[ ]=



which of course looks like a line. This improper dependence confirms that the election results in the June 14, 2022, Republican gubernatorial primary in Clark County, Nevada, were artificially contrived.

Using the standard mathematical method of least-squares linear regression, the equation of the plane is this maximum-likelihood estimator for  $g$ :

$$\hat{g} = 0.01818144438 + 1.758536682 \alpha - 0.8083882873 h.$$

20. As an example of how this improper dependence could be used to manipulate an election, consider the following scenario: If  $\alpha$  were hypothetically predetermined for each precinct in this 2022 Republican gubernatorial primary from this plane, then after the early in-person votes for candidate Lombardo are counted ( $c$ ), and the mail-in and early in-person votes for Gilbert et al. are counted ( $b$  and  $d$ , respectively), the required mail-in vote for candidate Lombardo ( $a$ ) can be calculated *without counting*.

21. Specifically, the following procedure would *almost exactly* predict the required mail-in vote for candidate Lombardo *for nearly every single precinct in the county*:

Let *alpha* be the value for the precinct hypothetically predetermined from the plane,

*b* be Gilbert et al.'s mail-in vote total,

*c* be Lombardo's early in-person vote total, and

*d* be Gilbert et al.'s early in-person vote total.

Then using *h* as defined in ¶ 17 above, and *g* as defined in ¶ 19 above, the estimator for Lombardo's mail-in vote count *a* is given by

$$\hat{a} = d * \left(\frac{1}{g} - 1\right), \text{ rounded to the nearest integer.}$$

22. For example, in precinct 2004 suppose *alpha* were hypothetically set in advance to 0.421686747 from the 2-dimensional plane described in ¶ 19 above. Then counting 19 mail-in votes for Gilbert et al. (*b*), 25 early in-person votes for Lombardo (*c*), and 16 early in-person votes for Gilbert et al. (*d*) and substituting those values into this formula gives *a* = 23, the exact required number of mail-in votes for Lombardo, *before those votes have even been counted*. After counting, mail-in ballots can be added or removed to adjust the total to the required 23.

23. As a second example of how this improper dependence could be used to manipulate an election, consider the following scenario: A very small number of precincts (at least 3), could be used to determine the plane as described in ¶ ¶ 17-20 above, and then the resulting coefficients would allow one to predict the required number of mail-in votes for Lombardo in the remaining many hundreds of precincts *before those votes have even been counted*. After counting, mail-in ballots can be added or removed to adjust the total in each precinct to the required number.

24. In my expert opinion the foregoing calculations overwhelmingly demonstrate clear and convincing evidence that all of the election results analyzed above were not produced by accurate counting of the votes cast, but were instead artificially contrived according to the same (or a very similar) predetermined plan or algorithm.

25. Due to the prohibitive amount of calculation to accomplish this by hand, it is clear that computer software must have been used. Such manipulating software could be installed in a variety of ways, including vendor programming, operating system components, open-source or commercial off-the-shelf libraries, remote access, viruses or other malware, etc.

26. Unless and until future proposed electronic voting systems (including hardware, software, source code, firmware, etc.) are made completely open to the public and also subjected to scientific analysis by independent and objective experts to determine that they are secure from manipulation or intrusion, in my professional opinion as a computer expert, electronic voting systems should not even be considered for use in any future elections, as they cannot be relied upon to generate secure and transparent election results free from the very real possibility of unauthorized manipulation. My professional opinion as a computer expert is therefore that hand-marked hand-counted paper ballots should be used instead.

27. I have personal knowledge of the foregoing and am fully competent to testify to it at trial.

I declare under penalty of perjury that the foregoing is true and correct. Executed on July 25, 2022.

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Walter C. Daugherty

**EXHIBIT 14**

**EXHIBIT 14**

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FIRST JUDICIAL DISTRICT COURT

CARSON CITY, NEVADA

JOEY GILBERT, an individual,	)	Case No.: 22 OC 000851B
	)	
Plaintiff,	)	
	)	
vs.	)	
	)	
STEVE SISOLAK, in his official	)	
capacity as Governor of Nevada;	)	
BARBARA CEGAVSKE, in her official	)	
capacity as Secretary of State; and	)	
JOSEPH GLORIA in his official	)	
capacity as Clark County Registrar of	)	
Voters, JAMES B. GIBSON, in his	)	
official capacity as Chairman of the	)	
CLARK COUNTY BOARD OF COMMISSIONERS,	)	
and DEANNA SPIKULA in her official	)	
capacity as Washoe County Registrar	)	
of Voters and VAUGHN HARTUNG in his	)	
official capacity as Chair of the	)	
WASHOE BOARD OF COUNTY COMMISSIONERS,	)	
and JOSEPH LOMBARDO, putative	)	
Republican candidate for Governor of	)	
Nevada; and DOES 1 through 10, and	)	
ROES 1-10,	)	
	)	
Defendants.	)	

DEPOSITION OF DR. WALTER C. DAUGHERITY

via ZOOM VIDEOCONFERENCING

Taken on JULY 29, 2022

at 11:19 A.M., CDT

Reported by: John Fahrenwald, CCR NO. 965



1 Q. Okay. And what the Supreme Court was saying there 9:47:08AI  
2 is that you simply assumed that there was a failure because  
3 that's what the party who retained you was alleging and that  
4 you didn't objectively review the evidence.

5 Do you understand that? 9:47:20AI

6 A. That's not correct. I objectively reviewed the  
7 evidence. I examined the hardware, the software, and the  
8 interface device for the transducers.

9 Q. Isn't this Graves' opinion similar to what you're  
10 doing here, which is trying to get to a desired result to 9:47:38AI  
11 help the party that retained you?

12 A. Not at all. The purpose of data analysis is like  
13 detective work. You look for patterns that shouldn't be  
14 there that are and patterns that should not be that aren't.

15 And so I was asked to analyze the data for the 9:47:55AI  
16 Clark County -- let me see -- June 14th primary, which I  
17 did. And I found patterns that should not be there in a  
18 fair election.

19 A fair election is not predictable. A predictable  
20 election is not fair. 9:48:17AI

21 Q. You assume to know what a fair election looks like  
22 in terms of vote share across voting methods. Correct?

23 A. No. I did not assume that. I just gave it as an  
24 example of how you would be unable to predict from knowing  
25 mail-in votes and early in-person votes for a candidate you 9:48:36AI

1 (Exhibit No. 19 was marked for identification.) 10:22:40A

2 THE WITNESS: Okay. Which tab is that?

3 Q. (BY MR. MIRKOVICH:) It's Tab 2. It's your amended  
4 declaration. The bottom of page 3, you will see paragraph  
5 12. 10:56:38A

6 And paragraph 12, to me, is identical to paragraph  
7 11 in your first declaration. Would you review the two and  
8 let me know if there's any changes that I'm missing?

9 A. Well, I can't pull them both up on the screen at  
10 the same time. But I believe paragraph 12 is the same, but 10:56:57A  
11 paragraph 13 is corrected because I made an error in the  
12 calculation.

13 Q. Okay.

14 A. As I said, that has nothing to do with the further  
15 analysis that shows that the points are predictable when 10:57:11A  
16 they should not be. It's just an example of how  
17 insufficient information leads to a bad guess.

18 Q. All right. So paragraph 12, second-to-last line  
19 on page 3:

20 In an honest and fair election, we can only 10:57:25A  
21 estimate that since Lombardo received 39.6 percent of the  
22 early in-person vote, we would expect that Lombardo would  
23 also receive about 39.6 of the mail-in vote since the way  
24 people cast ballots does not influence their choice.

25 What support can you identify for that sentence in 10:57:48A

1 your declaration?

10:57:51A

2 A. Well, if I decide I'm going to vote for  
3 Candidate A and I get a mail-in ballot and then I decide,  
4 I'm going to the shopping mall. It's right next to a voting  
5 center. I think I'll go vote early in-person, that doesn't  
6 change my choice. I'm still going to vote for Candidate A.

10:58:04A

7 Q. Can you point us to some study, research,  
8 article -- anything that accepts this presumption that in an  
9 honest and fair election, the vote share across different  
10 methods of voting would be roughly the same?

10:58:26A

11 A. No. And as I said, it's not relevant to my  
12 analysis. You need to read in paragraph 12, it says:

13 Clearly these numbers should be independent; that  
14 is, knowing some of the numbers should not allow almost  
15 exactly predicting the other examples -- I'm sorry -- the  
16 other numbers. For example, knowing that in precinct 1,000,  
17 B = 13, C = 21, and D = 32 -- rely on exact prediction of A  
18 Lombardo's mail-in vote total, in an honest and fair  
19 election, we could only estimate -- underline the word  
20 estimate -- that since Lombardo received 39.6 percent of the  
21 early in-person vote, we would expect -- underline expect --  
22 that Lombardo would receive 39 percent of the mail-in vote  
23 since the way people cast ballot's does not influence their  
24 choice. Solomon's equation leads 9 votes. His estimate --  
25 underline estimate -- is only a best guess -- underline best

10:58:43A

10:59:05A

10:59:26A

1 guess.

10:59:29AI

2 So the point of paragraphs 12 and 13 is to say  
3 with insufficient information, you can't make a good  
4 prediction. The best prediction you could make would be to  
5 assume that the proportion was the same.

10:59:41AI

6 But that just an assumption and it only results in  
7 an estimate. It only results in a guess. It does not  
8 predict the outcome because the outcome, paragraph 14, was  
9 actually 25. So this example of how to -- you can't predict  
10 something from insufficient information is simply an example  
11 and has no effect on the analysis which follows.

11:00:00AI

12 You could delete 12, 13, and 14 entirely. It was  
13 not used in the analysis which follows which shows the  
14 numbers were predictable.

15 Q. You didn't research that assumption, you can't  
16 identify any works that accept that assumption. You just  
17 took it from Mr. Solomon's report, didn't you?

11:00:20AI

18 A. No, I took it from my own experience. If I decide  
19 to vote for Candidate A and I have an absentee ballot, if I  
20 change my mind and decide I'm going to vote early in-person  
21 or I'm going to vote on Election Day, that doesn't change my  
22 mind. I'm still going to vote for Candidate A.

11:00:36AI

23 Q. Let's go now -- and we can stay with your amended  
24 declaration -- to paragraph 15.

25 You see paragraph 15?

11:01:06AI

1 Q. (BY MR. MIRKOVICH:) Dr. Daugherty? 11:14:34A

2 A. Yes.

3 Q. The question stands, sir.

4 A. Can you repeat the question?

5 Q. Yeah. 11:14:48A

6 Excuse me. Paragraph 25 and 26 refer to your  
7 expert opinions about electronic voting systems. Correct?

8 A. Yes.

9 MR. MIRKOVICH: So I will pass the witness at this  
10 time subject to, we didn't obtain this new disclosure until 11:15:10A  
11 last night. We haven't been provided with a fair  
12 opportunity to exam Dr. Daugherty on it, and so I'll  
13 reserve the right to call him back for additional questions  
14 after we've had that opportunity.

15 But with that, I will pass. 11:15:28A

16 MR. MUELLER: Thank you, Counsel. And in the  
17 spirit of fair play, we will certainly recognize, as well we  
18 are working on short deadlines. We'll be more than happy to  
19 give another chance to ask questions if it's necessary.

20 9:21:11A

21 EXAMINATION

22 BY MR. MUELLER:

23 Q. Dr. Daugherty, how are you, sir?

24 A. Fine, thank you. And you?

25 Q. Fine. 11:15:44A

1           Sir, neither my colleague or I are in academia, so 11:15:44A  
2 I want to understand a few basic points here. And with  
3 without any reference to this case, frequently  
4 mathematicians and computer scientists are called upon to  
5 analyze data. Correct? 11:15:59A

6           MR. MIRKOVICH: Objection. It's leading.

7           THE WITNESS: Yes, sir.

8           Q. (BY MR. MUELLER:) The purpose of leading or the  
9 purpose of analyzing data is to do what?

10          A. It's to draw conclusions about the data. 11:16:11A

11          Q. All right. And --

12          A. For example, if you wanted to know the average  
13 sale price of a house in a particular neighborhood, the data  
14 would be all of the individual houses, the prices.

15                 And the question would be: What is the average? 11:16:28A  
16 And then the analysis would come up with that average.

17          Q. All right, sir. And frequently when presented  
18 with a novel problem, several different types of mathematics  
19 or formulas are needed to try to figure out how to best  
20 describe the problem. Correct? 11:16:49A

21          MR. MIRKOVICH: Objection.

22          THE WITNESS: In a complex problem, then there are  
23 multiple approaches that you have to try.

24          Q. (BY MR. MUELLER:) All right. And the fact that  
25 Dr. Allen, a true mathematician, was -- tried one approach 11:16:59A

1 first that didn't work and later tried another, there's 11:17:03A  
2 absolutely nothing unusual about that. Correct?

3 MR. MIRKOVICH: Objection. Leading.

4 THE WITNESS: Correct. Nothing unusual.

5 Q. (BY MR. MUELLER:) All right. Now, you've had to 11:17:12A  
6 try several -- on other occasions, you've had to try  
7 different formulations of mathematics to get the tools to  
8 analyze a problem. Correct?

9 MR. MIRKOVICH: Objection. Leading.

10 THE WITNESS: Yes, of course. 11:17:26A

11 And in fact Dr. Allen has written a paper on  
12 problem solving about the different methods that students  
13 could try since he was a math professor.

14 Q. (BY MR. MUELLER:) All right. And, sir, the work  
15 that you've been retained to do here, did you do all 11:17:39A  
16 independent work?

17 A. Yes.

18 Q. And if I were to take and literally cut, saw them  
19 and push him of this equation, knowing what you know now,  
20 would you be able to do all this work independently without 11:17:55A  
21 any reference to his work?

22 MR. MIRKOVICH: Objection. Form. Lacks  
23 foundation. Calls for speculation.

24 THE WITNESS: Yes, all of my analysis is based on  
25 the original data and my analysis of it. 11:18:05A

1 Q. (BY MR. MUELLER:) All right. And, sir, you -- 11:16:04A  
2 what if -- and so for clarification -- for clarity, what is  
3 the original data that you did in fact use?

4 A. It is the official results on the Clark County  
5 Election Department website, which is listed in paragraph 7 11:18:27A  
6 of my amended declaration.

7 Q. All right. Now, does the fact that Mr. Solomon  
8 was the first to spot the ratios in the vote tally have any  
9 difference or make any scientific moment and to the work  
10 that you've done? 11:18:45A

11 MR. MIRKOVICH: Same objection.

12 THE WITNESS: It could have been discovered by  
13 anyone. But so far as I know, he was the first to see that  
14 there were patterns in cross-ratios. I don't think anybody  
15 had looked at that before. But that's . . . 11:18:56A

16 Q. (BY MR. MUELLER:) And now having seen those  
17 results, you now indicate that they are indicia of a unfair  
18 election. Correct?

19 A. That's right. A fair election is not predictable,  
20 and a predictable election is not fair. 11:19:11A

21 Q. Now, I want to come back and clarify a few points.  
22 Predictable, you've created a formula that will actually  
23 predict the amount of mail-in ballots for Mr. Lombardo and  
24 the tallies. Correct?

25 A. That's correct. 11:19:29A



1 MR. MIRKOVICH: Objection. Leading. 11:19:29A

2 Q. (BY MR. MUELLER:) Is there any possible way this  
3 could happen without impropriety?

4 A. No.

5 Q. Impossible? Any way in the world this could 11:19:40A  
6 happen?

7 A. I mean, this is one of the weaknesses of  
8 statistical arguments, which I did not use, is that a  
9 statistical argument would say: Would -- in a fair claim --  
10 come up heads a million times in is a row. A statistician 11:19:58A  
11 will say, yes, that can happen. If you flip the -- a  
12 million times and then repeated that enough times, then some  
13 tiny, tiny, tiny, tiny number of times, you would get a  
14 million heads in a row.

15 But for practical purposes, you would never bet on 11:20:17A  
16 that. So if I'm flipping coins with you, after about 10  
17 heads, you're going to stop bidding on tails.

18 So you can't say statistically that it's  
19 impossible. What you can say is, looking at the mean and  
20 standard deviation away from the plane, a 3-dimensional 11:20:36A  
21 number -- a 3-dimensional object with three numbers ought to  
22 be a cloud.

23 And when all of those points lie on a plane and  
24 makes it 2-dimensional, that means the 3rd dimension can be  
25 predicted from it. Then in practical terms, that's 11:20:58A

1 impossible.

11:21:01A

2 Q. All right. And that's what we have here, sir.

3 Correct?

4 A. May I give another example?

5 Q. Yes, please.

11:21:06A

6 A. So New York City is layed out on a square grid.  
7 So the streets run east/west -- so 1st Street, 2nd Street,  
8 3rd Street, 4th Street. The avenues run north/south --  
9 1st Avenue, 2nd Avenue, 3rd Avenue, 4th Avenue, 5th Avenue.

10 What we have here -- what we found here is  
11 equivalent to saying if you will tell me the address, I will  
12 tell you how tall the building is. So if you give me the  
13 two numbers of 37th Street and 5th Avenue, whatever that  
14 intersection is, there's a formula will say, that building  
15 is 378 feet tall. That's not possible.

11:21:19A

11:21:37A

16 Q. Now, you went further than that and you speculated  
17 that there would have been a program, or a routine and a  
18 program, to produce these results.

19 Do you remember that opinion, sir?

20 A. Yes.

11:21:55A

21 Q. All right. And how was it that you concluded  
22 that?

23 A. Because the calculations are too extensive to have  
24 been done by hand.

25 Q. So a priority -- it must have been a computer that

11:22:07A

1 did it?

11:22:13AI

2 A. Right.

3 Q. Now, sir, you said something during direct -- you  
4 had something for me?

5 A. Yes. When he was asking about the Mesa County,  
6 Colorado report, which found inside the Dominion Voting  
7 machine unauthorized databases of deleted election records.

11:22:26AI

8 He brought up the -- Mr. Rubenstein's response to that, and  
9 Jeffrey O'Donnell, who is my coauthor, and I wrote a  
10 rebuttal to his response, pointing out that he had not  
11 listed any of our conclusions which was false, or given any  
12 evidence that any of our conclusions was false.

11:22:53AI

13 And in fact he had never examined the databases or  
14 the deleted election records, which were the two key  
15 findings of our report. So I would like to submit that  
16 rebuttal to complete the record, to follow Mr. Rubenstein's  
17 report.

11:23:12AI

18 Q. Thank you, sir. If you could send that to the  
19 court reporter, after we're done, we'll mark it and make it  
20 an exhibit.

11:23:27AI

21 A. If you will give me the email address, I will do  
22 that. Oh, I see it's under the court reporter. Let me  
23 write this down, john.fahrenwald@gmail.com. I'll send you  
24 that as soon as we're over.

25 MR. MIRKOVICH: That will be Exhibit 20, next in

11:23:55AI

1 order. 11:23:55A

2 (Exhibit No. 20 was marked for identification.)

3 MR. MUELLER: Thank you, Counsel.

4 Q. (BY MR. MUELLER:) Sir, I couldn't help but notice  
5 that you seem to speak with some familiarity about the  
6 conclusion that maybe Mr. Solomon is autistic. 11:24:03A

7 A. Yes.

8 Q. And I don't know you, sir, so -- and I don't want  
9 to inadvertently offend, but do you have some experience  
10 with autism personally? 11:24:18A

11 A. Yes, I do.

12 Q. Okay. And what's that, sir?

13 A. I have a nephew who is autistic, and I've had  
14 several students during the 32 years I taught at Texas A&M  
15 who were. 11:24:35A

16 Q. And one of the traits of autism is the ability to  
17 spot a pattern much quicker than someone neural -- with a  
18 normal neural system?

19 A. That's one. So I'll give you another example of a  
20 autistic person that I knew. He was unable to make the  
21 simplest logical deductions. So after a meeting, in a  
22 subsequent meeting, he asked me if I was at the first  
23 meeting. And I just replied as I would normally, I said,  
24 well, did you see me there? 11:24:48A

25 And he could not make the connection that since he 11:25:10A

1 had seen me there, I must have been at the meeting. But if  
2 you said, February 27th, 1824, he would say, that was  
3 Tuesday. And you go look it up, and it was Tuesday. So he  
4 could not function at the level of a normal person in making  
5 connections, but somehow, he could see the pattern of the  
6 calendar and give you the correct day of the week.

11:25:13AI

11:25:36AI

7 Now, that was on extreme case. Mr. Solomon, with  
8 respect, is a high-functioning autist.

9 Q. All right. And having -- have him point out a  
10 pattern that no one else had detected does not make it any  
11 less of a pattern. And the pattern now verified by your  
12 work. Correct?

11:25:55AI

13 MR. MIRKOVICH: Objection.

14 THE WITNESS: That's correct. It doesn't matter  
15 who finds it, to say look at the cross-ratios. And you look  
16 at the cross-ratios, and there is a pattern of  
17 predictability that should not be there.

11:26:09AI

18 Q. (BY MR. MUELLER:) All right. Sir, I want to go  
19 back on your training and experience and know -- I want to  
20 touch in on it. Your undergraduate was in math -- or your  
21 doctoral studies was in mathematics?

11:26:22AI

22 A. My undergraduate degree is in mathematics. My  
23 master's and my doctorate are in mathematical education.  
24 Back then there were no computer science departments so all  
25 of my computer classes were either in the math department at

11:26:41AI

1 Oklahoma Christian University or in the Applied Math 11:26:44A  
2 Division of the Division of Engineering and Applied Physics  
3 at Harvard.

4 Q. All right. And -- I say, when were you at  
5 Harvard? 11:26:55A

6 A. Well, I got my doctorate in '77.

7 Q. All right. All right, sir. I just have a couple  
8 more points, and then I can let you go.

9 Any doubt in your mind with a hundred percent  
10 certainty, a reasonable degree of certainty -- mathematical 11:27:13A  
11 and scientific certainty that this was not a fair election?

12 A. No doubt.

13 Q. And I'm going to change the subject just real  
14 quick. Did you look at Dr. Hemmers work as well?

15 A. I very briefly looked at an initial report that he 11:27:27A  
16 wrote. But I did not spend much time on it.

17 Q. Okay. And this kind of goes without saying, but  
18 you don't know Mr. Hemmers -- or Dr. Hemmers and you don't  
19 have any real professional relationship with him?

20 A. That's correct. I had not met him before this 11:27:48A  
21 case.

22 Q. And I see here that your BS minor was in German.  
23 Do you speak Deutsche?

24 (Brief discussion in German.)

25 Q. (BY MR. MUELLER:) Have you heard of the Max Planck 11:16:03A

1 Institute in Berlin?

11:28:05A

2 A. I have.

3 Q. And is it my understanding that that is widely  
4 regarded as the best physics planet on -- in the world,  
5 physics program in the world?

11:28:14A

6 A. It's certainly one of the best, if not the best.

7 Q. Without hurting your Texas pride, sir.

8 The answer is, it is --

9 A. It's highly-distinguished.

10 Q. All right. And you are aware that Dr. Hemmers  
11 was -- got his doctorate there in physics. Correct?

11:28:28A

12 A. I was not aware of that. But, yes, that's a  
13 prestigious institute.

14 Q. All right. Counsel, if you give me just a second,  
15 I'll check with my colleagues here. I think I'm object  
16 done.

11:28:44A

17 MR. MIRKOVICH: I have a couple of followups, but  
18 take your time, Mr. Mueller, and you can wrap up. And I'll  
19 just pose a couple more questions.

20 Q. (BY MR. MUELLER:) Just a couple of clear-up  
21 points, sir, since you did consult with Dr. Allen.

11:16:03A

22 Was Allen's -- Dr. Allen's conclusion independent  
23 of yours?

24 A. Yes.

25 Q. All right. And all these opinions, both as my

11:29:28A

1 colleague pointed out in your original report and your  
2 amended report, are these true and accurate to a reasonable  
3 degree of scientific certainty?

11:29:31A

4 A. The amended report is. There was a formula, an  
5 error in the original report, which I corrected in the  
6 amended report.

11:29:42A

7 Q. All right. And going forward, is there anything  
8 that you need to add or would amend, or do you have any  
9 degree of -- or believe that there's a mistake in -- anymore  
10 remaining mistakes in your amended report?

11:29:56A

11 A. To the best of my ability, it's correct and  
12 complete at this point.

13 MR. MUELLER: All right. Thank you, sir.

14 I believe I'll pass the witness. Counsel, yours.

15

9:21:11A

16

FURTHER EXAMINATION

17 BY MR. MIRKOVICH:

18 Q. Dr. Daugherty, you didn't perform any vote  
19 restoration calculations in this matter, did you?

20 A. I did not.

11:30:15A

21 Q. Okay. And in your amended declaration,  
22 Exhibit 19, at pages 7 -- or excuse me, paragraph 7 and 8,  
23 would you please refer to those for me?

24 A. Yes.

25 Q. Paragraph 7, you state that you've reviewed the

11:30:36A



# **EXHIBIT 15**

# **EXHIBIT 15**

1 FIRST JUDICIAL DISTRICT COURT  
2 CARSON CITY, NEVADA

3 JOEY GILBERT, an individual  
4 Plaintiff,

5 vs.

Case No.  
22 OC 000851B

6 STEVE SISOLAK, in his official  
7 capacity as Governor of Nevada;  
8 BARBARA CEGAVSKE, in her official  
9 capacity as Secretary of State;  
10 and JOSEPH GLORIA in his official  
11 capacity as Clark County Registrar  
12 of Voters, JAMES B. GIBSON, in his  
13 official capacity as Chairman of  
14 the CLARK COUNTY BOARD OF COUNTY  
15 COMMISSIONERS, and DEANNA SPIKULA  
16 in her official capacity as Washoe  
17 County Registrar of Voters and  
18 VAUGHN HARTUNG in his official  
19 capacity as Chair of the WASHOE  
20 BOARD OF COUNTY COMMISSIONERS, and  
21 JOSEPH LOMBARDO, putative Republican  
22 candidate for Governor of Nevada,  
23 and DOES 1-10 and ROES 1-10,

Defendants.

17  
18 REMOTE VIDEOCONFERENCE DEPOSITION OF

19 MICHAEL C. HERRON, PhD

20 Taken on Friday, August 5, 2022

21 By a Certified Court Reporter and Legal Videographer

22 At 9:02 a.m.

23  
24 Reported by: Becky J. Parker, RPR, CCR No. 934

25 Job No. 50298, Firm No. 061F

1 FRIDAY, AUGUST 5, 2022, 9:02 A.M.

2 (Via Remote Videoconferencing)

3 -oOo-

4  
5 THE VIDEOGRAPHER: Today is Friday,  
6 August 5th, 2022, and the time is 9:02 a.m. This is the  
7 remote deposition of Michael C Herron, PhD in the case  
8 Joey Gilbert versus Steve Sisolak, et al. I'm Nick  
9 Nardiello with Oasis Reporting Services. I'll be  
10 monitoring the proceedings and recording both video and  
11 audio today.

12 At this time, I'll ask counsel to identify  
13 themselves, state whom they represent, and agree on the  
14 record that there's no objection to the court reporter  
15 administering a binding oath to the witness through  
16 remote videoconferencing. If no objection is stated,  
17 we'll proceed forward with the agreement of all counsel,  
18 beginning with Mr. Mueller.

19 MR. MUELLER: Mueller on behalf of  
20 Joey Gilbert. Also present in my conference room is  
21 Charles LoBello and Lindsay Dibler. We agree to it  
22 based on the necessity for a shortened schedule.

23 MR. MIRKOVICH: Samuel Mirkovich, Campbell &  
24 Williams on behalf of Joseph Lombardo. We consent to  
25 the remote proceeding.

1 THE VIDEOGRAPHER: The court reporter today  
2 is Becky Parker with Oasis Reporting Services. The  
3 reporter may now swear in the witness.

4 Whereupon,

5 MICHAEL C. HERRON, PhD,  
6 having been first duly sworn to testify to the truth,  
7 the whole truth, and nothing but the truth, was  
8 examined and testified as follows:

9

10 EXAMINATION

11 BY MR. MUELLER:

12 Q. All right. Good morning. Is it Dr. Herron?  
13 Do you go by Doc? Is that okay?

14 A. Sure. That's fine. Thank you.

15 Q. That's fine. All right, Doc. I'm a little  
16 informal. I've been doing this for a while. All right.

17 Doc, I want to ask you some basic questions.  
18 I have read your resume. Very impressive. Let's get  
19 down to a few things I want to talk about.

20 Do you have any formal training in  
21 mathematics?

22 A. Before I answer that, I didn't realize that  
23 you were asking to call me "Doc," and honestly, I -- I  
24 think I've never been called that before.

25 Q. Okay.

1 for the combination of early voting in Nevada and  
2 election day voting.

3 All right. Now, let's get to the issues at  
4 hand. Just clarify. Have you had a chance to review  
5 the Washoe County data? It was very late in coming.  
6 And Washoe County gave it to us middle of this week. So  
7 you may not have had a chance to look at it.

8 Have you?

9 MR. MIRKOVICH: Objection to the preamble of  
10 the question. Lacks foundation.

11 Go ahead, Dr. Herron.

12 BY MR. MUELLER:

13 Q. Did you have a chance to look at the  
14 Washoe County data yet?

15 A. I'm -- I'm not sure what you mean by  
16 "Washoe County data."

17 Q. The election precinct reports from  
18 Washoe County, have you seen them or looked at them?

19 MR. MIRKOVICH: Objection to the form of the  
20 question. Vague and ambiguous as to quote/unquote  
21 precinct reports.

22 BY MR. MUELLER:

23 Q. You can answer the question.

24 A. I have not seen a Washoe County report that  
25 breaks down vote outcomes by method of voting. So I --

1 I'm still -- I want to restate, I'm not sure what data  
2 you're talking about here. If you could show me perhaps  
3 on the screen or send me the file, I could answer the  
4 question. I don't --

5 Q. The precinct reports. Who got what votes in  
6 what precincts in Washoe County.

7 MR. MIRKOVICH: Objection to the form of the  
8 question. Vague and ambiguous as to precinct report.

9 THE WITNESS: I have seen a statement of  
10 vote, what I believe is the statement of vote from  
11 Washoe County.

12 BY MR. MUELLER:

13 Q. Okay.

14 A. The state -- the statement that I had does  
15 not break down vote shares by method of voting. And I  
16 just would like to say again, I'm still not sure when  
17 you say the Washoe County data, what exact data you're  
18 talking about.

19 Q. The list that has the precinct number and the  
20 tally of votes for the Republican primary by candidate.

21 MR. MIRKOVICH: Same objection as to vague  
22 and ambiguous as to so-called precinct reports and  
23 information you're referencing that's not been  
24 disclosed.

25 MR. MUELLER: I can't make it any clearer

1 than that, counsel.

2 MR. MIRKOVICH: You can show us the document  
3 or disclose it so we all have it.

4 BY MR. MUELLER:

5 Q. Sir, have you seen anything from  
6 Washoe County, sir?

7 A. I mean, anything?

8 Q. Yes, anything. Did you see anything from  
9 Washoe County?

10 A. I -- I -- I believe in the previous question  
11 I said that I had seen a statement of vote from  
12 Washoe County, and that, in my recollection, the  
13 statement of vote does not break down vote totals by  
14 method of voting.

15 Q. Okay.

16 A. If you're referring to a different  
17 document -- well, I can't tell if you're referring to a  
18 different document.

19 Q. All right. Let's go through some -- let's  
20 move on, sir.

21 The in-person voting, who won -- between  
22 Mr. Gilbert and Mr. Lombardo, who won in-person voting  
23 in the statewide election?

24 A. I didn't calculate that. That wasn't  
25 necessary for me to calculate for the -- my report.

1 just -- ma'am, could you read that question so I know  
2 exactly what I'm being asked? Thank you.

3 (Record read.)

4 THE WITNESS: Thank you. I have never,  
5 before reading this contest, heard of anyone asserting  
6 that sort of a thing. There is no literature that I  
7 know of in the study of election administration that  
8 engages this. And since I ground my work in literature,  
9 I would say that this sort of a claim is not part of the  
10 literature.

11 BY MR. MUELLER:

12 Q. All right, sir.

13 A. And --

14 Q. I'm sorry. Don't mean to interrupt.

15 A. No, I -- no, I'm happy to ground that in the  
16 literature and just say that this is not part of how the  
17 literature operates.

18 Q. All right. Will you agree that if a  
19 mathematical formula were found that holds true over all  
20 of the election precincts, then that would be an  
21 irregularity?

22 MR. MIRKOVICH: Objection. Incomplete  
23 hypothetical.

24 Go ahead.

25 THE WITNESS: I'm not sure what you mean by a



1 does not show any evidence or even discuss illegal  
2 formulas in the way that you are -- the way that I  
3 understand you to be describing them to me, such as one  
4 vote share implies another.

5           There's plenty of research showing that  
6 there are regularities. I want to be clear,  
7 regularities among types of people who use different  
8 methods of voting. There's a whole field on voter  
9 behavior that studies preferences of voters.

10           Your question doesn't really fit in the  
11 literature, and that's where I'm grounding my expertise  
12 as a scholar and an expert witness here.

13 BY MR. MUELLER:

14       Q.       Sir, do you have your report in front of you?

15       A.       I do.

16       Q.       Okay. Is it turned to the first page?

17       A.       Yes, sir. I'm there.

18       Q.       Drawing your attention to your report, your  
19 first page, your last full sentence starting in, in  
20 particular, can you read that sentence out loud for me?

21       A.       Yes.

22       Q.       Please.

23       A.       Thank you. Quote, In particular, counsel  
24 requested that I evaluate the claim, argued in the  
25 litigation's statement of contest, that the election

1 day, early voting, and mail vote shares of the  
2 Republican gubernatorial primary's two main contestants,  
3 Joey Gilbert and Joseph Lombardo, were not only  
4 irregular but also mathematically impossible.

5 Q. All right. That's what you were hired to do  
6 by Mr. Mirkovich, et al.; correct?

7 A. I would say so, yes.

8 Q. Okay. Now, we asserted it was mathematically  
9 impossible. But despite my repeated questioning as to,  
10 did you look at the data to find a mathematical  
11 relationship existed or not, you have refused or  
12 deflected answering that fundamental question.

13 Did you read the formula and try to apply it  
14 to see if it actually works?

15 MR. MIRKOVICH: Objection to the editorial.  
16 Objection to the form of the question. Asked and  
17 answered several times.

18 MR. MUELLER: Unfortunately, it hasn't been  
19 answered. That's what's -- that's why we're coming back  
20 to it again.

21 THE WITNESS: Sir, there is no evidence in my  
22 report that there are any mathematically impossible  
23 election results in the 2022 Republican gubernatorial  
24 primary. So did I -- did I run across any data that  
25 looked mathematically impossible? No. None.

1 willingness to vote by mail.

2 Q. Now, earlier in your deposition we covered  
3 the fact of there's three methods of voting; election  
4 day voting, early voting, and mail voting. Right?

5 A. I believe so, yes.

6 Q. Are you familiar with certain trends that  
7 exist in the -- those three different methods of voting?

8 A. Yes. So across the country, historically,  
9 individuals voted in person, but that has changed. The  
10 most -- the greatest -- the most prominent example, the  
11 exemplar of that, is the 2020 election where voting by  
12 mail surged. Most people attribute this to the  
13 pandemic, of course. But, in addition, there's been  
14 growing movement toward voting by mail. There are a  
15 number of states, as I review in my report, that  
16 actually have essentially mail elections. Some states  
17 don't mandate all mail elections but they allow them.  
18 So there is a generic trend across the country toward  
19 voting by mail.

20 And I should say, voting by mail encompasses  
21 this term called "absentee voting." These terms are  
22 sort of used -- they're not exactly synonymous, but  
23 they're pretty close. So I will use voting by mail even  
24 though traditionally it was called absentee voting.  
25 Across the country there's growth in this, and in

1 races that had at least 50 precincts.

2           Then of those races, I identified the  
3 precincts where there were 50 day election votes, 50 day  
4 early votes, 50 day election day votes, and 50 mail --  
5 mail ballot votes, further restricting my attention to a  
6 set of precincts in Clark County that had enough votes  
7 to make correlations useful and enough precincts to make  
8 correlation calculations valuable.

9           I then calculated the correlation between the  
10 election day vote share for a candidate and the  
11 candidate's early voting vote share and the same thing  
12 for mail, and then I plotted those correlations against  
13 each other. So there's sort of a number of levels in  
14 Figure 8.

15           What Figure 8 shows are correlations of  
16 candidate vote shares by voting method across different  
17 races in the 2022 Republican primary. So each point in  
18 this figure represents two different correlations. One,  
19 a correlation between election day and early votes, and  
20 two, a correlation between election day and mail votes.

21           So what I can see in the left side of  
22 Figure 8 is that there are a lot of correlations that  
23 are close to zero and a couple of them that are not. So  
24 what that shows is there are a lot of candidates, again,  
25 I don't just mean gubernatorial candidates, I mean

**EXHIBIT 16**

**EXHIBIT 16**

# Expert Report of Michael C. Herron, PhD

August 1, 2022

## 1 Introduction

1 I have been engaged by Defendant's Counsel Campbell & Williams to provide an expert report in the matter of *Gilbert v. Sisolak, et al.*, an election contest in Nevada concerning the Republican primary held in this state on June 14, 2022. In particular, Counsel requested that I evaluate the claim, argued in the litigation's Statement of Contest, that the Election Day, early voting, and mail vote shares of the Republican gubernatorial primary's two main contestants, Joey Gilbert and Joseph Lombardo, were not only irregular (§ 29) but also mathematically impossible (§ 32).

## 2 Summary of conclusions

2 This report conclude as follows.

1. The Contest's claims of vote share irregularities in the 2022 Republican gubernatorial primary rest on the premise that a "fair" election is one in which the Election Day, early vote, and mail vote shares of candidates running for office are roughly similar. This premise, fundamental to the Contest, is grounded neither in academic literature nor in any data adduced in the Contest. Moreover, the Contest offers no reasons to think that its fundamental premise is true and provides no rationale as to why "fair" elections should, in principle, feature roughly similar Election Day, early vote, and mail candidate vote shares.

2. Notwithstanding the fact that the Contest's fundamental premise lacks support theoretically and empirically, the Contest presents no evidence that Joey Gilbert's and Joseph Lombardo's Election Day, early voting, and mail vote shares from Nevada's June 2022 Republican gubernatorial primary are irregular in the sense of being at odds with trends in election returns in recent Nevada elections. In fact, the Election Day, early vote, and mail ballot vote shares of Gilbert and Lombardo exhibit patterns similar to patterns in the Election Day, early voting, and mail ballot vote shares of other candidates in statewide races conducted during the 2022 Republican primary and in races from the 2014, 2016, and 2018 Republican primaries as well. In other words, Gilbert's and Lombardo's vote shares from the 2022 Republican gubernatorial primary look regular, not irregular.
3. The Contest asserts that, "There is absolutely no correlation between [Gilbert's Election Day, Early, and Mail-in Percentages across [Clark County's] precincts," labeling this an "irregularity" (§ 29). The Contest's claim about "absolutely no correlation" is false. Across Clark County precincts, the correlation between Gilbert's Election Day and early voting vote share is approximately 0.33 where the precise correlation depends on how precincts with small numbers of votes are treated. The correlation between Gilbert's Election Day and mail ballot vote share is approximately 0.19 where, again, the precise correlation depends on how precincts with small numbers are treated. Thus, what the Contest labels an "irregularity" is not an irregularity at all.
4. While the Contest draws attention to candidate vote share correlations across different methods of voting that it posits are low, in fact correlations in 2022 Republican gubernatorial candidate vote shares across methods of voting were similar to candidate vote share correlations from the 2022 Republican primary albeit in races beyond the gubernatorial contest. This implies that the 2022 Republican gubernatorial primary did not suffer from irregular relationships between Election Day, early voting, and mail ballot candidate vote shares. Moreover, correlations between candidates' Election Day and early voting vote

shares from a large set of races contested in the 2014, 2016, and 2018 Republican primaries are regularly close to zero, something observed in the 2022 Republican gubernatorial primary as well. Thus, Election Day and early voting vote share correlations close to zero are not uncommon in Republican primaries in Nevada. And, Election Day and early voting vote share correlations close to zero do not indicate the presence of irregularities.

5. Arizona, a neighboring state of Nevada, held its 2020 Republican primary on August 4, 2020. In Maricopa County, the most populous county in Arizona, there were many candidates who in the 2020 Republican primary had correlations between their Election Day vote shares and their early voting shares that were close to zero. This parallels the situation in Clark County in 2014, 2016, 2018, and 2022, reinforcing the conclusion that Election Day and early voting vote share correlations close to zero do not indicate the presence of irregularities.
6. Within Clark County precincts in the 2012, 2016, and 2020 presidential elections, vote shares for winning presidential candidates varied by voting method. In particular, Barack Obama received greater Election Day support than mail ballot support (2012); Hillary Clinton received greater mail ballot support than Election Day support (2016); and, Joe Biden received much greater mail ballot support than Election day support (2020). These findings are at odds with the premise of the Contest, which holds that, in “fair” elections, candidate vote shares do not vary by method of voting. The findings are also at odds with statements made by Dr. Oliver Hemmers about the 2012 general election in Nevada at his July 27, 2022 deposition in this litigation, statements to the effect that presidential candidate vote shares in the 2012 general election did not vary by voting method.
7. Clark County is easily the most populous county in Nevada. However, like Clark County, two relatively small counties in the state, Elko and Lincoln, publish election returns broken down by method of voting. In these two counties, patterns in Election Day, early voting, and mail ballot vote shares of the winning candidates in the 2022 Republican gubernatorial and lieutenant governor primaries are roughly consistent with corresponding patterns observed



in Clark County. This suggests that there is nothing idiosyncratic about Clark County regarding patterns in Election Day, early voting, and mail ballot vote shares of candidates who competed in the 2022 Republican primary.

8. On account of the recent passage of Assembly Bill 321, as of the 2022 election cycle registered voters in Nevada have the option to opt out of receiving mail-in ballots. Data from across Nevada implies that Republican partisan affiliates in the state opt out of mail balloting at greater rates than do Democratic partisans. One should thus expect mail-in ballot support rates for Republican candidates to be lower than mail-in ballot support rates for Democratic candidates, all things equal, which contradicts the Contest's fundamental premise of equality of candidate vote shares by voting method. In the 2022 Republican primary in Nevada, Gilbert spoke against Assembly Bill 321, stating that he wished to repeal this piece of legislation. Within Clark County precincts, Gilbert's level of support among mail ballot voters was notably lower compared to Lombardo's level of support. And within precincts in Elko and Lincoln Counties, Lombardo received greater support among mail ballot voters than he did from Election Day voters.

### **3 Qualifications**

3 I am the William Clinton Story Remsen 1943 Professor of Quantitative Social Science at Dartmouth College in Hanover, New Hampshire. I am also Chair of the Program in Quantitative Social Science and previously served in this capacity from July 2015 - June 2020. I have taught at Dartmouth since 2003 and prior to that was on the faculty of Northwestern University. I have served as a visiting professor at Harvard University (July 2008–January 2009), the University of Rochester (September 2006–December 2006), and the Hertie School of Governance in Berlin (August 2011–August 2012). I also served as a visiting scholar at the Hertie School of Governance (August 2016–July 2017).

4 In January 1998, I received a doctorate in the field of Political Economy from the Graduate School of Business at Stanford University. I also have a master's degree in statistics from Stanford University (June 1995), a master's degree in political science from the University of Dayton (August 1992), and a bachelor's degree in mathematics and economics from Carnegie-Mellon University (May 1989).

5 I have published many scholarly articles on election administration in the United States; I published three such articles in 2021, one in 2020, and two in 2019. My research on election administration covers numerous aspects of elections, including the effects of ballot formats, patterns in invalid votes, the availability of early voting, and polling place congestion. My articles rely heavily on statistical analyses.

6 I have published over 30 articles in peer-reviewed political science journals, including in the field's top general journals (*American Political Science Review*, *American Journal of Political Science*, and *Journal of Politics*). I have published in specialty journals as well (*Election Law Journal*, *American Politics Research*, and *Legislative Studies Quarterly*). Among my published articles are Cottrell, Herron and Westwood (2018), a statistical study of the allegations made by Donald Trump about voter fraud in the period surrounding the 2016 General Election. This article concludes that there is no evidence in support of these allegations. Herron (2019) is an analysis of allegations made after a 2018 election in North Carolina's 9th Congressional District. It concludes that patterns in absentee votes cast in this district were consistent with allegations of absentee ballot fraud.

7 I was a testifying expert for defendants in *Law et al. v. Whitmer et al.* (Case No.: 20 OC 00163 1B) and in *Jennings v. Elections Canvassing Commission of the state of Florida* (2006 WL 4404531 (Fla.Cir.Ct.)) and a testifying expert for plaintiffs in *League of Women Voters of Florida, Inc., et al., v. Laurel Lee, et al.* (4:21cv242-MW/MAF), *Alliance for Retired American et al. v. Matthew Dunlap et al.* (DKT NO. CV-20-95), *Michigan Alliance for Retired Americans et al.*

*v. Jocelyn Benson et al.* (Civil Action No. 2020-000108-MM), *League of Women Voters of New Hampshire et al. v. William M. Gardner et al.* (226-2017-CV-433), and *Veasey et al. v. Abbott et al.* (265 F. Supp. 3d 684 (S.D. Tex. 2017)). In addition, I have written expert reports in approximately 15 other cases relating to aspects of election law and election administration.

8 My written and oral testimony was credited by courts in their written opinions in *League of Women Voters of Florida, Inc., et al., v. Laurel Lee, et al.*, *Montana Youth Action et al. v. Christi Jacobsen* (Cause No. DV 21-0451), *Law et al. v. Whitmer et al.*, *Donald J. Trump for President, Inc. v. Stephen Bullock et al.* (Case No.: 6:20-cv-00066-DLC), *League of Women Voters of New Hampshire et al. v. William M. Gardner et al.*, and in *Veasey et al. v. Abbott et al.* My opinions and testimony have never been found by a court to be unreliable.

9 My *curriculum vitae* is attached as Appendix A.

10 I am being paid at a rate of \$600/hour for work in this litigation. My compensation is contingent neither on the results of the analyses described herein nor on the contents of this report.

#### **4 Background on the 2022 primary election in Nevada**

11 The Contest offers claims about irregularities in the rates at which voters supported two particular candidates—Joey Gilbert and Joseph Lombardo—in the 2022 Republican gubernatorial primary in Nevada, held on June 14, 2022. These claims focus not on the statewide vote shares received by Gilbert and Lombardo across Nevada in June 2022 but rather on the relationships between the rates at which voters supported these two candidates in conjunction with the ways, or methods, with which voters cast their ballots. To place the Contest’s claims about candidate vote shares and voting methods in context, I turn to a discussion of the voting methods used in Nevada and in the United States overall.

#### **4.1 Voting methods in Nevada: Election Day voting, early voting, and mail ballot voting**

12 Registered voters in Nevada can cast ballots in the state in one of three ways: in-person on Election Day, in-person during early voting, and via mail ballot. Henceforth I refer to these methods as Election Day voting, early voting, and mail voting, respectively.

13 *Election Day voting.* For a voter to cast a ballot on Election Day, the voter appears in-person at a pre-assigned polling location and casts a ballot using the voting technology available there. Or, in jurisdictions that support what are called voting centers, the voter chooses a permitted center at which to vote, if more than one such center is available.

14 *Early voting.* For a voter to cast a ballot during early voting in a state, like Nevada, that allows this, the voter appears in-person at a polling location in the voter's jurisdiction and casts a ballot using the voting technology available there. Early voting refers to in-person voting prior to Election Day. Not all states in the country offer early voting, and, among those that do, the extent of early voting periods varies.

15 *Mail voting.* To vote a mailed ballot, a voter returns a ballot that was received in the mail. In Nevada, a ballot mailed to a voter can be returned to elections officials via mail or placed in a drop box, and Nevada is not unusual among states in offering multiple ways to return mail ballots. Mail ballots face return deadlines. Per the Washoe County Registrar of Voters, “[Mail] [b]allots must be dropped off at a drop box location by 7:00 pm on Election day or postmarked on or before Election day and received in our office by 5:00 pm on the fourth day following Election day to be counted.”<sup>1</sup> In Nevada and in some other states, mail voting was historically called absentee voting, and both of these terms continue to be used in the United States.

<sup>1</sup>“Vote By Mail,” *Registrar of Voters, Washoe County*, available at [https://www.washoecounty.gov/voters/voting-options/vote\\_by\\_mail.php](https://www.washoecounty.gov/voters/voting-options/vote_by_mail.php) (last accessed July 27, 2022).

16 Across the United States there are various hybrids of the three aforementioned voting methods. In Maine, for example, an absentee ballot can be voted prior to Election Day in the presence of a local elections clerk, combining elements of early in-person voting and absentee voting.<sup>2</sup> That aside, Election Day, early, and mail voting are the three ways that voters in Nevada cast their ballots.

#### 4.2 Trends in usage of Election Day, early, and mail voting

17 Across the United States, in-person voting, either on Election Day or during early voting, has historically been the modal method of ballot-casting. This changed during the 2020 election cycle when voting by mail surged. All told, 43.1 percent of the electorate voted by mail in the 2020 General Election (U.S. Election Assistance Commission, 2021, p. 10) on account of the COVID-19 pandemic and the changes this pandemic wrought on election administration in the United States (Herrnson et al., 2022).

18 Across the United States, mail voting has become common. As enumerated by the National Conference of State Legislatures, eight states permit their elections to be conducted by mail (California, Colorado, Hawaii, Nevada, Oregon, Utah, Vermont and Washington); two states permit counties to run all-mail elections (Nebraska and North Dakota); nine states allow “small elections” to be conducted by mail (Alaska, Arizona, Florida, Kansas, Maryland, Missouri, Montana, New Mexico and Wyoming); and, four states have all-mail provisions for some “small jurisdictions.”<sup>3</sup>

19 As of January 1, 2022, prior to an upcoming primary or general election all registered voters in Nevada receive ballots by mail unless they affirmatively have opted out of mail-in voting (NRS

<sup>2</sup>“Absentee Voting Guide,” *Bureau of Corporations, Elections, & Commissions, Department of the Secretary of State, State of Maine*, available at <https://www.maine.gov/sos/cec/elec/voter-info/absenteeguide.html> (last accessed July 30, 2022). See in particular the pull-down menu option labeled, “Can I vote by absentee ballot in person somewhere?”

<sup>3</sup>See “Table 18: States With All-Mail Elections,” *National Conference of States Legislatures*, February 3, 2022, available at <https://www.ncsl.org/research/elections-and-campaigns/vopp-table-18-states-with-all-mail-elections.aspx> (last accessed July 26, 2022).

§ 293.269911(2)). No Nevada voter is required to vote using a mail ballot (NRS § 293.2546), and, as described in the Nevada Secretary of State’s Voters’ Bill of Rights, “Each voter [in the state] has the right to vote on Election Day if the voter is waiting in line at his or her polling place to vote before 7:00 PM.”<sup>4</sup> Every county in Nevada is required to operate in-person polling places, the number of which depend on the county’s population (NRS § 293.2731(1)). Thus, voters in Nevada choose how they cast their ballots just as they choose the candidates whom the wish to support.

## 5 The 2022 Nevada primary

20 The 2022 primary election in Nevada took place on June 14, and it included both a Republican and a Democratic primary. Contested in the June 2022 primary were statewide partisan races (e.g., United States Senator, Nevada Governor, and Nevada Lieutenant Governor), partisan legislative races (e.g., Congressional Representative and member of the Nevada State Assembly), county-level races (e.g., county commissioner), and various non-partisan races (e.g., constable). Across Democratic and Republican primaries on June 14, voter turnout in Nevada was 469,209 with 101,243 of these voters casting their ballots on Election Day, 101,909 voting early, and 266,057 voting via mail ballots. Table 1 displays turnout figures in recent Nevada primaries, the 2022 primary included.<sup>5</sup>

Table 1: Voter turnout in recent Nevada primary elections

Primary	Election Day	Early	Mail / Absentee	Total
2014	93,551	106,712	21,977	222,240
2016	93,504	121,373	25,251	240,128
2018	146,296	157,513	26,054	329,863
2020	0	0	481,172	481,172
2022	101,243	101,909	266,057	469,209

<sup>4</sup>“Voters’ Bill Of Rights,” *Nevada Secretary of State*, available at <https://www.nvsos.gov/sos/elections/voters/voters-bill-of-rights> (last accessed July 27, 2022).

<sup>5</sup>Source for the data in this table is “Voter Turnout,” *Nevada Secretary of State*, available at <https://silverstateelection.nv.gov/vote-turnout> (last accessed July 26, 2022).

21 As this table shows, hundreds of thousands of voters regularly participate in Nevada primary elections, and these voters cast their ballots using all of the three methods of voting provided in Nevada. The 2020 Primary was an exception to this, as is clear in Table 1; this primary, held on June 9, 2020, was an all-mail election, reflecting the ongoing coronavirus pandemic.

22 Reflecting my earlier comments about the terms “mail voting” and “absentee voting,” Table 1 combines what traditionally was called absentee voting in Nevada with what is now called mail voting.

Table 2: Official results of the 2022 Republican gubernatorial primary

Candidate	Votes
Joe Lombardo	87,761
Joey Gilbert	61,738
Dean Heller	32,087
John J. Lee	17,846
Guy Nohra	8,348
Fred Simon	6,856
Tom Heck	4,315
None of these candidates	4,219
Eddie “Mr. Fix it now” Hamilton	1,293
Amber Whitley	1,238
William “Dock” Walls	833
Gary “Radar” Evertsen	558
Seven Achilles Evans	475
Edward E. O’Brien	422
Barak Zilberberg	352
Stanleigh Harold Lusak	229

23 Table 2 reports official results of the 2022 Republican gubernatorial primary, drawing from the website of the Nevada Secretary of State.<sup>6</sup> The gubernatorial race was recounted, and its original result—that Lombardo was the winning candidate—did not change.<sup>7</sup> The vote margin

<sup>6</sup>The vote totals and candidate names in this table are based on the “View details” view of the election results available at <https://silverstateelection.nv.gov/NVOther> (last accessed July 27, 2022). On the web page, these results are prefaced with, “Results are official.”

<sup>7</sup>On the recount, see “Clerks Complete Recount of Nevada Republican Governor’s Race,” *U.S. News & World Report*, July 2, 2022, available at <https://www.usnews.com/news/politics/articles/2022-07-01/clerks-complete-recount-of-nevada-republican-governors-race> (last accessed July 27, 2022).

between Lombardo and his nearest competitor, Gilbert, was 26,023 votes.

## **6 Key claims made in the Contest**

**24** Having provided background as to how Nevadans cast their ballots, the Contest's key claims are as follows.

**25** First, "fair" elections feature candidate vote shares that are roughly equal across Election Day voters, early voters, and voters who cast their ballots via mail (§ 28). I call this assertion the Contest's *fundamental premise*. Throughout this report, I place quotation marks around the word "fair" when I use it. I do this because the Contest do not formally define this term; moreover, "fair" is not a term that appears in a formal way in academic literature on election administration.

**26** Second, the Election Day, early, and mail vote shares of Gilbert and Lombardo from the June 2022 Republican gubernatorial primary are irregular in the sense of their violating what should be expected in a "fair" election (§ 29). The Contest also asserts that there is a connection between the ostensibly irregular vote shares of Gilbert and Lombardo and votes received by Nevada Governor Stephen Sisolak, who was a candidate in the June 2022 Democratic gubernatorial primary (§ 48).

**27** Third, a "mathematically-illegal geometric formula" was used to "govern" the Election Day, early, and Mail vote shares of Gilbert and Lombardo (§ 30).

**28** Fourth, the results of the 2022 Republican gubernatorial primary should be "restored," which would make Gilbert the winner of the contest as opposed to Lombardo, who per Table 2 won the primary.

**29** In addressing these four claims, I argue as follows.



**30** Regarding the fundamental premise of the Contest, I show in Section 7 that the premise is not grounded in academic literature of any type, is not grounded in data on Nevada elections, and is inconsistent with data from historical presidential elections in Nevada and with Nevada voters' decisions to opt out of mail voting.

**31** Regarding claims of irregularities, I show in Section 8 that the Election Day, early, and mail ballot candidate vote shares from the 2022 Republican gubernatorial primary have properties akin to Election Day, early, and mail ballot candidate vote shares from (1) other elections contested in the 2022 Republican primary, (2) recent primary elections in Nevada held prior to 2022, and (3) the most recent Republican primary in Maricopa County, Arizona. Thus, it is not the case that Gilbert's and Lombardo's Election Day, early, and mail ballot candidate vote shares from the 2022 Republican gubernatorial primary are irregular. Rather, they appear regular.

**32** Regarding a formula that the Contest alleges governed vote shares in the 2022 Republican primary, I argue in Section 9 that the lack of irregularities in the Election Day, early, and mail ballot vote shares of Gilbert and Lombardo render moot the question of whether there was such a formula. I note as well that the approach to vote modeling used in the Contest does not appear in academic literature on election administration and appears to be unconnected to peer-reviewed literature on elections and voting.

**33** Regarding the Contest's claim about "restored" election outcomes, I argue in Section 9 that this claim is also moot since there is no evidence that the Election Day, early, and mail ballot candidate vote shares in the 2022 Republican gubernatorial were irregular. I note as well that "restoring" elections is not part of the academic literature on election administration, this concept as invoked in the Contest appears to be unconnected to peer-reviewed literature on elections and voting of any type.

## 7 The fundamental premise of the Contest

34 The Contest offers a set of mathematical equations and summaries of election data in support of its claims. However, the Contest rests on a single premise, which I earlier referred to as its fundamental premise. This premise describes a relationship between a candidate's Election Day, early vote, and mail vote shares, and it is summarized as follows (§ 28):

In a fair election, we expect a strong linear correlation between Gilbert's Election Day, Mail-in and Early Vote percentages across the precincts. That is, whatever Gilbert's Election Day percentage is at a particular precinct, we expect both Gilbert's Mail-in percentage and Early Vote percentage to be **roughly** the same, not exactly, since that would imply causation. . . but **roughly**, which implies a strong correlation, which would be consistent with Clark County's Historical Election Results in all years prior to 2020, both in the Primaries and the General Elections (bold in the original).

35 The Contest restates this point when discussing what it purports to be an appropriate "remedy" to an election that suffers from a "mathematically-illegal geometric formula" (§ 38):

The remedy imports the **statistical trends** that are expected in a **fair** election, that is, the Early, Mail-in and Election [Day] Percentages of a candidate should be linearly correlated and roughly equal (bold and underlining in the original).

36 By its use of the word "import," I believe that the Contest is stating that its "remedy" to the problem it purports to have identified in the 2022 Republican gubernatorial primary assumes that the Contest's fundamental premise is true, i.e., that "fair" elections feature roughly equal Election Day, early vote, and mail vote shares for individual candidates.

### 7.1 The Contest's characterization of a "fair" election is speculative

37 The academic literature on American elections is extensive. This literature incorporates research on two fields, election administration and voting behavior, both of which are relevant to

the Contest's fundamental premise.

**38** The field of election administration covers the mechanics of elections. Research in this area focuses on, among other things, voting technology (e.g., Tomz and Houweling, 2003; Herron and Wand, 2007), ballot formats (e.g., Wand et al., 2001; Frisina et al., 2008), how and when voters cast their ballots (e.g., Herron and Smith, 2012), mail ballot return and rejection rates (e.g., Alvarez, Hall and Sinclair, 2008; Baringer, Herron and Smith, 2020), whether voters wait in line before casting their ballots (e.g., Cottrell, Herron and Smith, 2021; Pettigrew, 2021), and the way that voters are registered to vote (e.g., Brians and Grofman, 2001; Burden and Neiheisel, 2013). The literature on election administration also includes studies of the prevalence of voter and election fraud, all of which conclude that there is no evidence of systematic fraud affecting American elections (e.g., Minnite, 2010; Cottrell, Herron and Westwood, 2018; Goel et al., 2020; Eggers, Garro and Grimmer, 2021).

**39** Beyond election administration, the academic literature on American elections covers the field of voter behavior, a major area in the discipline of political science. Broadly construed, the study of voter behavior focuses on voter turnout, how voters make decisions, and how individual voters choose which candidates to support (e.g., Alvarez, Hopkins and Sinclair, 2010; Barreto et al., 2019; Burden et al., 2014; Sides, Tesler and Vavreck, 2017, 2019).

**40** The Contest's definition of a "fair" election is not grounded in literature on election administration, is not grounded in literature on voter behavior, and in fact is not grounded in academic literature of any kind.

**41** Moreover, the Contest's definition of a "fair" election is not grounded in any empirical findings from Nevada or from elections held outside of this state. The Contest does not, for example, contrast a set of elections that it believes to be "fair" with a set of elections that it believes to be "unfair," highlighting how, in principle, patterns in Election Day, early vote, and mail vote

shares distinguish “fair” and “unfair” elections.

42 Lastly, the Contest offers no rationale whatsoever for why a “fair” election is one that should have similar candidate Election Day, early vote, and mail vote shares. I cannot evaluate a purported link between an election’s level of “fairness” and the election’s distribution of candidate Election Day, early vote, and mail vote shares. The Contest does not provide such a rationale.

43 To the best of my understanding, the Contest simply asserts, without grounding and evidence, that “fair” elections should have similar candidate Election Day, early vote, and mail vote shares. I regularly publish peer-reviewed articles on election administration, and I have never come across such a characterization of “fair” elections.

44 The Contest’s characterization of a “fair” election is part of its fundamental premise: “In a fair election, we expect a strong linear correlation between Gilbert’s Election Day, Mail-in and Early Vote percentages across the precincts” (§ 28). Beyond speculation, the Contest has provided no reason to think that this expectation is meaningful.

## **7.2 As part of its fundamental premise, the Contest’s characterization of causality is nonsensical**

45 Recall from the above that the Contest contains the following passage: “That is, whatever Gilbert’s Election Day percentage is at a particular precinct, we expect both Gilbert’s Mail-in percentage and Early Vote percentage to be **roughly** the same, not exactly, since that would imply causation . . . (bold in the original)” (§ 28).

46 This passage does not make sense.

47 I cannot ascertain what variable (or set of variables) the Contest is claiming may be causing another variable (or a second set of variables) if Gilbert’s early vote and mail ballot vote shares

from the 2022 Republican gubernatorial primary were the same. Notwithstanding this point, I cannot ascertain the logic as to why equality of Gilbert's (or any candidate's) early vote and mail ballot vote shares "would imply causation."

48 The above passage about causation is a statement about voter behavior. To wit, it asserts that, regardless of Gilbert's Election Day vote share in a precinct, Gilbert's early vote share and mail ballot vote share should be roughly the same. This is a claim about three types of individuals: those Nevadans who cast Election Day ballots in the 2022 Republican gubernatorial primary, those who cast early voting ballots, and those who cast mail ballots. This claim is nonetheless made without evidence or citation, and as such it is speculative.

### **7.3 The Contest's reference to historical Clark County election results is not grounded in data**

49 I noted above how, in the course of specifying its fundamental premise, the Contest comments on "Clark County's Historical Election Results in all years prior to 2020, both in the Primaries and the General Elections" (§ 28).

50 Note that this passage refers to Election Day, early vote, and mail ballot candidate vote shares in Clark County "in all years prior to 2020." Despite this clear historical reference, the Contest does not presents data on Clark County Election Day, early vote, and mail ballot candidate vote shares "in all years prior to 2020." The Contest also does not offer any citations in support of the passage, which in principle could substitute for actual data.

51 Moreover, the Contest does not define the scope of, "in all years prior to 2020." While Nevada became a state in 1864 and Clark County was formed in 1909, I cannot imagine that, in the passage above, the Contest is referring to elections that date to this latter year.<sup>8</sup> In 1909, early

<sup>8</sup>On Clark County's existence, see "A year for history as county turns 100," *Las Vegas Sun*, January 4, 2009, available at <https://lasvegassun.com/news/2009/jan/04/year-history-county-turns-100> (last accessed July 28, 2022).

voting did not even exist in its present form.

#### **7.4 The Contest's fundamental premise is inconsistent with Clark County election returns from the presidential elections of 2012, 2016, and 2020**

52 Not only is the Contest's fundamental premise grounded neither in literature and nor in empirical analyses, it is also inconsistent with presidential election returns from Clark County in the 2012, 2016, and 2020 general elections.

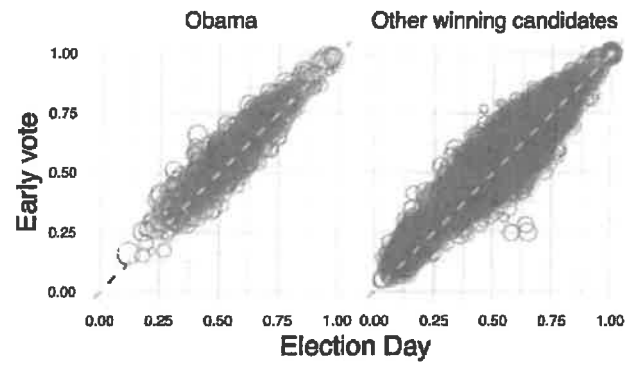
53 I focus here on historical presidential election returns in Clark County because this county is the focus of the Contest. Moreover, among counties in Nevada, Clark County's election data are the most accessible and detailed. Unlike Clark County, most counties in Nevada appear not to maintain publicly available election data that breaks down candidate vote totals by method of voting.

54 Consider Figure 1, which plots precinct-level Election Day and early voting vote shares of winning candidates in Clark County's 2012, 2016, and 2020 general elections. The figure's top panel (a) corresponds to the 2012 general election, and the lower two panels (b) and (c) correspond to the 2016 and 2020 general elections, respectively.<sup>9</sup>

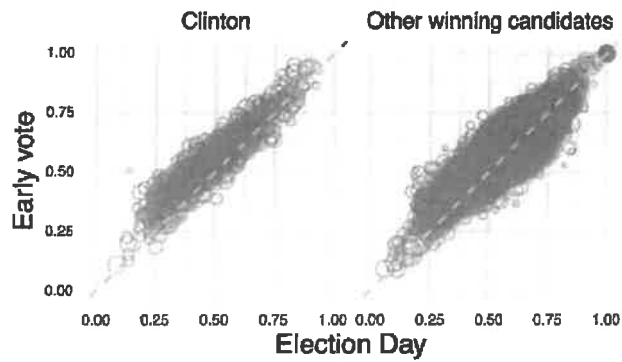
55 Barack Obama won the 2012 presidential election in Nevada, and the left plot in panel (a) of Figure 1 shows how Obama's 2012 Election Day and early voting vote shares varied across precincts in Clark County. Similarly, the right plot in this panel shows how the Election Day and early voting vote shares of all other winning Clark County candidates varied. Each point in the panel (a) plots denotes a single Clark County precinct, and points are sized proportionally to the sum of total votes cast in a precinct on Election Day and during early voting. Larger points are

<sup>9</sup>Clark County election returns were downloaded from the web page of the county: [https://www.clarkcountynv.gov/government/departments/elections/past\\_elections.php](https://www.clarkcountynv.gov/government/departments/elections/past_elections.php). When accessing this site, I selected "STATEMENT OF VOTE (RESULTS BY PRECINCT)" in the dropdown menu titled, "Select the type of information."

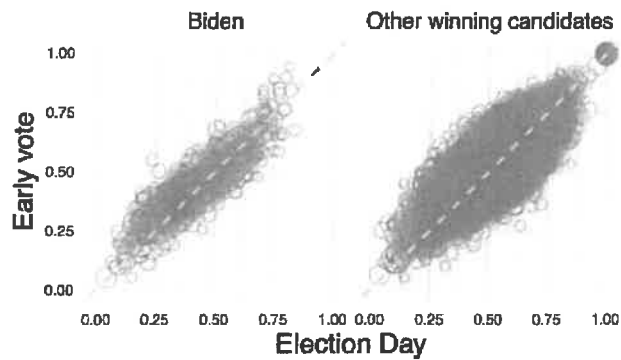
Figure 1: Precinct-level Election Day and early voting shares of winning presidential and other winning candidates in the 2012, 2016, and 2020 general elections in Clark County



(a) 2012 General



(b) 2016 General



(c) 2020 General

*Note: includes only precincts with at least 50 voters for each relevant voting method.*

more meaningful statistically since they denote precincts with more ballots cast, in this case, more Election Day and early voting ballots.

56 Each of the plots in panel (a) also contains a dashed 45-degree line. Focusing on the left plot of this panel, points that lie *above* the 45-degree line connote Clark County precincts in which Obama's early vote share was greater than his Election Day share; points that lie *below* this line connote Clark County precincts in which Obama's early vote share was lesser than his Election Day share; and points that lie *on* this line connote Clark County precincts in which Obama's early vote share and his Election Day share were equal.<sup>10</sup>

57 Panels (b) and (c) are structured like panel (a), but they highlight different presidential candidates, namely, Hillary Clinton and Joe Biden, the winners of the 2016 and 2020 presidential elections in Nevada, respectively.

58 Turning first to the 2012 general election in panel (a), the cluster of points in the left plot lies slightly above the pictured 45-degree line. In particular, across 866 displayed Clark County precincts, Obama's vote share among early voters was marginally greater than his vote share among Election Day voters (585 precincts featured Obama early vote share greater than Obama Election Day vote share). Across winning candidates in the 2012 general election in Clark County (Obama not included), the situation is more ambiguous, and the number of races in November 2012 in Clark County beyond the presidential contest is beyond the scope of this report.

59 Now turning to the 2016 general election in panel (b), this panel shows that Clinton was more successful among Clark County early voters than among Election Day voters: note that the cluster of points in the left plot of panel (b) lies above the pictured 45-degree line. Among 896 pictured Clark County precincts, Clinton's early voting vote share was greater than her Election Day vote share in 760 of them. As in 2012, the situation with other winning candidates is more

<sup>10</sup>To be included in the upper left plot of Figure 3, and similarly for other figures in the report like this one, a precinct had to have at least 20 Election Day ballots cast in it as well as 20 "Other winning candidates" early votes.



ambiguous. That Clinton's vote shares were greater among early voters than among Election Day voters in Clark County is evidence against the Contest's fundamental premise, which holds that candidates in "fair" elections receive equal support among voters of different voting methods.

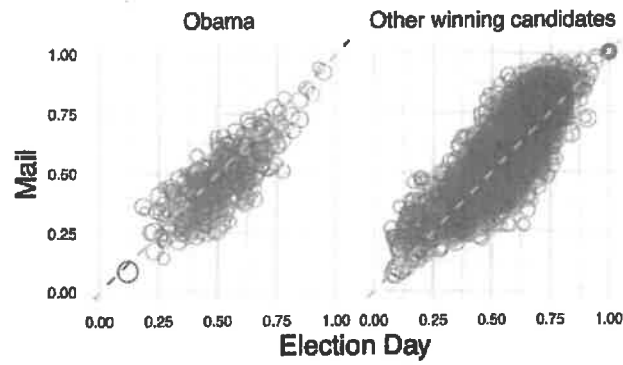
**60** Panel (c) of Figure 1 highlights nothing particularly remarkable about Biden's Election Day and early voting support levels, although there is arguably some evidence that Biden was more successful among early voters than Election Day voters. Among 829 pictured precincts, Biden was more successful among early voters in 475 of them. The many other winning candidates in the 2020 general election in Clark County seem, on average, to have received roughly similar support from Election Day and early voters.

**61** Continuing with my analysis of the 2012, 2016, and 2020 general elections in Clark County, Figure 2 displays relationships between Election Day and mail vote shares for winning candidates in these three elections. This figure, and its three panels, is structured similarly to the previous figure. Namely, it covers three elections, one per panel, and separates out winning presidential candidates.

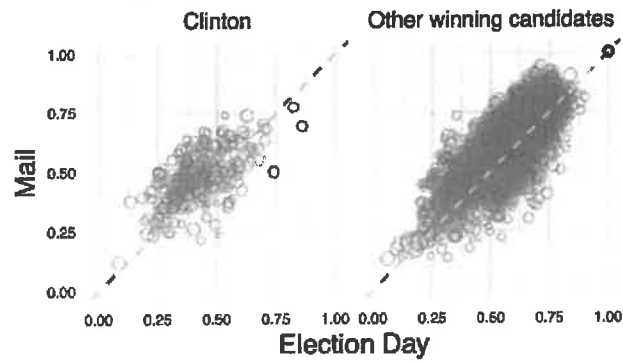
**62** There is little ambiguity about the relationship between mail ballot vote shares and Election Day vote shares for the winning presidential candidates in Nevada in 2012, 2016, and 2020. In particular, Figure 2 shows clear evidence of different levels of candidate support by method of voting. In the 2012 general election, of 394 pictured precincts, Obama's level of support among Election Day voters was greater than his mail ballot voters in 262 of them; in 2016, Clinton was more successful among mail voters than Election Day voters in 231 of 310 precincts; and, in 2020, Biden was similarly more successful among mail voters than Election Day voters albeit in an overwhelming 826 of 829 shown precincts.

**63** To summarize the most notable results in Figure 2's implications, in 2012, Obama was more successful among Election Day voters than mail voters; in 2016, Clinton was more successful

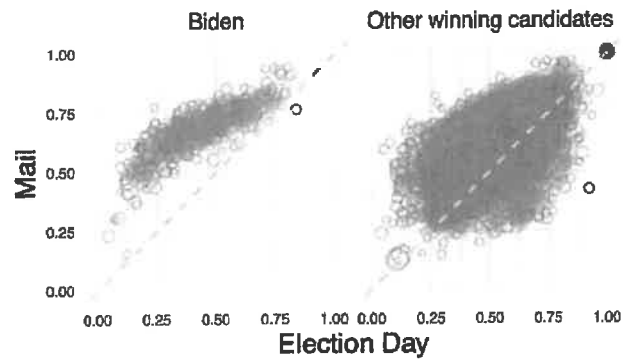
Figure 2: Precinct-level Election Day and mail voting shares of winning presidential and other winning candidates in the 2012, 2016, and 2020 general elections in Clark County



(a) 2012 General



(b) 2016 General



(c) 2020 General

*Note: includes only precincts with at least 50 voters for each relevant voting method.*

among mail voters than Election Day voters; and, in 2020, Biden was much more successful among mail ballot voters than he was among Election Day voters. Stated in another fashion, across precincts in all three of the most recent general elections in Clark County, the winning presidential candidates did not receive equal vote shares among mail and Election Day voters. This finding is inconsistent with the Contest's fundamental premise.

### **7.5 Dr. Hemmers asserts that Obama and Romney received similar vote shares across Election Day, early, and mail voting, but this is not true**

64 Appendix B of the Contest is a letter written by Dr. Oliver Hemmers in support of the claims in the body of the Contest and the Contest's Appendix A, which itself was written by Edward Solomon. Dr. Hemmers was deposed on July 28, 2022 for the purposes of this litigation, and in his deposition he was asked whether he tried to verify what I have called the Contest's fundamental premise ("Dr. Hemmers, are you aware of any study or research Mr. Solomon conducted to support his assumption about percentage of vote across methods of voting?" Oliver Hemmers deposition transcript, p. 48, lines 15-18.)

65 In response, Dr. Hemmers replied that he "independently verified [Mr. Solomon's statement about equal candidate vote shares across methods of voting]" (p. 49, line 6), and Dr. Hemmers explained that he based his verification efforts on Clark County election returns from the 2012 general election:

And I looked...to see if...the voting method actually had an influence on [election] outcomes...I...compared Obama and Romney and mail-in voting or election day voting and looked at those ratios and they all looked good to me (p. 49, lines 12-22).

66 When asked to confirm that ratios looking "good" meant that Obama and Romney vote shares "were roughly the same across the different methods of voting" (p. 49, lines 24-25), Dr. Hemmers said, "Yes" (p. 50, line 1).

67 Dr. Hemmers's comments are marginally inconsistent with the left plot in panel (a) of Figure 1 (showing that Obama was more successful among early voters than Election Day voters) and clearly inconsistent with the left plot of Figure 2 (showing that Obama was less successful among mail voters than Election Day voters).

68 At his deposition, Dr. Hemmers mentioned that he analyzed the vote shares of Barack Obama and Mitt Romney, both of whom contested the 2012 presidential election in Nevada. Clark County precincts in which Obama was successful in 2012 are in general precincts where Romney did relatively less well, and vice versa, and this is because Obama and Romney were the main candidates in the 2012 presidential election in Nevada. However, these two were not the only candidates for president in the state; Nevada also featured Virgil Goode, Gary Johnson, and "None of these candidates" on its 2012 presidential ballot. Therefore, it is technically possible for Obama and Romney to have had non-complementary relationships across Clark County precincts with respect to Election Day, early voting, and mail ballot support, and I investigated this possibility to ensure that Romney's support among Election Day, early voting, and mail ballot voters did not unduly affect Dr. Hemmers's conclusions about the 2012 presidential election.

69 Appendix B contains a precinct-level plot (Figure 11) which shows the following. Within precincts in Clark County, Romney was more successful among Election Day voters compared to early voters, and Obama had the opposite relationship with these two groups of voters. Within precincts in Clark County, Romney was more successful among mail voters compared to Election Day voters, and Obama had the opposite relationship with these two groups of voters. Put another way, precinct-level election returns from Clark County show that Obama's and Romney's level of support in the 2012 presidential election varied by voting method, and this is at odds with the investigation of election returns from the 2012 presidential election that Dr. Hemmers described at his deposition in this litigation.

70 Finally, Dr. Hemmers testified at his deposition that, in his efforts to verify the Contest's fundamental premise, he did not investigate any Nevada elections beyond the 2012 general election (p. 50, lines 2-5).

## **7.6 Requests in Nevada to opt-out of mail voting vary by voter type**

71 When describing Nevada's three methods of voting, I earlier noted that ballots are mailed to all registered voters prior to primary and general elections except those who had opted out of receiving such ballots.

72 To the best of my knowledge, the Nevada Secretary of State maintains records on the number of opt-out requests that voters in the state have made to county elections officials. Table 3 breaks down the number of requests ("Requests") in the period January 24, 2022 - July 25, 2022 by county and by voter partisanship, for voters affiliated with the Democratic or Republican parties.<sup>11</sup> For example, the top row of the table corresponds to mail ballot opt-out requests made by Republican affiliates in Washoe County; there were 1,440 such request in the period January 24, 2022 - July 25, 2022. A corresponding table containing mail ballot opt-out requests for voters affiliated with neither the Democratic nor the Republican party can be found in Appendix C.

73 Nevada counties vary dramatically in terms of population, and this complicates comparing raw numbers of mail ballot opt-out requests across counties and across partisan groups. To control for differing sizes of county and partisan groups, Table 3 reports partisan group turnout in the 2022 primary ("Turnout") as well as the ratio ("Ratio") of mail ballot opt-out requests to 2022 primary voter turnout. The latter ratio is a better measure of the extent to which voter partisan groups in Nevada counties opt out of mail-in voting compared to raw numbers of opt-out requests.<sup>12</sup>

<sup>11</sup>The source for the opt-out request data in Table 3 is an Excel spreadsheet titled, "MBP Submissions 07-25-22.xlsx." This file was produced to me by Counsel on July 26, 2022, and to the best of my knowledge it was generated by the Nevada Secretary of State. The bottom of the file contains a timestamp of "7/25/2022 9:25:45 AM," which to the best of my knowledge reflects when the file was created. Table 3 does not include opt-out requests made by Nevada registered voters who affiliate with a party other than the Democratic or Republican Party.

<sup>12</sup>Source for 2022 primary turnout is a file, produced to me by Counsel on July 26, 2022, titled, "2022 Primary Election Cumulative Turnout Report.pdf." To the best of my knowledge, this file contains voter turnout data from the

Table 3: Ratios of in-person voting requests to 2022 primary turnout

County	Party	Requests	Turnout	Ratio
Washoe	Republican	1,440	20,028	0.0719
Churchill	Republican	212	4,105	0.0516
Storey	Republican	34	1,090	0.0312
Lyon	Republican	184	8,837	0.0208
Humboldt	Republican	45	3,048	0.0148
Carson City	Republican	148	10,807	0.0137
Clark	Republican	1,718	128,742	0.0133
Douglas	Republican	158	12,521	0.0126
Elko	Republican	80	6,811	0.0117
Mineral	Republican	6	613	0.0098
Pershing	Republican	5	804	0.0062
Churchill	Democratic	6	978	0.0061
Lander	Republican	7	1,201	0.0058
Nye	Republican	43	7,783	0.0055
White Pine	Republican	5	937	0.0053
Washoe	Democratic	66	12,816	0.0051
Elko	Democratic	6	1,245	0.0048
Lyon	Democratic	6	2,628	0.0023
Humboldt	Democratic	1	651	0.0015
Douglas	Democratic	5	4,015	0.0012
Clark	Democratic	111	125,728	0.0009
Carson City	Democratic	4	5,118	0.0008
Eureka	Democratic	0	38	0.0000
Eureka	Republican	0	535	0.0000
Lander	Democratic	0	127	0.0000
Lincoln	Democratic	0	195	0.0000
Lincoln	Republican	0	1,140	0.0000
Mineral	Democratic	0	347	0.0000
Nye	Democratic	0	2,714	0.0000
Pershing	Democratic	0	210	0.0000
Storey	Democratic	0	344	0.0000
White Pine	Democratic	0	332	0.0000

*Note: rows in decreasing order by ratio, thereafter alphabetically.*

74 The rows in Table 3 are sorted by ratio, up to the point where ratios are zero, after which rows are sorted, by convenience, alphabetically by county and party.

75 Of Nevada's 17 counties, 16 are included in Table 3 (Esmeralda is not, as noted in fn. 12).

Of these 16 counties, there are 14 in which there was at least one mail ballot opt-out request made

June 24, 2022 primary in Nevada, assembled by the Nevada Secretary of State. The data do not include figures from Esmeralda County, which therefore is not included in Table 3.

by either a Democratic or a Republican affiliate (exceptions are Eureka and Lincoln Counties). *In all of these 14 counties, Republican mail ballot opt-out ratios in the period January 24, 2022 - July 25, 2022 were greater than corresponding Democratic opt-out ratios.* Accordingly, I conclude that the willingness of Nevada voters to opt out of mail-in voting is correlated with partisanship.

76 The numbers in Table 3 are inconsistent with the fundamental premise of the Contest, that “fair” elections have roughly equal candidate support rates across different methods of voting and that one should “expect both Gilbert’s [or any other candidate’s] Mail-in percentage and Early Vote percentage to be **roughly the same.**” If one (or more) partisan groups in any state disproportionately selects out of mail-in voting, making it impossible for individuals in this group (or groups) to cast mail ballots, it should be expected that a candidate supported by this group (or by these groups) would have a disproportionately low mail ballot support rate compared to the candidate’s support rates based on other methods of voting. In other words, that Nevada voters opt out of mail voting at rates that are correlated with partisanship implies that the expectation of equality in candidate support rates across different methods of voting does not follow.

## 7.7 Summary

77 The Contest rests on a premise, that I have called its *fundamental premise*, that a “fair” election is one in which candidate vote shares are equal across methods of voting.

78 The Contest offers no reasons to think that its premise holds. Across the 2012, 2016, and 2020 presidential elections in Nevada, it does not hold. Moreover, mail ballot opt-out rates imply that the premise should not be expected to hold. Lastly, the claim in the Contest that the premise is consistent with historical election data in Clark County, Nevada, is supported neither with historical election data in Clark County nor by citation.

79 Therefore, the entire Contest rests on a speculative and unsupported premise, undermining the integrity of all of the claims that depend on it.

## **8 Regularities in Election Day, early voting, and mail vote shares in the 2022 Republican primary**

80 The Contest argues that the 2022 Republican gubernatorial primary suffered from irregularities in the way that the Election Day, early voting, and mail ballot vote shares of Gilbert and Lombardo are distributed across precincts.

81 There is no literature in political science that specifies precisely what the relationship between a given candidate's Election Day, early voting, and mail ballot vote shares should be, and the Contest does not specify a metric the purports to measure the extent to which Lombardo's and Gilbert's Election Day, early voting, and mail ballot vote shares were irregular. The Contest's claim about irregularity in vote shares thus begs the question, irregular compared to what?

82 Therefore, to assess whether the Election Day, early voting, and mail ballot vote shares for Gilbert and Lombardo in the recent Nevada primary were irregular, I offer a variety of comparative analyses. Among other things, these analyses leverage the facts that Nevada holds Republican gubernatorial primaries every four years, that the 2022 Republican primary in Nevada featured races beyond the gubernatorial race, and that other states hold Republican gubernatorial primaries as well. If, as alleged by the Contest, the Election Day, early voting, and mail ballot vote shares for Gilbert and Lombardo in the recent Nevada primary were irregular, this should be apparent in some or all of my comparisons.

### **8.1 Vote shares of Lombardo and other winning candidates in the 2022 Republican primary**

83 I now turn to an analysis of patterns in Lombardo's vote shares in Election Day, early voting, and mail balloting versus patterns in corresponding vote shares for other winning candidates in non-gubernatorial races that were contested in the June 2022 Republican primary



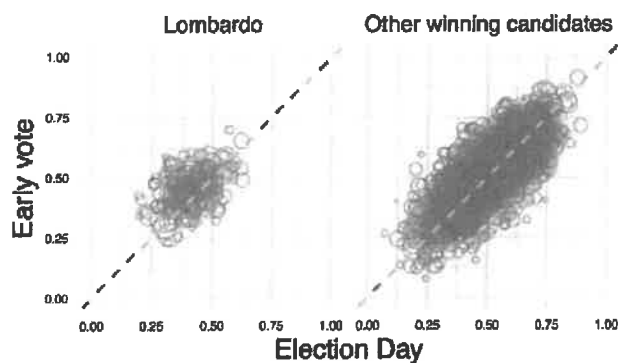
in Clark County. My comparative analysis here focuses on Clark County because the Contest does as well. And, the reason that this analysis examines winning candidates is because Lombardo was a winning candidate himself. Thus, the analysis here holds fixed the winning status of the candidates it examines.

84 For Clark County precincts, Figure 3 plots Election Day, early vote, and mail ballot candidate vote shares against each other, separating out Lombardo. The structure of this figure mirrors the structure of previous figures that I used to analyze the 2012, 2016, and 2020 general elections earlier in this report.

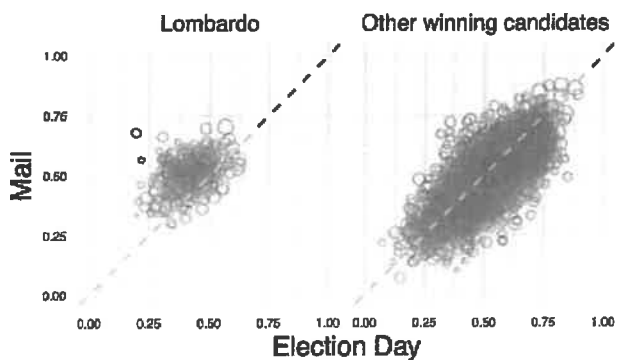
85 The implications of Figure 3 are threefold. First, within Clark County precincts, Lombardo's Election Day and early vote shares tended to be similar across precincts albeit with some evidence that his early vote support was greater than his Election Day support. This is evident in the fact that the points in the upper left panel of the figure are clustered around, yet slightly above, the pictured 45-degree line. Second, and focusing now on panel (b), within Clark County precincts, Lombardo's mail ballot vote shares tended to be greater than his Election Day vote shares; this finding is evident in the fact that the points in the lower left plot of the figure are in general above the pictured 45-degree line.

86 Evidently, within Clark County precincts, Lombardo did better on mail ballots than he did on Election Day ballots while receiving close to similar support across Election Day and early ballots. There is nothing problematic about these two results, which in principle contradicts the Contest's fundamental premise. I already provided evidence that willingness to vote by mail in Nevada is correlated with voter partisanship and that candidates for president in recent Clark County elections did not receive equal vote shares across voting methods. Moreover, Gilbert was Lombardo's chief opponent in the 2022 gubernatorial primary, and one of Gilbert's stated policy positions was that Assembly Bill 321 should be repealed. This bill created the mail voting rules now in place in Nevada, and accordingly it is thus intuitive that Lombardo did relatively well on

Figure 3: Precinct-level Election Day, early voting and mail vote shares of gubernatorial candidate Joe Lombardo and other winning candidates in the 2022 Republican primary in Clark County



(a) Election Day versus early voting



(b) Election Day versus mail

*Note: includes only precincts with at least 50 voters for each relevant voting method.*

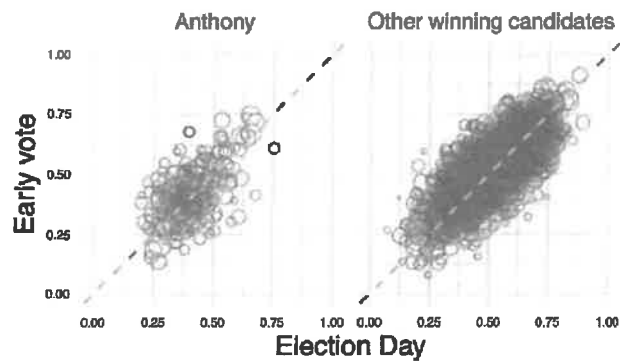
mail balloting.<sup>13</sup>

87 Returning to the implications of Figure 3, the third is that the two Lombardo clouds of points do not appear anomalous compared to the clouds of points for other primary election winners. However, to make this point concrete, I turn to an additional comparison, the 2022 Republican lieutenant governor primary, won by Stavros Anthony. Figure 4 plots Election Day,

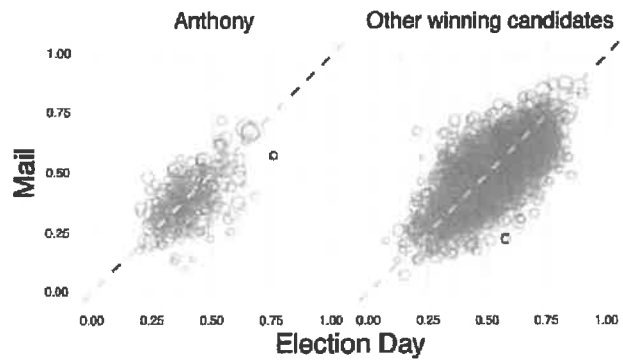
<sup>13</sup>On Gilbert's position against Assembly Bill 321, see his comments ("AB 321 is going to be the first thing I hammer down on") at 2:07:04 of "Nevada Election Integrity - Seth Keshel Joey Gilbert Robert Beadles - HQ," available at <https://rumble.com/v101da4-nevada-election-integrity-seth-keshel-joey-gilbert-robert-beadles-hq.html> (last accessed July 28, 2022).

early voting, and mail vote shares, focusing on the 2022 Republican lieutenant governor primary in the same way that the previous figure, above, focused on the 2022 Republican gubernatorial primary. A third figure of this type, pertaining to the 2022 Republican United States Senator primary won by Adam Laxalt, can be found in Appendix D.

Figure 4: Precinct-level Election Day, early voting and mail vote shares of lieutenant gubernatorial candidate Stavros Anthony and other winning candidates in the 2022 Republican primary in Clark County



(a) Election Day versus early voting



(b) Election Day versus mail

*Note: includes only precincts with at least 50 voters for each relevant voting method.*

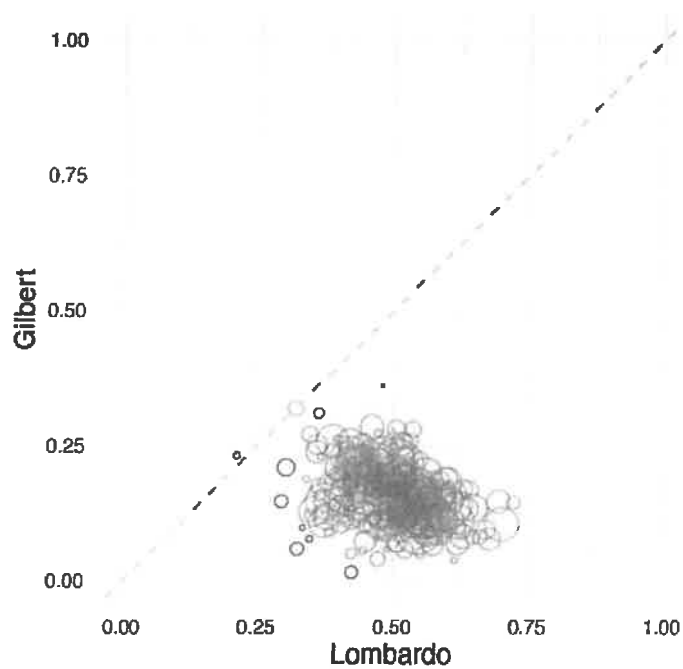
88 The clouds of points in Figure 4 (and as well in Appendix D's Figure 12 that covers the Republican United States Senator primary) are placed similarly to the clouds of points in the gubernatorial Figure 3. Namely, vote shares of the winners of the 2022 Republican gubernatorial

primary and the 2022 Republican lieutenant governor primary do not particularly differ than vote shares of other winners who contested races in the 2022 Republican. This implies that the 2022 Republican gubernatorial primary in Nevada was regular, not irregular.

## 8.2 Gilbert's and Lombardo's mail vote shares in the 2022 primary

89 Above I provided evidence that Lombardo did relatively well in mail balloting in the 2022 Republican gubernatorial primary. I now follow up on this point with a direct comparison of Lombardo's mail ballot support rates in Clark County precincts to Gilbert's mail ballot support rates in these precincts. See Figure 5.

Figure 5: 2022 precinct mail vote shares of Lombardo and Gilbert in Clark County



*Note: each point denotes a precinct in Clark County with at least 50 mail ballots; points sized proportionally to number of mail ballots cast.*

90 This figure plots Gilbert’s and Lombardo’s mail ballot vote shares against each other. Each point in the figure denotes a Clark County precinct, and points are sized proportionally to the number of mail ballots cast in a precinct. The figure also has a dashed 45-degree line to help with interpretation.

91 The implication of Figure 5 is clear: within almost all Clark County precincts, Lombardo received greater mail ballot support than did Gilbert. Indeed, of the 567 precincts displayed in the figure, Lombardo’s mail ballot support was greater than Gilbert’s in 557 of them. This is consistent with Gilbert’s support for repealing Assembly Bill 321.

92 Moreover, Gilbert’s relatively poor performance on mail ballots is inconsistent with the fundamental premise of the Contest, which states that “fair” elections feature candidate vote shares that are roughly equal across Election Day, early, and mail voting returns. Gilbert’s overall vote share in the 2022 Republican primary was roughly 27 percent, and Figure 5 shows that this rate greatly exceeds his mail ballot support rate in most Clark County precincts.

### **8.3 Election Day, early vote, and mail ballot vote shares beyond Clark County**

93 My analysis of the 2022 Republican primary in Nevada has thus far focused heavily on Clark County. This county is the most populous in Nevada, containing approximately 73 percent of all residents as of July 1, 2021.<sup>14</sup> In addition, Clark County makes publicly available election returns that break down candidate vote totals by method of voting. As I mentioned earlier, to the best of my knowledge, most other Nevada counties do not do this.

94 However, two exceptions to this are Elko County and Lincoln County. Counsel provided me with documents that, to the best of my knowledge, contain Elko County and Lincoln County

<sup>14</sup>See “QuickFacts: Clark County, Nevada; Nevada,” *United States Census Bureau*, <https://www.census.gov/quickfacts/fact/table/clarkcountynevada,NV/SBO010217> (last accessed July 30, 2022).

election returns from the 2022 Nevada primary, and I hired a research assistant to create machine-readable versions of these documents for six statewide races. I regularly hire research assistants in the course of my work as an academic and as an expert witness.

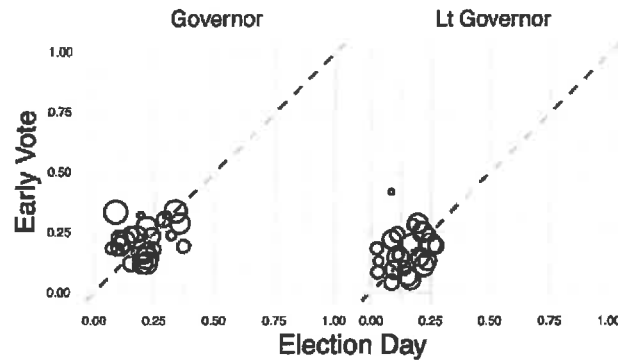
95 Elko and Lincoln Counties are much smaller than Clark County. To put this into perspective, Clark County's official data on the 2022 Republican gubernatorial primary yielded results for 814 precincts. In contrast Elko County is divided into 41 precincts and Lincoln County, into five. Given this imbalance, I use Elko and Lincoln Counties as a robustness check on my Clark County results. I do not expect to generalize across Nevada from 46 precincts, but it is nonetheless appropriate for me to check if my results on Clark County extend beyond this jurisdiction.

96 Figure 6 contains two panels, both of which depict election data from the 2022 Republican primary in Elko and Lincoln Counties. The top panel (a) plots against each other Lombardo's Election Day and early voting vote shares from the gubernatorial race (left side of panel) and Anthony's Election Day and early voting vote shares from the lieutenant governor race (right side of panel). The bottom panel (b) is similar except that it plots Election Day and mail ballot vote shares against each other.

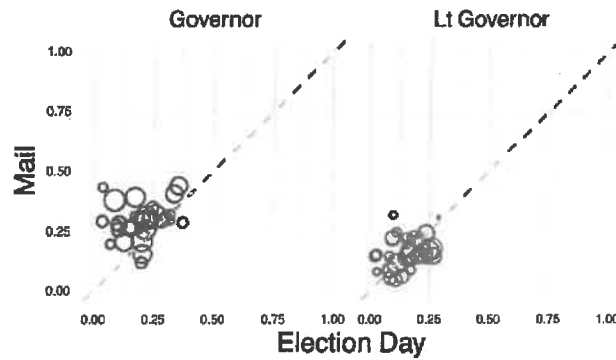
97 Earlier I presented some evidence that, within Clark County precincts, Lombardo was more successful among early voters than among Election Day voters. I also presented clear evidence that, within these precincts, Lombardo received greater support from mail voters than from Election Day voters. This pattern is roughly consistent with Figure 6. Namely, the two Governor (i.e., Lombardo) plots in the figure show (1) roughly similar Election Day and early voting vote shares within Elko and Lincoln precincts and (2) definitively greater mail ballot vote shares than Election Day vote shares within these same precincts.

98 With respect to the 2022 Republican lieutenant governor primary, won by Stavros Anthony, the two right side plots in Figure 6 imply that Anthony received roughly equal vote shares from

Figure 6: Elko and Lincoln County precinct-level Election Day, early voting and mail vote shares of winning gubernatorial and lieutenant governor candidates in the 2022 Republican primary



(a) Election Day versus early voting



(b) Election Day versus mail

*Note: includes only precincts with at least 20 voters for each relevant voting method.*

Election Day and early voters and from Election Day and mail ballot voters. This is what I found in Clark County as well.

99 In summary, it is not possible to generalize from 2022 Republican primary election results in Elko County and Lincoln County to Nevada overall; these two counties are simply too small population-wise. However, that results drawn from them are roughly consistent with results based on Clark County suggests that there is not an idiosyncrasy in the latter than led to the results I have discussed at length above.

**100** The precincts included in Figure 6 are those that had at least 20 ballots cast of relevant types. For example, for a precinct to be depicted in a plot of an Election Day vote share against an early voting vote share, the precinct must have had at 20 Election Day votes and 20 early voting votes. I created a version of Figure 6 using a ballot lower bound of 50, and this latter figure, which appears in Appendix E, is qualitatively similar to the figure with a lower bound of 20.

**101** I noted above that the research assistant I hired to create machine readable material for Elko and Lincoln Counties created files that covered six statewide races from the 2022 Republican primary. The four races not included in Figure 6 are those for United States Senator, Nevada Secretary of State, Nevada Treasurer, and Nevada Attorney General. These races are for the most part beyond the scope of my report. That said, Appendix F contains two figures that describe the relationship between Election Day, early voting, and mail ballot candidate vote shares for voters in Elko and Lincoln Counties who participated in the United States Senator, Nevada Secretary of State, Nevada Treasurer, and Nevada Attorney General contests. These figures highlight the types of regularities I have described in this report. For example, the winning candidate in the Nevada Treasurer primary, Michele Fiori, was moderately more successful among mail ballot voters in Elko and Lincoln County precincts than among Election Day voters. The winning Secretary of State candidate, Jim Marchant, had the opposite result: he was more successful among Elko and Lincoln County Election Day voters than among these two counties' mail ballot voters. Even keeping in mind the small number of precincts in Elko and Lincoln Counties, this sort of variability constitutes additional evidence against the Contest's fundamental premise, which claims that candidate vote shares do not vary by voting method.

## **8.4 Vote shares of winning gubernatorial candidates in the June 2018**

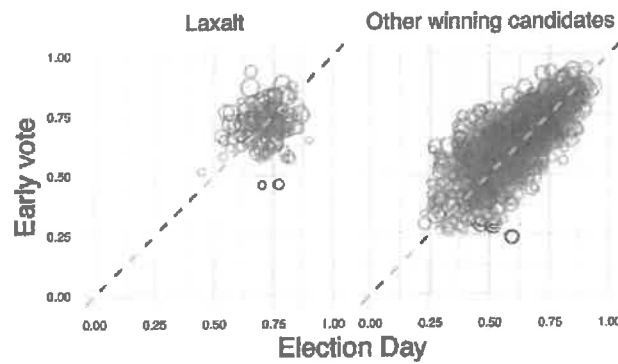
### **Republican primary**

**102** To ensure that the plots I have offered do not reflect an idiosyncrasy associated with the 2022 Republican primary, I now consider the 2018 Republican gubernatorial primary. This

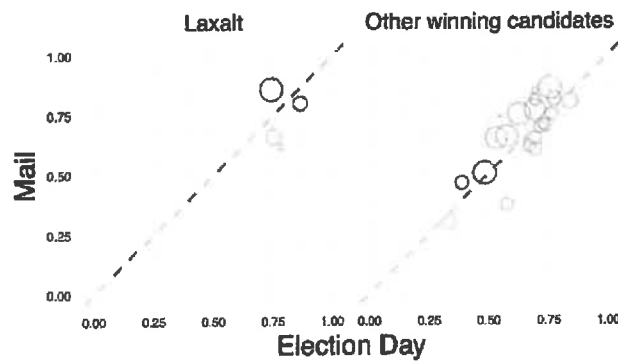


primary was won by Adam Laxalt and took place on June 12, 2018, before Assembly Bill 321 was passed. That the laws governing voting in Nevada elections were different in 2018 than in 2022 works against finding similarities in candidate vote shares patterns produced by Election Day, early voting, and mail ballot voters in the 2018 and 2022 Republican gubernatorial primaries.

Figure 7: Precinct-level Election Day, early voting and mail vote shares of gubernatorial candidate Adam Laxalt and other winning candidates in the 2018 primary in Clark County



(a) Election Day versus early voting



(b) Election Day versus mail

*Note: includes only precincts with at least 50 voters for each relevant voting method.*

**103** Figure 7 displays Election Day, early voting, and mail ballot candidate support rates in the same fashion as in previous plots. The winner Republican gubernatorial candidate, Laxalt, is highlighted on the left side of the figure just like Lombardo was highlighted in the earlier Figure

3, which covered the 2022 primary.

**104** Holding aside the fact that mail voting was less common in the 2018 Republican primary compared to the 2022 Republican primary, the clouds of points in Figure 7 (2018 primary) look very similar to the clouds of points in Figure 3 (2022 primary). This implies that there was nothing idiosyncratic about the 2022 Republican gubernatorial primary.

**105** Panel (b) of Figure 7 is somewhat sparse because of the relative paucity of mail ballots cast in the 2018 Republican gubernatorial primary. In light of this, Appendix G contains a version of this figure with a ballot lower bound of 20, not 50, thus including a greater number of precincts. Numbers of precincts notwithstanding, this latter version of Figure 7 is qualitatively identical to the original.

### **8.5 Republican gubernatorial primary vote share correlations were greater in 2022 than in 2018**

**106** To complement the visual evidence I have presented on the 2022 and 2018 Republican gubernatorial primaries, Table 4 contains precinct-level correlations between Election Day and early voting vote shares (“ED-Early”) and between Election Day and mail ballot vote shares (“ED-Mail”). For the 2018 and 2022 Republican primaries, the table includes two sets of results: for the winning governor candidates (Laxalt in 2018 and Lombardo in 2022) and for the winning lieutenant governor candidates (Michael Roberson in 2018 and Stavros Anthony in 2022). The table covers Clark County, which is consistent with the Contest’s analysis

Table 4: Winning candidate vote share correlations in the 2018 and 2022 Republican gubernatorial and lieutenant governor primaries

Primary	Governor		Lt Governor	
	ED-Early	ED-Mail	ED-Early	ED-Mail
2018	0.16	0.14	0.23	0.46
2022	0.40	0.34	0.55	0.55

**107** Correlations are statistics that measure the extent to which two sets of points fall on a line. They range from negative one (-1) to positive one (1). If two sets of points have a correlation of negative one, they fall exactly on a line that is sloped down. If, though, two sets of points have a correlation of positive one, they fall exactly on a line that is sloped up.

**108** This is important because of the Contest's fundamental premise. If among a set of precincts a candidate receives equal vote shares from, say, Election Day voters and early voters, then the correlation between the candidate's Election Day and early voting vote share will be one. Equality between a candidate's Election Day and early voting vote shares is *sufficient* for a correlation of one but not *necessary*. Indeed, two sets of points can fall on a line that has a barely positive slope. These points will have a correlation of one even though they are not equal.

**109** Table 4 shows that Lombardo's vote share correlations in the 2022 primary (Election Day and early as well as Election Day and mail) were greater than or equal to corresponding correlations from 2018 when Laxalt was the winning gubernatorial candidate in that year's Republican primary. With respect to Election Day and early voting correlations, 0.40 (from the 2022 primary) is greater than 0.16 (2018). And, with respect to Election Day and mail vote share correlations, 0.34 (2022) is greater than 0.14 (2018). In other words, if one were to adopt hypothetically the Contest's notion that irregularity in candidate vote shares can be identified by low correlations when candidate shares are compared across methods of voting, then it follows that the 2022 Republican primary featured a winning candidate whose vote shares appear *less* irregular than the vote shares of the winning candidate in the 2018 Republican primary. This is inconsistent with the claim in the Contest that the 2022 Republican gubernatorial primary was irregular.

**110** The same phenomenon appears in the 2018 and 2022 Republican lieutenant governor primaries (0.55 is greater than 0.23 and 0.55 and greater than 0.46). Namely, winning lieutenant governor candidate vote share correlations from 2022 are greater than those in 2018, which, adopting the Contest's perspective on irregularity, means that the 2022 Republican lieutenant

governor primary was less irregular than the 2018 Republican lieutenant governor primary.

111 To be clear, I do not adopt the position in the Contest’s premise that there is a connection between election “fairness,” vote share correlations across methods of voting, and what is or is not irregular in an election. This premise, as I have argued already, is unsupported by literature and at odds with Nevada election data adduced here.

112 The correlations in Table 4 are sensitive to the lower bound on the number of ballots (Election Day, early voting, and mail) required for a Clark County precinct to be included in the table. In this table, correlation calculations between Election Day and mail vote shares for Gilbert do not use precincts with fewer than 50 Election Day or mail ballots (and similarly for correlation calculations between Election Day and early voting candidate shares). If this number, 50, were to be changed to 20 or 100, the calculated correlations would change. However, the conclusion that 2022 correlations are at least as large as 2018 correlations would not change. Versions of Table 4 with lower bounds of 20 and 100 votes are in Appendix H. This appendix shows that the qualitative result implicit in Table 4, that 2022 Republican primary vote share correlations were at least as large as 2018 Republican primary vote share correlations, is robust to changes in the minimum number of ballots required for a precinct to be included in a correlation calculation.

113 Continuing with the subject of vote share correlations, the Contest claims that, “There is absolutely no correlation between Gilbert’s Election Day, Early, and Mail-in Percentages across [Clark County] precincts” (§ 29). In light of this claim, Table 5 reports correlations between the second place candidates in the 2018 and 2022 Republican gubernatorial primaries, Dan Schwartz being this candidate in the former year and Gilbert, the second place candidate in 2022.

Table 5: Second place candidate vote share correlations in 2018 and 2022 Republican gubernatorial primaries

Primary (candidate)	ED-Early	ED-Mail
2018 (Schwartz)	0.05	1.00
2022 (Gilbert)	0.33	0.19

114 To the best of my understanding, I cannot reconcile the Contest's claim about "absolutely no correlation between Gilbert's Election Day, Early, and Mail-in Percentages across [Clark County] precincts" and the figures reported in Table 5. In fact, correlations involving Gilbert are greater than those involving the 2018 second place Republican gubernatorial candidate, although the implications of this should not be pushed too hard insofar as Schwartz received very few votes in the 2018 Republican gubernatorial primary (and very few votes via mail ballot).

115 The correlations in Table 5 are sensitive to the lower bound on the number of ballots (Election Day, early voting, and mail) required for a Clark County precinct to be included in the table. I have noted the phenomenon before. Table 5 imposes a lower bound of 50 ballots, and versions of this table with bounds of 20 and 100 votes are in Appendix I. My comments on the Contest's "absolutely no correlation" claim are robust to whether Table 5 uses a lower bound of 20, 50, or 100 ballots.

## **8.6 2022 Republican gubernatorial primary vote share correlations in perspective**

116 To place Lombardo's (Table 4) and Gilbert's (Table 5) vote share correlations from the 2022 Republican gubernatorial in perspective, I now calculate similar correlations for a variety of races contested in the 2022 Republican primary in Clark County. I then assess whether the correlations from the 2022 Republican gubernatorial race appear different than corresponding correlations from other races.

117 I start by identifying every race that was contested in the 2022 Republican primary in Clark County. There were 99 such races. Of these, there were 79 that had election returns in at least 50 precincts in the county. Across-precinct correlations from races contested in fewer precincts are less meaningful statistically, and hence I focus here on races in the 2022 Republican primary in Clark County that were contested in at least 50 of the county's precincts.

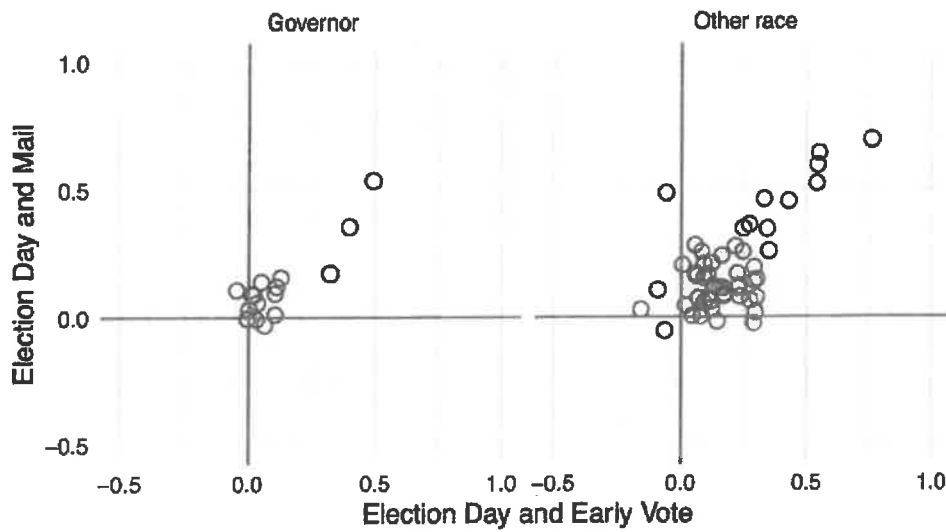
118 Of the 79 races, I then identified those in which there were at least 50 Election Day votes, 50 early votes, and 50 mail ballot votes. This produced a list of 36 races. Earlier in this report, I noted that precincts with relatively more votes have vote shares that are more meaningful statistically, and this leads me to restrict attention here to precincts with at least 50 votes in all three methods of voting.

119 For each candidate in these 36 races, I calculated (1) the precinct-level correlation between the candidate's Election Day vote share and early voting vote share and (2) the correlation between the candidate's Election Day vote share and mail ballot vote share. Then, I plotted these two correlations against each other. The result is Figure 8.

120 There are two panels in Figure 8, one for the gubernatorial primary (left side) and one for other races contested in Clark County (right side). Each panel is structured similarly: horizontal axes depict correlations between Election Day and early voting vote shares. And, vertical axes depict correlations between Election Day and mail ballot vote shares.

121 In general, the two clouds of points depicted in Figure 8 are themselves positively correlated, pointing up and to the right. This indicates that candidate support in the 2022 Republican primary in Nevada had a degree of consistency across voting methods. However, there is strong evidence in Figure 8 that "a degree of consistency" is about as strong a statement as one could make about the vote share correlations in Figure 8. Note that many points in both panels of Figure 8 are close to a panel origin, i.e., the point where both axes are zero. When a point is close to an origin, this denotes a candidate whose Election Day, early voting, and mail ballot vote shares were barely correlated with each other. There were a number of candidates like this in both the gubernatorial race (left side of Figure 8) and in other primary races as well (right side). From this I conclude that the gubernatorial race in 2022 was not different than other races in the 2022 Republican primary insofar as featuring candidates whose vote shares often had low correlations across voting methods.

Figure 8: Election Day, early voting, and mail ballot vote share correlations for candidates in the 2022 Republican primary in Clark County

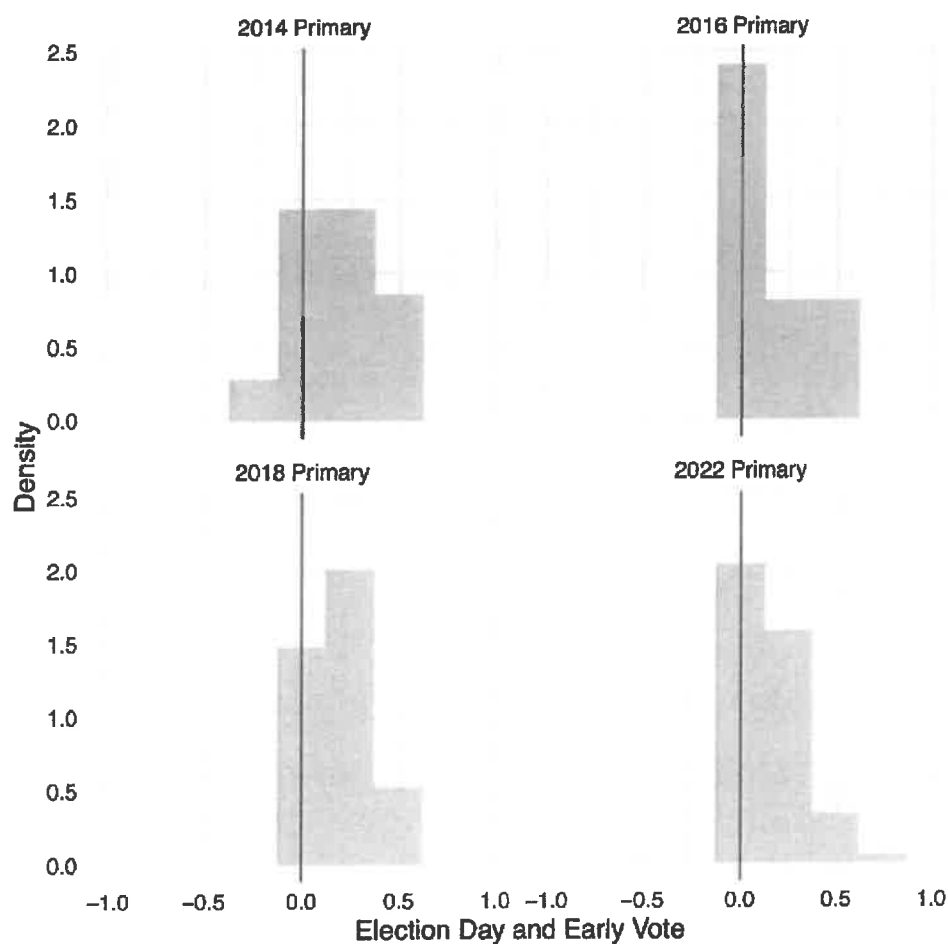


*Note: includes races contested in at least 50 precincts with at least 50 Election Day votes, 50 early votes, and 50 mail ballot votes.*

**122** Continuing to compare the 2022 Republican gubernatorial primary with other Republican primaries from 2022, if the Contest were correct that the former were irregular, then the left and right panels of Figure 8 should look quite different, implying that the relationships between Election Day, early voting, and mail ballot vote shares for gubernatorial candidates in the 2022 Republican primary were drawn from a different distribution than the Election Day, early voting, and mail ballot vote shares for non-gubernatorial candidates in the 2022 Republican primary. Figure 8 presents no such evidence, which is at odds with the Contest's claim that the 2022 Republican gubernatorial primary was irregular.

123 In light of the Contest’s aforementioned comment regarding “absolutely no correlation between [Gilbert’s Election Day, Early, and Mail-in Percentages across [Clark County’s] precincts” (§ 29), I now consider whether a plethora of vote share correlations close to zero—apparent in both of Figure 8’s plots—was unique to the 2022 Republican in Clark County. To address this matter, I turn to Figure 9.

Figure 9: Election Day and early voting vote share correlations for the 2014, 2016, 2018, and 2022 Republican primaries in Clark County.



*Note: includes races contested in at least 50 precincts with at least 50 Election Day votes and 50 early votes.*



**124** This figure displays four histograms, corresponding to the Republican primaries of 2014, 2016, 2018, and 2022 in Clark County. The 2020 primary is not part of this list, reflecting the nature of the 2020 primary in Nevada as an all-mail election due to the COVID-19 pandemic.

**125** Prior to 2022, there were a limited number of mail ballots cast in Clark County Republican primary elections. Accordingly, the histograms in Figure 9 depict Election Day and early voting correlations only. The figure covers all races in the 2014, 2016, 2018, and 2022 Republican primaries and all candidates contesting these races, subject to each race being contested in at least 50 precincts and each precinct having at least 50 Election Day votes and 50 early votes. For example, to generate the 2014 primary histogram (upper left plot of Figure 9), I identified all races contested in at least 50 precincts in the 2014 Republican primary in Clark County and then from this group identified all precincts that had at least 50 Election Day votes and 50 early votes. For every candidate in the primary, I then used these precincts to calculation correlations between Election Day vote shares and early voting vote shares.

**126** Each histogram in Figure 9 has a black vertical line at zero, and these lines aid in interpretation. The four histograms show collectively that Election Day and early voting vote share correlations close to zero are not unusual at all in Clark County Republican primaries. In fact, they are common. The 2018 and 2022 primaries had similar concentrations of low (i.e., close to zero) Election Day and early voting vote share correlations, and the 2016 primary had even more such correlations. This is evident in the heights of the gray rectangles that include zero in the four histograms of Figure 9.

**127** The implication of the Contest's assertion that there was "absolutely no correlation between [Gilbert's Election Day, Early, and Mail-in Percentages across [Clark County's] precincts" is that low correlations between candidate vote shares across methods of voting is evidence of election irregularity. Figure 9 shows that this implication is false. As an aside, I noted earlier that the claim that there was "absolutely no correlation between [Gilbert's Election Day, Early,

and Mail-in Percentages across [Clark County's] precincts [in the 2022 Republican gubernatorial primary]" is also false.

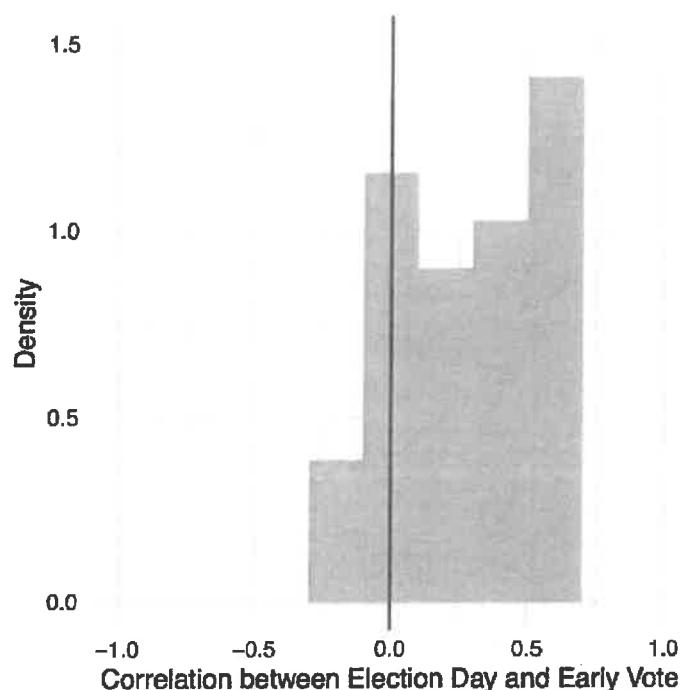
## **8.7 Election Day and early voting vote 2020 Republican primary in Maricopa County, Arizona**

**128** To ensure that my findings about Election Day and early voting candidate vote share correlations in primary elections are not idiosyncratic to Nevada, I briefly consider the 2020 primary in Maricopa County, Arizona. This election was held on August 4, 2020.

**129** Maricopa County maintains publicly available election returns that disaggregate candidate vote totals by Election Day and early voting. With returns from the 2020 Republican primary in Maricopa County, I implemented a procedure similar to the one described above. Namely, I first identified all races from the 2020 Republican primary contested in at least 50 precincts. Then, from this set of precincts, I identified the set that had at least 50 Election Day and early votes. With this latter set of precincts, I calculated for each candidate in every race in the 2020 Republican primary the correlation between Election Day vote share and early voting vote share. These correlations are displayed in Figure 10.

**130** The histogram in Figure 10 describes the distribution of Election Day and early voting correlations in Maricopa County's 2020 Republican primary in the same fashion as Figure 9 did for four primary elections in Clark County. As the Maricopa figure shows, close to zero correlations between candidates' Election Day and early voting vote shares are part of Arizona primaries as well Nevada's. While a comprehensive analysis of Republican primary voting in Maricopa County is beyond the scope of this report, Figure 10 suggests that my findings, above, about close to zero correlations between candidates' Election Day and early voting vote shares in Clark County do not reflect an idiosyncrasy limited to this jurisdiction.

Figure 10: Election Day and early voting vote share correlations for the 2020 Republican primary in Maricopa County, Arizona



*Note: includes races contested in at least 50 precincts with at least 50 Election Day votes and 50 early votes.*

## 9 The alleged formula affecting the 2022 Republican primary

131 The Contest asserts that its analysis “revealed a mathematically-illegal geometric formula that governed the proportions between the Early, Mail-in and Election Day ballots [of Gilbert] across [Nevada’s] precincts” (§ 30). And, it describes the effect of the putative formula as “geometric interference” (§ 36).

132 These claims ultimately rely on the Contest’s fundamental premise, which is unsupported and inconsistent with the Nevada election data that I have presented here.

133 Moreover, the approach to vote modeling used in the Contest and its allegation of an “mathematically-illegal geometric formula” does not appear in academic literature on election

administration and appears to be unconnected to peer-reviewed literature on elections and voting.

**134** There is no evidence in the Contest that the 2022 Republican gubernatorial primary Election Day, early voting, or mail vote shares of either Lombardo or Gilbert were irregular, as this term is defined in the Contest. Moreover, drawing on Clark County, like the contest, and bringing to bear Clark County election data from 2022 and prior years, I have shown visually and with calculations that the Election Day, early voting, and mail vote shares of Lombardo and Gilbert have properties no different than the Election Day, early voting, or mail vote shares of other candidates for office in Clark County in 2022 and before.

**135** Insofar as the Contest has not shown that the 2022 Republican gubernatorial primary was irregular, the matter of whether a “mathematically-illegal geometric formula” was responsible for “geometric inference” in this primary is moot. Without evidence of “geometric interference,” which I understand to be evidence of irregularities, there is no reason to think that a “formula” dictated candidate vote shares in the 2022 Republican gubernatorial primary.

## **10 Restoring the 2022 Republican gubernatorial primary**

**136** The Contest claims that the 2022 Republican gubernatorial primary must be “restored” in order to determine the election’s true winner. And this claim is based on the assertion that the election suffered from “geometric interference.”

**137** “Restoration” is not a term that appears in the academic literature on election administration, and its use in the Contest is not grounded in any literature at all.

**138** As there is no evidence that the 2022 Republican gubernatorial primary was irregular and thus no evidence that this election suffered from “geometric inference,” there is no need for the election to be “restored,” to the extent that this means to have its results adjusted.

## 11 Conclusion

139 This report assesses the Contest filed in the matter of *Gilbert v. Sisolak, et al.*, litigation concerning the 2022 Republican gubernatorial primary held in Nevada on June 14, 2022.

140 The Contest rests on the premise that “fair” elections are those in which candidate vote shares do not vary by voting method, meaning, for example, that the vote share a candidate receives on Election Day should be similar to the vote share that the candidate receives on mail ballots. This premise is not grounded in academic literature, is not grounded in data on Nevada elections, and is inconsistent with data from historical elections in Nevada and with Nevada voters’ decisions to opt out of mail voting. Since the premise of the Contest has no support and moreover is inconsistent with observed data on Nevada elections, all of the implications that depend on it do not follow.

141 Putting aside the fact the premise of the Contest has no support and is inconsistent with observed data on Nevada elections, the Contest nonetheless uses the premise to argue that the Election Day, early voting, and mail ballot vote shares of the two main candidates, Joe Lombardo and Joey Gilbert, in the 2022 Republican gubernatorial primary are irregular. In fact, based on historical Nevada primary and general elections, including past gubernatorial primaries and other similar races, I find no evidence that there were any irregularities in the Election Day, early voting, and mail ballot vote shares of Lombardo and Gilbert.

142 Because there is no evidence of irregularities in the Election Day, early voting, and mail ballot vote shares of Lombardo and Gilbert, there is no evidence that an “illegal” formula was used to influence the 2022 Republican gubernatorial primary in Nevada. There is correspondingly no evidence that Lombardo’s and Gilbert’s Election Day, early voting, and mail ballot vote shares were “impossible.” And, because there is no evidence that an “illegal” formula was used to influence the 2022 Republican gubernatorial primary, there is no evidence that the results of this election need to be adjusted.

I declare under penalty of perjury that the foregoing is true and correct and if called as a witness would testify thereto.

8/1/2022

Date

Michael C. Herron

Michael C. Herron

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# **EXHIBIT 17**

# **EXHIBIT 17**

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# Dr. Oliver A. Hemmers

281 Gingerbread Street  
Henderson, NV 89012

Phone: (702) 525-8767 Email: Oliver.Hemmers@gmail.com

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August 09, 2022

Craig A. Mueller, Esq.  
Mueller and Associates  
808 South Seventh Street  
Las Vegas, Nevada 89101

Re: Request for an amended expert opinion on the 'Clark County, 2022, Governor Primary Precinct Analysis' Summary

Dear Mr. Mueller:

1. This is my first amended declaration to my expert witness opinion from July 2, 2022. For this amended opinion you requested that I provide election data analyses for Clark and Washoe counties regarding the existence of possible illegal formulars that can predict certain election votes.
2. The data used in this report was downloaded from the Clark County Elections website at [https://www.clarkcountynv.gov/government/departments/elections/past\\_elections.php](https://www.clarkcountynv.gov/government/departments/elections/past_elections.php) and the Washoe Country website at <https://www.washoecounty.gov/voters/elections/electionreports/index.php> for the Republican Gubernatorial Primaries (2022).

## Procedures

3. I only looked at precincts with a total combined vote count of over 50 votes for the candidates Gilbert and Lombardo. These precincts have a combined total of over 96% of all votes cast for Lombardo and Gilbert. Therefore, 163 precincts for Washoe County and 500 precincts for Clark County were analyzed.
4. The vote counts for each candidate are reported by the three methods used, i.e., mail-in voting, early voting and election day voting. For my analyses I grouped these methods into two groups for each candidate, namely, mail-in voting (MiV) and street voting = early voting + election day voting (Street).
5. I expect that these two distinct voting methods of MiV and Street voting for each candidate result in four independent vote counts. Each of these four vote counts are independent and as such should not be possible to "construct" or calculate a vote count based on the other three vote counts.

6. I have used the following variables for the vote counts as the basis of my analyses: Let

**A** be Gilbert's Street Vote Total per Precinct

**B** be Gilbert's Mail-In Total per Precinct

**C** be Lombardo's Street Vote Total per Precinct

**D** be Lombardo's Mail-In Total per Precinct

7. These four independent precinct results can be reduced to 3 independent ratios following the formalism introduced by Solomon as follows:

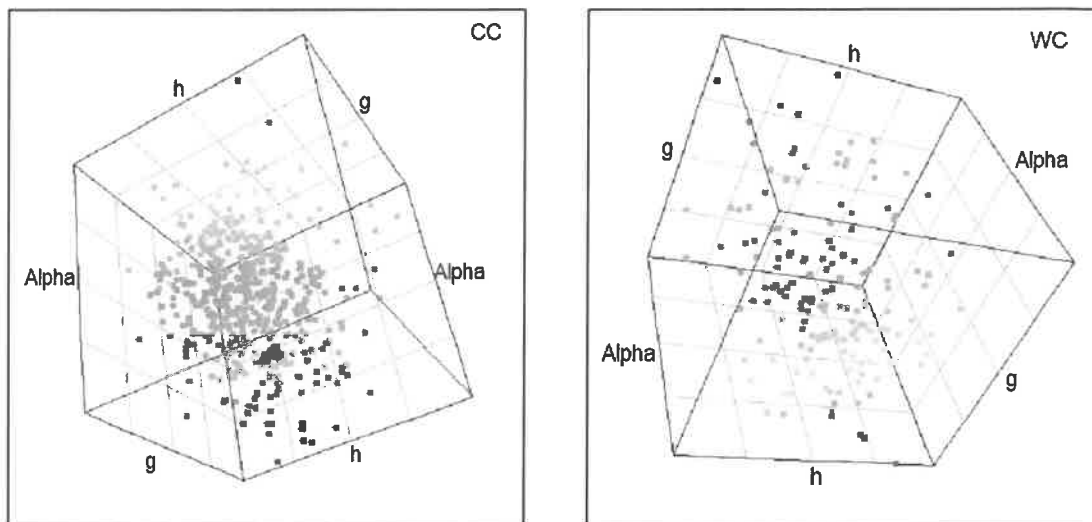
$$g = A/(A+D)$$

$$h = B/(B+C)$$

$$\text{alpha} = (A+B)/(A+B+C+D)$$

This provides three independent election vote ratios for each precinct and these can be graphed in an (x, y, z) coordinate system as (g, h, alpha) and each point represents a precinct. This has been done for both Clark County and Washoe County.

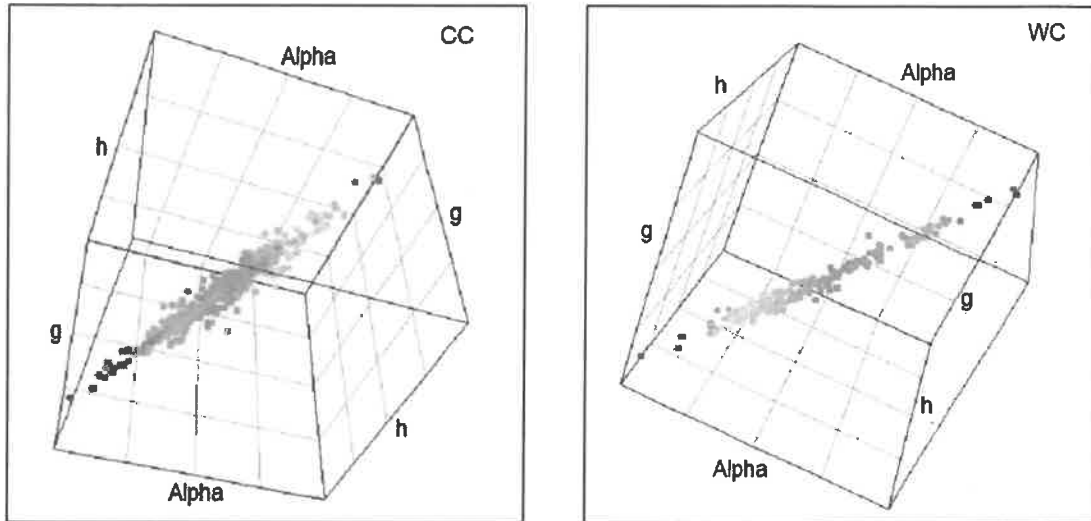
Figure 1: 3-D Plot of the reduced three-dimensional election data for Clark and Washoe counties



8. As can be seen in figure 1, the precincts data is scattered all over the three directions of the selected vantage point as we would expect for an election with independent election results for the two candidates. This must be true for all vantage points since we expect a cloud of data points in this cube.

9. Figure 2 below shows the exact same data, meaning precincts for both counties again but from a different vantage point.

Figure 2: 3-D Plot of the reduced three-dimensional election data for Clark and Washoe counties



10. By rotating the coordinate system and changing the vantage point of the same data shown in Figure 1, it becomes obvious that our three-dimensional data sample is not three dimensional, but it collapsed in one of the dimensions literally into a pancake shape for both counties.

11. This is a clear indication of election tampering and a statistically impossible outcome for any election.

12. Let's look at the two equations that describe/approximate the two planes shown in Figure 2. A standard mathematical method that can be used to describe those planes is a two-dimensional least-squares linear regression and we use g as the dependent variable, depending on h and alpha. We get the following equations:

Equation 1: Clark County 2-D least-squares linear regression fit for plane shown in Figure 2

$$g^* = 0.0269 + 1.7614 \text{ alpha} - 0.8031 \text{ h}$$

Equation 2: Washoe County 2-D least-squares linear regression fit for plane shown in Figure 2

$$g^* = 0.0401 + 1.6309 \text{ alpha} - 0.7657 \text{ h}$$

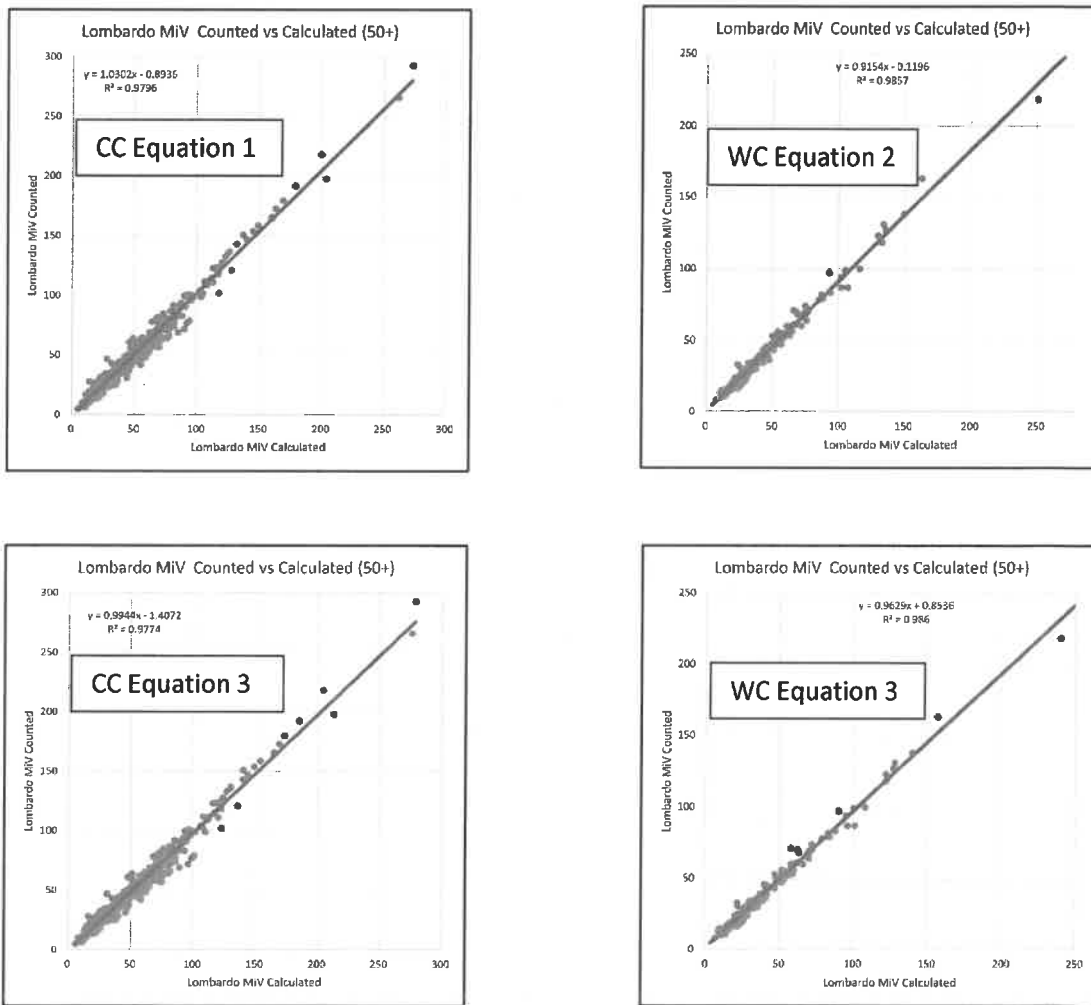
Equation 3: Geometric average of the coefficients of equations 1 and 2

$$g^* = 0.0335 + 1.6961 \text{ alpha} - 0.7844 \text{ h}$$

13. Equations 1 and 2 are very similar and for comparison I created equation 3 by averaging the coefficients from equations 1 and 2.

14. The fact that you can describe the data distribution with an equation for a plane allows us to calculate one of the 4 variables as defined in Paragraph 6 above based on the values of the other three variables. For example, Lombardo's mail-in votes can be calculated with A, B, and C for both counties. I did this analysis for both counties and the precincts considered and the agreement between reported vote counts and calculated vote counts for Lombardo's mail-in votes agree. See Figure 3 top row below. Then I used the average equation 3 for both counties for Lombardo's mail-in votes in the bottom row of figure 3. The difference is minimal, and the agreement is quantitatively the same. Two different counties with different precincts show the same behavior, the third dimension as seen in Figure 2 is collapsed into two dimensions and the resulting plane can be described with one equation. This is statistically impossible and a sure indication of election data tempering.

Figure 3: Counted votes over calculated votes for Lombardo MiV – CC left and WC right



15. In my opinion, considering my extensive precinct data analyses for two Nevada counties, I found that the supposedly three-dimensional data distributions for two separate counties not only collapsed into

two-dimensional planes (pancakes) but that the resulting planes for both counties can be described with the same equation is an indication of severe election data tampering across Nevada.

16. This type of data manipulation can only be accomplished so perfectly with a computer rather than individual vote tampering.

I declare under penalty of perjury that the foregoing is true and correct.

A handwritten signature in black ink, appearing to read "Oliver A. Hemmers". The signature is fluid and cursive, with a large initial "O" and "H".

Dr. Oliver A. Hemmers

August 9, 2022