

Court Reporting

Trial Presentation

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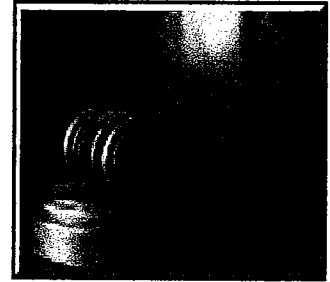
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CONDENSED

IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON
IN AND FOR THE COUNTY OF CHELAN

Timothy Borders, et al.,)
)
 Petitioners,)
 v.)
)
 King County and Dean Logan, its)
 Director of Records, Elections)
 and Licensing Services, et al.,)
)
 Respondents,)
 v.)
)
 Washington State Democratic)
 Central Committee,)
)
 Intervenor-Respondent,)
 v.)
)
 Libertarian Party of Washington)
 State, et al.,)
)
 Intervenor-Respondents.)
)

No. 05-2-00027-3



DEPOSITION OF JONATHAN N. KATZ, taken on behalf of the Respondents, at 1620 26th Street, Suite 600, Santa Monica, California, commencing at 9:16 a.m., on Thursday, May 5, 2005, pursuant to Notice, before CHRISTINA KIM-CAMPOS, CSR No. 12598, a Certified Shorthand Reporter, in and for the County of Los Angeles, State of California.

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15
16 QUESTIONS INSTRUCTED NOT TO ANSWER
None.
17
18 INFORMATION REQUESTED
19 None.
20
21
22
23
24
25

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1 SANTA MONICA, CALIFORNIA; THURSDAY, MAY 5, 2005
2 9:16 A.M.
3
4 JONATHAN N. KATZ,
5 called as a witness by and on behalf of
6 the Respondents, being first duly sworn,
7 was examined and testified as follows:
8
9 EXAMINATION
10 BY MR. BURMAN:
11 Q. Could you state your name.
12 A. Jonathan Neil Katz.
13 Q. And your occupation?
14 A. Professor of political science, California
15 Institute of Technology.
16 Q. How would you define the specific area of
17 scientific expertise that you're bringing to bear on
18 this case?
19 A. Clarify. Do you want all my research, or
20 what comes to bear on this case only?
21 Q. Well, not all your research, but what you --
22 how you would define the area of science.
23 What is -- just what -- what did you apply
24 here?
25 A. Statistical analysis, election data.

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1 Q. Okay. Are there any narrower fields --
2 excuse me -- within that, that you believe are
3 relevant to this?
4 A. I don't quite understand your question. I
5 mean, that's pretty broad. I agree. There are
6 particular techniques and methods that are used
7 here.
8 It's just, I don't -- that I recall -- that
9 I recall -- these are basic statistics -- basic
10 statistics of elections.
11 Q. Okay. You mentioned techniques and methods.
12 What are the techniques and methods that you
13 used in this matter?
14 A. In this one it was very simple. It was use
15 of binomial and multinomial -- can you -- analysis
16 to figure out pulling out a group of -- a group from
17 a known set, a known population.
18 Q. What is the known population?
19 A. In this -- in this case, the known
20 population is the set of ballots that were cast in
21 the Washington gubernatorial election.
22 Q. The whole state?
23 A. Well, not the whole state. We, in fact,
24 draw from smaller -- we actually know more than
25 that. We know the population broken down into

Page 8

1 smaller units -- counties and precincts.
2 Q. And why did you apply this method that you
3 just described?
4 A. Again, a bit unclear, so let me -- I was
5 asked a -- a very specific question by counsel in
6 this case, which was -- counterfactual -- what would
7 happen where some set of, a particular a set of
8 invalid ballots were removed from their final caps.
9 Q. What do you mean by a counterfactual?
10 A. Well, we reserve one state of the world.
11 And a counterfactual has to propose -- some other
12 state is attained. So these states had not been
13 allowed to be cast in the first place, what would
14 have happened.
15 Q. And when you say "these votes," you mean the
16 identified voters that were provided to you by
17 Polidata?
18 A. That is correct.
19 Q. Okay. And I know that has changed over
20 time; correct?
21 A. Yeah, that has changed.
22 Q. And did you have any understanding of how
23 those were selected?
24 A. I know cursory -- I -- which they were
25 selected by, particularly felons and other

2 (Pages 5 to 8)



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1 non-citizens who were claimed to not legally have
2 voted under Washington law.

3 **Q. Did Polidata select them; do you know?**

4 A. I don't know if Polidata selected them.

5 Polidata gave me the -- the -- a data set which
6 included the counts of these by various geographic
7 units.

8 **Q. And you don't know where they got the
9 information?**

10 A. Not -- I have no first-hand knowledge where
11 they got the information.

12 **Q. Okay. Do you have any knowledge where they
13 got them?**

14 A. I understand they culled state records and
15 the like. That's as far as I know.

16 **Q. They, Polidata; or somebody else?**

17 A. Again, I -- I don't know if Polidata did
18 themselves or they contracted. I don't have
19 first-hand knowledge of -- I --

20 **Q. Okay.**

21 A. I have no knowledge of --

22 **Q. Okay. But you understood that Polidata was
23 working for the -- for the Rossi petitioners in this
24 case?**

25 A. That is correct.

1 includes in it an -- an assumption or a hypothesis,
2 if you could be sure to state the assumption that
3 that's based on and not -- not assume that I know
4 what the assumption is because I often won't.

5 A. Again, I will do my best.

6 **Q. Okay. And I assume it's been your
7 experience that lay people sometimes oversimplify
8 what they read in -- in the -- in your scientific
9 area?**

10 A. I think the -- the lay population is often
11 confused by statistics.

12 **Q. And -- and sometimes jump to conclusions
13 that the statistics do not actually support within
14 the scientific discipline?**

15 A. If -- if we're talking in generalities,
16 perhaps.

17 **Q. Now, you mentioned this process that you
18 used of selecting or of studying some examples out
19 of this known data which is the pre- -- how the
20 precincts voted.**

21 **Am I close to describing it?**

22 A. I -- I don't quite understand what -- what
23 you mean by that, so if you could maybe clarify
24 what --

25 **Q. I've been -- I've been told to ask you**

1 **Q. Okay. And because the data changes over
2 time, I'm going to -- just going to refer many of my
3 questions to kind of a generic definition of that,
4 which, if it's okay with you, I'll call it the Rossi
5 selection.**

6 A. I like -- I tend to be very specific, so
7 I'll do that, but I'll correct you if there is -- I
8 mean, I think there's -- leads to some ambiguity.

9 **Q. That would be great and, in fact, I should
10 say I -- I don't know what I'm talking about so --
11 but you shouldn't fall into the trap of
12 oversimplifying things for me. I want to be fair to
13 you.**

14 **So you need to assume really that -- 'cause
15 part of the purpose of this deposition is for me to
16 ask questions on behalf of other experts, and you to
17 communicate to them what your explanations are.**

18 **So don't oversimplify things for me. If I
19 need a more simple explanation, then I'll say, "You
20 know, time out. Try to give us a little statistic
21 for dummies here and see if I can get it.**

22 **Is that acceptable to you?**

23 A. Not a problem.

24 **Q. Okay. The other thing that will be helpful
25 for me is that whenever you give an answer that**

1 **whether it's similar to stratified sampling.**

2 A. Stratified -- no, in a sense. Stratified
3 sampling, we're interested in knowing about a
4 population which we don't have any information
5 about, and so what we're going to do -- but we're
6 particularly interested in subgroups of that
7 population -- say, African-Americans, Latinos, and
8 Anglos.

9 The problem is if we do a pure random
10 sample, just call up, you know, 1,500 households in
11 the United States, given the small fraction --
12 relatively small fractions of Hispanics and -- and
13 African-Americans in the national sample, there
14 might not be very many in there.

15 And so you might want to over-sample, take a
16 stratified sample, take subsamples, and make
17 inferences, both about the entire population and
18 then about the sub- -- the subpopulations, say,
19 African-Americans and -- and Anglos.

20 Here, it's -- we're in a different world
21 than most statistics. We actually know the
22 population.

23 **Q. Know the total voting population?**

24 A. We know the population -- the population in
25 this world is the -- is the ballots that were cast

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1 in -- in -- in the world. So we're not sampling to
 2 find out information about this -- about the
 3 population. There's no sampling -- there's no
 4 notion which we're sampling here.
 5 **Q. Do you know whether we actually know how**
 6 **many illegal felons or other invalid voters voted in**
 7 **the 2004 Washington gubernatorial election?**
 8 A. No. We -- we know -- we have the current
 9 S&I -- it's a question of fact for the court to
 10 decide, are those relevant. There perhaps could be
 11 others.
 12 **Q. Okay. And you've not done any analysis of**
 13 **whether this is a complete census of what I'll call**
 14 **invalid voters, including, both felons and all those**
 15 **other categories?**
 16 A. No. My analysis is confined to asking,
 17 given a set of -- of invalid voters, what would be
 18 the likely outcome had they not been allowed to
 19 vote.
 20 **Q. Okay. And you don't know the probability of**
 21 **inclusion of any given invalid voter in the -- in**
 22 **the list you were given?**
 23 A. That is correct. I don't know that.
 24 **Q. Okay. You don't know whether the method**
 25 **they used followed the, you know, the standards for**

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1 **random samplings of your profession?**
 2 A. Again, this isn't -- this isn't -- this is a
 3 very different -- I think you're confusing again,
 4 sampling.
 5 So here, we're not sampling. We're actually
 6 asking for an exhaustive census. So we're not
 7 random sampling. So -- so that's not actually the
 8 proper terminology.
 9 **Q. Okay. You -- so the implicit assumption of**
 10 **everything you did is that you had an exhaustive**
 11 **census of invalid felons and other invalid votes;**
 12 **correct?**
 13 A. Again, I think that's a bit unclear. What I
 14 would say my analysis was conditional on the data I
 15 had.
 16 **Q. Okay. Garbage in, garbage out?**
 17 A. The analysis is consistent with the data I
 18 had.
 19 **Q. You don't like my lay person's version of**
 20 **what I just said?**
 21 A. I just like to be consistent.
 22 **Q. Okay. You would agree that typically, in**
 23 **the science in which you practice, it would be**
 24 **expected that you would check whether it was either**
 25 **a complete census or a random sample before you**

Page 15

1 **reached any -- any conclusions from the data,**
 2 **wouldn't you?**
 3 A. No. Again, this analysis -- I hope I made
 4 clear in my reports -- is conditional on the set of,
 5 on the set of data I was provided. I was asked a
 6 very specific questions.
 7 **Q. Okay.**
 8 A. Given this set of invalid voters and the
 9 other facts we know about the case -- about the
 10 election, what would -- what is the counterfactual,
 11 if they were not.
 12 **Q. Okay.**
 13 A. So I was not asked to verify the data,
 14 although clearly, my conclusions depends on that, on
 15 the data being correct.
 16 **Q. Understood.**
 17 **Okay. And just to make sure I have it**
 18 **right, you can't state an opinion on the fact of**
 19 **whether illegal or other invalid voters caused the**
 20 **election of Governor Gregoire without knowing how**
 21 **valid the research is; correct?**
 22 A. Again, I think you're not being specific
 23 enough for my taste.
 24 **Q. That's fine.**
 25 A. What my analysis says, if this were the only

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1 issue in the election and this is the correct -- and
 2 in fact, the court agrees that this is a true and
 3 correct set of invalid ballots -- my analysis is
 4 consistent with most likely with Rossi -- most
 5 likely Rossi having won the election, had they been
 6 excluded.
 7 **Q. Okay.**
 8 A. So that's a very specific question.
 9 **Q. Okay. And would you agree that unless**
 10 **someone proves to the judge that the research that**
 11 **was done to give you that data set satisfied**
 12 **generally accepted standards of your science, no**
 13 **valid conclusion can be reached?**
 14 A. Well, again, I think it needs to be clear
 15 the question -- this is a -- this is an odd
 16 situation for most political scientists. Most
 17 studies we have are not asking about an entire
 18 population. What we're typically doing is, say, for
 19 example, in a survey of national population, we take
 20 a snapshot, and then they want to make an inference
 21 out of a whole population.
 22 Here we actually -- much more like the
 23 census -- we're trying to actually do an
 24 enumeration, but whether or not that enumeration was
 25 done properly or not is a -- is a question of fact

4 (Pages 13 to 16)



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1 for the court.
 2 **Q. And my point is, your conclusion from the**
 3 **assumption that it was done accurately is only as**
 4 **valid as whether the research was done consistently**
 5 **with general -- generally accepted scientific**
 6 **principles?**

7 A. Again, I think you're putting too much
 8 weight, I think, on the procedure. What I care
 9 about is -- is about -- is the -- is the final set
 10 of ballots -- the -- of invalid ballots -- in fact,
 11 the correct set.

12 **Q. Well, in your science, isn't it true that**
 13 **for purposes of research methodology, the procedure**
 14 **that is used gives you some indication of whether**
 15 **the result are reliable?**

16 A. Again, I don't quite follow you.

17 **Q. That's pretty simple, isn't it?**

18 A. No. I actually don't quite understand your
 19 question. I -- I -- I don't mean to be
 20 confrontational. I just -- what I would say is one
 21 does care about the process by which it was drawn.
 22 But here what we care about is the final -- is the
 23 outcome -- what is the set of individuals.

24 Again, it's not a sampling endeavor. It's a
 25 com- -- it's an exhaustive search. Whether or not

1 **Q. And again, if -- if the ultimate question**
 2 **here is did invalid voters cause the election of**
 3 **Governor Gregoire in the 2004 Washington election,**
 4 **would you agree that you cannot state an opinion on**
 5 **that issue of factual causation without knowing**
 6 **whether, in fact, you have an exhaustive census of**
 7 **the invalid voters?**

8 A. Again, to reiterate what I said, what my
 9 analysis finds is, given this set of invalid votes,
 10 then had -- had they -- had that set been excluded,
 11 in all likelihood, Rossi would -- would likely have
 12 prevailed.

13 **Q. So --**

14 A. Whether or not some data set which shows
 15 something different, I have no information of those
 16 other data sets.

17 **Q. So -- so, in fact, it's unknowable, unless**
 18 **we know this is an exhaustive census of the invalid**
 19 **voters, it is unknowable whether or not invalid**
 20 **voters affected the outcome of the election?**

21 A. Again, I think it's a bit stronger than I
 22 would put it. Even if -- even if it were not a
 23 complete census, there are methods and statistics
 24 of -- methods and bounds which you could put -- what
 25 is this -- suppose you thought there was another

1 the exhaustive search was correct or not is, again,
 2 beyond my knowledge.

3 **Q. And you would agree that it is not**
 4 **exhaustive if it's limited to certain counties;**
 5 **correct?**

6 A. If that were true, that would -- yes, that
 7 would be correct.

8 **Q. Okay. And that would be fatal to any**
 9 **conclusions from the data?**

10 A. No, that is not true. It would depend --
 11 you'd ask how sensitive one's results are to
 12 excluded cases, depending on what information you
 13 had about said excluded cases.

14 **Q. Okay. But you weren't asked to do that;**
 15 **correct?**

16 A. No.

17 **Q. And you've not been given any insights into**
 18 **what might have been excluded; correct?**

19 A. That is correct.

20 **Q. Okay. And it's certainly possible, isn't**
 21 **it, that the search for invalid voters was done only**
 22 **in precincts in which Governor Gregoire won?**

23 A. That's beyond my knowledge.

24 **Q. Okay.**

25 A. I don't know.

1 faction out there. You could put bounds on whether
 2 or not you felt that would impact the results.

3 So -- so it's not as strong as you want --
 4 as you put it.

5 **Q. But under the generally accepted standards**
 6 **of your science, until you put those bounds or do**
 7 **something similar to that, unless you know that the**
 8 **data is a complete census, you cannot reach any**
 9 **valid conclusions, can you?**

10 A. No. Again, I think that's a bit strong. As
 11 I've said, my analysis is conditional on the data I
 12 had. If there was different data that might lead to
 13 different conclusions, if there's hypothetical data
 14 or potential data out there, we can also, in some
 15 circumstances, make claims as well.

16 So you're -- you're ruling out saying that
 17 there's no -- even if this were exhaustive, it's not
 18 quite correct.

19 **Q. But pretty close?**

20 A. No.

21 **Q. Okay.**

22 A. Suppose that I left out two people. I can
 23 ask -- suppose those two people voted for Rossi,
 24 then I could put -- that's why it depends crucially
 25 on -- on -- on information. So your statement is

5 (Pages 17 to 20)

<p style="text-align: right;">Page 21</p> <p>1 very strong.</p> <p>2 Q. Okay. You've been told that at least 400</p> <p>3 were left out, haven't you?</p> <p>4 A. That's what I've read in a Seattle Times</p> <p>5 report.</p> <p>6 Q. Okay. And did you do anything to check to</p> <p>7 see how that affected your outcome?</p> <p>8 A. Actually, I need more than just knowing that</p> <p>9 there were 400 felons. What I would need to know is</p> <p>10 whether those 400 invalid ballots -- I would</p> <p>11 actually need to know their geographical</p> <p>12 distribution, which I have not been provided.</p> <p>13 Q. Okay. And that was a -- as far as you know,</p> <p>14 decision made by Mr. Braden and Mr. Benson not to</p> <p>15 provide you with that?</p> <p>16 A. Again, we -- I think we're waiting to</p> <p>17 actually clear the list, so --</p> <p>18 Q. Oh.</p> <p>19 A. I don't have that data. All I have is the</p> <p>20 report.</p> <p>21 Q. Now, it would also be true, wouldn't it,</p> <p>22 that you cannot say as a matter of generally</p> <p>23 accepted science that the invalid voters, in fact,</p> <p>24 voted the same as their precinct?</p> <p>25 A. No. That's a -- that's a homogeneity</p>	<p style="text-align: right;">Page 23</p> <p>1 based on the Uggen & Manza article?</p> <p>2 A. What I'm saying is, as I -- like I put out</p> <p>3 in my report, as I stated, I think, pretty clearly</p> <p>4 in my report, that is one additional piece of</p> <p>5 confirming evidence.</p> <p>6 Q. That's the only other piece of evidence;</p> <p>7 correct?</p> <p>8 A. That's right. We have -- we have a large</p> <p>9 number of precinct votes, and we have their one</p> <p>10 study. That's the only one I'm aware of.</p> <p>11 Q. And you looked for others?</p> <p>12 A. I -- as best -- I did do a library search,</p> <p>13 as best I could. It wasn't exhaustive.</p> <p>14 Q. Okay. And the article that you're referring</p> <p>15 to says that any questions about the study should be</p> <p>16 directed to Professor Manza, doesn't it?</p> <p>17 A. Correct.</p> <p>18 Q. And did you contact Professor Manza?</p> <p>19 A. No. I didn't have any questions about their</p> <p>20 study.</p> <p>21 Q. Okay. Would it surprise you to know that</p> <p>22 Professor Manza thinks you cannot make any</p> <p>23 assumption what happened in Washington from his</p> <p>24 data?</p> <p>25 A. Since I haven't any interest -- since I do</p>
<p style="text-align: right;">Page 22</p> <p>1 assumption that we -- that this -- we make all</p> <p>2 sorts of homogeneity assumptions. That isn't what</p> <p>3 we've made in this case, in this analysis.</p> <p>4 Q. And have you tested that assumption in any</p> <p>5 way?</p> <p>6 A. Yes. My -- well, in fact, so my estimate,</p> <p>7 for example, for felons, which is the class of</p> <p>8 individuals -- the largest set of invalid ballots,</p> <p>9 we actually have some independent research on.</p> <p>10 So the -- I don't know the exact figure</p> <p>11 without looking it up, but -- but my estimate is</p> <p>12 probably 60 odd percent of them were estimated to</p> <p>13 have voted for now Governor Gregoire. And if you --</p> <p>14 taking the Uggen & Maz- -- Mazda --</p> <p>15 Q. Manza.</p> <p>16 A. -- Manza analysis there, their estimates for</p> <p>17 voting in other races -- they had more detailed data</p> <p>18 than I had -- put the probably voting for Democratic</p> <p>19 candidate at about 70 to 85 percent.</p> <p>20 So -- so in that instance -- and that's a</p> <p>21 conservative estimate, and it goes against the --</p> <p>22 the analysis. So that gives me some confidence in</p> <p>23 it, but I do not know.</p> <p>24 Q. Are you telling your peers in the profession</p> <p>25 that you can say your estimate is conservative,</p>	<p style="text-align: right;">Page 24</p> <p>1 not know the gentleman I have had no contact with</p> <p>2 him, and I don't have any personal knowledge of</p> <p>3 that --</p> <p>4 Q. Okay. It doesn't surprise you though that</p> <p>5 he would say that there's nothing in his study that</p> <p>6 would tell you that Washington voters -- Washington</p> <p>7 felon voters voted overwhelmingly for Governor</p> <p>8 Gregoire?</p> <p>9 A. It would actually surprise me, given his</p> <p>10 estimate. Of course, he is free to tell you what he</p> <p>11 likes. I don't know. I have no way of knowing</p> <p>12 what he thinks.</p> <p>13 Q. Okay. How closely did you look at his</p> <p>14 study?</p> <p>15 A. I've -- I've read it. I know -- and I</p> <p>16 know -- I know the data -- most of the data sources</p> <p>17 that he used.</p> <p>18 Q. Okay. Who were the women candidates that</p> <p>19 were supported by the ex-felons or felons in his</p> <p>20 study?</p> <p>21 A. There are, as far as I know, no women</p> <p>22 candidates, but there are -- might be some in the</p> <p>23 Senate races. I didn't look at all the exhaustive</p> <p>24 Senate races.</p> <p>25 Q. Okay. What were the African-American</p>

6 (Pages 21 to 24)

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1 percentages of the states where this strong
 2 Democratic bias was shown as to felons?
 3 A. Again, I -- it was probably higher than
 4 Washington, given what cursory knowledge I know of
 5 the demographics of Washington.
 6 **Q. Two or three times as high?**
 7 A. I -- I don't know -- I don't feel
 8 comfortable putting a magnitude on it.
 9 **Q. Okay. You didn't do any adjustment for**
 10 **that?**
 11 A. No. I -- I -- as a benchmark, my estimate
 12 was significantly lower than theirs, so --
 13 **Q. Okay. Did you look at the table they**
 14 **provided that discussed which of the various**
 15 **socioeconomic factors were most correlated with --**
 16 **with voting demographics?**
 17 A. Again, personally, I don't have -- I don't
 18 have an exact memory of it.
 19 **Q. Okay. So let me go back to the question.**
 20 **Under the generally accepted standards of**
 21 **your science, can you say that you can tell how an**
 22 **individual voter voted, based upon the surrounding**
 23 **precinct and the Uggen & Manza study?**
 24 A. We can make an estimate of that.
 25 **Q. Okay.**

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1 A. There's uncertainty. I don't know for
 2 certain how anyone voted. All I can do is the
 3 data -- I can say what's the data consistent with.
 4 **Q. Okay. And -- and did you -- did you measure**
 5 **the amount of uncertainty in that assumption?**
 6 A. Again, I don't follow you -- what you mean
 7 by "measuring the uncertainty." Measuring
 8 uncertainties about assumptions -- when there is
 9 uncertainty about one's estimates.
 10 **Q. Okay. So for assumptions and hypotheses,**
 11 **you test them in other ways?**
 12 A. For those that are testable.
 13 **Q. Okay. And was this one testable?**
 14 A. No. We don't have any further data in -- in
 15 Washington, so there's -- homogeneity assumption, I
 16 think or interchangeability assumption is -- is a
 17 part of my analysis. So there's -- without other
 18 data, I can't verify or not.
 19 **Q. Okay. So under generally accepted standards**
 20 **of your profession, could you reach a factual**
 21 **conclusion about how individual voters voted, based**
 22 **upon the data you have?**
 23 A. You can make estimates of how individuals
 24 likely voted, and that's what I did.
 25 **Q. And -- but you can't tell me how accurate or**

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1 inaccurate that likelihood is?
 2 A. Sure I can. That's why there -- there are
 3 confidence intervals in my estimate.
 4 Given the model, my -- my model predicts
 5 both a point estimate -- that is, a likelihood that
 6 a particular voter or group of voters voted a
 7 particular way, and -- and are likely confident
 8 around that -- actually, it's not how individual
 9 voters, but strictly how the analysis does it -- it
 10 asks, how many, what number of felons from this set
 11 of 1,183 -- I think that's the correct number --
 12 **Q. Okay.**
 13 A. Are --
 14 **Q. Invalid --**
 15 A. -- invalid voters.
 16 **Q. I think what I'm hearing from you is that**
 17 **the assumption is part of what you just said you**
 18 **measured in terms of confidence level?**
 19 A. No. Again, I think you're being -- what --
 20 what the model is -- is given my -- my model, my
 21 assumption about how the world works, that leads
 22 to -- since I don't know individuals, I have some
 23 uncertainty about how I might assemble those 1,183
 24 invalid ballots, given the observed data.
 25 And there is some -- I don't know that for a

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1 fact, since I don't know how the 1,183 voted. So
 2 what the model gives me is a range of plausible
 3 values.
 4 **Q. But that range merely reflects the potential**
 5 **randomness of the data; correct?**
 6 A. Again, I think you're being not specific
 7 enough for my taste.
 8 **Q. Tell me what the range measure.**
 9 A. What the range measures is, given this model
 10 and given the data, it tells us what the ranges are
 11 of our estimate.
 12 **Q. So it doesn't -- the confidence level that**
 13 **you're talking about does not measure how accurate**
 14 **the model is in predicting how people vote?**
 15 A. That is correct.
 16 **Q. And it does not measure how accurate the**
 17 **data is or reliable or valid; correct?**
 18 A. Right. It's conditional on the data, is
 19 what we would say formally.
 20 **Q. So what I'm inarticulately trying to get at**
 21 **is, how do we find out how accurate your model is,**
 22 **your assumption that you can predict what this, how**
 23 **this group of voters voted, from their surrounding**
 24 **precincts?**
 25 A. Again, that's -- that's -- given the data we

7 (Pages 25 to 28)

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1 have, that's the only model we can put forward.
 2 With other data, you might be able to test that
 3 specification, but --
 4 **Q. Okay.**
 5 A. -- but given the available data, that's
 6 currently -- that's not a testable proposition.
 7 **Q. Okay. And what other data did you consider**
 8 **getting in order to have a testable proposition?**
 9 A. We talked about trying to get more
 10 individual data on felons. But that is not yet
 11 available.
 12 **Q. Okay.**
 13 A. And I don't know if it is available, I
 14 mean --
 15 **Q. Did you look at any polling, exit polling,**
 16 **or the like?**
 17 A. No, I didn't. Again, for the -- I know of
 18 no exit poll, for example, that asks, "Are you an
 19 invalid voter?"
 20 **Q. But you do know of exit polls that ask of**
 21 **African-American voters, "Did you vote for Christine**
 22 **Gregoire?"**
 23 A. They -- they might -- I don't know in
 24 Washington. I would -- I would -- I would be
 25 surprised if there were not exit polls, and they did

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1 not, in fact, ask their race in that question.
 2 **Q. Right. And sex.**
 3 A. Although I'd be concerned about exit polls,
 4 exit polls as we -- as we saw with 2004 -- 2004
 5 election, there's actually a lot of work to go from
 6 an exit poll to a prediction about behavior.
 7 They're not -- they're -- they're very complicated
 8 sampling structures --
 9 **Q. Okay.**
 10 A. -- particularly in a state like Washington,
 11 where you have a large number of non-polling place
 12 voters.
 13 So you have to ask, how do the -- how do the
 14 polls adjust for that -- nonresponsive and the like,
 15 so --
 16 **Q. If you were faced with an important decision**
 17 **in your personal life that had real world**
 18 **consequences, and you had to be very certain that**
 19 **you would be right, would you base it upon this**
 20 **hypothesis that you're using in this case, that you**
 21 **can predict how actual voters actually voted, based**
 22 **upon the surrounding precinct?**
 23 A. I think it's a very odd hypothetical. And
 24 so what I would tell you -- and how I lead my life
 25 is I would base my decision on the best available

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1 data I have. This is the best available data. I
 2 would make my best estimate and take a course of
 3 action based on that.
 4 **Q. Well, this isn't the best available data in**
 5 **the universe of data; correct?**
 6 A. Of course not. I can always go -- I mean,
 7 the ideal world, I don't need a possible -- we'd
 8 know exactly how these 1,183 people exactly --
 9 exactly voted.
 10 **Q. But if -- if you had time and you had the**
 11 **resources and you were doing this to make a very**
 12 **important decision, you would look at other data,**
 13 **wouldn't you?**
 14 A. It's potential that I would look at other
 15 data if -- if I think that other data is available.
 16 I mean, I'm not -- I actually mentioned in this
 17 paper there's not much other data available, that I
 18 would reliably believe.
 19 **Q. So what you're saying is we should make a**
 20 **very important real world decision, based upon this**
 21 **data set, just because it's the one that we were**
 22 **given?**
 23 A. That's a question of law for a court to
 24 decide. I present evidence to the court, and the
 25 court weighs whether that evidence is sufficient to

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1 make a decision.
 2 **Q. Under the generally accepted standards of**
 3 **your profession, can you say without knowing whether**
 4 **the data set is accurate and without testing your**
 5 **assumption that invalid voters caused the election**
 6 **of Christine Gregoire --**
 7 A. I think you've asked that question. I'll
 8 answer it again the same way --
 9 **Q. No --**
 10 A. -- which is --
 11 **Q. No. No. Don't -- don't -- do not**
 12 **affirmatively repeat what they've done. Answer my**
 13 **question --**
 14 MR. BRADEN: Wait a second. You asked him a
 15 question. Let him respond to it.
 16 THE WITNESS: My -- as I said, my
 17 analysis -- I had one bit of this case -- my
 18 analysis was asked a very specific question. Given
 19 a set of 1,183 ballots, if that were the only thing
 20 that determined the election outcome, what would
 21 have been the likely outcome, had I removed them.
 22 I was asked a very specific question.
 23 BY MR. BURMAN:
 24 **Q. And the lawyers who -- and in fact**
 25 **Mr. Braden said he represents you -- have**

8 (Pages 29 to 32)



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1 represented to the court certain things about what
 2 your study proves.
 3 **Are you -- have you read those?**
 4 A. I haven't -- to be honest with you, I don't
 5 have time. I don't read the plethora of briefs
 6 in -- in this case, so I honestly don't -- have not
 7 read what they said about my report.
 8 **Q. Well, does -- does your report establish**
 9 **that the method that you used is the best method for**
 10 **determining who actually won the 2004 election?**
 11 A. It is -- given my professional experience it
 12 is my belief the best way to go about answering that
 13 particular question.
 14 **Q. If limited to this data set?**
 15 A. With this data set. Again, this is
 16 conditional on the data set I have.
 17 **Q. Okay. But they didn't condition it in their**
 18 **brief. They didn't say it's conditioned on the**
 19 **limited data you were given?**
 20 A. Again, I have no knowledge of this -- of
 21 what --
 22 **Q. Is this --**
 23 A. -- what they said or what they don't say.
 24 **Q. Is this the best way of determining -- not**
 25 **limited by the data you were given, but is this the**

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1 **best way of determining who won the 2004 election?**
 2 A. Again, that's a too broad a hypothetical
 3 since I don't know what your budget constraint is, I
 4 don't know what the feasible set of available data.
 5 Given the data, this is the best estimate I can
 6 make.
 7 **Q. And certainly you would have put those**
 8 **caveats on it before saying this is the best way to**
 9 **do it?**
 10 A. I'm a social scientist answering -- using
 11 general sets of scientific principles. What lawyers
 12 make claims of in court is -- they're asking a
 13 different -- they're looking at a different
 14 audience, trying to do different things.
 15 **Q. You wouldn't say this is the best method,**
 16 **without applying the caveats you've just testified**
 17 **to; correct?**
 18 A. Again, the caveats are -- I -- I -- yeah,
 19 let me -- let me actually -- again, to be clear,
 20 what -- what -- what my report says is, given this
 21 data, given what we have available, this is our best
 22 estimate.
 23 **Q. You wouldn't say that this is the only**
 24 **rational method for determining who won the 2004**
 25 **election, would you, or whether invalid votes**

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1 **affected the outcome of the 2004 election?**
 2 A. I would say that I haven't thought about all
 3 these, and what other data might be available to
 4 other analysts, so I don't feel comfortable, in
 5 fact, agreeing with that statement.
 6 **Q. Okay. And because you haven't thought of**
 7 **them, you would not say that all rational methods**
 8 **would indicate a change in the outcome?**
 9 A. Again, that's beyond my knowledge, since
 10 I --
 11 **Q. And you wouldn't say that the methodology**
 12 **you used is, quote, the most accurate possible,**
 13 **would you?**
 14 A. Again, since we don't know the set and
 15 available datas, we don't know -- given this data
 16 set, what I did -- given the set up, this is the
 17 right way to proceed.
 18 **Q. Right.**
 19 **And if you were set up, you're in trouble,**
 20 **aren't you?**
 21 A. Again, I -- there's -- again, I don't -- I
 22 don't agree with your proposition, which is "set
 23 up."
 24 I was asked, given a data set, what's the
 25 likely outcome. So that's what --

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1 **Q. And you assumed that that was an exhaustive**
 2 **census?**
 3 A. I made no -- my report made no assumption.
 4 It was conditional on this data.
 5 **Q. You actually don't know yourself whether**
 6 **these identified invalid voters voted in the 2004**
 7 **governor's election, do you?**
 8 A. Again, that's -- that's beyond my knowledge.
 9 I was given a set -- this is the set -- that these
 10 were invalid voters who voted, and here are the
 11 precincts in which they voted.
 12 **Q. And I think we've established this, but just**
 13 **to be clear, you cannot say as a matter of generally**
 14 **accepted science that your assumption or hypothesis**
 15 **about precinct proportions accurately shows how**
 16 **actual people actually voted?**
 17 A. Again, I disagree with your set up. I'll be
 18 much more specific than that. What it says is,
 19 given the available data, that is our best estimate,
 20 and that estimate has some uncertainty.
 21 With other data it might be possible to make
 22 more precise -- or estimates.
 23 **Q. I mean, at most, under generally accepted**
 24 **science, you can say that you believe there is some**
 25 **positive correlation between an ex-felon or other**



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1 **invalid voter's home precinct and how they voted?**

2 A. Yes. As -- as -- as, you know, I said
3 earlier, that's a commonly -- unfortunately, we
4 often make -- we make those types of assumptions all
5 the time.

6 **Q. But not when huge real world consequences
7 depend on them; correct?**

8 A. I -- well, again, it depends on your view,
9 whether or not you think that's a huge
10 consequential --

11 **Q. Well, we'll get to those. We'll get to
12 those.**

13 **And you don't know the extent to which --
14 you don't know the strength of that positive
15 correlation between the precinct vote proportion and
16 how the individual voter voted, do you?**

17 A. Again, I don't quite follow you. We don't
18 observe individual voters. That's not a notable
19 quantity.

20 **Q. Well you analyzed 1,100-some individual
21 voters; correct?**

22 A. 1,183, I believe, is the correct number --
23 or 63. And so -- but we don't know anything about
24 those individuals. We know how they -- we know the
25 precincts they came from, and we know -- actually,

1 it's about the precincts from which they came. And
2 we know, for example, correlations between the
3 precincts -- say, vote for Gregoire.

4 **Q. But you don't know the strength of the
5 correlation between how all those precincts voted
6 and how the 1,183 actually voted, do you?**

7 A. Again, I think since -- that's -- that's --
8 we don't have that data, so we don't know that, but
9 that's not quite the way I would put it.

10 **Q. I mean, if we were looking forward to the
11 2006 election, can you predict how I vote from my
12 precinct?**

13 A. I could make an -- if that was the only bit
14 of information I have, that would be my best
15 estimate.

16 **Q. Okay. And to what level of accuracy would
17 that estimate be?**

18 A. The variance would be plus -- if your
19 precinct voted, say, 6 percent for Gregoire, it
20 would be -- the variance would be "T" times one
21 minus "P," which is -- I'm terrible doing
22 calculations in my head -- and that would be our
23 relevant uncertainty.

24 If you told me more information about you,
25 that you -- you know, some more information about

1 your demographic background, I might be able to make
2 a more accurate estimate.

3 **Q. And that would include gender?**

4 A. Perhaps, yeah.

5 **Q. Race?**

6 A. Again, any -- any -- any factor which we
7 know is correlated with voting behavior would
8 improve our estimates.

9 **Q. I mean, social scientists are capable of
10 looking at 1,183 people and finding out their gender
11 and race, aren't they?**

12 A. You're asking abstractly. Perhaps one could
13 go to the data, go to the list and find out.

14 **Q. So you -- when you say the available data,
15 you're not trying to suggest that your discipline is
16 incapable of finding out the gender and race of
17 1,183 people?**

18 A. But you need more than that, actually. If
19 you -- if you're going to go to available data, you
20 need to know how in a particular election -- 'cause
21 as you know, between elections, gender, race,
22 socioeconomic status varies.

23 So you -- you'd want some sample of people,
24 and you would want to use very much like the Uggem &
25 Manza study, which was to fit them all to particular

1 elections of how these demographic characteristics
2 correlated with moot vote choice.

3 **Q. And then you fit that model to a different
4 election; correct?**

5 A. Potentially.

6 **Q. You did or didn't?**

7 A. No. You could.

8 **Q. I mean, did you --**

9 A. In this case, no, I didn't.

10 **Q. So you haven't actually applied the Manza &
11 Uggem model to the Washington election?**

12 A. That's correct.

13 **Q. You could have found out or someone could
14 have found out for you income levels of the 1,183,
15 couldn't they?**

16 A. I have -- no, actually, income level is very
17 difficult to find out. It's the question that
18 people -- one of the most unanswered questions. So
19 income level is very difficult to get.

20 **Q. What about education level?**

21 A. Again, potentially, if one were to do a
22 survey -- and then you'd have to worry about
23 response rate -- but at least in theory, that would
24 be possible.

25 **Q. And if you had that information, such as**

10 (Pages 37 to 40)

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1 education, that would have allowed you to make a
 2 more accurate estimate of how these people actually
 3 voted?
 4 A. Sure. Additional information would lead to
 5 better estimates.
 6 **Q. And that would be true of gender and race as
 7 well?**
 8 A. It would be true of any information that
 9 was -- that was, in fact, accurately correlated with
 10 vote choice.
 11 **Q. Okay. Is homeownership correlated with vote
 12 choice?**
 13 A. I -- again, I don't know Washington in
 14 particular. He have from studies that home
 15 ownership is often correlated with voting -- both
 16 propensity to vote and -- and vote choice.
 17 **Q. Census tract location?**
 18 A. Again, same. Yeah, that's just -- I think
 19 census tract is actually larger than the precincts
 20 in Washington, so that would probably not provide
 21 you with as much information.
 22 **Q. Which primary ballot they took in
 23 Washington?**
 24 A. Again, any information about the voter
 25 that's correlated to voter choice would probably

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1 help.
 2 **Q. It would be at least as reasonable
 3 assumption as the one you have made, that if the
 4 voter took a Republican ballot in the primary, that
 5 they supported Rossi in the general; correct?**
 6 A. Again, I don't -- I don't know enough about
 7 Washington politics to know if that's true or not.
 8 But one -- for example, I do know of studies that --
 9 where colleagues worry about crossover voting,
 10 strategic voting.
 11 Whether or not that happened in Washington,
 12 I have no idea.
 13 **Q. And you don't know the extent to which
 14 Washington voters split their ticket even within a
 15 given election?**
 16 A. That is correct. I don't know. I don't
 17 have data on that.
 18 **Q. Okay. And you don't know the extent to
 19 which Washington voters vote for every race on the
 20 ticket?**
 21 A. No, I would not know. I imagine they're
 22 like voters in most other places. They don't vote
 23 on every -- on every -- on every -- on every
 24 measure.
 25 **Q. Okay. Now, did you ask Mr. Bensen for the**

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1 data he has that Republicans use for targeting
 2 individual voters that they think might be
 3 sympathetic to their cause?
 4 A. No, I did not.
 5 **Q. Why not?**
 6 A. I didn't know if one knew the other -- how
 7 would one help the other, and I don't know quite who
 8 they -- how I would use it.
 9 **Q. That might help determine how they voted in
 10 this election, wouldn't it?**
 11 A. Yes. But we need both that information and
 12 the information about this demographic
 13 characteristics of these 1,100 and odd invalid
 14 ballots.
 15 **Q. Well, wouldn't it be fair to assume that if
 16 we picked out one of those 1,100 odd people, and
 17 they had been identified within the Republican
 18 database as being a strong Republican supporter,
 19 shouldn't we somehow take that into account in your
 20 analysis?**
 21 A. Again, if you have that data, you -- one
 22 could make use of that information.
 23 **Q. Or if they contributed to Dino Rossi?**
 24 A. Again, that's if you had information about
 25 how contribution patterns affected vote choice.

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1 Then you could use -- construct a model. You need a
 2 lot of data --
 3 **Q. Okay.**
 4 A. -- but you could do this.
 5 **Q. And I guess I just want to make this clear.
 6 You're not representing to the court that
 7 the precinct level proportions are the only way or
 8 the best way to predict or estimate how these
 9 invalid voters voted?**
 10 A. I would -- I'm presenting the -- that's
 11 it -- it's a good way in this case, given the
 12 available data. I do worry about certain responses
 13 and -- and -- and honesty -- or correct recall, for
 14 being polite -- on these issues.
 15 And -- but it's clearly not the only thing.
 16 One -- one could think about ways to supplement this
 17 analysis.
 18 **Q. Okay. And there are ways to design surveys
 19 to kind of hide the ball from the respondent as to
 20 what it is you're really trying to learn; correct?**
 21 A. There are -- I'm not a survey expert, but
 22 I'm sure there are ways that -- that -- they do
 23 definitely try to do that.
 24 **Q. Okay. I mean, you could ask not "Did you
 25 vote for Dino Rossi?", but you could ask some**

11 (Pages 41 to 44)



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<p style="text-align: right;">Page 45</p> <p>1 questions about attitudes, and perhaps get a more 2 accurate sense of whether they, in fact, supported 3 Dino Rossi? 4 A. I'd be a little concerned about that 5 because, again, then you're adding another layer. 6 We actually care about actual behavior. What did 7 you do? 8 Q. Uh-huh. 9 A. And attitudes are just like demographic 10 characteristics. They're correlated, but not 11 perfect predictors of this. 12 Q. So because we are concerned about an actual 13 event, how someone voted, you're a little bit 14 concerned about surveys, but you don't seem at all 15 concerned about assuming that people voted like 16 their surrounding precinct. 17 A. Again, that's an -- I think that's an -- an 18 inaccurate statement. What I've said was, this is 19 -- given this available data and given this 20 administrative data, this is the best analysis I 21 believe you can do. 22 Q. But how comfortable are you with those 23 assumptions? 24 A. I feel reasonably comfortable with them. 25 I -- again, in my ideal world, we wouldn't be in</p>	<p style="text-align: right;">Page 47</p> <p>1 Q. Okay. 2 A. It actually -- there's an -- a counting 3 error, so -- 4 Q. Okay. 5 A. -- so it's not quite the same thing. 6 Q. Did -- did you use any bounds in your 7 analysis? 8 A. As I think I alluded to in my report, 9 typical method of bounds is that number of felons 10 for a precinct, that number is relatively small. 11 The bounds are not informative in this case. 12 There's no -- there's no -- you could change one 13 with another in a precinct and that wouldn't change 14 the proportions. 15 So bounds data isn't particularly useful in 16 this case. 17 Q. If I were to make an estimate based upon my 18 great expertise in this area, that the invalid 19 voters split 50-50, do you know whether or not I'm 20 right or wrong? 21 A. No. For a fact I can't know. We -- that is 22 a statistical question. If you gave me some time 23 and we looked at the data, we could ask would that 24 be consistent with the data. Yeah, that we could 25 ask.</p>
<p style="text-align: right;">Page 46</p> <p>1 court. We would know exactly how these 11- -- 1,183 2 people voted or didn't. 3 Q. How did you get comfortable with the 4 assumption that you have a complete census of 5 invalid voters, without questioning how they were 6 put together? 7 A. I don't think I ever said that I was 8 comfortable with this. What I said was my 9 analysis -- given the data set, this is the best 10 available analysis one could do. 11 Q. So your comfort level is contingent upon 12 your assumption as to the data and the hypothesis 13 about precinct proportions? 14 A. I don't -- I don't understand that last 15 part. 16 Q. The assumption that -- that precinct 17 proportions is strongly correlated without 18 individual or a group of voters voting? 19 A. It's actually more than -- it's not -- 20 that's actually, again, not a correct statement. We 21 know, in fact, there's a -- there's an accounting 22 error in math. 23 So at some level there's only certain 24 proportions that are consistent with the data. So 25 there's not correlation in a sense.</p>	<p style="text-align: right;">Page 48</p> <p>1 Q. Or another way to say it might be, can you 2 rule it out based upon the data you have? 3 A. Again, you can ask the question about the 4 faction, the number of invalids and how they voted, 5 and we can look to see if those confidence intervals 6 included the case of 50-50 split. I don't -- I 7 haven't, in fact, done that analysis. 8 Q. Okay. It's certainly possible that every 9 single one of those 1,183 or whatever invalid voters 10 voted for Dino Rossi? 11 A. I think, as I made clear, it's possible but 12 not likely, given the data. 13 Q. Okay. How likely is it that 50 percent of 14 them voted for Dino Rossi? 15 A. Again, I think that's what we said before, 16 is that's like a statement about the bounds on 17 these -- on these number of ballots that were cast, 18 and I don't know if that -- I haven't looked to see 19 if that's -- how that's -- whether or not that is 20 supported by the data or not. 21 Q. What would you do to test that? 22 A. As you -- as I -- as I made clear, so we can 23 back out these proportions. 24 Q. Which proportions? Each precinct? 25 A. Each precinct.</p>

12 (Pages 45 to 48)

1 And you can ask is it -- is it -- is it
2 consistent with the proportion in which precincts
3 that have any invalid ballots is basically 50-50.

4 **Q. If you assume that the precinct proportions
5 influence that single voter in each precinct -- I'm
6 trying to get away from the assumption.**

7 **Based on the data you have been given access
8 to, how would you test my estimate that it was
9 50-50?**

10 A. You can't test your hypothesis --

11 **Q. Okay.**

12 A. -- on that level.

13 What you can test is -- what you can test is
14 did they split the -- did they evenly split the
15 ballots. That would be the confidence intervals.

16 You would ask -- there are two confidence
17 intervals that are in my report. Do they both
18 overlap to the point where they both have equal
19 vote.

20 If they did, then that would be
21 consistent -- that means that would be consistent
22 with your claim.

23 **Q. But your confidence intervals are based upon
24 your assumption that the precinct proportions are
25 useful in determining how someone voted; correct?**

1 A. -- in the way you posit it.

2 **Q. Okay. Are there things we could do to test,
3 without -- without actually proving that it clearly
4 works, are there things we can do that gives us some
5 better sense of how accurate it is?**

6 A. Again, it's potential. You'd have to tell
7 me what data was available. If you were to give me
8 such data, I'm happy to sit down for a couple days
9 and think about it, but --

10 **Q. Without making any assumptions about either
11 the accuracy of the data or the fit of your model
12 with the real world, are you highly confident that
13 you can say that invalid votes affected the vote of
14 the 2004 gubernatorial election in Washington?**

15 A. What I said is that if this 1,183 ballots
16 were the ones -- are the exhaustive set -- if you
17 remove those 1,183, and this was the only issue in
18 Washington, then in all likelihood, Rossi would have
19 won.

20 **Q. Right.**

21 **But the answer to my question is no, you are
22 not sure; correct?**

23 A. Again, that's not -- that's not a question
24 I'm comfortable -- I can answer.

25 **Q. No, I can make you answer.**

1 A. That's incorrect. You're asking to verify
2 a model, which I've told you -- as I told you, we
3 need other data to verify.

4 **Q. So I just want to make sure.**

5 **Without making any assumptions about the
6 validity of that model, do we have any way of
7 knowing whether it was 50-50 or 60/40 or 40/60?**

8 A. Again, my -- I -- I don't quite follow you.
9 What I -- what I can tell you is my analysis is
10 conditional on the model and on the data -- and
11 conditional -- it's not with them getting an even
12 split --

13 **Q. Okay.**

14 A. -- of the -- of the votes of the invalid
15 ballots.

16 **Q. And I apologize for being so dense, but I
17 have to make sure I ask the right questions for my
18 colleagues.**

19 **Have we tested the model as to whether it
20 actually shows how the 1,180-some voters actually
21 voted?**

22 A. Without actually knowing the quantity we
23 want to know, which is how they voted, it's not
24 directly testable --

25 **Q. Okay.**

1 A. Well, I'm answering it as best I can.

2 **Q. No, you're not.**

3 MR. BRADEN: Well, he just responded to your
4 question.

5 MR. BURMAN: No, he's restating his
6 assumptions.

7 BY MR. BURMAN:

8 **Q. And I'm asking, without relying on the
9 assumptions, as a human being, looking at the actual
10 world and applying your expertise, without relying
11 on any assumptions, can you say it is highly
12 probable that invalid felon votes changed the
13 outcome?**

14 A. Again, I'm not -- I'm not -- I'm not
15 comfortable with your proposition. I'm -- you're --
16 I was asked in this case to analyze data as an
17 expert. I analyzed the data and I told you here in
18 my findings what -- you're asking me a question
19 about a finding of fact or law that a court needs to
20 find. That's not my expertise.

21 **Q. No. That's not what I'm asking you.**

22 **I'm asking you whether a court can rely upon
23 what you've done in order to answer that ultimate
24 question.**

25 A. This is evidence that bears to that

13 (Pages 49 to 52)

