

Transcript of the Testimony of

JEFFREY ZAX, PH.D.

March 19, 2014

Colorado Outfitters Association, et al.

vs.

John W. Hickenlooper

Carrie A. Arnold, R.P.R., C.R.R.

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO

Civil Action No. 13-CV-1300-MSK-MJW

DEPOSITION OF: JEFFREY ZAX, Ph.D. - MARCH 19, 2014

COLORADO OUTFITTERS ASSOCIATION, et al.,
Plaintiffs,

v.

JOHN W. HICKENLOOPER, Governor of the State of Colorado,
Defendant.

PURSUANT TO NOTICE AND AGREEMENT, the deposition of JEFFREY ZAX, Ph.D., was taken on behalf of the Plaintiffs at 1600 Stout Street, Suite 500, Denver, CO, on March 19, 2014, at 9:00 a.m., before Carrie A. Arnold, Registered Professional Reporter, Certified Realtime Reporter, and Notary Public within Colorado.

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Also Present: None

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2 INFORMATION REQUESTED:
3 (None)

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1 WHEREUPON, the following proceedings were
2 taken pursuant to the Federal Rules of Civil Procedure.

3 JEFFREY ZAX, Ph.D.,
4 having been first duly sworn to state the whole truth,
5 testified as follows:

6 EXAMINATION

7 BY MR. KRUMHOLZ:

8 Q. Good morning, Professor. It's nice to see you
9 again.

10 A. Good morning. Thank you.

11 Q. I've got an exhibit to show you.

12 (Deposition Exhibit 6 was marked.)

13 Q. (BY MR. KRUMHOLZ) Professor, have you seen
14 this before, Exhibit 6?

15 A. No.

16 Q. I didn't think you had. Let me give you some
17 context for it. Over the holidays both sides exchanged
18 lists of what our respective experts' opinions were
19 going to be. And so this is what we received from
20 Mr. Grove concerning, among other things, what your
21 opinions were going to be.

22 So if you could take a look at page 1, which
23 contains your opinions, and tell me if the four
24 opinions listed there look right to you.

25 A. First, my name is misspelled. Therefore, I

1 cannot be certain that this is attributed to me.

2 Second, I believe that points 2, 3, and 4 are not
3 relevant to the subject of today's deposition. I'm
4 uncertain as to whether or not I should respond.

5 **Q. Well, unless -- and I appreciate that, Professor.**
6 **Unless Mr. Grove tells you not to, you can go ahead and**
7 **respond.**

8 A. Thank you. Point 1 is part of my expert opinion.
9 Point 2 is part of my expert opinion. Point 3 is part of my
10 expert opinion. Point 4 is part of my expert opinion.

11 **Q. Thank you. Is there anything you would add beyond**
12 **these four points, based on your opinion and supplemental**
13 **opinion?**

14 A. I'm not sure how to answer that, because as I
15 understand the proceedings, the opinions that I offer will
16 be elicited by the questions that I'm asked. I'm not in a
17 position to anticipate what the range of questions might be.

18 **Q. Well, my question was qualified by whether there's**
19 **anything beyond what's listed there, based on your**
20 **supplemental -- your report and your supplemental report.**
21 **So based solely -- I understand your answer.**

22 **Based solely on your report and your supplemental**
23 **report, is there anything that you would add?**

24 MR. GROVE: You know, we can stipulate that the
25 supplemental report that you guys have that this deposition

1 is going to cover relates solely to opinion 1.

2 MR. KRUMHOLZ: Professor Zax indicated that.

3 That's fine.

4 Q. (BY MR. KRUMHOLZ) Professor, let me ask you, how
5 did Mr. Grove misspell your name?

6 MR. GROVE: I'd like to know that too.

7 A. It's R-E-Y. Almost no one spells it E-R-Y.

8 MR. GROVE: My apologies.

9 THE DEPONENT: Thank you.

10 Q. (BY MR. KRUMHOLZ) All right. You were going to
11 say something.

12 A. I have some concerns about the quality of the
13 expert evidence presented by Professor Kleck that are
14 probably subsumed in these four points, but that might be
15 categorized as something additional.

16 Q. I appreciate that. Let me hand you Exhibit 7.

17 (Deposition Exhibit 7 was marked.)

18 Q. (BY MR. KRUMHOLZ) Professor, this is again, I
19 presume, an e-mail that you have not seen before.

20 A. That's correct.

21 Q. Okay. Then for context, this is an e-mail from
22 Mr. Grove to me, among others, in which he attached several
23 documents that will be the subject of today's deposition.
24 So I want to read to you the first sentence. He says, I am
25 attaching additional documents that we have provided to

1 Dr. Zax for statistical analysis.

2 And so the first paragraph refers to information
3 about burglaries and home invasions in the city and county
4 of Denver from January to November 2012. And then the
5 second paragraph refers to what we'll call the Virginia
6 Firearms Clearinghouse data.

7 Is it your understanding that these are
8 the -- this is the data that we are here to discuss today?

9 A. It's my understanding that we're here to discuss
10 the Virginia Firearms Clearinghouse and the analysis that I
11 performed thereon.

12 Q. Okay. So we'll get to the Denver data, and that
13 might take two minutes to talk about because you may not
14 have done anything with it.

15 So let's turn to the Virginia stuff. Mr. Grove
16 says in his e-mail in the second paragraph, the records are
17 pertinent -- meaning the Virginia records -- are pertinent
18 to Dr. Zax's opinions concerning the likely effect of
19 HB-1224 on LCM numerosity as well as Dr. Kleck's rebuttal on
20 this point.

21 Does that sound accurate to you, Professor Zax?

22 A. Yes.

23 Q. Is the Virginia material pertinent to anything
24 else beyond what Mr. Grove mentioned in this e-mail?

25 A. I don't think so.

1 Q. Okay.

2 (Deposition Exhibit 8 was marked.)

3 Q. (BY MR. KRUMHOLZ) Let me give you Exhibit 8,
4 which I believe might be something you actually have seen.
5 Can you identify Exhibit 8?

6 A. Yes.

7 Q. What is it?

8 A. This is the report that I prepared based on my
9 analysis of the data that I obtained from the Virginia
10 Firearms Clearinghouse.

11 Q. Did you prepare this, Professor, specifically for
12 this case?

13 A. Yes.

14 Q. When did you complete it?

15 A. Sometime in December, I believe.

16 Q. There are some additional exhibits I want to get
17 in front of you because I think having them all at the same
18 time will make it easier to go through your analysis. And I
19 apologize for this. It is what it is.

20 I'm going to hand you Exhibit 9.

21 (Deposition Exhibit 9 was marked.)

22 MR. KRUMHOLZ: Mr. Grove might be able to see it.
23 I don't know if anyone else in the room can.

24 Q. (BY MR. KRUMHOLZ) Professor, this is one of the
25 spreadsheets that we received from Mr. Grove. I believe

1 **this is one of about 20 going from 1993 until 2013. The one**
2 **that I've just handed you is the 1995 spreadsheet.**

3 MR. GROVE: For the record, I'm not sure they went
4 through 2013, although I might be incorrect about that.

5 Dr. Zax, do you remember?

6 THE DEPONENT: I believe I had -- I believe I
7 obtained files that went through 2013. I only used files
8 that went through 2010 for my analysis.

9 MR. GROVE: Okay. My apologies.

10 **Q. (BY MR. KRUMHOLZ) Professor, this is just an**
11 **exemplar. It didn't make any sense to print out every**
12 **single one of the spreadsheets. But can you tell me who**
13 **prepared these spreadsheets?**

14 A. First, I am not in a position to verify that this
15 is the same spreadsheet. It appears to be. It is of the
16 form of the spreadsheets that I used, and the individual
17 data items indicate that this data is from 1995. But I
18 cannot guarantee that this is the spreadsheet that I used
19 for my analysis.

20 At the same time, I'm not -- I don't see any
21 reason to dispute that.

22 **Q. Thank you.**

23 A. Now, having said that, could you repeat your
24 question, please.

25 **Q. Yes. Who prepared these spreadsheets?**

1 A. These spreadsheets came to me directly in this
2 form from an official of the State of Virginia whose
3 specific title and specific office of employment I cannot
4 recall.

5 **Q. Okay. I couldn't tell, reviewing the**
6 **spreadsheets. Is there a particular order in which each of**
7 **the reports is listed in those spreadsheets? It's not by**
8 **date, as far as I can tell.**

9 A. I believe you are correct that the original
10 spreadsheet does not have an ordering. In any analysis that
11 I would have made, I would have imposed the appropriate
12 order myself prior to processing.

13 **Q. Is there an appropriate order for the purposes for**
14 **which you used the data?**

15 A. In this case, no.

16 **Q. Okay. So you received the spreadsheets for each**
17 **year from '93 to 2013. Did you receive any other data from**
18 **Virginia?**

19 A. No. Only the documentation.

20 **Q. Okay.**

21 A. The accompanying documentation.

22 **Q. Oh. What documentation do you mean?**

23 A. It consisted solely of a copy of the form that
24 Virginia law enforcement agencies are required to complete
25 when they confiscate a firearm.

1 Q. I see.

2 (Deposition Exhibit 10 was marked.)

3 Q. (BY MR. KRUMHOLZ) And is Exhibit 10 what you're
4 talking about, Professor Zax?

5 A. Yes.

6 Q. And so Exhibit 10 is a blank form that the
7 officers used to provide the information that ultimately
8 ended up in those spreadsheets?

9 A. That's my understanding.

10 Q. Okay. So you did not receive the underlying
11 reports themselves that were used to produce the
12 spreadsheets; right?

13 A. Are you speaking of these -- the reports that
14 would have consisted of this document completed?

15 Q. Yes, sir.

16 A. No. I did not receive the original documents, nor
17 would I have wished to.

18 Q. Well, how many documents would that have been?

19 A. Tens of thousands.

20 Q. How did you go about obtaining this data?

21 A. I became aware of its existence through two
22 articles published in the Washington Post in which a
23 reporter analyzed these data. I corresponded with the
24 reporter regarding the source of the data. He was not
25 allowed to transmit that data to me himself, but he

1 identified the Virginia Department of State Police as the
2 original source of the data.

3 I accessed the website of this department and
4 discovered that the data were now available to the public
5 for a processing fee.

6 I had a brief correspondence via e-mail with the
7 official in charge of distribution, after which I sent them
8 a personal check for \$110 and soon thereafter received an
9 e-mail containing the spreadsheets that have been conveyed
10 to you.

11 **Q. Thank you. Did you have an understanding of why**
12 **the reporter wasn't able to provide it to you directly?**

13 A. Yes.

14 **Q. Why?**

15 A. He had obtained them several years ago. At the
16 time, they were not publically available. He was required
17 to file a Freedom of Information Act proceeding in order to
18 obtain them. Apparently -- and as a stipulation on his
19 possession of them, he was required to maintain their
20 confidentiality.

21 Apparently, in the subsequent years, the Virginia
22 Department of State Police had decided to make those data
23 more readily available. That was quite a surprise to the
24 reporter. And I sensed some regret on his part regarding
25 the effort to which he had gone compared to the effort

1 required of me.

2 Q. How many times did you speak with this reporter?

3 A. Perhaps one phone call and three e-mails.

4 Q. Okay.

5 A. Something on that order.

6 Q. And during your one phone call, did the subject of
7 this case come up?

8 MR. GROVE: Objection, calls for hearsay.

9 A. I don't think so.

10 Q. (BY MR. KRUMHOLZ) I apologize if I already asked
11 this. When did you ultimately receive the spreadsheets from
12 Virginia?

13 A. Sometime in November, I believe. I could verify
14 that, but that's my memory.

15 Q. Let's go back to the blank report, Doctor. And
16 just for the record -- we all understand this, but each of
17 the boxes on the report are numbered.

18 A. Yes.

19 Q. And is it correct that each of those numbered
20 boxes then correspond to the number of columns on the
21 spreadsheet?

22 A. That's my understanding.

23 Q. Okay. Now, with respect to the reports that are
24 actually filled out, what is your understanding -- well, do you have
25 an understanding of who actually fills out the individual

1 **reports in Virginia?**

2 A. I have a surmise; whether or not that qualifies as
3 an understanding.

4 **Q. I appreciate that qualification. What is your**
5 **surmise, then?**

6 A. My surmise is that either the confiscating officer
7 or some closely related colleague would be responsible for
8 filling this out.

9 **Q. Okay. Let's turn, then, to your regression**
10 **analysis, your five-page analysis. And, Doctor, if you**
11 **could just state for the record very briefly what your**
12 **analysis of the data showed concerning the impacts of the**
13 **federal ban in Virginia.**

14 A. My analysis demonstrates that the federal ban, as
15 we can call it, initially elevated the proportion of
16 confiscated firearms that were equipped with large-capacity
17 magazines. But during the course of the ban, that
18 proportion rose slightly and then began to decline
19 substantially, such that in the last several years of the
20 ban, the proportion of confiscated firearms equipped with
21 large-capacity magazines was less than it would have been in
22 the absence of the ban and, in fact, was declining rapidly.

23 **Q. Thank you. And does your analysis suggest**
24 **anything about what the ban would have done in future years,**
25 **had it not expired in 2004?**

1 A. Yes.

2 **Q. What does it suggest?**

3 A. It predicts that the proportion of firearms
4 equipped -- of confiscated firearms equipped with
5 large-capacity magazines would decline at an increasing rate
6 had the ban been extended.

7 **Q. Okay. Thank you. On page 1 of your report,**
8 **Professor, in the first paragraph you refer to the Koper**
9 **study -- the 2013 Koper study?**

10 A. Yes.

11 **Q. And you quote from that study the following:**
12 **Although available evidence is too limited to make firm**
13 **projections, it suggests that the ban may have reduced**
14 **shootings slightly had it remained in place long enough to**
15 **substantially reduce crimes with both LCMs and AWs. AW**
16 **standing for assault weapons.**

17 **What does your regression analysis suggest about**
18 **the conclusion that you quoted in that paragraph?**

19 A. First, the evidence that I present here is much
20 stronger than the evidence that Koper had access to, and the
21 implication that the ban reduced the proportion of
22 confiscated weapons equipped with LCMs is much stronger than
23 the evidence that Koper examined.

24 **Q. And I presume by that answer you mean to suggest**
25 **that Dr. Koper did not have any of this Virginia data?**

1 A. Certainly he did not mention that data in any way
2 in his 2013 report.

3 Q. Okay. Thank you for that clarification. So he
4 didn't mention it. Is it safe to presume that had he had
5 it, he would have mentioned it?

6 A. Based on my expertise and understanding the
7 scholarly frame of mind, I agree with that.

8 Q. Okay. In your answer in which you generally
9 summarized the results of your regression analysis, you
10 referred to the phrase "confiscated weapons"?

11 A. Yes.

12 Q. And in paragraph 2 on page 1 you have a specific
13 reference to the concept of firearms being confiscated. And
14 I wanted to ask you about that. You state in the second
15 paragraph, Beginning in 1993, the state police in the state
16 of Virginia have maintained a database that records
17 characteristics of all firearms confiscated by any law
18 enforcement agency in the state because of use or suspected
19 use in a crime.

20 So I wanted to ask you, Professor, is it your
21 understanding that every firearm listed in these
22 spreadsheets was confiscated because of use or suspected use
23 in a crime?

24 A. My understanding, as regards the contents of this
25 database, is informed entirely by footnote 2 on this page.

1 Footnote 2 is derived verbatim from the -- what I understand
2 to be the official website of the Virginia state police and
3 the web page thereon referring to the firearms
4 clearinghouse.

5 My understanding is that this footnote quotes the
6 relevant section in the Virginia code defining the role of
7 the Criminal Firearms Clearinghouse. And as I said, this is
8 the source of my understanding regarding the nature of this
9 database.

10 Q. Thank you. Is there any way from the data
11 themselves -- by "data themselves," I'm referring to the
12 spreadsheets.

13 Is there any way from the data themselves to
14 confirm your understanding based on the quoted statute in
15 the footnote?

16 A. No.

17 Q. Okay. For purposes of your opinion, Professor, do
18 you ascribe -- well, let me back up.

19 For purposes of your regression analysis, do you
20 ascribe any meaning to the fact that the firearms described
21 in the reports were used or suspected of being used in a
22 crime?

23 A. My interpretations of my regressions are based on
24 the understanding that the firearms in question have all
25 been confiscated by the Virginia Department of State Police.

1 **Q. I couldn't tell if you were done. Thank you.**

2 **So, Professor, do you infer that if the proportion**
3 **of confiscated firearms equipped with LCMs decreases, then**
4 **the overall number of crimes being perpetrated with such**
5 **firearms is also decreasing?**

6 A. That is an inference that is not unreasonable, but
7 it is -- it does require some additional assumptions.

8 **Q. What assumptions are those?**

9 A. First, and perhaps most important, is that the
10 firearms reported to the Virginia Criminal Firearms
11 Clearinghouse are all those that were confiscated, and I
12 quote, because they are believed to have been used in the
13 commission of a crime. The Firearms Clearinghouse data
14 itself does not verify that these weapons were used in a
15 crime, only that they came into possession of law
16 enforcement agencies based on the belief that they had been
17 used in a crime.

18 So the character and the distribution of firearm
19 types actually used in crimes is not knowable based on these
20 data alone. One would have to assume that it was similar to
21 the distribution of characteristics of firearms confiscated
22 under the belief that they were used in a crime.

23 **Q. Thank you. Any other assumptions?**

24 A. That's the principal one that comes to mind.

25 **Q. Okay. Let's go to paragraph 3 of your regression**

1 **analysis. And I wanted to ask you about the secular**
2 **quadratic trend. Can you, in laymen's terms, define what**
3 **the secular quadratic trend is?**

4 A. Yes.

5 **Q. What is it?**

6 A. The trend refers to the idea that over the period
7 under examination there was some natural history, so to
8 speak, regarding the possession of firearms. That is, that
9 the nature of and characteristics of firearms in the
10 possession of those present in the state of Virginia was
11 evolving in response to changes in the types of firearms
12 that were available, for example, changes in the purposes to
13 which people put firearms, changes in the prices of
14 firearms, changes in the incomes of people who might buy
15 firearms.

16 All of those various components of the environment
17 were evolving over time, and they were contributing to an
18 evolution in the nature of firearms in the possession of
19 people in the state of Virginia over the time. That's the
20 underlying idea of the trend.

21 Now, a trend in itself is ordinarily thought of as
22 a linear evolution. That is, that the change in, in this
23 case, the proportion of confiscated firearms equipped with
24 large-capacity magazines would be something that would
25 change by the same amount each year.

1 Now, that's a restrictive assumption. I have
2 allowed for the possibility that this natural history, so to
3 speak -- that this evolution was not linear, that it had a
4 more complicated form, that it could rise and fall or fall
5 and rise. That's technically what the "quadratic" in that
6 phrase refers to.

7 **Q. I see.**

8 A. If I had spoken merely of a trend, what I would
9 have meant technically was the assertion that the
10 composition of confiscated firearms changed by the same
11 amount in each year. The employment of a quadratic trend
12 allows for the possibility that that evolution was more
13 complicated.

14 **Q. Thank you, Professor. And that segues into my**
15 **next question, which is in some parts of this analysis you**
16 **refer to a "secular quadratic trend," which you just**
17 **explained. In some parts you use the phrase "secular**
18 **trend." In others you use the phrase "quadratic trend," and**
19 **in others just "trend" by itself.**

20 And so what I wanted to ask you or confirm is that
21 when you use each of those different phrases, are you
22 referring to the concept that you just described with
23 respect to the secular quadratic trend?

24 MR. GROVE: Can you point us to a specific
25 example? I'd like to put that in context.

1 MR. KRUMHOLZ: Sure.

2 Q. (BY MR. KRUMHOLZ) If we look at paragraph 3 on
3 page 1, there is a reference to an underlying secular
4 quadratic trend and then in that same line a reference to a
5 quadratic trend.

6 If you go to page 2, there's a reference to a
7 quadratic trend in the only paragraph on that page.

8 If you go to page 4, in the first full paragraph,
9 in the first line there's a reference to a secular trend.

10 And so the question is: In each of those cases
11 are you using it in the sense that you described a moment
12 ago?

13 A. I think that there are some distinctions between
14 each of these cases. It would be easier for me to answer
15 appropriately if we examine them --

16 Q. In context?

17 A. -- one at a time. So, for example, the first that
18 you speak of in paragraph 3 of page 1, I refer to a secular
19 quadratic trend. That's the trend that we just discussed.

20 Q. Yes.

21 A. And by "secular," I mean persisting throughout the
22 period under examination. So to be specific here, when I
23 refer to "secular quadratic trend," I am referring to a
24 trend that preceded from 1993 to 2010.

25 Later in this sentence I refer to a quadratic

1 trend during the ban. There I'm referring to the
2 possibility that there was a separate component to the
3 evolution of firearms -- of confiscated firearms that took
4 place only while the ban was in effect.

5 And that trend also, for the purposes of my
6 analysis, has a quadratic structure. That is, I allow for
7 the possibility that there was first a trend that
8 underlied -- underlaid the composition of confiscated
9 firearms throughout the entire period.

10 Second, I allow for the possibility that there was
11 a separate trend that overlaid that that was operative only
12 during the ban. And that separate trend also has a
13 quadratic form; that is, it has the possibility of rising
14 and falling.

15 So that's what's referred to in that paragraph.

16 Q. Okay. I tell you what, Professor. Let's -- and I
17 appreciate that explanation.

18 Why don't we -- as we get to the places where you
19 use each of those phrases, we can discuss whether you meant
20 them in a different way.

21 A. Thank you.

22 Q. Let me ask you this: You talk about the
23 unexplained remainder. And I understood your description of
24 the secular quadratic trend -- and tell me if I'm wrong, but
25 I sort of understood it as sort of market forces.

1 A. Market forces would certainly have been a
2 component of or part of what helped determine the secular
3 trend. But anything in society that might have helped
4 determine people's preferences regarding the types of
5 firearms that they wished to carry and that they wished to
6 expose to possible confiscation would have been part of
7 that.

8 **Q. Okay. Thank you. So my question then is how --**
9 **because you describe an unexplained remainder which**
10 **contributes to 10 percent of the year-to-year variation.**

11 A. Yes.

12 **Q. And I'm not sure if I understand how the**
13 **unexplained remainder is really different from the secular**
14 **quadratic trend.**

15 A. For example, I have -- I hope I've made it clear
16 that the evolution of firearms ownership is affected by many
17 things. I have, for the purposes of this analysis, chosen
18 to summarize them with only two variables; one being a
19 linear trend and the other being a quadratic trend. That's
20 obviously a dramatic reduction. So there may be that many
21 of the components that contributed to the evolution of the
22 composition of firearms ownership might not have followed
23 the patterns that are possible, that are traceable with only
24 those two variables.

25 So, for example, one way to get at that would have

1 been to try to measure the individual components to these
2 choices about firearm ownership individually. That's an
3 exercise that is well beyond the scope of anything possible
4 in this context.

5 Another possibility would have been, for example,
6 to add an additional variable, measuring the trend cubed.
7 And perhaps another, measuring the trend to the fourth
8 power.

9 So I could have designed this regression so as to
10 allow for yet more complicated evolutions. And had I done
11 so, the unexplained -- they would have then incorporated at
12 least some of that unexplained portion and reduced the
13 percent of the variation that was unexplained.

14 But we are talking about human behavior here. We
15 would never have been able to explain all of it.

16 **Q. Okay. Thank you, Doctor. One more question on**
17 **page 1. And you alluded to this earlier. Your analysis**
18 **includes the data from 1993 to 2010.**

19 A. Yes.

20 **Q. You indicate in footnote 3 that reporting**
21 **standards appear to have changed dramatically in 2011. I**
22 **wanted to ask you, how did those reporting standards appear**
23 **to have changed?**

24 A. My memory on this is not precise, but I believe
25 what I found was that the numbers of confiscated firearms

1 dropped dramatically after 2010. There was no explanation
2 for the change available within the data, and I found
3 communications with the individuals who provided the data to
4 me to be difficult to maintain.

5 In the absence of an explanation for why the
6 numbers -- the raw numbers -- the raw totals of confiscated
7 weapons dropped so dramatically, I felt it was prudent to
8 exclude those latest years from the analysis.

9 Q. Thank you. If we flip forward to page 3, you have
10 a Table 2, which includes the years you just described, 1993
11 to 2010. Did you produce a version of Table 2 that included
12 2011, 2012, and 2013?

13 A. No.

14 Q. Professor, let's flip forward to Table 2 on
15 page 3. And I wanted to ask you, if you look at the note
16 right underneath the table --

17 A. Yes.

18 Q. -- it says, The baseline percentage is the
19 constant from the regression at Table 23. And clearly you
20 intended to refer to Table 1. And I understand more than
21 most that typos are omnipresent for anyone who writes a lot,
22 but this typo struck me as not one that resulted from
23 hitting the wrong key as you were typing, but rather, from
24 perhaps a cut-and-paste job where you forgot to change 23 to
25 1.

1 So I just wanted to ask you about that. And
2 specifically, does this regression analysis -- this
3 five-page regression analysis, does it appear in some other
4 form in some other paper?

5 A. This -- first, thank you for catching that. You
6 are correct. That should have been a reference to Table 1
7 in this document.

8 This document appears only in this form in all of
9 my writings.

10 Q. Thank you. Professor, as I look at this table, I
11 see the far right column is the actual percentage, and that,
12 I presume, is the actual percentage of confiscated firearms
13 in Virginia equipped with magazines of greater than ten
14 rounds; correct?

15 A. That's correct.

16 Q. And I wanted to ask you, how does the column for
17 actual percentages for each year help us in interpreting the
18 estimated contributions?

19 A. It's not directly relevant.

20 Q. Okay. If we look at the year 2000, the actual
21 percentage was 15.17 percent, and the total estimated
22 percentage for that same year was 15.21 percent, which is
23 very, very close.

24 If we go down to 2005, the actual percentage was
25 12.98 percent, and the total estimated percentage was

1 15.17 percent.

2 Do those differences suggest anything about the
3 estimated contributions for those particular years?

4 A. They suggest that the regression analysis provided
5 a better fit to the data in 2000 than it did in 2005.

6 Q. Okay. Thank you. Professor, if we turn to
7 page 4, you alluded to this earlier, the fact that at least
8 in the initial years during which the federal ban was
9 effective, the proportion of confiscated firearms with
10 greater than ten rounds increased. And I read paragraph 3
11 on page 4 as an attempt to explain why that might be.

12 Can you -- well, first let me ask you, was that
13 what you were trying to do in paragraph 3?

14 A. Yes.

15 Q. I wanted to ask you if there was any basis in the
16 data that you can point to that would help support your
17 suggestion in that paragraph.

18 A. No.

19 Q. So paragraph 3 describes a possible explanation,
20 but not one for which, at the moment, you have any data to
21 support it; is that accurate?

22 A. It is a possible explanation for which I have no
23 supporting data apart from the evidence in the regression
24 itself.

25 Q. Well, can you explain the last part of that

1 **answer?**

2 A. Yes.

3 **Q. Thank you.**

4 A. The regression shows clearly that there was an
5 increase in the average proportion of confiscated firearms
6 equipped with large-capacity magazines beginning in the
7 first year of the ban. So the increase was present and,
8 therefore, it supports any -- it supports an interpretation
9 that would explain why such an increase occurred.

10 **Q. I see. Thank you.**

11 **Now, could the spreadsheets themselves be of any**
12 **assistance in determining whether your suggestion in**
13 **paragraph 3 is accurate?**

14 A. Not in my expert opinion.

15 **Q. Why not?**

16 A. The explanation that I offer in the third
17 paragraph of page 4 speculates on the reasons for which the
18 firearm was confiscated.

19 The form that is supposed to be filled out upon
20 each instance of confiscation includes fields in which the
21 reason for the confiscation can be entered.

22 However, my reading of the data is that these
23 fields are used sporadically and are coded -- when coded,
24 are coded with a variety of textual entries that would
25 require enormous resources to compile in any systematic way

1 such as to be relevant to testing the hypothesis that I
2 offer.

3 Q. That raises an interesting question, Professor.
4 And we talked about this just briefly a moment ago. You had
5 a surmise for how the data gets entered on the actual
6 reports that eventually were turned into this spreadsheet.
7 Can you tell me anything more about your understanding of
8 how Virginia police officers were instructed to fill out
9 those reports?

10 A. I know nothing further.

11 Q. So is it fair to say that what you know about it
12 is limited to the blank form that we have with instructions
13 on the second page?

14 A. To the blank form -- I'm sorry. What I know about
15 this is limited to the blank form we have here with
16 instructions on the second page and the evidence of how
17 these entries actually were accomplished in the spreadsheets
18 themselves.

19 Q. The evidence that you just referred to, you mean
20 the spreadsheets themselves are the evidence?

21 A. Yes.

22 Q. Okay. On page 5 of your analysis you have a
23 concluding paragraph just before the References heading in
24 which you say that the regression predicts a reduction in
25 the proportion of confiscated firearms with magazines

1 **greater than ten for each succeeding year after 2004.**

2 **So is it accurate to state that based on this**
3 **analysis, you believe that the federal ban simply was not in**
4 **place long enough to have the desired effect?**

5 A. I'm not sure how to answer that question because
6 "desired effect" is not well-defined. There were many
7 parties involved in this, I'm sure, all of whom had
8 different aspirations for the effect of the bill. And I
9 have my own view as to what the bill could have reasonably
10 been expected to accomplish. So I'm not actually sure what
11 you're referring to.

12 **Q. Fair enough. If we define the "desired effect" as**
13 **a reduction in the number of firearms equipped with a**
14 **capacity of more than -- equipped with magazines with a**
15 **capacity of more than ten rounds, how would you answer that**
16 **question?**

17 A. From that perspective, the ban began to have --
18 the so-called ban began to have the effect of reducing the
19 proportions of confiscated firearms equipped with magazines
20 of greater than a ten-round capacity in the year 2002 and
21 continued to have that effect in the years 2003 and 2004.

22 The paragraph to which you refer indicates that
23 that effect would have persisted subsequent to the actual
24 end of the ban and perhaps become larger.

25 **Q. So the premise of my question was incorrect. It's**

1 your view that the -- and I appreciate you calling it the
2 so-called ban. And I recognize that there are many words,
3 especially in this area, which have loaded connotations. So
4 we will call it a so-called ban.

5 But the premise of my question was that the ban
6 was not in place long enough to have the desired effect.
7 But your point is it did have the desired effect within the
8 ten years?

9 A. My results demonstrate that the proportion of
10 confiscated firearms equipped with large-capacity magazines,
11 as defined by this particular statute, declined below what
12 it would have been in the absence of the statute as early as
13 2002.

14 Q. Thank you. Professor, having walked through this
15 analysis, let me now ask you: How does this analysis impact
16 your opinion with respect to HB-1224's potential impact on
17 the number of 16-plus magazines in Colorado?

18 A. It reinforces that opinion.

19 Q. In your deposition last Halloween you said -- and
20 this is a quote from your deposition -- the extent to which
21 that experience -- and when you said "that experience," you
22 were referring to the 1994 federal statute -- the extent to
23 which that experience can be thought of as informative
24 regarding what could be expected in Colorado under HB13-1224
25 is, in my mind, limited.

1 **Now that you've obtained the Virginia data and**
2 **conducted this analysis, are you still of the same opinion**
3 **that the applicability of the experience of the 1994 federal**
4 **ban to HB-1224 is limited?**

5 A. No.

6 **Q. I can't remember the name of the Washington Post**
7 **reporter. But you said he wrote two articles?**

8 A. That's my memory, yes.

9 **Q. Concerning the 1994 federal statute?**

10 A. Concerning the experience of Virginia during the
11 period in which the statute was in force.

12 **Q. Thank you. I presume he did not conduct a**
13 **regression analysis?**

14 MR. GROVE: Objection, calls for speculation. Go
15 ahead.

16 A. It was evident to me that he compiled -- made
17 compilations of the same data that I examined. Based on the
18 newspaper reports, I didn't see anything that suggested that
19 those compilations took the form of a regression analysis.

20 **Q. (BY MR. KRUMHOLZ) Well, then based on the**
21 **newspaper reports, did you arrive at an understanding of how**
22 **you thought he used the data?**

23 A. Again, this is speculation, but my best guess is
24 that he did something like what I have done in the
25 right-most column of Table 2 where I calculate the actual

1 percentages of confiscated firearms equipped with
2 large-capacity magazines.

3 Q. Professor, you referred to Professor Kleck's
4 rebuttal. And Mr. Grove, in the e-mail we looked at,
5 referred to it as well. And with respect to Professor
6 Kleck's rebuttal, how does this regression analysis impact,
7 in your view, his rebuttal concerning the numerosity of
8 LCMs?

9 A. I'm afraid that I do not remember Dr. Kleck's
10 rebuttal sufficiently well to answer that question.

11 Q. Fair enough.

12 A. Not at this moment, anyhow.

13 Q. I understand. And I have copies of that, and here
14 in a minute we can take a break, and I can get a copy of
15 that, and then we can go through it.

16 A. As you wish. I understand we have a limited
17 amount of time this morning?

18 Q. We do.

19 A. I don't need a break, so it's up to you.

20 Q. I appreciate that. But given our progress so far
21 and looking at what time it is now, I think we can take a
22 break and still finish in plenty of time.

23 A. That's fine.

24 Q. Have you discussed this regression analysis with
25 anyone outside the AG's office?

1 A. No.

2 Q. With respect to this kind of project, do you have
3 research assistants who assist you with any aspect of this
4 analysis?

5 A. No. By "this analysis," we're referring to this
6 document?

7 Q. Correct.

8 A. No.

9 Q. And then more generally, when you do similar
10 analyses for cases like this, do you ever have research
11 assistants assist you? When I say "cases like this," I mean
12 cases in which you are an expert.

13 A. Not for a regression analysis.

14 Q. Let's do this quickly. This is Exhibit 11.
15 (Deposition Exhibit 11 was marked.)

16 Q. (BY MR. KRUMHOLZ) Professor Zax, Exhibit 11,
17 which we've just handed you, is something we received from
18 Mr. Grove. It appears to be a stack of Denver Police
19 Department reports. Have you seen this before?

20 A. Not that I recall.

21 Q. And so it would be accurate to say, then, that
22 you've done nothing with respect to Denver Police Department
23 reports vis-a-vis your opinion for this case?

24 A. As of now, that's correct.

25 Q. Hand you Exhibit 12.

1 (Deposition Exhibit 12 was marked.)

2 Q. (BY MR. KRUMHOLZ) Professor, we've handed you
3 Exhibit 12, which we also received from Mr. Grove, which
4 appears to be a spreadsheet aggregating data from -- well, I
5 don't know where it's from. Have you seen this before?

6 A. Not that I recall.

7 (Deposition Exhibit 13 was marked.)

8 Q. (BY MR. KRUMHOLZ) Professor, Exhibit 13 is a
9 one-page table entitled Reported Offenses Using NIBRS
10 Definitions in the City and County of Denver. Have you seen
11 this before?

12 A. Not that I recall.

13 Q. Mr. Grove's e-mail of January 2nd, which
14 was -- which we marked as Exhibit 6, I believe -- no.
15 Exhibit 7 -- says in the first line, I am attaching
16 additional documents that we've provided to Dr. Zax for
17 statistical analysis. They contain information about
18 burglaries/home invasions in the city and county of Denver
19 from January to November of 2012.

20 And I just want to confirm. It's your testimony
21 that you've not seen these documents before?

22 A. It's my testimony that I do not recall seeing
23 these documents. It is quite possible they were transmitted
24 to me. It's even possible that they currently reside on the
25 hard disk of my computer. But I am fairly certain that I

1 have not examined them in any depth. I am relatively
2 certain that I have not opened them, if they actually are in
3 my possession.

4 **Q. Thank you. Is it your intention to do so before**
5 **trial?**

6 A. I had not given that any thought until this very
7 moment.

8 **Q. Okay. Well, having thought about it --**

9 A. At least -- I'm sorry.

10 **Q. Go ahead.**

11 A. I imagine that there was probably a conversation
12 in which I was alerted to the impending delivery of these
13 files. It wouldn't surprise me if there was a conversation
14 in which I was invited to examine them. It seems pretty
15 clear to me that I chose not to pursue that invitation,
16 whether consciously or unconsciously.

17 Whether I am -- at the moment, I would not be able
18 to say whether I would actually at them subsequent to today.

19 **Q. Fair enough. Having had the opportunity to think**
20 **about it for the last 90 seconds or so, do you have --**

21 MR. WESTFALL: Actually, let me interject here.
22 Matt, is there any chance at all we're going to get into
23 this, or can we just move on? Because obviously we have
24 real big issues if we're talking about him looking at data
25 and doing another analysis that we're going to see at trial

1 based upon something he's not done yet and we haven't had a
2 chance to depose him on.

3 Can we just take care of it right now? We've only
4 got a couple hours here, so I don't want to go down a rabbit
5 hole. But you obviously, for all the reasons that you've
6 been articulating the last couple months . . .

7 MR. GROVE: I think it's unlikely that we'll get
8 any additional work done on this.

9 MR. WESTFALL: Great. Let's just leave it at
10 that, and we'll move on. Thanks.

11 MR. KRUMHOLZ: Professor, let's take a short
12 break. I will go and get a copy of the Kleck rebuttal, and
13 we can talk about that.

14 (A recess was taken from 10:04 a.m. to 10:12 a.m.)

15 Q. (BY MR. KRUMHOLZ) I found Professor Kleck's
16 rebuttal to your expert report. It was previously marked as
17 Exhibit 5. So I'll just hand you that. And to save time,
18 Professor, you're welcome to look all the way through it,
19 but having reviewed it, it looks like the pertinent
20 paragraphs for today's deposition are paragraphs 2 and 3.

21 A. Yes.

22 Q. Professor, you've had a chance to take a look at
23 those paragraphs again and refresh your recollection?

24 A. Yes. Thank you.

25 Q. And so let me ask you the question I asked

1 **earlier: With respect to Professor Kleck's rebuttal on this**
2 **point, the numerosity of LCMS, how does the regression**
3 **analysis that we've discussed impact his rebuttal on this**
4 **point?**

5 A. Professor Kleck's point 2 refers to my claim that
6 a decline in the numbers of large-capacity magazines is
7 inevitable as empirically unsupported. It is now
8 empirically supported. If it was not at the time, it
9 certainly is now. And if it was at the time, then that
10 empirical support is substantially strengthened.

11 **Q. Thank you. Any other comments regarding**
12 **paragraph 2?**

13 A. No.

14 **Q. How about paragraph 3? And paragraph 3 is the**
15 **paragraph in which Professor Kleck starts by saying that,**
16 **Zax's claim that Koper's analysis of the federal ban on LCMS**
17 **and assault weapons supports his prediction of a negligible**
18 **decline in LCMS. It does not.**

19 **Same answer?**

20 A. I don't think that my analysis of the Virginia
21 Clearinghouse Firearm -- the Virginia Firearms Clearinghouse
22 data bears on point 3. Point 3 is Dr. Kleck's discussion of
23 my discussion of Professor Koper's results. That
24 discussion -- my discussion of Professor Koper's results is
25 not modified by my analysis of the data provided by the

1 Virginia Firearms Clearinghouse.

2 **Q. Okay. Professor, what is the regression analysis**
3 **with respect to the Virginia data, or what bearing does that**
4 **have on the criticism that the federal statute in 1994 was**
5 **national in scope, while HB-1224 is only limited to**
6 **Colorado?**

7 A. It's not a valid criticism.

8 **Q. Why not?**

9 A. I believe that Professor Kleck's intent here is
10 to -- well, I suppose he makes it a little more clear -- is
11 to distinguish between the federal ban and the state ban on
12 the grounds that illegal importation into the state would be
13 relatively easy from surrounding states; whereas the
14 national ban might, in some sense, have cordoned off the
15 national market for LCMs.

16 Well, that, of course, is false.

17 **Q. Can you explain that?**

18 A. The so-called federal ban, in effect, functions
19 only as a ban on domestic manufacture. That is, the ban was
20 interpreted, as I understand it, to allow for -- the federal
21 ban, that is, was interpreted, as I understand it, to allow
22 for importation of LCMs, large-capacity magazines, produced
23 elsewhere prior to the date of the ban.

24 According to Professor Koper, those importations
25 amounted to 4.7 or 4.8 million units between the beginning

1 of the ban in 2000, I believe, apparently increasing the
2 stock of LCMS within the country by nearly 20 percent.

3 There was also -- there were also licenses issued
4 to import another 40-odd million LCMS from abroad into the
5 United States. That may or may not have been exercised.

6 But the net effect of the so-called ban on the
7 availability of legal LCMS in the United States was
8 negligible -- would have been negligible. The opportunity
9 to legally import from elsewhere was presumably much more
10 inviting than would be the opportunity to illegally import
11 into the state of Colorado under the Colorado statutes.

12 **Q. You referenced the year 2000, and I'm sorry. I'm**
13 **not quite following you with respect to your reference to**
14 **the year 2000.**

15 A. I believe the reference that you're referring to
16 is based on my recall of Professor Koper's data regarding
17 the importation of LCMS from abroad that were presumably
18 legally available in the United States because they had been
19 manufactured prior to the imposition of the federal ban.

20 **Q. I see.**

21 A. My memory is that his statement that 4.7 or
22 4.8 million additional units were imported refers to the
23 period from the initiation of the federal ban, so-called, to
24 the year 2000. It's possible that I have that end date
25 incorrect.

1 **Q. Okay. Thank you. Professor, is there anything**
2 **else about Dr. Kleck's rebuttal that is impacted by the**
3 **regression analysis we've discussed today?**

4 A. I have already described how my regression
5 analysis of the data provided by the Virginia Firearms
6 Clearinghouse addresses Professor Kleck's point 2. We have
7 discussed whether or not or the extent to which it might
8 affect or address Professor Kleck's point 3.

9 I have not examined the other points in the
10 rebuttal, and therefore, I'm not sure if the evidence that I
11 present here bears or addresses any of the other rebuttal
12 points that Professor Kleck offers.

13 **Q. And that's fair, Professor. So if you wouldn't**
14 **mind taking a moment just to flip through the remainder of**
15 **his rebuttal report just to confirm that in fact**
16 **paragraphs 2 and 3 are the only ones that would be pertinent**
17 **here.**

18 A. I will do so.

19 **Q. Thank you.**

20 A. It may bear on point 1. I understand that point 1
21 is probably no longer entirely accurate in any case as
22 Professor Kleck here indicates that he has never heard of
23 me. I imagine that at this point he has. So that is no
24 longer an accurate statement.

25 **Q. Okay.**

1 A. He also expresses disdain for my expertise. I
2 would hope that this analysis, at least to some degree,
3 addresses that disdain and puts him in a position to be
4 slightly more respectful of my capacity to make
5 contributions in the matter at hand.

6 In rebuttal number 5, Professor Kleck accuses me
7 of providing largely unsupported doctrinaire claims,
8 oversimplification of issues, and fallacious logic. I
9 believe the analysis that I present here is none of those
10 and, therefore, at least shifts the weight slightly in
11 Professor Kleck's view regarding the quality of my
12 contributions.

13 That's all that I'm aware of, that I recognize,
14 having glanced at the rest of the rebuttal.

15 **Q. Thank you. Let's move on to some housekeeping**
16 **matters, Professor, and then we can wrap up.**

17 **Since October 31st, which was when your last**
18 **deposition was in this case, have you testified in any other**
19 **cases at trial or in deposition?**

20 A. No.

21 **Q. At your deposition last year, you indicated that**
22 **you had not published any papers that specifically addressed**
23 **the topics of guns, gun use, or gun regulation. I believe**
24 **also in your deposition you expressed some interest in the**
25 **possibility of publishing a paper that might address those**

1 topics.

2 A. That's possible. I'm sorry. It is possible that
3 I expressed that interest.

4 Q. Right. Well, and I appreciate that you haven't
5 read your deposition, at least probably recently, and I have
6 the advantage of having read it yesterday.

7 A. I hope you enjoyed that.

8 Q. It was also my impression from your deposition,
9 Professor, that your interest in possibly publishing
10 something on the topics of guns, gun use, or gun regulation
11 was driven in part by your perception that the scholarship
12 in this area leaves something to be desired?

13 A. It's quite possible that I said that.

14 Q. Do you still have that view?

15 A. Yes.

16 Q. And so that all leads up to the question: Since
17 your last deposition, have you published anything on these
18 topics?

19 A. No.

20 Q. And I recognize that that was less than six months
21 ago and the process for peer review and so forth can take a
22 long time, in addition to the actual drafting and analysis.
23 So are you working on any papers that you intend to publish
24 in these areas?

25 A. Since the time of my last deposition, all the work

1 that I have done in these areas has been directed at
2 providing support for my clients in this case.

3 **Q. And I think that begs the question of whether you**
4 **are thinking of using the regression analysis of the**
5 **Virginia data for a paper in the future.**

6 A. Yes, I may.

7 **Q. You may. But no specific intention to do so?**

8 A. I'm not sure what distinction's being drawn here.
9 I believe that these results are of interest and that it may
10 be appropriate to present them to a wider audience.

11 **Q. Thank you.**

12 A. I have not thought in any greater detail as to how
13 I might do that.

14 **Q. I appreciate that. With respect to HB-1224 and**
15 **HB-1229, which is another Colorado statute that was enacted**
16 **and is being challenged in this case, there were legislative**
17 **hearings before their enactment. Do you understand that?**

18 A. Yes.

19 **Q. There was lots of testimony provided by**
20 **individuals on both sides of the debate during those**
21 **hearings. And so my question for you is, just to confirm,**
22 **you did not testify in any legislative hearings concerning**
23 **these bills; correct?**

24 THE DEPONENT: Is this beyond the scope of the
25 deposition?

1 MR. GROVE: No. I don't think it is.

2 Yeah. I don't think that we should -- I don't
3 want to go down this road. In addition to legislative
4 hearings, to the extent that that's even relevant, they
5 speak for themselves. So I'm going to ask Dr. Zax not to
6 answer that question.

7 MR. KRUMHOLZ: Fair enough. They do speak for
8 themselves.

9 MR. WESTFALL: Hang on a sec.

10 I think we're entitled to an answer.

11 MR. GROVE: I'm sorry. I disagree.

12 Q. (BY MR. KRUMHOLZ) Well, let me ask this question,
13 Professor Zax. Mr. Grove is correct. The legislative
14 hearings -- the transcripts of the legislative hearings do
15 speak for themselves, and a review of those indicates that
16 you did not testify concerning either of the bills at issue
17 in this case.

18 So my next question is: Were you asked by anyone
19 to testify, concerning these bills, before the General
20 Assembly?

21 MR. GROVE: Dr. Zax isn't going to answer
22 questions that are outside the scope of the deposition
23 today.

24 Q. (BY MR. KRUMHOLZ) Professor, I understand that
25 you --

1 **Professor, when were you hired to be an expert in**
2 **this case?**

3 A. My memory on that is not precise. I believe it
4 was sometime this past summer.

5 **Q. Have you done anything else on this case, since**
6 **your last deposition, beyond what we've already discussed**
7 **today?**

8 MR. GROVE: Object to the extent that it calls for
9 privileged communications, and I direct you not to answer,
10 describing any communications that we've had.

11 A. I have given further thought to the work of
12 Professor Kleck.

13 **Q. (BY MR. KRUMHOLZ) What do you mean by "given**
14 **further thought to"? Have you reviewed his report?**

15 MR. GROVE: Again, to the extent that it requests
16 privileged communications, I'm going to direct Dr. Zax not
17 to answer that question.

18 MR. KRUMHOLZ: Mr. Grove, I appreciate that, but
19 let me ask you: Are you talking about work product?

20 MR. GROVE: Further thought would encompass
21 discussions that Dr. Zax and I may have had in preparation
22 for his testimony, things like that.

23 MR. KRUMHOLZ: Well, are you asserting, then, that
24 you represent Dr. Zax?

25 MR. GROVE: No. I'm asserting that communications

1 between Dr. Zax and myself, under Rule 26, are privileged.

2 MR. KRUMHOLZ: Under what doctrine?

3 MR. GROVE: If you want to get out the Federal
4 Rules of Civil Procedure, we can get them out right now.

5 MR. KRUMHOLZ: You're asserting a privilege with
6 respect to your conversations with a hired expert?

7 MR. GROVE: Yeah, absolutely. Rule change in
8 2010.

9 **Q. (BY MR. KRUMHOLZ) Subject to his objection,**
10 **Professor, you can still answer.**

11 A. I have reviewed Professor Kleck's 1995 paper with
12 some co-author whose name I forget and further refined my
13 views regarding that work.

14 **Q. Can you briefly describe what that 1994 paper was**
15 **about?**

16 A. 1995.

17 **Q. Sorry. 1995.**

18 A. This is the paper in which Professor Kleck and his
19 co-author purport to estimate the frequency with which
20 individuals defend themselves with firearms.

21 **Q. By doing so -- by having reviewed that 1995 paper,**
22 **did you develop any further insight beyond what has already**
23 **been expressed in your first report or your supplemental**
24 **report?**

25 A. I have not developed any new criticisms.

1 **Q. And having reviewed that 1995 paper, was that a**
2 **re-review? Had you already looked at it previously?**

3 A. Yes.

4 **Q. Has Mr. Grove or anyone else at the AG's office**
5 **given you any other information to review, since your last**
6 **deposition, beyond what we've already covered today?**

7 A. It is possible that they have given me additional
8 information. However, I have not reviewed anything beyond
9 what we've covered today.

10 **Q. Turning to that 1995 Kleck paper, can you**
11 **summarize his conclusions now?**

12 MR. GROVE: Again, this is well outside the scope
13 of what we agreed to for the supplemental deposition.

14 MR. KRUMHOLZ: Well, this is work that he's done
15 since our last deposition.

16 MR. GROVE: Again, it's outside the scope of what
17 we had discussed and what we'd agreed to.

18 MR. WESTFALL: Matt, he's already testified that
19 his analysis with respect to Dr. Kleck's criticisms of him
20 is now informed by the new work that he's done. We're
21 entitled to answers to these questions.

22 MR. GROVE: That has no bearing on the 1995 paper.

23 MR. WESTFALL: We don't know that until he answers
24 the questions.

25 MR. GROVE: Maybe Dr. Zax can answer that for us.

1 A. Please pose the question.

2 Q. (BY MR. KRUMHOLZ) Can you summarize Professor
3 Kleck's conclusions in the 1995 paper based on your most
4 recent review?

5 A. I'm sorry. The question I was referring to was
6 the one that Mr. Westfall seemed to be offering. I'm
7 unclear as to which question I'm now dealing with.

8 Q. Well, you're dealing with my question.

9 MR. GROVE: And if I could interject. To the
10 extent that that does not relate to the Virginia Firearms
11 Clearinghouse data and the supplemental report that we
12 shared with you in advance of this deposition, I'm going to
13 direct Dr. Zax not to answer the question.

14 MR. WESTFALL: And let me interject myself here
15 again. His views, he has testified, have been informed by
16 his Virginia Clearinghouse analysis, and his opinions about
17 what his views are of Kleck's criticisms of him have now
18 been modified in some form or another. We're entitled to
19 explore the degree to which his views of Dr. Kleck's views
20 of him have been modified in one form or another.

21 MR. GROVE: That's fair. But you're asking two
22 different questions.

23 (Witness talking to Mr. Grove.)

24 A. As I understand Mr. Westfall's question, we've
25 already -- that question has already been asked and

1 answered. You'll recall that you directed me to look at the
2 rebuttal report. We looked at paragraphs 2 and 3. I
3 described how my analysis of the Virginia Firearms
4 Clearinghouse data addresses the criticisms that Dr. Kleck
5 addressed to me in items 2 and 3, and then we proceeded
6 through the rest of the rebuttal report.

7 So my understanding is I have responded to the
8 questions that Mr. Westfall is raising.

9 **Q. (BY MR. KRUMHOLZ) Are you saying, Professor, that**
10 **the 1995 paper authored by Professor Kleck has -- well, let**
11 **me ask it a different way.**

12 **Are you saying that the regression analysis you**
13 **conducted of the Virginia data has no bearing on Professor**
14 **Kleck's 1995 paper that you say you reviewed recently?**

15 A. That's correct.

16 **Q. Do you anticipate testifying at trial?**

17 A. It is my expectation that I will testify.

18 **Q. Do you have an understanding of when you'll be**
19 **testifying?**

20 MR. GROVE: I can interject here and say that
21 we've not completely scheduled anything. I mean, the second
22 week -- I will answer for Dr. Zax and say the second week of
23 trial.

24 MR. KRUMHOLZ: That's sufficient.

25 I don't have any other questions.

1 WHEREUPON, the within proceedings were concluded
2 at the approximate hour of 10:41 a.m. on the 19th day of
3 March 2014.

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CERTIFICATION OF DEPONENT

I, JEFFREY ZAX, Ph.D., do hereby certify that I have read the above and foregoing deposition and that the same is a true and accurate transcription of my testimony, except for attached amendments, if any.

Amendments attached () Yes () No

JEFFREY ZAX, Ph.D.

The signature above of JEFFREY ZAX, Ph.D., was subscribed and sworn to before me in the county of _____, state of Colorado, this _____ day of _____, 2013.

Notary Public
My commission expires

Colorado Outfitters v. Hickenlooper, 03/19/2014 (caa)

1 REPORTER'S CERTIFICATE

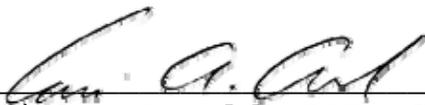
2 STATE OF COLORADO)
3) ss.
4 CITY AND COUNTY OF DENVER)

5 I, CARRIE A. ARNOLD, Registered Professional
6 Reporter, Certified Realtime Reporter, and Notary Public,
7 State of Colorado, do hereby certify that previous to the
8 commencement of the examination, the said JEFFREY ZAX,
9 Ph.D., was duly sworn by me to testify to the truth in
10 relation to the matters in controversy between the parties
11 hereto; that the said deposition was taken in machine
12 shorthand by me at the time and place aforesaid and was
13 thereafter reduced to typewritten form, consisting of 54
14 pages herein; that the foregoing is a true transcript of the
15 questions asked, testimony given, and proceedings had. I
16 further certify that I am not employed by, related to, nor
17 of counsel for any of the parties herein, nor otherwise
18 interested in the outcome of this litigation.

19 IN WITNESS WHEREOF, I have affixed my signature
20 and seal this 26th day of March, 2014.

21 My commission expires October 1, 2016.



22 
23 Carrie A. Arnold, RPR, CRR
24 Commission No. 20004029988
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