

THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO

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

COLORADO OUTFITTERS ASSOCIATION,
COLORADO FARM BUREAU,
NATIONAL SHOOTING SPORTS FOUNDATION,
MAGPUL INDUSTRIES,
COLORADO YOUTH OUTDOORS,
USA LIBERTY ARMS,
OUTDOOR BUDDIES, INC.,
WOMEN FOR CONCEALED CARRY,
COLORADO STATE SHOOTING ASSOCIATION,
HAMILTON FAMILY ENTERPRISES, INC.,
d/b/a FAMILY SHOOTING CENTER AT CHERRY CREEK STATE PARK
DAVID STRUMILLO,
DAVID BAYNE,
DYLAN HARRELL,
ROCKY MOUNTAIN SHOOTERS SUPPLY,
2ND AMENDMENT GUNSMITH & SHOOTER SUPPLY, LLC,
BURRUD ARMS INC. D/B/A JENSEN ARMS,
GREEN MOUNTAIN GUNS,
JERRY'S OUTDOOR SPORTS,
SPECIALTY SPORTS & SUPPLY,
GOODS FOR THE WOODS,
JOHN B. COOKE,
KEN PUTNAM,
JAMES FAULL,
LARRY KUNTZ,
FRED JOBE,
DONALD KRUEGER,
STAN HILKEY,
DAVE STONG,
PETER GONZALEZ,
SUE KURTZ,
DOUGLAS N. DARR,

Plaintiffs,

vs.

JOHN W. HICKENLOOPER, GOVERNOR OF THE STATE OF COLORADO,

Defendant.

REPORTER'S TRANSCRIPT
TRIAL TO COURT - DAY EIGHT

1 Proceedings before the HONORABLE MARCIA S. KRIEGER,
2 Judge, United States District Court for the District of
3 Colorado, continuing at 8:48 a.m., on the 9th day of April,
4 2014, in Courtroom A901, United States Courthouse, Denver,
5 Colorado.

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7 **APPEARANCES**

8 RICHARD A. WESTFALL and PETER J. KRUMHOLZ, Attorneys
9 at Law, Hale Westfall, LLP, 1600 Stout Street, Suite 500,
10 Denver, Colorado, 80202, appearing for the Plaintiffs.

11 DOUGLAS ABBOTT, Attorney at Law, Holland & Hart, LLP,
12 555 17th Street, Suite 3200, Denver, Colorado, 80202, appearing
13 for the Plaintiffs.

14 MARC F. COLIN, Attorney at Law, Bruno, Colin & Lowe
15 P.C., 1999 Broadway, Suite 3100, Denver, Colorado, 80202,
16 appearing for the Plaintiffs.

17 ANTHONY JOHN FABIAN, Attorney at Law, 510 Wilcox
18 Street, Castle Rock, Colorado, 80104, appearing for the
19 Plaintiffs.

20 DAVID BENJAMIN KOPEL, Attorney at Law, Independence
21 Institute, 727 East 16th Avenue, Denver, Colorado, 80203,
22 appearing for the Plaintiffs.

23 MATTHEW DAVID GROVE, LEEANN MORRILL, KATHLEEN L.
24 SPALDING, and STEPHANIE LINDQUIST SCOVILLE, Assistant Attorneys
25 General, Colorado Attorney General's Office, Ralph L. Carr
Colorado Judicial Center, 1300 Broadway, Denver, Colorado,
80203, appearing for the Defendant.

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119 THERESE LINDBLOM, Official Reporter
120 901 19th Street, Denver, Colorado 80294
121 Proceedings Reported by Mechanical Stenography
122 Transcription Produced via Computer

P R O C E E D I N G S

1
2 *THE COURT:* We are reconvened in Case No. 13-cv-1300.
3 This is our eighth day of trial.

4 Could I have entries of appearance for today's
5 proceedings.

6 *MR. COLIN:* Good morning, Your Honor. Mark Colin on
7 behalf of the federally licensed firearms dealer plaintiffs.

8 *THE COURT:* Good morning.

9 *MR. KRUMHOLZ:* Good morning, Your Honor. Peter
10 Krumholz and Richard Westfall here on behalf of David Bayne,
11 Dylan Harrell, and the nonprofits.

12 *THE COURT:* Good morning.

13 *MR. KOPEL:* Good morning, Your Honor. David Kopel on
14 behalf of David Strumillo, John B. Cooke, Ken Putnam, James
15 Faull, Larry Kuntz, Fred Jobe, Donald Kroger, Stan Hilkey, Dave
16 Stong, Peter Gonzalez, Sue Kurtz, and Douglas N. Darr.

17 *THE COURT:* Good morning.

18 *MR. ABBOTT:* Good morning, Your Honor. Doug Abbott on
19 behalf of Magpul Industries and the National Shooting Sports
20 Foundation.

21 *THE COURT:* Good morning.

22 *MR. FABIAN:* Good morning, Your Honor. Anthony Fabian
23 on behalf of Colorado State Shooting Association and Hamilton
24 Family Enterprises.

25 *THE COURT:* Good morning.

1 MR. GROVE: Good morning. Matthew Grove, Stephanie
2 Scoville, LeeAnn Morrill, and Katherine Spalding on behalf of
3 the defendants.

4 THE COURT: Are you all ready to proceed?

5 MR. COLIN: Plaintiffs are ready.

6 THE COURT: All right. We had Chief Fuchs on the
7 stand when we recessed yesterday afternoon. We'll resume with
8 his cross-examination.

9 So, Ms. Glover -- there you are, right back there in
10 the courtroom. Please come on up, take a seat. You remain
11 under oath.

12 MR. KOPEL: Your Honor, before proceeding with
13 Mr. Fuchs' cross-examination -- Chief Fuchs' cross-examination,
14 I was wondering if we could formally introduce the legislative
15 history exhibits which we had discussed yesterday morning, or
16 would you prefer that --

17 THE COURT: I think we need not inconvenience Chief
18 Fuchs with that right now.

19 MR. KOPEL: Okay.

20 **(DOUGLAS FUCHS, DEFENDANT'S WITNESS, PREVIOUSLY SWORN)**

21 **CROSS-EXAMINATION CONTINUED**

22 BY MR. COLIN:

23 Q. Good morning, Chief.

24 A. Good morning, sir.

25 Q. Before we get rolling and finalizing your

1 cross-examination, I want to make sure we're on the same page
2 as to the opinion we're talking about. My understanding is
3 that the opinion that you rendered yesterday is, "Limiting
4 magazines to 15 rounds provides victims in a mass shooting
5 situation with an opportunity to escape or overcome a shooter."
6 Is that accurate?

7 A. It could be a mass shooting, sir, or virtually any
8 shooting.

9 Q. I understand it could be. But your previous opinion, I
10 believe I just quoted; is that accurate?

11 A. It's accurate, with the caveat that it's any shooting.

12 Q. So you're modifying your original opinion?

13 A. If that's, indeed, what I said yesterday, then, I guess
14 that I am adding that to that, yes.

15 Q. So you're modifying the opinion to include other shootings
16 other than mass shootings?

17 *THE COURT:* That's what he just said.

18 *MR. COLIN:* Okay. I'm just trying to clarify. I
19 apologize.

20 *BY MR. COLIN:*

21 Q. And that's because a pause associated with a magazine
22 exchange provides a few seconds when the suspect is unable to
23 fire; is that accurate?

24 A. Any pause that's created by virtue of what we discussed
25 yesterday provides law enforcement or civilians with the

1 opportunity to either flee, to tactically relocate, to take
2 tactical action, or to overpower or overcome the aggressor,
3 yes, sir.

4 Q. Your opinion, however, goes specifically to pauses
5 associated with magazine exchanges, does it not?

6 A. Pauses associated with magazine exchanges make mandatory,
7 if you will, the -- that pause.

8 Q. Well, a weapons malfunction, for example, is not associated
9 with a magazine capacity limitation in any way, is it?

10 A. No, that's correct. I think we talked about that
11 yesterday.

12 Q. All right. In addition to pauses associated with magazine
13 exchanges, I understood you to say that there are other things
14 that can create pauses which might give victims an opportunity
15 to flee or intervene, such as a malfunction?

16 A. Correct.

17 Q. And with regard to the original opinion that we just
18 articulated, you provided several examples yesterday, six, to
19 be exact, of incidents in which you contend that limiting
20 magazines to 15 rounds provided a victim or more victims a --
21 an opportunity to escape or intervene. Is that accurate?

22 A. I'm sorry. Could you repeat that one more time?

23 Q. Sure. You gave us six examples yesterday. And what I
24 understood those examples to be were examples supporting your
25 opinion that in those cases, limiting magazines to 15 rounds

1 provided victims an opportunity to flee or intervene; is that
2 accurate?

3 A. Victims or bystanders.

4 Q. Okay. We talked about Sandy Hook, and we'll talk about it
5 again in a minute. That's one of those examples?

6 A. Yes, sir.

7 Q. And in the Sandy Hook incident, I think you acknowledged
8 yesterday that we're not sure whether there was a magazine
9 exchange involved in that opportunity or pause at all, are we?

10 A. Correct. There is a discrepancy in the reports as to
11 whether or not there was a malfunction of the weapon which
12 would have caused that pause or whether there was a magazine
13 exchange that would have caused that pause.

14 Q. And the Long Island railroad incident that you mentioned,
15 the suspect in that case simply ran out of ammunition; isn't
16 that true? He had two full magazines, they ran out, he was
17 trying to refill the magazines.

18 A. The -- there were two exchanges I think about which I spoke
19 yesterday. The first exchange afforded individuals on the
20 train the opportunity to flee. And that second magazine
21 exchange, if you will, afforded individuals on the train the
22 opportunity to overpower.

23 Q. But there was no second magazine exchange, correct? He was
24 actually trying to refill a magazine with loose rounds; isn't
25 that accurate?

1 A. I'm not quite sure.

2 Q. All right. So, once again, we don't know for sure whether
3 this second incident as part of the Long Island railroad event
4 involved a magazine exchange?

5 A. What I do know --

6 *MS. SPALDING:* Objection, Your Honor. Misstates the
7 testimony.

8 *THE COURT:* Noted for the record.

9 *THE WITNESS:* Can I answer?

10 *BY MR. COLIN:*

11 Q. Yes.

12 A. What I do know is that he ran out of bullets. And at that
13 time, when he ran out of bullets and was refilling, that gave
14 pause, which gave the opportunity.

15 Q. Okay. So the North Carolina shooting we talked about, that
16 was one where the suspect was shot three times, the last of
17 which he dropped to the ground and collapsed. So that did not
18 involve a magazine exchange or an attempt to reload at that
19 point?

20 *MS. SPALDING:* Objection, asked and answered.

21 *THE COURT:* Sustained.

22 *BY MR. COLIN:*

23 Q. With regard to the Penn State shooting that you
24 discussed -- do you recall that testimony yesterday?

25 A. I believe so, sir.

1 Q. And the Penn State shooting is not a mass shooting, was it?
2 It was -- one individual was shot and wounded, one individual
3 was shot and killed; is that right?

4 A. I believe you're correct, sir.

5 Q. So that doesn't fit within your original opinion that
6 limiting magazines to 15 rounds provides victims in a mass
7 shooting situation with an opportunity to escape or intervene,
8 does it?

9 A. Again, my opinion is that in any shooting, that pause
10 created gives one an opportunity to do what we talked about
11 before.

12 Q. Okay. And the shooter -- the female shooter in the Penn
13 State incident was carrying a Mauser rifle; is that right?

14 A. I believe the shooter was.

15 Q. And the shooter fired five shots before she was intervened
16 on; isn't that accurate?

17 A. I don't know the exact number of shots the shooter fired.

18 Q. Do you know what capacity a Mauser rifle has?

19 A. I do not.

20 Q. And if the suspect only fired five shots, do you know
21 whether that would have required any type of magazine exchange
22 in a Mauser?

23 A. I do not.

24 Q. Did you do any additional research since your second
25 deposition on the Penn State incident?

1 A. I believe I read another news article on it. I did not
2 obtain any police report as in some of the others.

3 Q. And did you provide a copy of that news -- additional news
4 article that you reviewed to counsel?

5 A. I would not have, no, sir.

6 Q. So of the six incidents that you mentioned, the only one
7 that we didn't talk about was the -- two, I apologize, I
8 skipped one. The Aurora theater incident, that's another
9 incident that you mentioned, is it not, which is supportive of
10 your opinion?

11 *MS. SPALDING:* Objection, Your Honor. It was not.
12 That was not in his testimony.

13 *THE COURT:* Thank you. That's not a basis for an
14 objection. The witness can answer that that was not the basis
15 of his opinion, if, indeed, it was not.

16 *THE WITNESS:* I'm sorry, could you repeat the
17 question?

18 *BY MR. COLIN:*

19 Q. Sure. Is the Aurora theater shooting another example of an
20 incident where a 15-round-magazine-capacity limit would have
21 provided, in your opinion, victims an opportunity to flee or
22 intervene?

23 A. That was the end of the question? I'm sorry.

24 Q. Isn't --

25 A. That was the end of the question? I wanted to make sure.

1 Q. I'm sorry?

2 A. That was the end of the question?

3 Q. Yes, I'm sorry.

4 A. Yes, that's correct, sir.

5 Q. Okay. And in the Aurora theater shooting, in fact, the
6 magazine that was being used, the 100-round magazine, jammed;
7 isn't that accurate?

8 A. That is correct, sir.

9 Q. So this was not an incident in which a magazine capacity
10 limit would have had any effect; isn't that true?

11 A. In that specific jam, that is correct, sir.

12 Q. All right. So in the six incidents you gave as examples
13 yesterday, the only incident in which, arguably, a magazine
14 exchange provided victims an opportunity to intervene or escape
15 is the Giffords shooting; isn't that correct?

16 A. Well, no. Because if in Aurora he was limited to a
17 15-round magazine, that would have created ample additional
18 pauses, even before that, I think, 45-round jam of his weapon.
19 He would have had to exchange magazines -- if it was limited to
20 15, you've got the first 15, you've got an exchange, you've got
21 the second 15, you've got an exchange, that would have been 45.
22 So there would have been magazine exchanges having to take
23 place in Aurora, as well.

24 Q. That's just speculation. You don't know if that's true.

25 A. I do know that if his magazine was limited to 15, he would

1 have had to exchange magazines.

2 Q. But that isn't your opinion in this case. Your opinion is,
3 limiting magazines to 15 rounds provides victims in a mass
4 shooting situation with an opportunity to flee or intervene.
5 We're not talking about situations in which that might have
6 occurred. That did not occur in the Aurora theater shooting,
7 did it?

8 A. No, because he had a drum with 100 rounds in it. If he had
9 been limited to 15 rounds, every 15 rounds he would have had to
10 exchange magazines, as opposed to being able to kill or injure
11 45, I believe it was -- or 55, one of the two -- individuals
12 before that weapon malfunctioned.

13 Q. And we'll get to that aspect of your opinion in just a
14 couple of minutes. I'd like to explore how your experience in
15 Sandy Hook has contributed to your expertise on the impact of
16 gun control on gun violence. That was your testimony, wasn't
17 it, that your Sandy Hook experience contributed to your
18 expertise in the area of gun control and gun violence?

19 A. I think you were really focusing on magazine capacity and
20 not overall gun violence.

21 Q. Okay. You -- well, maybe you can explain. How did your
22 experience at Sandy Hook contribute to your expertise on
23 magazine exchanges, then?

24 A. An individual walked into the Sandy Hook Elementary School
25 with 30-round magazines. He was able to shoot, kill, injure 30

1 individuals before he needed to exchange that magazine, if they
2 were back to back, he was able to do it fairly quickly, with
3 60. He fired more than 150 rounds. And if you look at a
4 30-round magazine, that would mean that he only needed to
5 exchange his magazine five times -- three times -- five times.
6 If he was limited to 15-round magazine, obviously, that
7 exchange rate would have doubled. Thereby, the amount of time
8 that one would have had to flee, to overpower, or if law
9 enforcement had arrived by then, to take tactical action, would
10 have doubled. Not only in the instances or the frequency, but
11 also in the amount of time. So that's a significant amount of
12 time.

13 Also, the six children who were able to run out of the
14 school, ran out of the school during one of those pauses. And,
15 arguably, we don't know what created that pause. But that
16 pause would have been mandated had one had to exchange a
17 magazine after 15 rounds.

18 Q. And I appreciate your answer, but that wasn't what I asked.

19 A. I'm sorry.

20 Q. I asked you how your experience -- not what happened at
21 Sandy Hook, but how your personal experience in Sandy Hook
22 contributed to your expertise in the area of magazine capacity
23 limits.

24 A. I guess one could talk about a philosophical look or
25 research look at any topic. And then one looks to see whether

1 or not in history, or in practice, your theory, your philosophy
2 has played out. So if I have a belief which says that at 15
3 rounds, you must exchange your magazine, that creates a pause,
4 that creates an opportunity, and I go back, and we talk about
5 those six incidents, we talked about Sandy Hook, as well, in
6 which that pause was created for whatever reason, that pause
7 gives -- in Sandy Hook, it gave six kids an opportunity to
8 live, who wouldn't have had it.

9 Now, whether or not that pause was created by a
10 magazine exchange or whether or not that pause was created by a
11 malfunction, if that shooter was limited to fifteen- or
12 ten-round magazines but in this case, fifteen-round magazines,
13 that would have given double the amount of reloading
14 requirements, which would have potentially let other kids run
15 out of that school.

16 So how did this impact me? It took what I knew to be
17 a fact, and to hear small children even recognize that fact,
18 that during that pause, they knew enough to run, I would
19 suggest that that bolsters that statement.

20 Q. All right. Let's just talk about your personal experience
21 at Sandy Hook to get at the answer that way. Your agency was
22 not primarily responsible for investigating the incident, was
23 it?

24 A. No, the Connecticut State Police were.

25 Q. And you were not present during the active shooter phase of

1 the event, were you?

2 A. No, sir.

3 Q. My understanding of your testimony was that your sole
4 involvement in Sandy Hook was that you picked up four teachers
5 who you encountered as you were driving to the school, you took
6 them, I think, to a firehouse, and then you went to the parking
7 lot of the school and assisted in reuniting children with their
8 parents. Is that accurate?

9 A. On a very high-level overview, sure.

10 Q. And then after that, you have a conversation with a couple
11 of parents.

12 A. There was a lot in between those two; but for the purposes
13 of this discussion, then that would be accurate.

14 Q. Okay. And anything about picking up the teachers,
15 reuniting children, or talking to these parents that
16 contributes to your expertise in the area of magazine capacity
17 limits?

18 A. I think that I just described that the conversation with
19 the parents and the fact that two of those parents have
20 children who are alive today because they were able to run out
21 of the school, and the kids described the fact that they --
22 that when he was playing with his gun -- although, one of the
23 statements actually says reloading -- that those children knew
24 enough to flee goes right to the heart of that opinion.

25 Q. Well, let's talk about where you received that information.

1 There were two investigative reports that were generated as a
2 result of the Sandy Hook incident; isn't that true?

3 A. There were a plethora of investigative reports.

4 Q. Well, let's -- I understand that there are lots of police
5 reports. But there were two comprehensive investigative
6 reports prepared regarding the Sandy Hook incident; isn't that
7 true?

8 A. Could you be more specific?

9 Q. Sure. Let's get specific. The first was prepared by the
10 Connecticut State's Attorney and released on November 25 of
11 2013; isn't that accurate?

12 A. Are you talking about -- I think it was about four pages,
13 kind of high-level overview?

14 Q. Yes.

15 A. That was released in advance of the report?

16 Q. Yes.

17 A. I don't recall the date, but I know that Steve Sedensky,
18 who is the state's attorney for the judicial district of
19 Danbury, did release that.

20 Q. Okay.

21 A. I don't know the date.

22 Q. And that's the first report in which it was determined that
23 the pause was associated with a malfunction, rather than a
24 reload; isn't that accurate?

25 A. That's the first report of the first released report.

1 Q. Yes. And then there was a nine-volume report, very
2 extensive report, that was ultimately released on December 27,
3 2013, that was prepared by the State of Connecticut Department
4 of Emergency Services and Public Protection, correct?

5 A. That's the Connecticut State Police.

6 Q. Yes.

7 A. There was. I think there were -- the release is in that
8 order, because the state's attorney's report, or high-level
9 overview, came out in advance of the state police report.

10 Q. In that report, they, too, then concluded that the pause
11 was associated with firearms malfunction and not a magazine
12 exchange; isn't that right?

13 A. I believe there is a dispute between the emergency services
14 unit folks who arrived and the lab as to what that malfunction
15 or exchange would have been. That they're not certain.

16 Q. Well, within the nine-volume report, there is a report from
17 the ESU, as you indicated, that indicates that they didn't find
18 a malfunction; but nonetheless, the conclusion in the report
19 was -- based upon all of the evidence in the nine volumes, that
20 there was a weapons malfunction; isn't that accurate?

21 A. I can't say that it is.

22 Q. Have you read the entire nine volumes?

23 A. I have not read every page of it, sir.

24 Q. Okay. Then, thank you.

25 Other than what we just spoke to -- so you did read

1 the four- or five-page original report issued by the states
2 attorney?

3 A. I did.

4 Q. In its entirety?

5 A. I did.

6 Q. But not the nine-volume report. And just to -- as I
7 understand it, the nine-volume report was a compilation of all
8 of those hundreds or thousands, even, of witness statements,
9 police reports, evidence, forensic evidence reports,
10 everything?

11 A. Photographs, many of which were redacted. So in reading
12 it, you've got a lot of blank pages and blackened out.

13 Q. Sure.

14 A. I also did read one of the statements that was obtained,
15 but was not a part -- was a part of the report, but not a part
16 of the report that was publicly released.

17 Q. Okay. And that was the report that you talk about
18 yesterday, where you couldn't tell if it was by one of the same
19 parents that you talked to?

20 A. Right. It was a statement of a parent -- of one of the six
21 children's parents.

22 Q. Right.

23 A. Who ran out of the school, which says that they fled when
24 the student said he was reloading. But I have no way of
25 knowing, because I don't know which parent authored that

1 statement, whether or not it is one of the two with whom I had
2 spoken or one of the other four.

3 Q. I understand. Thank you.

4 Even though you didn't make it through all nine
5 volumes, you would agree, would you not, that both Sandy Hook
6 reports indicate that there were seven partially or completely
7 spent magazines found at the scene?

8 A. I believe that is the correct -- you mean, from the AR-15?

9 Q. Yes.

10 A. Okay. Because there were other weapons there that had
11 magazines in them.

12 Q. I don't care what they were from. There were seven either
13 partially or completely spent magazines at the scene that were
14 found by investigators; isn't that true?

15 A. I think there were more. I think you're only talking about
16 the AR-15 magazines.

17 Q. Okay. So there may even have been more magazines that were
18 either partially or completely expended from a different
19 firearm?

20 A. There were, I believe, seven from the AR-15, I think three
21 of which were completely expended, and I think three were
22 partially expended. There were also two other weapons there,
23 the Glock 10 millimeter, I believe, which had a single round
24 fired out of it, and a Sig 9, which I don't believe was used.

25 Q. All right. So the magazines would have been from the AR,

1 then, that were found?

2 A. Right. I didn't know if you were asking me only if there
3 were seven magazines there, and there were more than that.

4 Q. If there were seven partially or completely spent magazines
5 that had been left on the ground by Mr. Lanza, that would
6 indicate to you, would it not, that Mr. Lanza performed at
7 least seven magazine exchanges during the incident; isn't that
8 true?

9 A. I would believe that would be the case.

10 Q. And do you recall reviewing any evidence or information in
11 any of the reports that you reviewed that indicates that the
12 pauses associated with these seven magazine exchanges resulted
13 in victims fleeing or successfully intervening before his
14 weapon malfunctioned?

15 A. Again, I -- I did not say that I knew for certain his
16 weapon malfunctioned. And I do not believe that anybody else
17 was able to flee or escape during any of those instances.

18 Q. So at least in the seven prior magazine exchanges, whatever
19 the last one was, in those previous seven exchanges, no one
20 escaped, no one was able to intervene successfully?

21 A. The school was pretty much in lockdown. Nobody was --
22 except for those who fled out the back who were not immediately
23 near where the shooting was taking place, everybody was in
24 lockdown and hide mode, so to speak, so there was no fleeing
25 going on. But, again, the opportunity for that to happen would

1 have been doubled had he only had a 15-round magazine, not a
2 30-round magazine.

3 Q. Let's talk about the person who actually followed your
4 advice and attempted to intervene. The only person who
5 attempted to intervene was a teacher who was one of the very
6 first people killed; isn't that true?

7 A. I think I have to back up. Followed my advice? I'm not
8 quite sure I understand.

9 Q. Well, haven't you suggested that these pauses provide an
10 opportunity for victims to flee or intervene?

11 A. I have.

12 Q. Okay. And the first person who attempted to intervene in
13 the Sandy Hook shooting was shot and killed; isn't that true?

14 A. Not sure that she really was intervening. Certainly, she
15 was not intervening during any kind of a pause in the shooting.
16 That's when the shooting first started.

17 Q. Well, let's talk about how the pauses in shootings under
18 your scenario assist people.

19 Your suggestion is that victims or bystanders should
20 wait for the first opportunity when the magazine is either
21 expended fully or the suspect is engaging in a tactical reload
22 and take that opportunity to either flee or intervene; isn't
23 that true?

24 A. That is an opportunity. That's correct.

25 Q. Okay. All right. And in order to get that opportunity, in

1 order for the victims or bystanders to avail themselves of this
2 pause, they have to wait until the shooter has expended the
3 rounds that are in the magazine; do they not?

4 A. That would be one of those.

5 Q. And that means that in a 15-round capacity situation, the
6 shooter would have shot and killed or seriously injured 15
7 people before the pause that you're suggesting they wait for;
8 isn't that correct?

9 MS. SPALDING: Objection, Your Honor. Argumentative.

10 THE COURT: Sustained.

11 BY MR. COLIN:

12 Q. Am I correct that in your direct examination, when speaking
13 of training with regard to -- law enforcement officer training
14 with regard to effecting magazine exchanges, quote, the amount
15 of time needed to change a magazine is the amount of time you
16 are out of the gunfight. Did I state that accurately?

17 A. I believe I also indicated that -- potentially out of the
18 gunfight, because there are some weapons that still will fire
19 without the magazine in it, depending on the type of handgun
20 you have.

21 Q. And we'll have a chance to talk about those in just a
22 second. And this is why law enforcement officers change --
23 train to effect magazine exchanges quickly; isn't that correct?

24 A. It's really why we train more to do tactical reloading
25 than -- which I think is more important than a quick magazine

1 exchange.

2 Q. Okay. So it's not important, are you saying, that law
3 enforcement officers and civilians learn how to conduct
4 magazine exchanges swiftly?

5 A. No, it's important. But what I'm suggesting is, we would
6 like to see our officers do a tactical reload when possible so
7 they're not confronted with that need to reload when they have
8 no more ammunition.

9 Q. That's because when you're out of bullets, you're
10 vulnerable; isn't that true?

11 A. Again, depends on whether or not you've got one in the
12 chamber or not. But, yes. And the fact that you're out of
13 bullets, you're vulnerable, that's exactly what we are training
14 the civilians. When that active shooter is out of bullets,
15 that shooter is vulnerable. That's exactly right.

16 Q. That's exactly right when it comes to the defensive gun
17 user, too, isn't it? When a person is attempting to save their
18 life and the lives of someone else in self-defense runs out of
19 ammunition, they, too, are rendered temporarily defenseless;
20 are they not?

21 A. That goes back to the discussion we just had a few minutes
22 ago, which is looking at, all right, you have a philosophy or a
23 theory, and let's look at the history to find out whether or
24 not there -- the philosophy or theory has ever played out. And
25 certainly, in the law enforcement realm, unfortunately, law

1 enforcement a multitude of times has needed far more than 15
2 rounds to defend themselves against others who have more than
3 15-round magazines.

4 *MR. COLIN:* Object as nonresponsive, Your Honor.

5 *THE COURT:* I agree.

6 *MR. COLIN:* Thank you.

7 *BY MR. COLIN:*

8 Q. Could you answer my question, sir.

9 *THE COURT:* Would you like to have the question read
10 back?

11 *THE WITNESS:* I would, please.

12 *THE COURT:* All right. "That's exactly right when it
13 comes to the defensive gun user, too, isn't it? When a person
14 is attempting to save their life and the lives of someone else
15 in self-defense runs out of ammunition, they, too, are rendered
16 temporarily defenseless; are they not?

17 *THE WITNESS:* I don't believe that's a simple yes or
18 no question.

19 *BY MR. COLIN:*

20 Q. Why don't you answer it. If you want to answer it, go
21 ahead and answer it.

22 A. I was trying to.

23 Q. Well, let's see if I can phrase it more succinctly, then.

24 In a defensive gun use situation, regardless of
25 whether or not it's a law enforcement officer or a civilian,

1 I'm simply asking you whether the pause associated with
2 effecting a magazine exchange is a pause during which the
3 defensive gun user is rendered temporarily defenseless.

4 A. If that person is trained properly -- again, we train to
5 tactically reload, which is what I talked about before -- and
6 you would not be rendered useless -- you would not be rendered
7 without ammunition.

8 Q. Chief, I wasn't asking about tactical reloads. Let me try
9 one more time. Isn't it true that during the pause associated
10 with a magazine exchange, regardless of the circumstances of
11 the magazine exchange, a defensive gun user is rendered
12 temporarily defenseless?

13 Just so we address your tactical magazine exchange
14 issue, there are certain firearms which with the magazine out
15 of the gun will allow you to fire one single round that is
16 still in the chamber. That's what you're referring to in your
17 previous response?

18 A. That's correct. I think you said that correctly, yes.

19 Q. Okay. So unless a civilian or law enforcement officer
20 happens to have one of those firearms that allows one more
21 round to be fired during a magazine exchange, the gun won't
22 fire. They're out of bullets. They're temporarily
23 defenseless. Wouldn't you agree?

24 A. I have to go back to the training. I mean, there is a
25 reason that law enforcement, we train so heavily that when you

1 tactically reload, you change positions, you maintain target
2 acquisition so we don't get ourselves in that position.

3 Q. Thanks, Chief.

4 Even when a civilian or a law enforcement officer is
5 very fast at effecting a magazine exchange, two seconds, very
6 fast, that means during that two seconds -- assuming they don't
7 have one of those special guns that you referred to -- they're
8 rendered temporarily defenseless; isn't that right?

9 A. What is a special gun?

10 Q. I'm sorry?

11 A. What do you mean by a special gun?

12 Q. You indicated in your prior testimony there are certain
13 firearms that allow a single round to be fired when the
14 magazine is out of the weapon, correct?

15 A. There are. I don't think they're special. It's the gun
16 manufacturer. I wouldn't suggest they are special.

17 Q. So that was your problem with my last question? Let me ask
18 again. During the two seconds that a very fast, proficient law
19 enforcement officer or civilian is effecting a magazine
20 exchange, they can't fire in self-defense, absent the fact that
21 they may have one of these firearms that allows them to fire
22 one round; isn't that true?

23 A. They can't fire if the gun has no bullets in it.

24 Q. There you go. Thank you.

25 And the two seconds that they're out of the gunfight,

1 a trained law enforcement officer can fire six, seven rounds in
2 two seconds accurately; isn't that right?

3 A. Would depend what kind of weapon he has.

4 Q. On average, using any authorized law enforcement
5 semiautomatic pistol, a trained law enforcement officer or
6 civilian can fire six to seven rounds in two seconds; isn't
7 that accurate?

8 A. I wouldn't -- I wouldn't know those numbers, sir.

9 Q. Okay. Give me your estimate. How fast can you fire,
10 effectively and accurately, a semiautomatic pistol in two
11 seconds? How many rounds can you fire on the range?

12 A. I would suggest accurately, probably two -- average two and
13 a half per second.

14 Q. Okay. So using your number, someone who is unable to fire
15 defensively for two seconds during a magazine exchange loses
16 the ability to fire approximately four rounds in self-defense
17 or defense of others; isn't that true?

18 A. If the gun is out of ammunition, then, yes, sir, you can't
19 fire it.

20 Q. And an empty firearm presents, essentially, the same risk
21 as a malfunctioning firearm, doesn't it? Meaning, the gun is
22 rendered ineffective for defensive use?

23 A. No, not necessarily. Because a malfunctioning weapon may
24 be one that has to be cleared, and you could start using it
25 again. And if you're out of bullets, you're out of bullets.

1 So if you don't know how to clear that malfunction, the gun may
2 be useless to you at that point. But assuming all you did was
3 run out of bullets, you would just have to know how to reload
4 it.

5 Q. In fact, in your deposition, you've responded that you've
6 got a really nice paperweight to throw at the suspect under
7 those circumstances; isn't that right?

8 A. If you can't clear it, you mean?

9 Q. Yeah.

10 A. If you can't clear a malfunction -- I believe we were
11 talking about a different scenario at that point. But if you
12 can't clear a malfunction for whatever reason, then, obviously,
13 the gun is useless to you.

14 Q. Well, the same is true if the gun is out of bullets, right?

15 A. Well, I would like to think before you threw it at
16 somebody, you would take the opportunity to reload it,
17 but . . .

18 MR. COLIN: I have no further questions of this
19 witness.

20 Thank you, Chief.

21 THE WITNESS: Thank you.

22 THE COURT: Thank you.

23 Redirect?

24 MS. SPALDING: Thank you, Your Honor.

25

1

REDIRECT EXAMINATION

2

BY MS. SPALDING:

3

Q. Just a few questions, Chief Fuchs.

4

You were describing on cross-examination what you personally did at Sandy Hook. And I think after the question about you taking teachers to the firehouse and then returning to the school, there seemed to be sort of a large blank of what occurred then. Could you describe what you did with respect to responding to the events at Sandy Hook after you took those teachers to the firehouse.

10

11

A. Sure. After the teachers were reunited with their students, went back to the school, met with the Newtown police chief and other officers prior to the calvary, essentially, coming in from other departments and the state police. Talked about what we had to do next. We did have one person who was in custody who we thought might have been involved. There were reports there was a second shooter at that point. That individual was an ambulance chaser, if you will. He heard the call, and he just showed up. So we took that person into custody, transferred the custody of that individual eventually over to the state police.

22

23

24

25

I, then, wound up at the firehouse, where I became, essentially, in charge of all of the kids and the victims, to reunite them with their parents, their caregivers, sort of take attendance, if you will, before we released them. A part of

1 that process included identifying those who were in the school
2 who might have some evidentiary value to the state police. So
3 we really started parsing folks out into different groups.
4 Group one would be kids whose parents were there. Then we had
5 to figure out whether they were in a position where they could
6 provide any kind of a statement to the state police. Group two
7 were the teachers. Group three were the parents who were
8 showing up who did not have any children, and they were taken
9 somewhere else. Group four were adults whose loved ones were
10 still in the school, and they were taken somewhere else as
11 well. And then we had some kids whose parents had not yet
12 shown, which is fine, and we housed them somewhere. That was
13 kind of the reunification process.

14 During that process, obviously, had the opportunity to
15 speak with quite a few individuals who were in the school, or
16 out of the school, who were responding as we put those people
17 in the right group of individuals, so to speak, really, to
18 identify if there was anybody who could speak to what had
19 happened.

20 Q. How long did that process take?

21 A. I would estimate about two hours or so, before we really
22 had a decent accounting, and that number 26 started coming up
23 time and time again. And we had all of the 26 victims'
24 families excluded in a back room. And when we had the number
25 26, and there were 26 of them, we were pretty confident we had

1 the right number.

2 Q. All right. And subsequent to taking that role and
3 determining which children had information that might be of
4 interest to the -- to the state investigators, what did you do
5 with respect to the Sandy Hook investigation or the aftermath
6 of the event?

7 A. Immediately that day, one of the things that I kind of
8 tasked myself with, along with one of the commanders from the
9 state police and the three school resource officers from
10 Newtown, was doing victim identification. We were desperately
11 trying not to have the parents have to do face-to-face or
12 photographic identification of the victims. So we put together
13 file folders on every single victim. The medical examiner or
14 coroner came and did a makeshift morgue in the school parking
15 lot. And we produced by probably about 10 o'clock that night a
16 file of -- for each one of the victims, which had photographs
17 and what they were last wearing and different descriptions of
18 them so that the coroner could do preliminary investigations,
19 and could do death notifications that night, which was able to
20 be accomplished. That took place that night.

21 For the following ten days or two weeks, most will
22 tell you that I pretty much ran the Newtown Police Department,
23 along with three other administrators. Their chief was buried
24 in this incident. Not so much in the investigative side, but
25 in the town aid side, if you will. We brought in -- for a

1 department that normally puts out five to seven officers, we
2 were putting out 50 to 70 officers per shift through mutual aid
3 departments. We had over 1,000 officers respond during the
4 course of those subsequent two weeks to assist in that
5 endeavor. We did things like guard victims' families, funeral
6 escorts, normal patrol, because the town still was there, every
7 other function, guarding scenes, traffic control, that would
8 have needed to take place because you're in a town that
9 normally has less than 30,000 people, which had a visiting
10 population, then, of an additional 30,000 people.

11 Q. Okay.

12 A. So I was very much involved with the day-to-day operation
13 of that department.

14 Q. All right. And did your opportunity to speak with the
15 parents, and I think one opportunity to speak to a child that
16 you referred to, did that occur at the firehouse when you were
17 sorting out students or witnesses who could be helpful to the
18 state investigating authorities?

19 A. It occurred at a couple of different junctures. I did
20 speak with somebody at the firehouse. I did speak with
21 somebody on a telephone. I did speak to a parent -- actually,
22 two, a parent and an uncle, I believe, when the President came
23 to Hartford, and we were up there with the surviving families,
24 as well. So there were multiple opportunities where that same
25 information came back to me.

1 Q. Okay. Thank you.

2 You were asked about whether -- well, you were asked
3 about the seven magazines that were found at the school, three
4 of which were partially expended, correct?

5 A. Yes, ma'am.

6 Q. All right. Do you know if there was anybody present, any
7 children, any adults present when those magazines were changed?

8 A. I would have no way of knowing. But my belief is, and I've
9 read the beliefs of others, that Lanza was engaged in what we
10 talked about before, which was tactical reloading. So he was
11 not in a position where he was ever out of ammunition.

12 Q. All right. And the time that we do know that either a
13 magazine exchange was being done in front of kids or there was
14 an incident where the shooter was playing with his gun,
15 whichever it was, we know at that time kids escaped, right?

16 A. We know that when he was in one of the classrooms, when he
17 was, quote, unquote, playing with his gun or doing a reload, as
18 the statement indicates, that is when those six kids knew
19 enough to run and fled the school.

20 Q. And so far as we know, that's the only time that he
21 actually either exchanged a magazine in front of people or his
22 gun jammed in front of people; is that correct?

23 MR. COLIN: Foundation.

24 THE COURT: Response.

25 MS. SPALDING: He's testified that he read the police

1 reports and -- and spoke to witnesses.

2 *THE COURT:* All right. It's not uncommon for
3 witnesses who were not present to testify based upon their
4 belief as to what happened. Most investigators of crimes do
5 exactly that. I understand this testimony to be in that vein.

6 *MS. SPALDING:* All right. Thank you, Your Honor.

7 *BY MS. SPALDING:*

8 Q. So, Chief, we do know of one time during this shooting when
9 either a magazine was exchanged in front of kids or a gun
10 jammed and the shooter was playing in front of kids, right?
11 That's your belief?

12 A. We do know that there was one such instance, for sure, when
13 he did something in front of the children and -- which gave
14 them the opportunity to flee the school, correct.

15 Q. Thank you.

16 You were asked some questions about civilians being
17 rendered helpless by running out of rounds. Are you aware of
18 any situation in which a civilian ever required more than 15
19 rounds to defend themselves?

20 A. I am not, no.

21 Q. Ten rounds?

22 A. I am not, no.

23 Q. You were asked about whether the incidents that you
24 referred to in your direct examination were mass shootings.
25 Let me ask you this: Do you consider an event in which an

1 individual attempts to shoot multiple people to be a mass
2 shooting situation?

3 A. I'm not sure there is any clear-cut definition of what a
4 mass shooting is. I think, unfortunately, our tolerance, if
5 you will, for that definition has increased as time has gone
6 on. Sandy Hook has now set a new bar for what school shootings
7 are. You see many that don't even make the national media
8 anymore, because they don't come close to that 26 number.

9 Q. Okay.

10 A. But I don't think that it -- it makes a difference, because
11 what -- what I have talked about is the opportunity -- whether
12 it's one life or twenty-six lives, it doesn't matter, it's that
13 opportunity to save additional lives during that time, where
14 there is a pause.

15 Q. Okay. Is it fair to say that you haven't established in
16 your own mind a definition of what a mass shooting is?

17 A. No, ma'am, I have not.

18 *MS. SPALDING:* Thank you very much, sir.

19 *THE COURT:* Can this witness step down and be excused?

20 *MR. COLIN:* I have no objection.

21 *MS. SPALDING:* Yes.

22 *THE COURT:* Thank you, sir.

23 *THE WITNESS:* Thank you, Your Honor.

24 *THE COURT:* You are excused.

25 *THE WITNESS:* Thank you.

1 *THE COURT:* You may call your next witness.

2 *MR. GROVE:* Your Honor, our next witness is
3 Dr. Jeffrey Zax. I understand the plaintiffs, again, have a
4 couple of motions in limine that maybe we should resolve before
5 he takes the stand.

6 *THE COURT:* Okay.

7 *MR. KRUMHOLZ:* Your Honor, Mr. Grove is correct, there
8 were two motions in limine. It seems to me that one has been
9 subsumed in the other.

10 We filed one Monday morning titled Plaintiffs' Motion
11 in Limine to Exclude Untimely Disclosed Expert Opinion
12 Testimony. And, Your Honor, that is -- that is based on the
13 untimely disclosure of a supplemental report produced to us on
14 January 30, 2014. It was based on data which Professor Zax
15 received sometime in November, after the discovery deadline had
16 closed. Professor Zax testified that he completed his report
17 in December, and there is no explanation for why we received it
18 on January 30.

19 *THE COURT:* How have you been prejudiced?

20 *MR. KRUMHOLZ:* We've been prejudiced, Your Honor,
21 because had we timely received the supplemental report, we
22 would have had the opportunity to designate our own rebuttal
23 expert, who could have examined the quality of Professor Zax's
24 progression analysis and provided some context for it.

25 *THE COURT:* What efforts did you make to address this

1 after January 30?

2 *MR. KRUMHOLZ:* Well, Your Honor, we took a
3 belt-and-suspenders approach, which is to say that we accepted
4 Mr. Grove's offer to take a short deposition of Professor Zax
5 concerning his late disclosed supplemental report. And then
6 the next thing we did was confer with counsel regarding this --
7 this motion over the weekend. We filed, with some reluctance,
8 Your Honor. We understand from the pretrial conference on
9 February 20 that you did not want motions in limine, and so it
10 was with some reluctance that we filed it. We believe that
11 based on the application of the rules, that this is an
12 important enough and clear enough circumstance that a motion
13 was warranted.

14 And I know you have the motion. We've cited the
15 relevant case law on that.

16 *THE COURT:* But this is -- what I'm asking is
17 something different than what I'm hearing. I don't see -- and
18 perhaps I've overlooked it -- any effort on your part to retain
19 another witness that you were unable to retain. I don't see in
20 the record any effort to extend deadlines or to seek an order
21 authorizing the retention of another witness. I see no --
22 nothing in the record that seeks any kind of sanctions for the
23 late disclosure. What I see is only a motion filed mid-trial
24 to exclude an expert opinion that the defendants had,
25 essentially, 45 days before trial. Fair?

1 MR. KRUMHOLZ: Your Honor, that's a fair
2 representation.

3 THE COURT: Okay. So why didn't you take any of those
4 actions during that 45-day period?

5 MR. KRUMHOLZ: Well, Your Honor, all I can say is, in
6 the press of preparing for trial, and especially with a case in
7 which we have five different plaintiffs' groups and five
8 different sets of lawyers, this is a litigation decision that
9 we made at the time we did. And, ideally, we would have made
10 it earlier, but this is -- this is the timing.

11 THE COURT: And to what extent is the opinion
12 different based on the January 30, 2013, report than the
13 opinion you previously had?

14 MR. KRUMHOLZ: Well, it's completely different. It
15 presents data that Professor Zax did not have at the time he
16 submitted his initial expert report and his supplemental expert
17 report in September.

18 THE COURT: Okay. Let's start with the conclusion.
19 Is the conclusion different?

20 MR. KRUMHOLZ: The conclusion is not different, Your
21 Honor.

22 THE COURT: Okay. Now, there was data that was relied
23 upon, I assume, in the first report; is that right?

24 MR. KRUMHOLZ: Not with respect to the opinion that
25 this regression analysis relates to.

1 *THE COURT:* Okay. So tell me the difference between
2 this report and the prior report.

3 *MR. KRUMHOLZ:* Well, this report presents a regression
4 analysis of data received after the discovery deadline
5 concerning firearms confiscated because they were suspected in
6 the commission of a crime in Virginia.

7 *THE COURT:* Okay.

8 *MR. KRUMHOLZ:* The supplemental report then describes
9 a regression analysis that Professor Zax conducted concerning
10 that firearms data. And Professor Zax's conclusion is that
11 based on his regression, the 1994 federal law that's been the
12 topic of much discussion in this case eventually resulted in a
13 decline in the proportion of firearms with large-capacity
14 magazines confiscated in Virginia.

15 *THE COURT:* Well, I'm a little confused. You referred
16 to "this report" presents a regression analysis, and then you
17 said the supplemental report describes a regression analysis.
18 When was the regression analysis performed?

19 *MR. KRUMHOLZ:* December.

20 *THE COURT:* Okay. Did you have the -- the description
21 of the regression analysis that was performed prior to
22 January 30?

23 *MR. KRUMHOLZ:* No, Your Honor.

24 *THE COURT:* Okay. So when you talk about the
25 regression analysis being in the report, you're talking about

1 it being in the January 30 report?

2 *MR. KRUMHOLZ:* Yes, Your Honor.

3 *THE COURT:* Okay. And had you had the opportunity --
4 you say the prejudice to the plaintiffs is, you could have
5 obtained another expert --

6 *MR. KRUMHOLZ:* That's correct.

7 *THE COURT:* -- to address the -- what? The
8 regression analysis?

9 *MR. KRUMHOLZ:* Correct.

10 *THE COURT:* Who would you have obtained?

11 *MR. KRUMHOLZ:* I believe we would have retained a
12 professor named Carl Moody from George Mason University.

13 *THE COURT:* But you made no attempt to obtain his
14 assistance, correct?

15 *MR. KRUMHOLZ:* We contacted him, Your Honor, and have
16 had conversations.

17 *THE COURT:* Was he unable to assist you?

18 *MR. KRUMHOLZ:* No, I don't believe he was unable. I
19 think by the time we had those conversations, we were too close
20 to trial to officially designate him as an expert.

21 *THE COURT:* When did you contact him?

22 *MR. KRUMHOLZ:* I can't answer that, Your Honor.

23 Can I confer with counsel?

24 *THE COURT:* Sure.

25 (Off-the-record discussion between counsel.)

1 MR. KRUMHOLZ: Your Honor, my apologies for the delay.
2 I wonder if we might have a very short recess so we can discuss
3 this.

4 THE COURT: Well, we'll move on to something else.
5 There is no reason to take a recess at this time. You can
6 discuss it over the morning recess.

7 MR. KRUMHOLZ: Very well. Thank you, Judge.

8 THE COURT: All right. I want to hear a response to
9 the motions, there are actually two of them, one at 148 and one
10 at 150.

11 MR. GROVE: Yes, Your Honor. So, my understanding of
12 the two motions is, one has to do with the demonstrative
13 charts. This is similar to what we dealt with with
14 Dr. Webster. We're not admitting those for anything other than
15 to -- for the witness to illustrate as he goes along.

16 The second is the more substantive motion, I believe,
17 that's 150. And so at the outset, as the Court has previously
18 held with respect to the plaintiffs' other mid-trial motions in
19 limine, the train, in my view, has left the station. The
20 plaintiffs' decision to wait until the second week of trial is
21 problematic. This could have been raised at the pretrial
22 conference; it could have been raised at any time.

23 We indicated at the beginning of January -- actually,
24 this additional data was discussed at Dr. Zax's deposition
25 during the discovery period. He hadn't received it yet. And

1 as Mr. Krumholz indicated, it relates directly to the first
2 opinion that he's going to discuss today.

3 For that reason, I believe the Court should view the
4 additional disclosure here as appropriate supplementation under
5 Rule 26(a)(1)(E) and 26(e).

6 That said, even if we do have a Rule 26 issue here,
7 the Court should still permit the testimony. The Tenth Circuit
8 has held that a trial court has broad discretion to determine
9 whether a Rule 26(a) violation is either, one, justified, or,
10 two, harmless. The seminal case on this appears to be
11 *Woodworkers Supply, Inc.*, which is at 170 F.3d 985, which is
12 from 1999. For the reasons I've already discussed, I believe
13 the timing of disclosure here was justified. But even if it
14 wasn't, it certainly was harmless.

15 Under *Woodworkers Supply*, the Court should look at
16 four factors to guide its discretion. First, prejudice or
17 surprise to the party against whom the testimony is offered;
18 second, the ability of the party to cure the prejudice; third,
19 the extent to which introducing the testimony would disrupt the
20 trial; and, fourth, the moving parties' bad faith or
21 willfulness.

22 All of these factors tilt in favor of admitting the
23 testimony here. Plaintiffs certainly can't claim they're
24 surprised by it. We disclosed the existence of this promptly.
25 I wish that I had been a little more prompt in disclosing the

1 report, but we had some issues with communication around this
2 period, given some of the timing of what else was going on and
3 the Christmas break.

4 We disclosed the data and the accompanying
5 supplemental report well before the trial date. And we agreed
6 with the plaintiffs that it was appropriate for them to take a
7 supplemental deposition of Dr. Zax. This opportunity cured any
8 prejudice that the plaintiffs might have suffered.

9 Aside from dealing with this motion, there has been no
10 disruption to the trial here, so the third factor also favors
11 admitting the testimony.

12 And there is certainly no bad faith. Bad faith would
13 have been sitting on this and disclosing the week or the day
14 before trial. That's not how we operate, and it's not
15 something that we were attempting to do here.

16 We did this on the level, in order to ensure that the
17 plaintiffs would have a fair opportunity to explore this area
18 with Dr. Zax in an additional deposition. Plaintiffs made a
19 strategic decision to take advantage of that opportunity, and
20 it's -- they shouldn't now be able to rethink that decision and
21 move to exclude it.

22 That also raises another issue, and that's waiver and
23 opening the door. Even if the Court doesn't agree with our
24 analysis under the *Woodworkers Supply* case, plaintiffs opened
25 the door to this testimony by asking Dr. Kleck about it during

1 his direct examination. The Court will likely recall his
2 testimony about the Virginia Firearms Clearinghouse and how in
3 his view the data gathered from that source is incomplete and
4 unreliable. The data that Dr. Kleck criticized is precisely
5 the data that Dr. Zax acquired and that we would like him to
6 address today.

7 If the Court has any questions, I'd be happy to
8 address them.

9 *THE COURT:* Thank you.

10 Response.

11 Counsel, it's the same attorney who argues the motion
12 and does the reply.

13 *MR. KRUMHOLZ:* Thank you, Your Honor.

14 Dr. Kleck did not testify about the Virginia
15 clearinghouse data. He testified about two *Washington Post*
16 articles. And so the topic of the Virginia clearinghouse data
17 did not come up during his testimony.

18 As to the -- as to our strategic decision, Your Honor,
19 I hardly think we can be blamed for taking a
20 belt-and-suspenders approach. If they offered the deposition,
21 and we declined to take it, we would have been in the position
22 that they're now -- they're then saying that we declined a
23 perfect opportunity to take his deposition.

24 So I don't think we were -- the strategic decision
25 here is not one we can be blamed for. We wanted to make sure

1 that we were protected on all sides.

2 *THE COURT:* Thank you.

3 *MR. KRUMHOLZ:* Thank you.

4 *THE COURT:* The motion in limine found at Docket No.
5 150 seeks to exclude opinions by Dr. Zax found in a report that
6 was disclosed on January 30, 2013. This was a supplemental
7 report. Apparently it contained discussion of a regression
8 analysis that had not been previously disclosed, based on data
9 that was obtained by Dr. Zax after the close of the discovery
10 period.

11 The plaintiffs here exclude his opinions and testimony
12 at this time on the grounds that the report was late disclosed.
13 There is no doubt it was late disclosed. It was disclosed a
14 good 45 days -- actually, close to 60 days before trial. And I
15 believe the appropriate legal standard that has to be applied
16 with regard to a request of this nature is, indeed, set out in
17 *Woodworkers Supply*. That's a Tenth Circuit binding case with
18 regard to this.

19 I find that the only prejudice that the plaintiffs
20 contend has happened is that they have not retained a
21 responsive expert to express a responsive opinion. They were
22 provided by the defendant with the opportunity to take a
23 deposition based on this new report and did so. And their
24 concern at this juncture is not based upon the deposition that
25 was taken or the report per se, it is only that they did not

1 have -- did not obtain a responsive expert.

2 I find that they had time to do so, have not heard
3 that there was inability to do so based upon the time. I think
4 they had ability to cure that prejudice. It does not disrupt
5 the trial to allow this witness to proceed to testify, and
6 there has been no showing of bad faith.

7 I, therefore, deny the motion in limine and find that
8 Mr. Zax -- Dr. Zax may testify and offer any opinion that was
9 disclosed in the January 30, 2013 report. At the close of his
10 testimony, the plaintiffs, if they choose, may make a proffer
11 of the testimony that they believe would have been offered had
12 they obtained an expert in response.

13 Any need for clarification or further explanation?

14 *MR. KRUMHOLZ:* No, Your Honor. Thank you.

15 *THE COURT:* Thank you.

16 *MR. GROVE:* I think we probably still need a ruling on
17 Docket No. 148, which has to do with the charts.

18 *THE COURT:* Thank you. Is there any more argument
19 with regard to 148?

20 *MR. KRUMHOLZ:* Your Honor, with respect to that
21 motion, in light of your ruling on this motion, we withdraw
22 that, 148.

23 *THE COURT:* All right. 148 is withdrawn. I think
24 that cleans up our pending motion list.

25 Please call your next witness.

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1 MR. GROVE: Dr. Jeffrey Zax, please.

2 THE COURT: Mr. Zax, please step up and be sworn.

3 (JEFFREY ZAX, DEFENDANT'S WITNESS, SWORN)

4 COURTROOM DEPUTY: Please be seated.

5 Please state your name and spell your first and last
6 name for the record.

7 THE WITNESS: My name is Jeffrey Zax, J-E-F-F-R-E-Y,
8 Z-A-X.

9 DIRECT EXAMINATION

10 BY MR. GROVE:

11 Q. Dr. Zax, what do you do for a living?

12 MR. KRUMHOLZ: Your Honor, my apologies for the
13 interruption, but I do need to make a short objection, just for
14 the record.

15 This witness did not testify before the General
16 Assembly. Plaintiffs, therefore, object to the testimony of
17 this witness in this case for the reasons articulated in our
18 trial brief, as well as by Mr. Abbott at the beginning of the
19 State's case last Thursday.

20 Thank you.

21 THE COURT: Thank you.

22 BY MR. GROVE:

23 Q. I'll repeat the question. Dr. Zax, what do you do for a
24 living?

25 A. I am an economist. I'm employed by the University of

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1 Colorado at Boulder. I'm a full professor in the department of
2 economics. I'm the associate chair of that department in
3 charge of the undergraduate instruction program.

4 Q. Please describe your educational background.

5 A. I have a bachelor of arts degree from Harvard University,
6 magna cum laude, conferred in 1976. I have a doctoral degree
7 in economics from Harvard University, conferred in 1984.

8 Q. Broadly speaking, what does an economist do?

9 A. Economists study the response of people and groups to
10 incentives and changes in incentives.

11 Q. Does economics have subspecialties?

12 A. Yes.

13 Q. Such as?

14 A. Well, for example, the *Journal of Economic Literature*,
15 which is the journal of reference regarding the structure of
16 the profession, separates the profession into approximately 20
17 major fields. Among them are labor economics, urban economics,
18 public economics -- those are all fields in which I've been
19 active -- macro economics, and so forth. They are each
20 designated by a capital letter. Capital letter K is law and
21 economics. Within each of these 20 major divisions, there are
22 subspecialties. Law and economics, for example, has one
23 subspecialty, I believe it's K42, which is the study of
24 criminal behavior. It has another subspecialty, I think it may
25 be K32, which is the study of the effects of laws on economic

1 behavior.

2 Q. Are you a referee for any academic journals?

3 A. Yes.

4 Q. What does refereeing a journal involve?

5 A. Refereeing is the act of evaluating a submitted paper for
6 the purpose of evaluating its credibility, its contribution,
7 and its appropriateness for the journal to which it's been
8 submitted. One is designated as a referee by the editors of
9 the journal, who, on receipt of a submission, look for
10 professionals whose opinions they respect who can help them
11 evaluate whether or not that submission is an appropriate -- is
12 appropriate for publication in their journal.

13 Q. When you're asked to referee papers, are those restricted
14 only to those specific topics in which you, yourself, have
15 published?

16 A. That certainly has not been my experience.

17 Q. Approximately how many journals have you refereed?

18 A. Fifty, a few more.

19 Q. How wide is the variety of those publications?

20 A. In my experience, it's been quite wide. Most of them are
21 in economics, but across all -- most fields in economics. I've
22 also refereed for journals in regional science, in geography,
23 in political science, and in sociology.

24 Q. Any particular journals that might be relevant to your
25 expertise in this case?

1 A. Well, for example, I have refereed for *Sociological Methods*
2 *and Research*, which is a top methodological journal in
3 sociology. I've refereed for *Social Science Quarterly*, which
4 might also -- which also publishes sociological material.

5 Q. In obtaining your degrees, did you have any special
6 emphasis in a particular field or focus of study?

7 A. Yes. My designated fields during my doctoral study were
8 labor economics and econometrics.

9 Q. How would you describe the field of econometrics?

10 A. Econometrics is the application of statistical methods to
11 economic problems, economic issues. Statistical methods --
12 well, statistics is the science of prediction, essentially.
13 Statistics is how we understand the relationship between causes
14 and effects in a rigorous way.

15 Q. Does the study of econometrics involve analysis of
16 empirical data?

17 A. The study of econometrics has two branches. First, there
18 is the theoretical branch, in which the fundamental properties
19 of statistical techniques are examined and verified. Then
20 there is the empirical branch, which is where those techniques
21 are applied to data.

22 Q. Do any of your other fields of concentration involve
23 analysis of empirical data?

24 A. Virtually everything I do has to do with analysis of
25 empirical data. I have written only two or three theoretical

1 papers in my career.

2 Q. Since obtaining your Ph.D., could you just run us through
3 the jobs that you've held.

4 A. Yes, it's brief. I -- upon graduating from my doctoral
5 program, I took a position as assistant professor at Queens
6 College of the City University of New York. A year or two
7 thereafter, I was given a parallel appointment at the same
8 level at the graduate center, the City University of New York.
9 I think that was in 1984 and 1986, perhaps. In 1988 or 1989, I
10 was promoted to associate professor in both of those
11 capacities. In the spring of 1990, I served as a Fulbright
12 professor at the University of Ghana, G-H-A-N-A, in West
13 Africa, after which I came to the University of Colorado at
14 Boulder as an associate professor in the spring of 1990. I've
15 been there ever since.

16 Q. Do you know a lot about the mechanics of firearms?

17 A. No.

18 Q. Do your opinions in this case depend on knowledge of how
19 firearms work?

20 A. No.

21 Q. What knowledge or expertise do your opinions require?

22 A. My opinions require the ability to understand how people
23 and organizations respond to incentives and the ability to
24 understand responsible analysis of quantitative data.

25 Q. Have you ever been retained as an expert witness before?

1 A. Yes.

2 Q. And have you ever been qualified as an expert witness
3 concerning a topic in which you have not published independent
4 research?

5 A. In every case where I have been -- I'm sorry. In every
6 field of litigation in which I have been qualified as an
7 expert. In the first instance of such qualification, at that
8 time I had not previously published research of my own in that
9 field. In some of those fields, I have subsequently --
10 subsequent to my first employment as an expert witness, I have
11 published, but not in all.

12 Q. Have you considered conducting additional scholarly
13 research based upon your experience in this case?

14 A. Actually, I believe I've already conducted worthy scholarly
15 research in this case. That is, I expect to testify on two
16 analyses that I believe make novel and substantial
17 contributions to the existing criminological literature.

18 Q. And were you retained by the defendant to offer expert
19 opinions in this case?

20 A. Yes.

21 Q. There are two laws at issue here. One is the limitation on
22 magazine capacity, and another is -- has to do with an
23 expansion of Colorado's background check requirements for
24 firearms transfers. Which of these laws do your opinions
25 pertain to?

1 A. My opinions pertain to what I believe is HB 13-1224, the
2 restriction on magazine transfers and sales.

3 Q. And I'll represent to you, that's been codified as
4 18-12-302. If we talk about 1224 -- well, we both know what
5 we're talking about, under either the statute or the bill
6 number. But we're discussing the same thing when we use those
7 two phrases, right?

8 A. Yes. Thank you.

9 Q. So let's first outline your opinions, and then come back
10 and discuss them.

11 First, did you reach an opinion concerning the likely
12 effect of the magazine capacity limitation on the number of
13 large-capacity magazines that may be used in crime in Colorado?

14 A. Yes. The magazine restriction will reduce the number of
15 LCMs that are in circulation and use in the state of Colorado
16 below what they would have otherwise have been in the absence
17 of law.

18 Q. Did you reach an opinion as to what impact the magazine
19 capacity limitation will have on the self-defense capabilities
20 of firearm owners?

21 A. Yes. The restriction on large-capacity magazines will have
22 no discernible effect on the capacity of Coloradans to engage
23 in appropriate self-defense.

24 Q. Can you sum up why that might be in a couple of sentences?

25 A. There is -- there is -- there is no example in the last ten

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1 years of any individual in Colorado requiring anything like the
2 capacity of even the legal LCMs in order to defend themselves.
3 And there is no record in the -- in the criminological
4 literature of that necessity elsewhere.

5 Q. Did you reach an opinion as to the effect of the magazine
6 capacity limitation on the safety of law enforcement officers?

7 A. Yes, I did. The restriction should improve the safety of
8 law enforcement officers and allow them to conduct their
9 business at less risk to their own health and safety.

10 Q. And, finally, did you reach an opinion as to whether the
11 magazine capacity limitation will have an impact on public
12 safety when shots are fired in connection with criminal
13 activity?

14 A. Yes. The reduction in the maximum size of allowable
15 magazines will increase the -- reduce the risk that the public
16 will encounter when aggressors fire rounds.

17 Q. Okay. So that's sort of a summary of what your opinions
18 are in this case. Let's go through them in detail.

19 Your first opinion was that the magazine capacity
20 restriction will reduce the numbers of large-capacity magazines
21 in circulation relative to what the numbers would be without
22 the law, correct?

23 A. Yes.

24 Q. What sources did you rely upon to reach this opinion?

25 A. I relied on three sources. First, there is the fundamental

1 economic logic. Second, there is the somewhat meager
2 literature analyzing the effects of the so-called federal ban
3 on large-capacity magazines. And, then, lastly, there is my
4 own original analysis of the data from the Virginia Firearms
5 Clearinghouse regarding the impact of the so-called federal ban
6 on the frequency with which large-capacity magazines were
7 encountered in potential criminal use by law enforcement
8 agencies in the state of Virginia.

9 Q. Okay. So you mentioned three sources. Let's start with
10 the first, basic economic theory. Given the provisions of the
11 law, which include a grandfather clause, why would economic
12 principles dictate a statewide decline in the stock of
13 large-capacity magazines over time?

14 A. The fundamental economic principle here is called the
15 demand curve. It's something that freshmen learn about in the
16 second week of their economic study. The demand curve slopes
17 down. And what that means is, when something becomes more
18 expensive, people want to do less of it. That is a general
19 proposition that holds across virtually all forms of behavior.

20 Its application here is the following: The effect of
21 the law is to make the acquisition and the use of LCMs more
22 expensive. That expense comes both in the form of the material
23 expense of acquiring an LCM; the amount of time that is
24 required to acquire an LCM; the risk that if an LCM is used, it
25 will be challenged as -- under illegal possession by law

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1 enforcement agencies; and the risk that if it is in fact
2 illegally possessed and illegally used, it will led to further
3 legal sanctions applied to the possessor.

4 Q. Just so the record is clear, when you say "LCM," what are
5 you referring to?

6 A. Under the Colorado statute, I understand an LCM to be a
7 magazine whose capacity is 16 rounds or greater.

8 Q. And that's short for large-capacity magazine?

9 A. I'm sorry, yes. I use LCM as an abbreviation of
10 large-capacity magazine.

11 Q. Okay. Thanks. So, what would economic theory predict
12 about the stock of large-capacity magazines in Colorado if this
13 law hadn't been passed?

14 A. Well, the effect of the law is to make the cost of
15 acquisition and use of LCMS greater. In the absence of the
16 law, that cost would have not increased in the same way; and,
17 therefore, the demand for LCMS would have been greater.

18 Q. Well, what if people just ignore the law?

19 A. "Ignore" is a big word in that context. Ignoring the law
20 would mean disregarding it entirely. That is, if firearms
21 stores in Colorado continue to sell LCMS exactly as they had
22 before the law was passed; if mail order vendors of firearms
23 equipment continued to ship LCMS into the state of Colorado
24 exactly as they had prior to the adoption of the law; if gun
25 shows continued to circulate through Colorado and display the

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1 same wares they had exactly as they prior to the law; if all --
2 and implicit in all of that, let me make it explicit -- if law
3 enforcement agencies uniformly refused to enforce any of the
4 provisions of the law; if all of that were to occur, then the
5 law would have no effect. That is, if the law were,
6 essentially, null and void, then it wouldn't affect the cost of
7 acquiring an LCM or using it, therefore, wouldn't change
8 anyone's behavior.

9 Q. Well, that sounds like a zero-compliance scenario. Do you
10 think that's likely?

11 A. Not only do I think it's not likely, I think the evidence
12 probably demonstrates that it hasn't occurred that way. If
13 even a single firearm shop has ceased to stock LCMs subsequent
14 to the ban, already, there is some compliance. I'm not in a
15 position to judge how much there is, but I certainly haven't
16 heard anything here to suggest that that hasn't happened.

17 Q. Is there any reason to believe that people who own guns
18 legally would be particularly sensitive to compliance with laws
19 like this?

20 A. Yes.

21 *MR. KRUMHOLZ:* Objection, Your Honor. Foundation.

22 *THE COURT:* Response.

23 *MR. GROVE:* Dr. Zax is an expert in economics and
24 incentives. This is a question about incentives.

25 *THE COURT:* The question is whether or not you've laid

1 the foundation for that. Do you care to supplement?

2 *MR. GROVE:* I believe the foundation has been
3 adequately laid.

4 *THE COURT:* I sustain the objection.

5 You may continue to supplement if you'd like.

6 *BY MR. GROVE:*

7 Q. Let's talk about incentives. What does economic theory
8 tell us about human behavior and what causes people to act in
9 the way that they do?

10 *MR. KRUMHOLZ:* Objection, vague.

11 *THE COURT:* Overruled.

12 *THE WITNESS:* We understand people to have
13 preferences. That is, when we present people with choices
14 between two actions, two objects, two alternatives, we
15 understand them to be able to answer that question. That is,
16 they can say, I prefer one thing to another, I prefer the
17 second thing to the first, or I'm indifferent. That's all we
18 really require.

19 Once we accept that individuals can offer those kinds
20 of responses, then we're in a position to say how those
21 responses would vary if the incentives were changed.

22 So, for example, if I offer you two objects, two
23 items, and say, which would you prefer? That's going to depend
24 on the cost. If you choose one, then I say, all right, now
25 let's raise the price of the one you chose. Do you still

1 prefer it? And the answer might be yes over some range of
2 price. But at some level I can say, if I make the item you
3 prefer so costly -- the item you originally preferred so
4 costly, would you still prefer it over the other item? At some
5 point there is going to be a price where the answer is going to
6 be no, I'm going to reverse my choice.

7 *BY MR. GROVE:*

8 *Q.* And do those choices that you're talking about, do they
9 affect an individual's decision, for example, to comply or not
10 comply with the law?

11 *A.* Of course. The question of compliance is, again, a
12 question of costs. That is, failing to comply with any kind of
13 restriction obligation, law, failing to comply, can incur two
14 types of costs. First, there is the internal cost. If one has
15 any moral or ethical commitment to those standards, then
16 failure to comply creates a psychological harm, an internal
17 psychological harm. But, second, there is the possibility of
18 external sanctions. If failure to comply raises the
19 possibility of suffering sanctions, that creates a cost to
20 noncompliance. And if that cost is sufficiently high, that
21 will certainly deter noncompliance in any context.

22 *Q.* So based on what you've just discussed, is there any reason
23 to believe that people who own guns legally would be
24 particularly sensitive to compliance with the law?

25 *MR. KRUMHOLZ:* Objection, foundation.

1 *THE COURT:* Overruled.

2 *THE WITNESS:* Yes.

3 *BY MR. GROVE:*

4 *Q.* Please elaborate.

5 *A.* The legal ownership of guns requires -- of firearms, I'm
6 sorry, requires adherence to the laws that govern that
7 possession. Violating those laws, for example, through
8 acquiring illegal large-capacity magazine, might put the
9 ownership of the firearm itself in legal jeopardy. So in order
10 to protect the right to retain the firearm, someone who owns a
11 firearm legally would presumably be especially cautious with
12 regard to violating laws that might threaten that ownership.

13 *Q.* Would the same principles apply to licensed firearms
14 dealers and what they stock?

15 *A.* Absolutely. They -- my understanding is that they also are
16 subject to fairly extensive legal regulation. And if they
17 violate those -- those laws, their capacity -- their ability to
18 continue as firearms dealers could itself be threatened, so
19 that's a pretty strong deterrent to the -- to illegal conduct
20 among gun shop owners.

21 *Q.* Well, from the perspective of an economist, what role do
22 retail storefronts play in consumer markets?

23 *A.* Of course, that's evolving pretty rapidly with the
24 availability of internet shopping. But, nevertheless, retail
25 outlets are still, to my mind, a fundamental component of the

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1 retail market. That's where -- you know, in general, I think
2 many people still think of retail outlets as the first place to
3 go when they want to buy something.

4 Q. Do you have any reason to believe that firearms markets are
5 qualitatively different than markets in general?

6 A. No.

7 Q. Would taking large-capacity magazines off the shelves of
8 FFLs affect the market for those items?

9 A. Absolutely. It would make them less available, less
10 readily available, more costly to acquire, and that would deter
11 some people from acquiring them.

12 Q. The FFLs in this case have alleged that they've ceased
13 selling large-capacity magazines. Would that be consistent
14 with your analysis?

15 A. Yes. It would, first, be evidence of compliance, which I
16 think is one thing. Second, it would certainly demonstrate
17 that the costs of acquiring LCMs has increased. The extent to
18 which it's increased would depend on the number or the extent
19 to which FFLs comply. But the fact that any of them comply at
20 all means it's harder to get an LCM, and that means people will
21 have fewer of them.

22 Q. When you say the cost has gone up, do you mean the price
23 sticker on the object has gone up? What are you talking about?

24 A. No, no. The cost -- well, first, that may be the case.
25 Presumably, if they're only available illegally right now,

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1 anyone selling them would want to sell them at a higher sticker
2 price in order to provide them with some compensation -- in
3 order to provide the seller with some compensation for the risk
4 that they're running by engaging in an illegal transaction.

5 But, moreover, the cost is much more than just the
6 out-of-pocket cost to complete the transaction. There is the
7 cost of locating a vendor; there is the cost of appearing in
8 the presence of a vendor; and then, in this case, there is the
9 cost of illegally importing an LCM or illegally possessing an
10 LCM in the state of Colorado and running the risk of legal
11 sanctions as a consequence of that. All of those are a part
12 of -- all of those combine to create the full realized,
13 actualized cost that someone would experience if they wanted to
14 acquire an LCM.

15 Q. Are you aware of any empirical support for your conclusion
16 that a ban on certain types of firearms or large-capacity
17 magazines might drive up the cost of those items?

18 A. Yes.

19 Q. Please describe that work.

20 A. The sources, apart from my own work to which I refer for
21 this support, are the analyses of Dr. Koper regarding the
22 effect of the federal -- the federal ban on assault weapons and
23 so-called ban on LCMs and two *Washington Post* articles by David
24 Fallis and a co-author -- F-A-L-L-I-S -- and a co-author,
25 regarding, again, the effect of the so-called federal ban on

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1 large-capacity magazines, Virginia firearms data.

2 Q. You keep saying "so-called ban," why do you use that
3 phraseology?

4 A. Because it's inappropriate -- I'm sorry. Let me say it
5 this way: Effectively, with regard to LCMs, the federal law
6 functioned as a ban only on domestic manufacturers. It was not
7 effective -- I'm sorry, it was not -- it was not largely
8 effective with regard to the acquisition of LCMs for the
9 following reasons: First, it allowed for the -- not just the
10 possession of LCMs purchased prior to the introduction of the
11 ban, but it also allowed for the transfer, the legal transfer
12 of those LCMs, provided they had originally been acquired
13 legally.

14 Moreover and more damagingly, the ban was interpreted
15 by the Bureau of Alcohol, Tobacco and Firearms to allow for the
16 importation of LCMs produced, manufactured elsewhere prior to
17 the date of the ban. The practical effect of that, according
18 to Dr. Koper, was that the stock of LCMs in the United States
19 grew from about 20 million in 1994 to 25 million in 2000. In
20 other words, in the first six years of the so-called ban, the
21 stock grew by 20 percent. As you can see, that's -- it's
22 really hard to think of that as a ban in the conventional
23 sense.

24 Moreover, as of 2000, Dr. Koper reports that there
25 were over 40 million import licenses issued by the ATF, not yet

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1 exercised. In other words, the permission to import was such
2 that even while the ban was in effect, it was potentially
3 possible that the stock of LCMs circulating legally in the
4 United States could have tripled from where it was at the
5 beginning of the ban. Again, it's not much of a ban.

6 Q. So given what you've just described, how strong an effect
7 would you have expected to see associated with the 1994 federal
8 assault weapons ban?

9 A. Well, as I've said, I don't expect there to be any decline
10 at all in the number of LCMs that were circulating. However,
11 you could imagine a decline in the frequency of their use. And
12 the reason is this: While the ban didn't seem to have any
13 appreciable impact on the cost of acquiring LCMs, it may have
14 increased the cost of using one. And that's because, if you
15 used an LCM, you did encounter the risk that you would interact
16 with law enforcement agencies. The consequence of that use and
17 that law enforcement agencies might challenge your right to
18 possess the LCM.

19 Now, the law as I read it, placed the burden of proof
20 for such challenge on law enforcement. And so I imagine if you
21 legally possessed an LCM, you could have reasonable confidence
22 that were you -- were that possession challenged, you would be
23 able to retain possession after the challenge was resolved.
24 Nevertheless, you have to undergo the challenge; and that would
25 likely be a pain in the ass. So that's a pretty substantial

1 deterrent from encountering that risk.

2 *THE COURT:* Counsel, we're getting kind of close to
3 10:30, and I know you're in the middle of this examination.
4 When you reach a convenient stopping point, would you let me
5 know, and we'll take our morning recess.

6 *MR. GROVE:* This is a good point.

7 *THE COURT:* Okay. Then, the court clock is showing
8 about 10:25. We'll stand in recess for 20 minutes, and plan on
9 reconvening at a quarter to 11:00.

10 (Recess at 10:24 a.m.)

11 (In open court at 10:53 a.m.)

12 *THE COURT:* Please continue.

13 *BY MR. GROVE:*

14 Q. Dr. Zax, when we left off, we were discussing theoretical
15 discussion of the federal large-capacity magazine ban and
16 assault weapons ban. Has anyone reviewed empirical evidence on
17 the question of whether federal ban affected the number of
18 large-capacity magazines in circulation?

19 A. Yes. In my reading, the principal source of that is the
20 work of Dr. Koper, K-O-P-E-R. And there are also two articles
21 from the *Washington Post* by David Fallis and a co-author.

22 Q. What was the effect of the federal assault weapons ban on
23 assault weapons?

24 A. My memory is that Dr. Koper found during the ban that the
25 price of assault weapons went up initially and then came back

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1 down and that the frequency with which assault weapons were
2 found in trace data declined consistently through out the
3 period of the ban.

4 Q. As an economist, what does a rise in price suggest about
5 supply?

6 A. Price goes up when supply goes down. In other words,
7 that's an indication that it was hard to get these things, so
8 people had to pay more money in order to acquire one.

9 Q. Did Dr. Koper make any findings about the prices of
10 large-capacity magazine?

11 A. I think that finding was similar. As the ban -- at the
12 beginning of the ban, the price went up. Subsequently, it
13 drifted back down again. And that would be consistent with the
14 evidence that subsequent to the introduction of the ban,
15 imports began to occur at a substantial rate.

16 Q. Did Dr. Koper's report make any findings about the use of
17 large-capacity magazines?

18 A. Yes. The most relevant had to do with data that he
19 acquired from the City of Baltimore. These, I understood to be
20 records of all firearms confiscated for suspicion of being used
21 in criminal activity. And there was a fairly large sample
22 there; I think it was 33,403 firearms, something like that. So
23 that's a lot of information. It was only during the period of
24 the ban itself, so he wasn't able to compare the experience
25 during the ban with the experience before or after.

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1 But the evidence from that -- from that data was that
2 the frequency with which large-capacity magazines appeared
3 among guns suspected of criminal use declined slowly, but
4 consistently throughout the period.

5 Q. Did he review evidence of large-capacity magazine use in
6 any other cities?

7 A. Yes. He had data from, if I remember this correctly,
8 Milwaukee, Louisville, and Anchorage. Those samples were all
9 substantially smaller, on the order of 300 to 700 firearms
10 spread out over multiple years, so they didn't have the same
11 informational content. In addition, they were more peculiar
12 samples. I believe the Milwaukee sample was firearms used in
13 fatal shootings, and in Louisville and Anchorage they were
14 trace data, firearms whose origins had been traced.

15 Q. There has been some discussion of trace data in this case.
16 Do you share the same concerns as Dr. Kleck with respect to its
17 use?

18 A. There are certainly concerns. My understanding is that
19 when you -- there is a choice that law enforcement officers
20 make when they decide whether or not to confiscate a firearm,
21 and there is another choice when they decide whether or not to
22 send that firearm on for tracing. And that means that the
23 collection of firearms that are confiscated and then traced
24 are -- that collection is conditioned by two sets of choices.
25 And those choices, you know, could be driven by lots of things

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1 we can't observe. And so it's important to be cautious about
2 how one interprets what one sees when the possibility of what
3 one sees is being distorted by choices that you can't really
4 reproduce.

5 Q. Have you done of your own independent work on the issue of
6 large-capacity magazines and how their prevalence was affected
7 by the federal assault weapons ban?

8 A. Yes, I have.

9 Q. And was it similar to the work that Dr. Koper reported in
10 his 2004 study?

11 A. It was actually similar in spirit, particularly to the work
12 he did with the Baltimore data. My work is more extensive,
13 both in that -- both in that it covers a brief period prior to
14 the ban and several years subsequent to the ban. Also, I have
15 a large sample to work with; that is, this is the data from the
16 Virginia Firearms Clearinghouse. And I believe I have 101,326
17 firearms.

18 Q. So let's talk about the data set. You mentioned the
19 Virginia Firearms Clearinghouse. Tell us what that is.

20 A. My understanding is that the Virginia Firearms
21 Clearinghouse is an informational repository, managed by the
22 State of Virginia. The intent is to collect an individual
23 record referring to every firearm confiscated by law
24 enforcement agencies in that state under suspicion that it had
25 been involved in criminal use.

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1 Q. So you said every firearm. Does that mean that this data
2 set is likely to suffer from selectivity problems that can
3 plague ATF trace data?

4 A. It certainly is not going to suffer from that problem.
5 That is, these are not traced weapons. So the weapons that I'm
6 looking at weren't selected by someone choosing whether or not
7 to send them on for tracing purposes.

8 There is some question -- as I said, David Fallis of
9 the *Washington Post* wrote two articles using the same data. In
10 one of those articles, he made reference to some agencies, law
11 enforcement agencies, in Virginia that did not participate in
12 the Firearms Clearinghouse. My understanding is that,
13 formally, all are obligated to. And I personally do not have
14 any knowledge of whether or not some agencies are not
15 participating, so there is that question. But my understanding
16 is that of the agencies that do participate, they're reporting
17 everything.

18 Q. And would leaving some of the agencies out, would that
19 matter to the numbers that you eventually reached when you do
20 the analysis?

21 A. I'm a little curious about that. It would be interesting
22 to know which agencies were not participating and why. But
23 that -- their omission would only distort the results if
24 somehow the weapons they were confiscating were systematically
25 different from the weapons confiscated throughout the state as

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1 a whole. There is no reason to suspect that, *a priori*.

2 Q. So from this data set, was -- you said you had, what,
3 101,000 trace -- trace is the wrong word -- 101,000 firearms
4 that were reported to the Virginia Firearms Clearinghouse?

5 A. Reported and confiscated, yes. 101,000, I think, -326.

6 Q. Did every one of those reported firearms also contain a
7 description of the magazine?

8 A. The reporting form requires a description of the magazine.
9 And I was actually surprised -- I have a fair amount of
10 experience with administrative data by -- collected by various
11 state agencies. This data was relatively clean, surprisingly
12 clean. I think 7,981, I believe, of the firearms did not have
13 magazine size information associated with them. So that's a
14 missing rate of 7.9 percent. That's actually quite good,
15 again, by the standards I've encountered in state
16 administrative data.

17 Q. So there was some data missing?

18 A. Yes, 7.9 percent.

19 Q. Did you account for that data in your analysis?

20 A. Yes.

21 Q. How?

22 A. In the analysis that I presented in the document that's
23 been distributed, in what was my report, I treated the small
24 number of weapons whose magazine sizes were not identified as
25 not being equipped with large-capacity magazines.

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1 Q. Okay. What was the -- what was the time frame for the data
2 that you reviewed?

3 A. So, the data that I reviewed began in, I think, July of
4 1993. I believe that was the inception of the clearinghouse.
5 I requested data through 2013. However, I only used data
6 through 2010 because the data -- reporting standards seemed to
7 have changed radically in 2011. I wasn't able to -- under the
8 time constraints, I wasn't able to identify what was going on
9 with 2011, '12, and '13, so I omitted that data.

10 Q. Let's talk a little bit about your analysis. What did you
11 do?

12 A. As I said, I began with these records of individual
13 firearms, identifying for each whether or not it was equipped
14 with a large-capacity magazine. And a large-capacity magazine
15 in this context meant 11 rounds or more. That was the
16 threshold set by the federal ban. So I looked at each firearm
17 and identified whether or not the magazine had been identified;
18 and if it had, whether or not it had a capacity of greater than
19 ten rounds.

20 Then I compiled for each calendar year the percentage
21 of all confiscated weapons that were equipped with
22 large-capacity magazine. So that's the basic data, percentage
23 of all confiscated firearms equipped with large-capacity
24 magazines in each year of the analysis, beginning the partial
25 year of 1993 and continuing through 2010.

1 Q. Putting on the Elmo, Exhibit 66. What -- what is this
2 document?

3 A. This is a graphical representation of precisely that data
4 that I just described.

5 Q. And what's the source of the data?

6 A. So, this is my compilation or my calculations from the
7 Virginia Firearms Clearinghouse data.

8 Q. And is this a fair and accurate graphical representation of
9 that data?

10 A. Yes, it is.

11 MR. GROVE: For demonstrative purposes, we'd move to
12 admit Exhibit 66, Your Honor.

13 THE COURT: Any objection?

14 MR. KRUMHOLZ: No objection.

15 THE COURT: It's received.

16 (Exhibit 66 admitted.)

17 BY MR. GROVE:

18 Q. Please tell us what we're looking at here.

19 A. This is, as I said, a graphical representation of the
20 percentage of confiscated firearms that are equipped with
21 large-capacity magazines. The blue line represents that
22 portion starting in 1993, at the left of the graph, and
23 continuing on to 2010 at the right of the graph.

24 As you can see from the left-hand axis here, that
25 represents -- gives us the percentages. This percentage, that

1 is, the share of confiscated firearms that were equipped with
2 large-capacity magazines, varied from a low of about 10 percent
3 in 2004 to a peak of close to 20 percent in 2009.

4 Q. What is significant about the 2004 date?

5 A. Well, 2004, of course, is the year in which -- it was the
6 final year in which the federal ban was in force. And it is, I
7 think -- it is -- it anticipates the results that I'm going to
8 show in my regression analysis to observe that at the end of
9 the ban, the share of firearms -- confiscated firearms equipped
10 with large-capacity magazines reached its lowest level.

11 Q. So you said regression analysis. I think you're going to
12 have to tell us what that means.

13 A. Regression analysis is the favorite toy of empirical
14 economists and of, I think, most empirical social scientists.
15 It's a statistical technique which allows us to take an outcome
16 in which we're interested, such as the percentage of
17 confiscated firearms equipped with large-capacity magazines,
18 and ask, of the things that might cause this outcome, how much
19 influence does each of them have?

20 Q. Putting Exhibit 67 on the Elmo. What is this, Professor
21 Zax?

22 A. This is the formal representation of my regression
23 analysis. This is the numerical representation of what I hope
24 to make a little more accessible in some further graphs after
25 we talk about this.

1 Q. So this is the equation that you used to discuss graphs
2 that are coming up in a few minutes?

3 A. Yes.

4 MR. GROVE: We'd move to admit this document for,
5 again, demonstrative purposes.

6 MR. KRUMHOLZ: No objection.

7 THE COURT: It is received.

8 (Exhibit 67 admitted.)

9 BY MR. GROVE:

10 Q. Again, tell us what we're looking at here.

11 A. Sure. This is a specific regression analysis. And as I
12 said, regression analysis begins with the thing you want to
13 explain. Here what we want to explain is the variation from
14 year to year in the percentage of confiscated firearms that are
15 equipped with large-capacity magazine. So that's what we're
16 trying to explain.

17 The next the thing you need is the things that will
18 explain that. And there, in the left-most column, here, there
19 are, essentially, three components to the explanation. The
20 first is a baseline. That's represented here by the constant.
21 The constant is what you might think of as the baseline share
22 of confiscated firearms that would be equipped with
23 large-capacity magazines if nothing else was changing over the
24 course of this period. So that's the first component of the
25 explanation.

1 The second component of the explanation is the
2 expectation that over this entire period, the 19 years that I'm
3 examining, there was some fundamental evolution in the
4 distribution or ownership of large-capacity magazines. So my
5 understanding is that large-capacity magazines were relatively
6 uncommon towards the beginning of this period, they became more
7 and more common as the period increased. And I'm trying to
8 capture that by what I call the trend and the trend squared --
9 sorry, that's in the wrong place. Oops. Let's try this again.

10 The trend, which is the first variable here, and the
11 trend squared, which is just below it. Together, they're
12 intended to capture the underlying evolution for the use of
13 LCMs over the entire period. That's the second component of
14 the explanation.

15 And then the third component of the explanation is the
16 effect of the ban itself. And that's represented by three
17 pieces. The first is, this here -- I don't know what I just
18 did.

19 *THE COURT:* It's okay. I see it.

20 *THE WITNESS:* Okay. Thank you.

21 Where I say ban -- simply ban, that's a change in the
22 baseline that would have been imposed by the effects of the
23 ban. So that's a shift in the baseline throughout the period
24 of the ban. And then the two rows below it are trends during
25 ban and trend squared during ban. And those capture the

1 possibility or the expectation that during the ban itself, as
2 response to the ban evolved, the appearance of large-capacity
3 magazines among confiscated weapons would also evolve.

4 So there are three components to the explanation I'm
5 going to offer. One of them is the baseline, and the other two
6 are basically trends that affected the ownership of large --
7 the appearance of large-capacity magazines throughout the
8 period.

9 *BY MR. GROVE:*

10 Q. Okay. Let's look at the graphs. This is Exhibit 68. What
11 is this document?

12 A. This document graphically represents the explanation that
13 my regression analysis provided for the evolution of the
14 proportion of large-capacity magazines that appeared in
15 confiscated weapons.

16 Q. Is it a fair and accurate depiction of that analysis?

17 A. It is.

18 *MR. GROVE:* Move to admit for demonstrative purposes
19 Exhibit 68.

20 *THE COURT:* Any objection?

21 *MR. KRUMHOLZ:* No, Your Honor.

22 *THE COURT:* It's received.

23 (Exhibit 68 admitted.)

24 *BY MR. GROVE:*

25 Q. Please go ahead and tell us what we're looking at here.

1 A. Well, this graph is very similar to the first graph we saw
2 two exhibits ago, in that, as you can see along the horizontal
3 axis, we're looking at the various years over which I examined
4 the data. On the vertical axis, we're again looking at --
5 that's over here -- we are again looking at the percentages of
6 confiscated weapons equipped with large-capacity magazines.
7 And then in the body of the graph, we have three colored lines.
8 Each one of them represents one of the three components I
9 described a moment ago of my explanation for how the proportion
10 of confiscated firearms equipped with large-capacity magazines
11 evolved over this period.

12 The first component is represented by this orange
13 line. That's the baseline percentage that was estimated by my
14 regression. So my regression analysis estimated that in the
15 absence of any other effects, 14.93 percent of confiscated
16 firearms would have been equipped with large-capacity magazines
17 at each point during this period. That's the baseline effect.

18 The green curve -- the green curve represents the
19 trend that I estimated in my regression analysis that carried
20 on throughout the entire period of the analysis. So this trend
21 expresses the idea that early on in the period, years 1993
22 through 1998 or 2000, even 2002, the underlying evolution of
23 demand for large-capacity magazines was relatively flat. But
24 after 2002, there was a more pronounced increase in the
25 underlying interest in owning -- having -- in having

1 large-capacity magazines. So the green line is the trend
2 throughout the period, and then the blue line -- the blue line
3 represents the effect of the ban itself. And that's why this
4 line doesn't continue through the whole period. It begins in
5 1995, which it might -- maybe should have come back to 1994,
6 but it begins at the beginning of the ban period and continues
7 to 2004, when the ban ended. And this blue line is what my
8 regression reveals to be the effect of the ban on
9 large-capacity magazines.

10 Q. This is Exhibit 69. What is this document?

11 A. So, this document is, as you can see, just the previous
12 document -- actually, it's the previous -- it's the previous
13 document with the addition of this red line here. The red
14 line, as I hope I get to explain in a moment, is the summation
15 of the three lines that we saw in the previous exhibit.

16 Q. And this is the fair and accurate representation of the
17 underlying data?

18 A. Yes.

19 MR. GROVE: Move to admit for demonstrative purposes
20 Exhibit 69.

21 MR. KRUMHOLZ: No objection.

22 THE COURT: Received.

23 (Exhibit 69 admitted.)

24 BY MR. GROVE:

25 Q. Please proceed and, again, tell us what we're looking at.

1 A. So this is the cumulative explanation produced by my
2 regression analysis for the effects -- for the -- this is a
3 cumulative explanation of the variation across this period in
4 the proportion of confiscated firearms that were equipped with
5 large-capacity magazines.

6 So first we see the components of that explanation
7 that came from the regression analysis. We have the flat
8 baseline here, the orange line; we have the overall trend,
9 which in the beginning of the period was, if anything,
10 suggesting a modest reduction in the income of LCMs; and then
11 at the end, an increase.

12 Then we have a trend, a trend that occurred during the
13 ban. And let me make sure that I explain what this represents.
14 What this trend shows is that when the ban began, there was an
15 immediate increase in the proportion of confiscated weapons
16 that were equipped with LCMs. My interpretation of that is
17 that because LCM possession was now potentially illegal, that
18 is, the possession of some LCMs was illegal, the appearance of
19 LCMs in potential criminal activity was of heightened interest
20 to law enforcement agents, and so they found themselves
21 confiscating a greater proportion of them.

22 As we see, following the blue line along as time goes
23 on, we see that over time, the effects of the ban was to begin
24 to reduce the proportion of LCMs found among confiscated
25 weapons. That happened in about 1997 and 1998. And then that

1 reduction accelerated to the point at -- by 2002, the effect of
2 the ban was to reduce the proportion of LCMs among confiscated
3 firearms below what it would have otherwise been. And then you
4 see in 2004, this blue line is quite some distance -- actually,
5 4 percent or more -- a little more than 4 percent below the
6 axis. What that says is that the effect of the ban at the --
7 at its very last year was to reduce the percentage of
8 confiscated firearms that were equipped with large-capacity
9 magazines by over four percentage points. And a
10 four-percentage-point reduction is pretty big when the baseline
11 was just 50 percentage points. So those, again, are the three
12 components of the explanation.

13 And then the red line, which is the only thing that is
14 new in this exhibit, that red line is the summation of those
15 three components. So that red line shows what the regression
16 predicts would have been the evolution of the share of
17 confiscated firearms equipped with large-capacity magazines.

18 In other words, the red line is the summary of all of
19 the influences that I account for in my regression analysis on
20 that proportion.

21 Q. And so -- go ahead.

22 A. And you can see that when you add those three together,
23 although the baseline itself is a straight line, a flat line,
24 the curve -- the trend throughout the period is this green line
25 that has a nice, smooth curve -- upward sloping curve to it

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1 throughout. And the effect of the ban is this blue line,
2 which, again, has a smooth downward sloping curve through most
3 of it. When you add those three together, what you get is a
4 predicted history of the proportion of confiscated firearms
5 that are large-capacity magazines that is actually pretty
6 regular.

7 So the red line shows that proportion declining
8 slightly at the beginning of the period. That's picking up the
9 slight decline in the green line. Then in 1994, that red line
10 shifts up, because it's capturing the beginning effect of the
11 ban. Then from '94 to 2004, you see that line slope slowly
12 downwards. And the reason for that is there is, first, a
13 slight downward slope to the green line, and then a slight
14 upward slope to the green line. That is being dominated by the
15 blue line. So between 1994 and 2004, what is driving the
16 downward slope of that red line is the downward slope of the
17 blue line.

18 And then in 2004, the blue line goes away, so there is
19 a very rapid increase in that red line. And the red line
20 continues to increase from 2004 on, and that's reflecting
21 purely the green line, the overall trend -- increasing trend in
22 LCM usage in the post-ban period.

23 Q. So let me just make sure I've got this straight. The red
24 line in Exhibit 69 is the regression analysis prediction of
25 what the proportion of confiscated magazines that are

1 large-capacity magazines would be?

2 A. That's exactly right. It's the summary of all the three
3 components of my explanation. And it says, these three things
4 together would have predicted that the proportions of
5 confiscated weapons equipped with large-capacity magazines
6 would have looked like this at each of those years.

7 Q. And --

8 A. That's what the red line is showing us.

9 Q. Did you, then, proceed to compare the prediction to the
10 actual data?

11 A. Yes. A natural question to ask here would be: How
12 effectively does the regression explain what I'm trying to
13 explain with it? And a natural way to answer that question
14 would be to look at how what I predict for the evolution of the
15 proportion of confiscated firearms equipped with large-capacity
16 magazines, how that prediction compares to what was actually
17 experienced.

18 Q. This is Exhibit 70. What are we looking at here?

19 A. Exhibit 70 is showing us two lines we've already seen. So
20 the red line is that prediction -- that overall prediction that
21 we just discussed from the previous exhibit. The blue line is
22 the actual experience that we saw in the first exhibit. So
23 this graph brings them together, the actual experience and the
24 prediction from my regression.

25 *MR. GROVE:* Move to admit Exhibit 70, again, for

1 demonstrative purposes.

2 *MR. KRUMHOLZ:* No objection.

3 *THE COURT:* Received.

4 (Exhibit 70 admitted.)

5 *BY MR. GROVE:*

6 Q. Anything else we should know about this one?

7 A. Yes. What this shows visually, what you can see, is that
8 these two lines are largely coincident. That is, the red line,
9 which is my constructed -- this is my constructed history of
10 the proportion of confiscated firearms equipped with
11 large-capacity magazines, that red line very closely tracks the
12 actual experience as presented in the blue line.

13 Now, we could have known this way back when we saw the
14 table which gave a numerical representation of the regression,
15 because that table contained lots of quantitative indices about
16 the effectiveness of the regression explanation. We didn't
17 look at them, and in some sense it's not really necessary,
18 because all of that is summarized in what you see visually
19 here. The regression does a very good job of predicting what
20 actually occurred.

21 And one implication of that is that what the
22 regression says about the effect of the federal ban is -- I'm
23 sorry, what the regression says about the effect of the federal
24 ban tracks very closely what the experience -- actual
25 experience of LCMs appearing in confiscated firearms was during

1 that period.

2 Q. And what did the regression predict?

3 A. Again, what the regression predicted was that as the ban
4 proceeded, the appearance of LCMs among weapons believed to be
5 involved in criminal activity, that appearance dropped first
6 slowly and then dramatically. If the ban had continued, it
7 would -- the regression predicts that the decline would have
8 accelerated further, even to the point where the trend predicts
9 that in a couple of years, there would have been no LCMs among
10 confiscated firearms.

11 Now, that's probably not likely. But that experience
12 is sufficiently far out of -- because -- so far -- that
13 experience is sufficiently far beyond when the ban actually
14 ended that the regression can't -- can't predict that as
15 convincingly as we would like it to.

16 Q. Let's look at one last graph here. This is 71. Does this
17 add anything?

18 A. This is, as we would say in Yiddish, the *ganze mischpache*,
19 the whole family. That is, this is simply the compilation of
20 all the lines that we have seen in the previous exhibits. So,
21 here, you can see both the -- you can see the actual
22 experience, that's the upper most blue line -- let's see if I
23 can -- we see the actual experience in the upper most blue
24 line. We see the three components of my regression
25 explanation, the orange line, which is the baseline. The green

1 line, which is the underlying trend. And this line, which is
2 the trend -- the effect of the ban itself. And then, lastly,
3 we see in the red line, the -- sorry, that's not quite the
4 right place. The red line, which as I said, is the summary of
5 my regression explanation.

6 Q. So what, if anything, does this analysis suggest about the
7 likely impact that Colorado's law would have?

8 A. In my opinion, this analysis indicates that the Colorado
9 law will also reduce the frequency of use of large-capacity
10 magazines below what it would have otherwise been in the
11 absence of the law. And, in addition, I believe that reduction
12 will be more pronounced, bigger than it was under the federal
13 ban.

14 Q. Well, let me explore that a little bit. The federal ban
15 was national in scope, right?

16 A. Yes.

17 Q. And so wouldn't you expect that something that is federally
18 imposed or state imposed have a greater impact?

19 *MR. KRUMHOLZ:* Objection, leading.

20 *THE COURT:* I'm sorry, I didn't hear the objection.

21 *MR. KRUMHOLZ:* Sorry, Your Honor. Leading.

22 *THE COURT:* I sustain the objection. It's a leading
23 question.

24 *BY MR. GROVE:*

25 Q. How would you compare -- how would you expect the impacts

1 of a federal ban to compare to the impacts of a state imposed
2 ban?

3 A. Superficially, you might expect a federal ban to be more
4 effective. And the reason for that, of course, is, with a
5 state ban, with any kind of local ban, your concern would be
6 that items of any sort that were illegal -- LCMs in particular,
7 that were illegal within a single state might nevertheless leak
8 into that state, so to speak, from surrounding states where
9 possession and sale was legal.

10 So you might think of this as a concern with the
11 ability to import. So a ban -- so a state like Colorado with a
12 ban like the one we have enacted, one of the things we would
13 have to be vigilant about in order to enforce it, is to be
14 careful about the possibility that LCMs being imported from,
15 for example, surrounding states.

16 Now, you might think that that would be less of a
17 problem with a national ban, because they would be illegal
18 everywhere throughout the country. And you might believe that
19 it would be easier to restrict the importation of LCMs from
20 other countries into the U.S. than it would be to restrict the
21 importation from other states into Colorado. Now, that belief,
22 however, in context, is unsupported, unjustified as false. The
23 reason is, as we've already said, the -- the ATF -- the
24 Alcohol, Tobacco and Firearms Bureau authorized literally
25 massive legal importations of LCMs from abroad during the

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1 course of the federal ban. So not only did the government make
2 no effort to restrict imports during the federal ban, they
3 actually encouraged them.

4 So as a consequence, the problem of having imports in
5 some sense countered the intent of the ban. That problem in
6 practice turned out to be much more severe during the federal
7 ban than I understand it to be for the Colorado state ban.

8 Q. Are there any other provisions of the Colorado state ban
9 that might make it more effective than the previous federal
10 ban?

11 A. Yes. The federal ban, so-called, if I may -- if I may
12 refer to it that way. The federal ban, banned the purchase of
13 new LCMS, but did not ban the transfer of LCMS that had
14 previously been acquired legally. So even in the absence of
15 importation, there could still have been an active market
16 transferring ownership of LCMS from those who felt like they
17 needed them less to those that felt like they needed them more.

18 The law in Colorado, as I understand it, although it
19 allows continued possession of LCMS that were purchased legally
20 prior to the ban, it prohibits transfers, and, as a
21 consequence, makes it harder for those who have not yet
22 acquired an LCM, but for some reason feel like they have an
23 urge -- a need to acquire one, makes it much harder for them to
24 do so legally, impossible.

25 Q. Let's shift gears. You said that -- you mentioned someone

1 that might need an LCM. Let's talk about the use of
2 large-capacity magazines in self-defense. That's your second
3 opinion. You testified earlier that the use of firearms in
4 self-defense is uncommon. What facts and data did you consider
5 in reaching that conclusion?

6 A. I considered my review of the various reports and documents
7 submitted to this case, and I considered my independent
8 analysis of the -- of the reports submitted by the 54 sheriffs
9 who were, I guess, at one time plaintiffs in this case and were
10 asked in the form of interrogatories to document their
11 experience with self-defense.

12 Q. And what type of information did those interrogatory
13 requests contain?

14 A. Well, the interrogatories asked sheriffs to report on each
15 instance -- each reported instance of home invasion experienced
16 within their jurisdiction over the prior ten years. It asked
17 for detailed descriptions of, in particular, the nature of the
18 firearm use within those home invasions. That is, did the
19 invader display a firearm? If possible, what was the identity
20 of the firearm? Was it equipped with a large-capacity
21 magazine? Were shots discharged? How many shots were
22 discharged? And it requested, as I recall, the same
23 information about the residents of the home suffering the
24 invasion. Did they have a gun? Did they show it? What was it
25 equipped with? Did they fire?

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1 Q. So according to the responses that you reviewed, how common
2 were home invasions in the jurisdictions covered by the
3 sheriffs?

4 A. Home invasions in the jurisdictions covered by the sheriffs
5 are very uncommon. There were -- over the ten-year period
6 covered by the request, there were 327 reports of home
7 invasion. One hundred of them are of dubious credibility,
8 because the sheriffs were not even able to assign a date to the
9 occurrence. Nevertheless, if we accept them, that's 327 home
10 invasions over ten years, over a range of Colorado geography
11 that I estimate has a population of approximately 3 million
12 people. So what that amounts to is, roughly speaking, 300 per
13 3 million over ten years. That's 30 per year. That's 1 per
14 100,000 Colorado residents.

15 Q. Would those numbers change in any way if it turned out that
16 the sheriffs didn't have reporting authority for their entire
17 county?

18 A. Yeah. There is a question as to whether -- first, whether
19 the sheriffs were responsible for law enforcement within, for
20 example, maybe -- some of the urbanized areas in their
21 counties. There is a second question as to whether or not --
22 whether or not they were responsible for law enforcement,
23 whether their records included data regarding the criminal
24 activities or home invasions that might have taken place in
25 parts that they didn't have active jurisdiction over.

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1 Now, unfortunately, the sheriffs were silent about all
2 of this. So there is no way to estimate the effects of these
3 uncertainties. I think it's fair to say, though, the net
4 effect is that the population to which I'm referring is
5 probably slightly smaller than the population I'm actually
6 using. And so the estimates I'm giving are probably slightly
7 under the truth.

8 Q. Why did you focus on home invasions?

9 A. I focused on home invasions for two reasons. First, there
10 was the practical reason that the -- I guess the second
11 interrogatory addressed that specifically, and so that was the
12 data that came to me. But the second reason is, first, that I
13 think we understand, home invasions -- or, rather, defense of
14 the home to be at the core of what is protected by the Second
15 Amendment. I think it's also at the core of what we are
16 concerned about when we think about our personal safety. And
17 lastly, my understanding is that the rules regarding personal
18 possession and use of firearms are typically least restrictive
19 with regard to the use within the home.

20 Q. So let's take a look at the sheriff's data. This is
21 Exhibit 59. What are we looking at here?

22 A. This is a table from my rebuttal report of, I believe,
23 early September.

24 Q. And what's the source of the numbers here?

25 A. These numbers are my calculations based on the data

1 disclosed by the sheriffs in response to your interrogatories.

2 *MR. GROVE:* I'd move to admit this document, Your
3 Honor.

4 *THE COURT:* *Voir dire* or objection?

5 *MR. KRUMHOLZ:* If I may *voir dire* for a moment, Your
6 Honor?

7 *THE COURT:* You may.

8 *MR. KRUMHOLZ:* Professor, it's your testimony that in
9 the third column, concerning population in plaintiff counties,
10 that the numbers shown for each of those years is the
11 population for which the sheriff responded; is that correct?

12 *THE WITNESS:* No.

13 *MR. KRUMHOLZ:* Okay. And it's not correct because
14 there were jurisdictions -- may have been jurisdictions for
15 which the sheriffs did not have -- for which the sheriffs did
16 not respond because the police departments had responsibility
17 for those jurisdictions, correct?

18 *THE WITNESS:* Again, I understand that there are in
19 some counties jurisdictions within the counties for which the
20 sheriffs are not necessarily responsible for law enforcement.
21 I believe the interrogatories asked for all instances within
22 the county. It's unclear to me whether or not the sheriffs
23 responded for the county -- only the parts of their counties
24 for which they had jurisdiction or whether they responded for
25 the entire county.

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1 MR. KRUMHOLZ: Thank you, Professor.

2 If I may ask, with respect to the interrogatories --
3 with respect to the interrogatories, it's your memory that it
4 requested responses for all home invasions within the county
5 for which the sheriff is responsible?

6 THE WITNESS: That's my vague memory. I could be
7 incorrect about that.

8 MR. KRUMHOLZ: Thank you, Professor. Would it be
9 useful to refresh your recollection by looking at the actual
10 interrogatory?

11 THE WITNESS: Yes.

12 MR. KRUMHOLZ: Your Honor, I wonder if I may show
13 Professor Zax a copy of the interrogatories to refresh his
14 recollection.

15 THE COURT: You may.

16 MR. KRUMHOLZ: Ms. Glover, do you know what exhibit
17 we're on?

18 COURTROOM DEPUTY: The next one would be 139, unless
19 Mr. Kopel, have you marked the ones you were going to give me
20 yet?

21 MR. KOPEL: I started with 141 to give us some
22 breathing room.

23 COURTROOM DEPUTY: 139 is fine.

24 MR. KRUMHOLZ: Thank you.

25 Professor, to refresh your recollection, would you

1 please look at page 3, interrogatory 1.

2 *THE WITNESS:* Yes. I see that I was incorrect. It
3 says, "With respect to each and every home invasion or robbery
4 in the home to which your department has responded." So this
5 would only be -- the counts that I represent here would be
6 counts only of those -- those home invasions to which the
7 sheriff and his employees had, themselves, responded to.

8 *MR. KRUMHOLZ:* I appreciate that. Thank you,
9 Professor.

10 Your Honor, we would object to the admission of this
11 document as being inaccurate.

12 *THE COURT:* Overruled. That's something you can
13 explore on cross-examination. This is the basis for his
14 opinion.

15 *MR. KRUMHOLZ:* Thank you, Your Honor.

16 (Exhibit 59 admitted.)

17 *BY MR. GROVE:*

18 Q. What are we looking at here, Dr. Zax?

19 A. So, the second column entitled "number of home invasions,"
20 that is my count based on the sheriffs' responses of the number
21 of home invasions to which they responded in each of these
22 years. As you can see, those numbers are -- they fluctuate,
23 within a relatively narrow band. That is, the maximum number
24 of responses was 34 in 2007. The minimum number was half that,
25 17, achieved in several years, 2005, 2006, and 2011. There

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1 were 100 home invasions -- I'm sorry, there were 100 reports of
2 responses to home invasions for which no date was provided. If
3 we sum those for which dates were provided, there are 237
4 instances. With the home invasions that were undated, in
5 addition, that's 327 instances in the ten years of reporting.
6 That's the second column.

7 Now, the third column, as we've already discussed, is
8 my compilation of the reported population. These are figures
9 from the state demographer, I believe, of the population in the
10 counties associated with each of these sheriffs. As I
11 previously testified, and I guess as we've now verified, that
12 is probably an overestimate of the populations that the
13 sheriffs actually covered. The extent of the overestimate is
14 unknown, because the sheriffs did not provide any information
15 specifically regarding which parts of their counties they were
16 and were not responsible for.

17 My guess is that this overestimation is not excessive,
18 because my understanding is that the major urban areas in the
19 state were not included among these 55 -- 54 responding
20 counties. I could be wrong about that, but I'm pretty sure
21 Denver is not part of it, and I'm pretty sure Boulder is not
22 part of it, Colorado Springs I suspect was not part of it, but
23 I don't recall specifically. So the population counts are as I
24 described them.

25 And then in the right most column, the fourth column,

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1 I estimate the number of home invasions per million population.
2 That's simply the ratio of the second column, the number in the
3 second column for each year divided by the number in the third
4 column for each year. And as I've already testified, that's
5 probably a slight underestimate of the frequency with which the
6 exposed populations were exposed -- or experienced, rather,
7 home invasions.

8 Q. Let's just suppose for the sake of hypothesis that your
9 number -- your population numbers here are double what they
10 should be. So, say, sheriffs are only responsible for
11 responding to -- it would be 1.7 million people instead of 3.4
12 people in 2004. What effect would that have on the right most
13 column, which is home invasions per million population?

14 A. It would double the estimated rate of home invasions per
15 million population. So my current calculations show that rate
16 as being somewhere between four and ten home invasions per
17 million population. If it were to double, that would change
18 the estimate to something between eight and twenty home
19 invasions per million population. As we'll see later, even a
20 doubling of that nature would indicate that the risks of
21 experiencing a home invasion are quite small.

22 MR. GROVE: Your Honor, I'm not sure if Exhibit 59 was
23 formally admitted. Let me make sure.

24 COURTROOM DEPUTY: I think it was, because you
25 overruled the objection, so I put it down as admitted.

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1 *THE COURT:* It's been admitted.

2 *MR. GROVE:* Thank you.

3 *BY MR. GROVE:*

4 *Q.* This is Exhibit 60. What are we looking at here?

5 *A.* So this was a comparison -- that is, the numbers on the
6 previous slide -- on the previous exhibit suggest that
7 numerically, home invasions are uncommon. I wanted to give a
8 sense of scale to that suggestion by tabulating the frequency
9 of other events that I think of as uncommon but they're more
10 familiar to us.

11 So this table tabulates from reports by the Colorado
12 Department of Transportation -- actually, I'm sorry, it's not
13 the Colorado Department of Transportation, this is the federal
14 tabulation of fatal automobile accidents. As you can see in
15 the left most column, I'm looking at years that were comparable
16 to those for which we had reports of home invasions from the
17 sheriffs. They -- these reports go only to 2011 because more
18 recent data had not been released at the time I wrote the
19 report.

20 The second column is the total of traffic fatalities
21 that occurred in the state in each of those years. And as you
22 can see in each of those years, the number of traffic
23 fatalities exceeded the total number of home invasions reported
24 over all ten years by the sheriffs on the previous slide. It
25 is on the previous slide we saw a total of 327 home invasions.

1 What we're seeing here is that traffic fatalities vary from a
2 high of 667 per year in 2004 to 447 in 2011.

3 The third column gives the population of the state in
4 each of these years. And the fourth column gives the risk of
5 incurring a traffic fatality per million population.

6 What you can see there is, first, that risk has
7 dropped dramatically during the period, for which we can all be
8 grateful. But, nevertheless, the risk even in 2011 was 87 per
9 million population.

10 If you look back at the previous exhibit, you'll see
11 that the risk of home invasion -- of suffering a home invasion,
12 I estimated to range between 4 and 9 per million. As we said,
13 even if that estimate -- those estimates were off by half, the
14 appropriate range would be between 8 and 20 million per
15 million. So even with that adjustment, the risk of dying in a
16 traffic accident in Colorado is at least four times as great as
17 the maximum possible risk of experiencing a home invasion.

18 Q. And does this chart fairly and accurately depict the data
19 that you gathered underlying it?

20 A. Yes, it does.

21 MR. GROVE: We'd offer this as well, Your Honor.

22 MR. KRUMHOLZ: No objection.

23 THE COURT: Received.

24 (Exhibit 60 admitted.)

25 BY MR. GROVE:

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1 Q. This is Exhibit 61. What are we looking at here?

2 A. This is an elaboration of the previous exhibit. That is,
3 the previous exhibit tabulated all traffic fatalities recorded
4 in the state of Colorado between 2004 and 2011. This tabulates
5 only those fatalities that occur as a consequence of a driver
6 who was legally intoxicated. And what you can see is that if
7 you compare the second column here to the second column in the
8 previous exhibit, roughly speaking, about a third of traffic
9 fatalities in the state of Colorado occur because the driver
10 was intoxicated.

11 If you look over at the right most column, you see the
12 risk of being killed by an intoxicated driver in the state of
13 Colorado. And you can see that over the, I guess, eight
14 years of this data, that risk varies from about 25 per million
15 population to 44 per million population. Regardless, in every
16 year, the risk of being killed by a drunk driver is greater
17 than the risk of encountering a home invasion, even accounting
18 for extreme overcounts of the population served by the sheriffs
19 who reported the interrogatory.

20 MR. GROVE: Move to admit this as well.

21 MR. KRUMHOLZ: No objection.

22 THE COURT: Received.

23 (Exhibit 61 admitted.)

24 MR. GROVE: That was 61.

25 BY MR. GROVE:

1 Q. 62. What are we looking at here?

2 A. This is a second tabulation from the data provided by the
3 sheriffs in response to your interrogatories. In this
4 tabulation, I am counting the number of home invasions --
5 reported home invasions in which the perpetrator was reported
6 to have possessed a firearm. That information is in the third
7 column -- I'm sorry, let's start again at the left. The first
8 column, of course, again, gives the year of the report. The
9 second column reproduces the number of home invasions from the
10 first of these exhibits, what was earlier called Table 1.

11 The third column is the new information. That reports
12 the number of home invasions in which the perpetrator was
13 reported to possess a firearm. As we can see, first, not all
14 home invaders possess firearms. Second, the number of home
15 invasions in which a firearm is in the possession of a
16 perpetrator fluctuates from year to year. On average, about --
17 well, there are, I believe, 161 -- 170 home invasions in which
18 the perpetrator possessed firearms. That's out of a total of
19 327. So roughly speaking, about 60 percent of these home
20 invasions were ones in which the perpetrator possessed
21 firearms.

22 Over in the right-most column, once again, I offer
23 that calculation regarding the risk of encountering a home
24 invasion in which the perpetrator was possessed of a firearm --
25 possessed a firearm. That risk, as you can see, is calculated

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1 here as running between 2.58 and 7.11 per million.

2 If, as we've discussed already, my population numbers
3 were -- overestimated the Colorado population by as much as a
4 half, then the risks here in the right most column would range
5 from approximately 5 per million to about 14 per million. That
6 is, the risk that you would experience a home invasion in which
7 the invader possessed a firearm would be in -- in none of these
8 years, any greater than 14 per million.

9 As a standard of comparison, in 2012, I believe the
10 Colorado state lottery awarded 22 prizes of \$1 million. So
11 that would say that you are more likely to win a million
12 dollars in the Colorado state lottery than you are to
13 experience a home invasion in which the perpetrator is armed
14 with a firearm.

15 Q. I think we all know which one of those we would prefer.

16 A. I sure hope so.

17 MR. GROVE: Move to admit Exhibit 62, Your Honor.

18 MR. KRUMHOLZ: No objection.

19 THE COURT: Received.

20 (Exhibit 62 admitted.)

21 BY MR. GROVE:

22 Q. This is 63. Please tell us what we're looking at here.

23 A. Here, as with the previous exhibit, we are narrowing our
24 focus from all home invasions, which, again, are tabulated here
25 in the second column, to those that are of specific interest to

1 this case. In the previous exhibit, we were looking at those
2 home invasions in which the perpetrator was armed with a
3 firearm. Here, in the third column, we're looking at those
4 home invasions which the perpetrator was not only armed with a
5 firearm, but actually discharged it. And we can see that that
6 is a very rare experience. I believe it's 46 occurrences in
7 all ten years, but give me just a moment to add -- yes, 46
8 instances in ten years across 54 counties, in which a home was
9 invaded and in which the aggressor actually discharged a
10 firearm.

11 Q. And let's assume that our population numbers are double
12 what they should be, what would the range be for the number of
13 discharges per million population?

14 A. Well, that would be given by the right-most column on this
15 table. And as you can see, the estimates here range from about
16 one-quarter of an experience per million to 2.74 instances per
17 million. Doubling that would raise it to about -- in 2008, the
18 risk would have been about 1 per 2 million. In 2007, the risk
19 would have been about 5 1/2 such instances per million
20 population.

21 As -- again, as standards of comparison, my research
22 demonstrated that you are more likely to give birth to
23 triplets, quadruplets quintuplets, sextuplets, octuplets than
24 you are to encounter a home invasion in which a perpetrator
25 discharged a firearm. You are also more likely to experience

1 an organ transplant than a home invasion in which the
2 perpetrator discharged a firearm. And, for that matter,
3 reports of unidentified flying object sightings were more
4 common than firearm discharges by perpetrators in house -- in
5 home invasions.

6 *MR. GROVE:* Move to admit 63, Your Honor.

7 *MR. KRUMHOLZ:* No objection.

8 *THE COURT:* Received.

9 (Exhibit 63 admitted.)

10 *BY MR. GROVE:*

11 Q. Let's talk about the use of firearms in self-defense by
12 home invasion victims. This is 65. What are we looking at
13 here?

14 A. This, again, is a compilation of the data that were
15 reported by the sheriffs in response to the interrogatories.
16 Much of this is familiar. So, again, the first column is the
17 year of the data. The second column is the total number of
18 home invasions. The fourth column is the population of the
19 plaintiff counties. The new information here is in this third
20 column. The new information is in the third column, where I
21 tabulate the number of home invasions in which the victim was
22 known to possess firearms. So -- and you can see that that
23 number varies from six in 2004 to fifteen in 2012. In other
24 words, if you compare that to the information in the third
25 column to the information in the second column, roughly --

1 well, a little under half of those homes that suffered
2 invasions were homes in which the residents possessed firearms.

3 Q. So what do we know about the rates at which this phenomenon
4 occurred?

5 A. That's in the right most column, again. And the rates
6 published here range from 1.67 per million to 3.28 per million.
7 Again, if the populations in the fourth column are double the
8 populations that were actually served by the sheriffs, these
9 rates would double as well. And that would take them to a
10 range of about 3.3 per million up to 6.5 per million.

11 Q. And to put that in perspective, how does that compare, to,
12 say, being struck by lightning in Colorado?

13 A. The probability of incurring an injury or a fatality
14 through a lightning strike is greater than the probability of
15 experiencing a home invasion as a gun owner while in possession
16 of a firearm.

17 *MR. GROVE:* Move to admit 65, Your Honor.

18 *MR. KRUMHOLZ:* No objection.

19 *THE COURT:* Thank you. Received.

20 (Exhibit 65 admitted.)

21 *BY MR. GROVE:*

22 Q. You talked about home invasion victims possessing firearms.
23 Was there any data available about discharges of firearms by
24 home invasion victims?

25 A. Yes, there was.

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1 Q. And what did that reveal?

2 A. I believe -- excuse me. I believe, as I testified, that
3 there were 46 instances in which the perpetrator discharged a
4 firearm. I believe there were 19 instances in which the victim
5 discharged a firearm. So that would be less than two
6 occurrences per year. The number of rounds discharged in all
7 reported cases was less than the maximum available in currently
8 legal large-capacity magazines. That is, there was no report
9 of anyone, either perpetrator or victim, discharging as many as
10 15 rounds. And there were only two instances in which a
11 perpetrator was equipped with an LCM, that is, an LCM that
12 would currently be illegal, and two reported instances in which
13 a defender was equipped with a LCM.

14 Q. Did anyone come close to firing 15 rounds or more?

15 A. As far as the reports go, the answer to that is no. There
16 was one instance in which I believe a perpetrator was reported
17 to have fired one or more rounds, so I can't be absolutely
18 certain that that individual did not exhaust the capacity of a
19 currently illegal large-capacity magazine, but I think it's
20 likely.

21 Q. What does this data suggest to you about the frequency of
22 defensive gun use in Colorado?

23 A. Defensive gun use, in response to home invasions, is rarer
24 than many other events that we think of as being almost
25 impossible to experience.

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1 Q. Well, Dr. Kleck opines that defensive gun uses are a lot
2 more frequent than you do. Do you agree with this conclusion?

3 A. His estimates of the frequency, both from his 1995 paper
4 and his modifications of those estimates to fit the
5 contemporary environment, suggest -- well, I'm sorry. Let me
6 start again. I disagree, and I agree. I disagree with his
7 counts of the number of defensive gun uses. That is, even his
8 most conservative estimates in the contemporary environment
9 suggest numbers of defensive gun uses that are many times in
10 excess of those reported by the sheriffs in the state of
11 Colorado. So even if they are valid for the country as a
12 whole, they clearly are not representative of the experience in
13 Colorado. That's where I disagree with him.

14 Where I agree with him is that, according to his
15 testimony, he's unaware of any defensive gun uses in which a
16 large-capacity magazine was needed or the number of rounds
17 expended were equivalent to those you would expend with a
18 large-capacity magazine. And I agree with him there, that is,
19 there is no record in Colorado of anyone defending themselves
20 with the number of rounds that are now -- that would exceed
21 what are now legal LCMs.

22 Q. Well, let's say we did agree with Dr. Kleck's results --
23 that you did, would that have any bearing on the issues in this
24 case?

25 A. No.

1 Q. Why not?

2 A. Well, again, what is at issue in this case is not the
3 number of defensive gun uses. What is at issue in this case is
4 whether large-capacity magazines are necessary for effective
5 self-defense. Professor Kleck has no information about the
6 number of rounds fired in self-defense. He has no information
7 about the type of weaponry and, in particular, the type of
8 magazines that self-defenders employ in self-defense. So his
9 opinion actually has no information regarding the central issue
10 in the case.

11 MR. GROVE: Your Honor, I don't know if you were
12 planning on stopping at noon, but this would be a good time for
13 us.

14 THE COURT: Okay. As I said, this is our longer lunch
15 hour, because it is the day that the judges of the court meet.
16 And so we will be looking at reconvening at about 1:40.

17 Let me ask you what the rest of the day looks like.

18 MR. GROVE: I'd guess we have another hour with
19 Dr. Zax, maybe. He's raising his eyebrows like we may have
20 more. And then I assume there is going to be a pretty lengthy
21 cross. We have two very short witnesses after that. And then
22 my understanding is that the plaintiffs might have one short
23 rebuttal witness.

24 THE COURT: Okay. All right. We can continue for
25 another five or ten minutes, if you want, and utilize this

1 time.

2 MR. GROVE: Let's do that.

3 THE COURT: Okay.

4 BY MR. GROVE:

5 Q. What do you know about the basis for Dr. Kleck's opinions
6 on defensive gun use?

7 A. The foundation of those opinions, as I understand it, is
8 his 1995 article with his colleague, Mark Gertz. And the
9 foundation for that article, of course, is his 1993 survey
10 regarding defensive gun uses.

11 Q. Do you have any experience with survey design?

12 A. Yes.

13 Q. Would you please describe that.

14 A. Well, I was part of the team that designed the 1988 China
15 household income project survey and the 1995 -- the 1995 China
16 household income project survey. Those were, actually,
17 landmark surveys in the study of the Chinese economy. They
18 were the first household surveys there, and they are the
19 foundation of everything we know about inequality in China.
20 That's a pretty big deal.

21 Now, I will admit that I was not the lead in the
22 survey design in either endeavor; but I was certainly an active
23 participant. Apart from that, I am a frequent consumer of
24 surveys and have extensive experience in reading, interpreting,
25 and analyzing the data generated by surveys.

1 Q. Did you read, interpret, and analyze the data generated by
2 Dr. Kleck's survey?

3 A. Yes, I did.

4 Q. In your opinion, is his estimate of the frequency of
5 defensive gun use reliable?

6 A. The estimate that he derives from his data is not reliable.

7 Q. And were the results of your analysis of the sheriffs' data
8 consistent with Professor Kleck's survey findings?

9 A. Certainly not. They showed far fewer defensive gun uses
10 than any of the numbers that Professor Kleck has offered.

11 Q. The sheriffs' data shows far fewer uses?

12 A. Yes, thank you.

13 MR. GROVE: This might really be a good stopping
14 point, Your Honor.

15 THE COURT: All right. As I indicated, we'll stand in
16 recess until 1:40.

17 MS. SPALDING: Your Honor, I've just got a quick
18 housekeeping matter, if I could.

19 THE COURT: Sure.

20 MS. SPALDING: The parties have some stipulations, and
21 we can certainly enter those as an exhibit, or we can --

22 THE COURT: We can do them right now if you'd like.

23 MS. SPALDING: Okay. I'm prepared to read it into the
24 record now, but I don't have the exhibit prepared. I'm
25 actually just asking for the Court's preference. Don't care?

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1 Okay.

2 *THE COURT:* I have realtime, so I've got the
3 transcript coming up as it is being developed.

4 Mr. Kopel, I know you wanted to get some exhibits
5 admitted. Maybe this is a good time to do that.

6 Sir, you may step down from the witness stand. Thank
7 you very much.

8 *THE WITNESS:* Thank you.

9 *MS. SPALDING:* Okay. Parties stipulate as follows:

10 An individual entered a movie theater in Aurora,
11 Colorado, in the early morning of July 20, 2012, with three
12 weapons: A 12-gauge shotgun, a .40 caliber handgun, and a
13 semiautomatic rifle. The theater had 415 seats set in
14 stadium-type seating. The theater was filled to near capacity.
15 The theater patrons were watching a movie.

16 The individual carried a 100-round drum magazine for
17 the semiautomatic rifle. He was also carrying five 30-round
18 magazines for the rifle and one 15-round magazine for the
19 handgun. The 100-round magazine and ten 30-round .223
20 magazines were purchased legally via internet sales. Ten
21 22-round magazines for a handgun were also purchased legally on
22 the internet. Three additional 30-round .223 magazines and
23 four 15-round magazines for a handgun were purchased legally
24 from local retail outlets.

25 The individual fired all three weapons at moviegoers.

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1 He first fired six rounds from the shotgun. He then
2 transitioned to the rifle, firing 65 rounds at moviegoers from
3 the 100-round drum magazine before the drum magazine jammed.

4 While the shooter was attempting to clear the
5 malfunction and reload the rifle with an overloaded 30-round
6 magazine, many people escaped from the theater. After failing
7 to reload the rifle, the shooter transitioned to the handgun
8 and fired five rounds at fleeing moviegoers. Twelve moviegoers
9 were killed and fifty-eight injured by shotgun or rifle fire.
10 Nobody was kill or injured from fire by the handgun. The movie
11 patrons who died were seated in rows 8 through 18.

12 Chief Daniel Oates is unaware of the use of a
13 100-round drum magazine in the city of Aurora other than the
14 magazine used in the July 20, 2012, Aurora theater shooting.
15 Chief Daniel Oates is unaware of any other incident in the city
16 of Aurora in which more than 15 shots were fired by the
17 perpetrator in the commission of a crime.

18 That's it.

19 *THE COURT:* Thank you.

20 Are those so stipulated?

21 *MR. ABBOTT:* Yes, Your Honor.

22 *THE COURT:* Thank you.

23 Okay, Mr. Kopel.

24 *MR. KOPEL:* Thank you, Your Honor. We would at this
25 time like to provide the Court with the fuller legislative

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1 history of the two bills that are at issue here. And we have
2 exhibit sets for all of these, including for defendants, of
3 course.

4 We would like to offer Exhibit 141, which is the
5 relevant pages from the --

6 *THE COURT:* Mr. Kopel, you don't have to identify
7 these.

8 *MR. KOPEL:* Okay.

9 *THE COURT:* Simply go by number. I will then ask the
10 defendants at the close of your listing of the numbers whether
11 they stipulate to the admission of these documents.

12 *MR. KOPEL:* So just read the numbers?

13 *THE COURT:* Yes.

14 *MR. KOPEL:* Thank you, Your Honor. Nos. 141, 142,
15 143, 144, 145, 146, and 147.

16 *THE COURT:* Thank you.

17 *MR. GROVE:* Your Honor, if we could take a look over
18 lunch.

19 *THE COURT:* Okay. That sounds good.

20 *MR. KOPEL:* Thank you, Your Honor.

21 *THE COURT:* We'll stand in recess.

22 (Recess at 12:08 p.m.)

23 (In open court at 1:46 p.m.)

24 *MS. SCOVILLE:* Your Honor, we've run up against a
25 little scheduling issue for this afternoon. The State has one

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1 very short witness, and the plaintiffs have been kind enough to
2 not object to us taking him out of turn.

3 *THE COURT:* All right.

4 *MS. SCOVILLE:* Thank you.

5 *THE COURT:* Please call your witness.

6 *MS. SCOVILLE:* The state calls Andy Logan.

7 *THE COURT:* Please step up and be sworn.

8 **(ANDREW LOGAN, DEFENDANT'S WITNESS, SWORN)**

9 *COURTROOM DEPUTY:* Please be seated.

10 Please state your name and spell your first and last
11 name for the record.

12 *THE WITNESS:* My name is Andrew Logan, A-N-D-R-E W,
13 L-O-G-A-N.

14 *MR. FABIAN:* At this time we would interpose our
15 objection. We would note that this witness has testified
16 before the General Assembly, but we would object to anything
17 that exceeds the scope of that evidence he presented to the
18 General Assembly.

19 *THE COURT:* Thank you. You may proceed.

20 **DIRECT EXAMINATION**

21 *BY MS. SCOVILLE:*

22 Q. Good afternoon, Mr. Logan.

23 A. Good afternoon.

24 Q. What is your occupation?

25 A. I'm a bioprocess engineer.

1 Q. What does that mean?

2 A. I work for a biotechnology company.

3 Q. What does your biotech company do?

4 A. The short story is, we grow bacteria that have a high
5 protein content in them, and that protein goes into animal
6 feeds.

7 Q. Are you also a hunter?

8 A. Yes.

9 Q. Fair to say you're an avid hunter?

10 A. Yes.

11 Q. How often do you hunt?

12 A. I hunt probably 30 days a year.

13 Q. What species do you hunt?

14 A. I hunt mostly big game, deer, antelope, elk. I hunt wild
15 pigs, turkeys. I also hunt waterfowl, ducks and geese, a
16 little upland hunting.

17 Q. And you own a variety of firearms for your hunting,
18 correct?

19 A. I do.

20 Q. I'd like to ask you about only one of those in particular.
21 Do you own an AR style rifle?

22 A. I do.

23 Q. What is that rifle?

24 A. It's a Bushmaster AR-15.

25 Q. What species do you hunt with that rifle?

1 A. I hunt exclusively wild hogs with that.

2 Q. Anything else?

3 A. No.

4 Q. Have you ever used that rifle to hunt any other species?

5 A. No.

6 Q. What size magazine is on your AR style rifle?

7 A. It's 15 rounds.

8 Q. And what magazine was on the rifle when you purchased it?

9 A. Fifteen rounds.

10 Q. Do you have any other magazines that fit that particular
11 rifle?

12 A. I do.

13 Q. And could you describe that magazine for us.

14 A. Yeah. I have a total of two, and they're both 15 rounds.

15 Q. Where did you purchase your AR style rifle?

16 A. I purchased it from an FFL out near Limon, Colorado.

17 Q. And as I understand it, the 15-round magazine, was that the
18 magazine that was offered with the rifle when you purchased it?

19 A. It was.

20 Q. And how have you found that 15-round magazine to be in
21 terms of reliability?

22 A. Flawless.

23 Q. Have you ever experienced any problems with it?

24 A. Neither of them, no.

25 Q. Have you ever attempted to insert 16 rounds into your

1 15-round magazine?

2 A. I have.

3 Q. And what did you find?

4 A. That the 16th round will not fit.

5 Q. In terms of your hunting activities in Colorado, will House
6 Bill 1224, which is section 18-12-112, have any impact on your
7 activities as a hunter in Colorado?

8 *MR. FABIAN:* Objection, foundation.

9 *THE COURT:* Sustained.

10 *BY MS. SCOVILLE:*

11 Q. Mr. Logan, are you familiar with House Bill 12 -- 1224,
12 which is section 18-12-112?

13 A. I am.

14 Q. Have you read that before?

15 A. I have.

16 Q. Have you considered whether it will impact your activities
17 as a hunter in Colorado?

18 A. I have.

19 Q. And will there be any impact to your hunting activities as
20 a result of that legislation?

21 A. None whatsoever.

22 *MS. SCOVILLE:* Thank you. I have no further
23 questions.

24 *THE COURT:* Thank you.

25 Cross-examination.

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CROSS-EXAMINATION

BY MR. FABIAN:

Q. Good afternoon, Mr. Logan.

A. Good afternoon.

Q. Okay. Now, you say you have hunted with your AR-15 type rifle, correct?

A. Correct.

Q. And you've hunted with other hunters who have used AR-15 rifles, correct?

A. Yes.

Q. Now, you originally hunted wild pigs in Texas with a bolt-action rifle, correct?

A. Yeah.

Q. That was a 30-06?

A. Correct.

Q. But after seeing the other hunters use AR-15 rifles and borrowing those rifles yourself, you decided to get your own AR-15, right?

A. I'm not sure that cause and effect is exact. But having hunted with them and having an interest in firearms and hunting, I decided to buy an AR-15, yes.

Q. Now, I was unclear from your testimony, do you have two magazines or just -- or three magazines for your AR-15?

A. I have two total.

Q. And they're both 15-round magazines, right?

1 A. Yes.

2 Q. And those are the only magazines you've ever used in that
3 rifle, correct?

4 A. Correct.

5 Q. Now, the bolt-action rifle you originally used to hunt wild
6 pigs, that had a magazine capacity of five rounds, correct?

7 A. It has a magazine capacity of five, yes.

8 Q. So the AR rifle you use now has a magazine capacity three
9 times that rifle, correct?

10 A. That's correct.

11 Q. Now, AR platform style rifles, both .30 caliber and
12 .223 caliber, are used for hunting in Colorado, correct?

13 A. I'm sorry, I missed the very last part of that.

14 Q. The AR type platform rifles, both .30 caliber and .223
15 caliber, are used for hunting in Colorado, right?

16 A. Are used for hunting, you're saying?

17 Q. Yes.

18 A. Yes.

19 Q. And there is not a magazine capacity limit on pig hunting
20 in Texas, correct?

21 A. There is not, to my knowledge.

22 Q. And in Colorado, there is no magazine capacity limit for
23 using a rifle to hunt varmints or small game, correct?

24 MS. SCOVILLE: Objection, foundation.

25 THE COURT: Sustained.

1 BY MR. FABIAN:

2 Q. Well, Mr. Logan, you said you've hunted in Colorado for
3 quite some time?

4 A. Yes.

5 Q. Okay. And that hunting also, does that include hunting
6 small game and varmints?

7 A. I do not hunt varmints, because I think it's unethical,
8 because you don't eat them. So --

9 Q. I understand.

10 A. And I do hunt small game, yes.

11 Q. And for hunting small game in Colorado, there is no
12 magazine capacity limit for hunting small game, is there?

13 MS. SCOVILLE: Objection, foundation.

14 THE COURT: Sustained.

15 BY MR. FABIAN:

16 Q. Do you know what -- if there are magazine capacity limits
17 for hunting small game in Colorado?

18 A. I believe that I do know, yes.

19 Q. And what are they?

20 A. I believe that there are not magazine limits for mammals,
21 small game mammals; but for shotguns, there are limits.

22 Q. Okay. And I --

23 MR. FABIAN: If I may have a moment, Your Honor.

24 THE COURT: Sure.

25 BY MR. FABIAN:

1 Q. Now, you belong to a group called Hunters Against Gun
2 Violence, correct?

3 MS. SCOVILLE: Objection beyond the scope.

4 MR. FABIAN: Goes to bias and interest, Your Honor.

5 THE COURT: I overrule the objection. The witness can
6 answer.

7 THE WITNESS: Yes.

8 BY MR. FABIAN:

9 Q. And as a representative of that group, you've publicly
10 announced your support for the magazine limitations contained
11 in House Bill 1224, correct?

12 A. Correct.

13 Q. Now, that group, Hunters Against Gun Violence, that was an
14 informal organization started by an acquaintance of yours,
15 correct?

16 A. That's correct.

17 Q. A Don Macalady, correct?

18 A. Yes.

19 Q. But you're not familiar with the detail of the
20 organization, correct?

21 A. Incorrect.

22 MR. FABIAN: I'd ask that the witness's deposition be
23 unsealed.

24 BY MR. FABIAN:

25 Q. Sir, do you recall your being taken on November 5, 2013?

1 A. I do.

2 Q. And you testified and answered questions under oath at that
3 time?

4 A. Correct.

5 MR. FABIAN: Ask the witness be shown his deposition.

6 BY MR. FABIAN:

7 Q. I'd like you to turn to page 30, please.

8 A. Okay.

9 Q. And were you not -- note that you were asked -- were you
10 not asked a question on page -- I'm sorry, on line 18, "And
11 when was this group started?"

12 Answer: "I don't know the ins and outs of the group.
13 And, you know, if it's even -- if it's just a word-of-mouth
14 group of 50 or so hunters now or even if it's a formal entity.
15 So I don't -- I don't know that I can give you a starting
16 date."

17 MS. SCOVILLE: Objection. I don't know that this is
18 actually an inconsistent statement.

19 THE COURT: Response.

20 MR. FABIAN: I believe it is an inconsistent
21 statement. I asked him if he was familiar with the details of
22 the organization, and this goes to show that he is not familiar
23 with the details of the organization.

24 THE COURT: I don't know that the details of the
25 organization has a definitive meaning so as to make the

1 statement in the deposition inconsistent. However, it has been
2 read into the record, and I overrule the objection.

3 *BY MR. FABIAN:*

4 Q. And, sir, you don't know when the group started, correct?

5 A. That's incorrect. So --

6 Q. I'm sorry, sir. Again, are you still looking at your
7 deposition?

8 A. Yes. This deposition was November 5, 2013, and you used
9 the present tense to pose your question.

10 Q. Okay.

11 A. And so --

12 Q. So at the time of your deposition, you did not know when
13 the group started, correct?

14 A. I didn't know the exact date.

15 Q. Thank you, sir.

16 A. I think in the deposition I told you that it started --

17 Q. Thank you.

18 A. -- after the Sandy Hook massacre.

19 *THE COURT:* Folks, I'm going to ask you not to talk
20 over each other. The reason is our court reporter can't
21 transcribe two people talking at the same time.

22 As to the witness, let me advise you that the State's
23 attorney will have an opportunity to ask you further questions.
24 If she believes there is some supplementation to your responses
25 that is appropriate, I'm sure she'll ask you a question, giving

1 you the opportunity to supplement.

2 Counsel, I will ask that you not talk over the
3 witness.

4 MR. FABIAN: I understand, Your Honor. Thank you.

5 THE COURT: Thank you.

6 BY MR. FABIAN:

7 Q. This group, Hunters Against Gun Violence, doesn't have a
8 formal membership application or enrollment procedure, correct?

9 A. Correct.

10 Q. And you don't have regular meetings, correct?

11 A. We have irregular, spontaneous meetings.

12 Q. Sir, my question was, you don't have regular meetings,
13 correct?

14 A. That is correct.

15 Q. And you personally don't believe that a magazine
16 restriction such as that contained in House Bill 1224 will stop
17 or even limit the number of mass shootings, correct?

18 A. That's -- I'm sorry. Say the question again, please.

19 Q. Sure. You do not believe that the magazine restrictions in
20 House Bill 1224 will stop or even limit the number of mass
21 shootings, correct?

22 MS. SCOVILLE: Objection. Beyond the scope and
23 foundation.

24 THE COURT: Sustained. Beyond the scope.

25 MR. FABIAN: If I may have just one more moment, Your

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1 Honor.

2 I have nothing further.

3 *THE COURT:* Thank you.

4 Redirect.

5 *MS. SCOVILLE:* None, Your Honor.

6 *THE COURT:* Can this witness step down and be excused?

7 *MS. SCOVILLE:* He may.

8 *MR. FABIAN:* No objection.

9 *THE COURT:* Thank you, sir. You may step down. You
10 are excused.

11 *THE WITNESS:* Thank you.

12 *THE COURT:* Are we ready to return to the examination
13 of Dr. Zax?

14 *MR. GROVE:* Yes, Your Honor.

15 *THE COURT:* Thank you. Would you please retake the
16 stand. You remain under oath.

17 *THE WITNESS:* Thank you.

18 **(JEFFREY ZAX, DEFENDANT'S WITNESS, PREVIOUSLY SWORN)**

19 **DIRECT EXAMINATION CONTINUED**

20 *BY MR. GROVE:*

21 Q. Let's move to your third opinion, that limiting magazine
22 capacity will have a beneficial impact on the safety of law
23 enforcement officers.

24 First, to your knowledge, is there any restriction on
25 the bill on what law enforcement officers may carry after

1 July 1, 2013?

2 A. I've read the bill, and my understanding is that there is
3 no restriction on what law enforcement officers can carry.

4 Q. In the course of preparing your report and preparing for
5 your testimony in this case, did you examine any sources that
6 shed light on the frequency of large numbers of discharges by
7 police officers?

8 A. Yes, I did. In particular I read three -- three of the
9 most recent annual firearm reports of the New York Police
10 Department.

11 Q. And those detail discharges in the line of duty?

12 A. Yes, they do.

13 Q. And when you did this analysis, did you assume that police
14 officers and civilians have similar self-defense needs?

15 A. No, I did not.

16 Q. Why?

17 A. Well, the most important reason is because the New York
18 Police Department's document asserts that they don't; and I
19 have no reason to disagree with that. The document spoke at
20 some length about the obligation of police officers to actually
21 pursue circumstances of great risk in the course of enforcing
22 public safety; whereas, private citizens actually have an
23 obligation to avoid risk to the reasonable extent before they
24 engage in self-defense.

25 Q. Are you aware of any evidence suggesting that

1 large-capacity magazines are of particular threat to police
2 officers?

3 A. Yes, I am.

4 Q. What is that evidence?

5 A. I believe it was in the article by Dr. Koper, the 2013
6 article, in which he asserts that between 31 and 41 percent of
7 police murders are accomplished with large-capacity magazines.

8 Q. You mentioned that you reviewed NYPD firearms discharge
9 data. What did that data show about the frequency and
10 intensity of firearms discharges by police officers in the line
11 of duty?

12 A. It showed the frequency and intensity are quite limited.
13 The city of New York has a population of 8 million or more.
14 The police force is typically around 33, 34,000 officers in the
15 course of a year. Over the three years that I looked at, 2009,
16 2010, 2011, there were 116 recorded incidents of police
17 discharging their firearms in the line of duty. In only six of
18 those incidents -- there were six incidents in which an
19 individual officer discharged 16 rounds. There were no
20 incidents in which any individual officer discharged more than
21 16 rounds.

22 Q. Mr. Ayoub testified earlier in this trial, and he said -- I
23 believe I'm remembering this right -- that something on the
24 order of, like, 3 percent of all incidents in New York in the
25 period that he reviewed involved the firing of more than 16

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1 rounds. Is that accurate or inaccurate?

2 A. In the three years that I reviewed, as I said, no
3 individual officer fired more than 16 rounds, and only in six
4 instances did they fire that many. Now, it's possible that in
5 those incidents, more than 16 rounds were fired; but that would
6 be because there were multiple officers discharging their
7 firearms, and the sum of the total discharged exceeded 16.

8 Q. Did you review firearms discharge statistics from any other
9 police departments?

10 A. Yes, I did. From -- the police departments in Milwaukee,
11 Los Angeles, San Diego, and Albuquerque, I believe. The
12 reports from those four cities are much less detailed than
13 those from New York. They are consistent with -- to the extent
14 they have detail, they are consistent with New York reports.
15 Law enforcement officers rarely fire their firearms in the line
16 of duty. When they do, they rarely fire large numbers of
17 discharges.

18 Q. Did the discovery in this case contain information about
19 discharges in the line of duty?

20 A. Yes, it did, in fact.

21 Q. What did that reveal?

22 A. Well, there was another interrogatory addressed to the
23 sheriffs, requesting reports from them regarding the number of
24 instances in which -- in which sheriffs and sheriffs deputies
25 discharged their firearms in the line of duty. I compiled that

1 data and found only 62 instances in the 54 reporting counties
2 over the past -- well, I was going to say ten years, but the
3 range on that question might actually have been longer. So,
4 certainly, over the last ten years, maybe over a longer period,
5 only 62 instances.

6 Q. Okay. Let's move on.

7 We touched on the public safety component of the
8 large-capacity magazine ban a few times already, but I'd like
9 to address it more squarely. Do you have an opinion as to the
10 effect of the magazine capacity limitation on public safety?

11 A. Yes. It will enhance public safety.

12 Q. Why?

13 A. Because the number of rounds fired will decline. In the
14 absence of a large-capacity magazine, the number of rounds
15 fired will be less.

16 Q. Does that apply only to mass shooting situations?

17 A. No.

18 Q. Okay. So let's discuss that moderating effect, whether or
19 not it's a mass shooting. What is the basis of that opinion?

20 A. There are four bases for my opinion. The first is basic
21 economic theory. The second is the apparent evidence regarding
22 the efficacy of reloading. The third is the evidence presented
23 by Reedy and Koper in their 2003 article in *Injury Prevention*
24 regarding the number of discharges and the consequences thereof
25 from pistols and revolvers. And the fourth is the evidence

1 from mass shootings.

2 Q. Okay. Let's go through those one at a time. What's the
3 relevant economic theory?

4 A. Well, the relevant economic theory is the theory of
5 opportunity costs. And perhaps I can motivate this first with
6 an illustration.

7 We've all seen scenes in movies where an individual
8 seems to be in control of the situation. He pulls the trigger
9 on his gun, and it turns out he's out of ammunition. Control
10 of the situation changes radically at that point. Nobody wants
11 to be that person. Nobody wants to be down to their last
12 bullet. And that's all about economics.

13 The issue is the following: One of the costs of doing
14 anything is the opportunity cost. That is the fact that by
15 making one choice, you forgo other choices. And the loss of
16 those other choices is something you have to consider when you
17 choose to make the choice that you made.

18 Well, in the present context, the relevance is that
19 when you shoot -- when you discharge a round, there is, of
20 course the expense of the bullet. But the other expense is the
21 fact that a round discharged now is not available to you to
22 discharge later.

23 Now, the reason that's important is because if you're,
24 for example, an aggressor in a violent interaction, those
25 interactions tend to be unscripted, unplanned, and they can

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1 evolve in ways that are unexpected. So when you discharge a
2 round now, you have to weigh, is it better for me to shoot it
3 now and not have it later, or should I hold it in reserve in
4 case my victim turns out to be more -- more aggressive in
5 defense than I expected, someone comes to their aid, the police
6 show up. There are a variety of unpredictable circumstances in
7 which I might wish I hadn't shot that round now. I wish I
8 rather had it.

9 Now, the opportunity cost of these bullets goes up the
10 fewer -- the fewer bullets you have left in your magazine. So,
11 for example, if you have a 30-round magazine, you can fire the
12 first couple of rounds, maybe the first five or ten rounds
13 recklessly. You don't have to think, I need to keep something
14 in reserve in case things go badly for me, because you've still
15 got 20 rounds or more.

16 On the other hand, if you have a 15-round magazine,
17 then you have to be a lot more careful. For example -- this is
18 oversimplifying a bit. But if, for example, you decided I want
19 to keep six rounds in reserve because I don't know who is
20 coming around the corner, I don't know how I'm going to make my
21 escape, I don't know all of those things. Well, if you have a
22 30-round magazine and you want to keep 6 in reserve, you can
23 fire 24. If you've got a 15-round magazine, you want to keep 6
24 in reserve, you can only fire 9. With a smaller magazine, the
25 opportunity cost of each round is greater. The opportunity

1 cost of each round grows more rapidly as you discharge rounds.
2 And, therefore, your reluctance to go to the end of the
3 magazine increases.

4 So, yes, fundamental economic theory says that with a
5 smaller magazine, you will ordinarily discharge fewer rounds.

6 Q. What's your understanding of the evidence regarding
7 reloading time?

8 A. Well, the evidence regarding reloading times --

9 MR. KRUMHOLZ: Objection, Your Honor. Foundation.

10 THE COURT: Response.

11 MR. GROVE: We can move on.

12 THE COURT: Okay.

13 BY MR. GROVE:

14 Q. So you mentioned the results of the Reedy and Koper study
15 from 2003. What's your understanding of what that study found?

16 A. The Reedy and Koper study examined firearm injuries over a
17 period of, I think, four years, 1992 to 1996, in Jersey City.
18 They had access to data which described not only the extent of
19 the injuries, but the firearms that were used and the number of
20 rounds discharged. They used this data to compare the outcomes
21 of -- outcomes of violent interactions where the firearms were
22 revolvers and those where the firearm were pistols with,
23 presumably, larger magazines.

24 Q. And we heard testimony from Dr. Kleck that semiautomatic
25 pistols do on average have a higher capacity than revolvers.

1 Do you have any basis to disagree with that opinion?

2 A. No, I heard that testimony, and Reedy and Koper make the
3 same comparison.

4 Q. So what was the outcome of the study comparing revolvers
5 and semiautomatic pistols?

6 A. The outcome of the study was that in incidents involving
7 pistols, the number of shots discharged -- the average number
8 of shots discharged was in the vicinity of 3.2 to 3.7. With
9 revolvers, the average number of shots discharged was between
10 2.3 and 2.6, I believe. The conclusion was that incidents
11 involving pistols involved the discharge on average of one
12 additional round, which is an increase of, roughly speaking,
13 45 percent over the number of rounds that were discharged in
14 the typical incident using only a revolver. That was the first
15 conclusion.

16 The second conclusion was that in incidents involving
17 a pistol, the number of -- average number of injured parties
18 was 1.15; whereas, in incidents involving the revolvers the
19 average number of injured individuals was one. So incidents
20 involving pistols caused an increase in the number of injured
21 individuals of .15 per incident, which is an increase of
22 15 percent.

23 Q. So what does that research suggest about the capacity of a
24 firearm and what effect it might have in a violent encounter?

25 A. Well, it agrees with the economic theory that I just

1 expostulated a couple of minutes ago. Aggressors with smaller
2 capacities husband that capacity more carefully and expend
3 fewer rounds; because they expend fewer rounds, they injure
4 fewer victims.

5 Q. So my understanding of Professor Kleck's testimony or his
6 position on this, is that he believes that any conclusions that
7 are in the Reedy and Koper analysis aren't relevant, because
8 the average criminal incident in which the perpetrator actually
9 shoots only involves a few rounds and usually comes nowhere
10 near to exhausting the capacity of, say, a 15-round magazine.
11 Do you agree with him?

12 A. No, that's incorrect. Apart from mass shootings, the
13 objective is never to exhaust the magazine. The objective is
14 to accomplish your objective while holding enough fire power in
15 reserve to protect yourself if things go bad. So as an
16 economic matter, you would never expect anyone to go into these
17 kinds of interactions with the intent of exhausting their
18 magazine.

19 Q. Well, so why does it matter if use of a larger-capacity
20 firearm versus a smaller-capacity firearm might only result in
21 one or two extra shots being fired?

22 A. Well, it wouldn't matter at all if we could be certain
23 those shots would always miss. But if shots always missed, we
24 wouldn't need to defend ourselves either. For example, if the
25 hit rate was as low of 15 percent, the probability of getting

1 shot when two rounds are being fired at you is about
2 28 percent, getting hit once. The probability of getting hit
3 once when four rounds are fired at you is about 48 percent. So
4 the addition of two more discharges increases your probability
5 of getting hit by 20 percentage points. And that's actually a
6 60 percent increase in your risk of being hit. That's
7 substantial.

8 Q. Professor Kleck also testified that mass shooters do not
9 need large-capacity magazines to carry out their goal. Do you
10 agree with that opinion?

11 A. No.

12 Q. Why?

13 A. Well, Professor Kleck didn't have any direct evidence to
14 support that. The direct evidence he does have, that we have,
15 is that it appears that the majority of mass shooters, maybe
16 the vast majority of mass shooters, for whom their weapon can
17 be identified carry with them large-capacity magazines. Now, I
18 did hear Professor Kleck testify that mass murderers tend to be
19 deliberate, methodical, to plan their ghastly expeditions over
20 extended periods of time. I think the evidence there is one of
21 what we call revealed preference. If having thought carefully
22 about how to wreak the carnage that they aspire to, they choose
23 to equip themselves with LCMs, what we're being told is that
24 they believe they'll be more effective in achieving their goals
25 if that's the weaponry they carry.

1 And, you know, it's awful to say, but they're,
2 unfortunately, the experts in this kind of behavior. It's hard
3 to contradict them without something more substantial.

4 Q. Are you familiar with the methodology that Professor Kleck
5 used to compile the information that he based his review of
6 what mass shooters need on?

7 A. Yes.

8 Q. And it was newspaper reports, right?

9 A. That's what I heard him testify to, yes.

10 Q. What's your expert opinion regarding the design of his
11 methodology?

12 A. It seems inadequate to address the questions that he wants
13 to answer.

14 Q. Why is that?

15 A. Well, as I understand it, one of the pieces of his analysis
16 is what he calls the average discharge rate, or the average
17 shot rate. I understand that he took calculations of a number
18 of discharges and divided that by the elapsed time of the
19 entire incident and called that the average discharge rate.

20 While I don't quibble with that definition, but it is
21 very difficult for me to see why that is relevant to anyone.
22 That is, the victims in these -- in these instances did not
23 typically experience the average rate. They experienced the
24 actual rate. And I did hear the tape of the recording of the
25 911 call from the Aurora incident. It was quite clear that at

1 that time, the rate of fire was well in excess of the average
2 rate that Dr. Kleck calculated for that incident. And while
3 that actual rate of fire was taking place, it's easy to imagine
4 that the defensive opportunities of the victims were very
5 limited. The opportunity to move, to get out of the way, to
6 tackle when the bullets were being fired more than one per
7 second would be very limited. Yet, in that circumstance,
8 Professor Kleck would assert that the relevant fire rate was
9 much slower. And that would suggest that the victims had
10 defensive opportunities that in fact were not available to
11 them.

12 Q. Did you have any concerns about the representativeness of
13 the sample of newspaper articles that Dr. Kleck relied upon?

14 A. Yes, I did.

15 Q. What were those?

16 A. Well, it became clear in the course of his testimony that
17 what -- he asserted that he had found all relevant instances,
18 but, in fact, he had not.

19 Now, I'm not much disturbed by the fact that he didn't
20 get every instance. It's very hard to be comprehensive in that
21 kind of situation. What does bother me is that he asserted
22 first that he had been comprehensive. And that raises the
23 possibility that the instances that he did examine had been
24 selectively chosen, that he had deliberately ignored the other
25 instances and chose to represent that no other instances were

1 relevant in order to avoid examining what -- instances that
2 might have been contradictory to his assertions.

3 So the question is not comprehensiveness; it's
4 representativeness. The way he presented it, it seems to me
5 that the -- that it's -- the question of whether or not his
6 sample was representative of mass shootings is very much
7 unanswered.

8 Q. What do you think of Professor Kleck's opinion that
9 reloading is so easy that multiple smaller magazines are just
10 as effective as large-capacity magazines?

11 A. As I understand it, that opinion is based on reloading
12 times that are recorded under controlled circumstances, in gun
13 shops, on firing ranges, but in circumstances where there is no
14 risk of aggressive responses or anything else.

15 Under those circumstances, it wouldn't surprise me if
16 people's dexterity is such that they can perform at the speeds
17 that Professor Kleck represents. However, I know we've had
18 evidence in this trial about the effect of stress in violent
19 circumstances on people's reactions. And I see nothing in the
20 evidence to suggest that the reloading times that Professor
21 Kleck claims are relevant are actually reloading times that
22 someone could expect -- expect in the heat of a violent event.

23 Q. Professor Kleck also used a definition of mass shooting
24 that I'd like to ask you about. And I think it was seven or
25 more killed or wounded in a single incident. What's your

1 opinion of whether that's a valid way to measure whether
2 something is or is not a mass shooting?

3 A. Well, it's --

4 *MR. KRUMHOLZ:* Objection, Your Honor. Foundation.

5 *THE COURT:* Response.

6 *MR. GROVE:* I can lay some more foundation.

7 *THE COURT:* Okay.

8 *BY MR. GROVE:*

9 Q. Dr. Zax, are you familiar with the term -- phrase
10 "selecting on the dependent variable"?

11 A. Yes, of course.

12 Q. What does that mean?

13 A. Selecting on the dependent variable is what happens when
14 you choose your sample based on the outcome that you want to
15 explain. So -- I'm sorry.

16 Q. And did Dr. Kleck select on the dependent variable when
17 doing his analysis?

18 A. Yes.

19 Q. What are the concerns with that?

20 A. Well, the outcome that you wanted to explain was the event
21 of the mass shooting. He defined mass shooting by the outcome,
22 that is, seven or more injured. The problem there is that that
23 definition biases his sample in the direction of finding a
24 reduced difference between the effectiveness of those using
25 LCMs and those not.

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1 The reason for that is the following: What we're
2 really concerned about is not those who succeed in being mass
3 shooters, but, rather, those who intend to be mass shooters.
4 What we would like to do is deter those who intend.

5 Now, if it's true that LCMs are more effective
6 weaponry for executing a mass shooting, then of those who
7 intend to be mass shooters, those who are not equipped with
8 LCMs are less likely to achieve the threshold that Dr. Kleck
9 established for his sample. That is, if their weaponry isn't
10 good enough, even though their intent may have been to
11 annihilate large numbers of people, they may have failed to do
12 so. And by failing to do so, they wouldn't have found their
13 way into Dr. Kleck's example.

14 Now, moreover, they failed to do so because they
15 didn't have LCMs. And so Dr. Kleck's strategy for creating the
16 sample means that those who wanted to kill lots of people but
17 failed to do so because their magazines were small, don't show
18 up. And that means he doesn't count the people who wanted to
19 wreak havoc but failed to do so because a restriction like that
20 in Colorado prevented them from having weaponry that would
21 allow them to.

22 Q. Let me make sure I've got this straight. So, for example,
23 somebody wants to commit a mass shooting. He decides that he's
24 going to do it with a revolver, which is all that he has, that
25 has a capacity of six rounds, which is all that he has, that

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1 has a capacity of six rounds. He decides that he's going to
2 kill as many people as possible, or at least shoot them. Fires
3 all six, misses with three, so he actually hits three people,
4 then does that mean that he would or would not be included in
5 Dr. Kleck's sample?

6 A. He would not be included in Dr. Kleck's sample. And the
7 problem with that is, he wanted to be a mass murderer, and he
8 didn't make it, fortunately. And the reason he didn't make it
9 was, he don't have an LCM. But Dr. Kleck isn't going to see
10 that. So Dr. Kleck's sample is going to be those people with
11 LCMs that made it in some sense easier for them to achieve
12 their grizzly objective and those without LCMs, whose weaponry
13 put them at a disadvantage with regard to this objective, but
14 for whatever reason managed to succeed anyhow.

15 So Dr. Kleck's sample is comparing those with LCMs
16 against only in some sense the most skilled or the most
17 fortunate of those without LCMs. It's ignoring those who are
18 equally murderous in intent, but whose -- but whose lack of
19 LCMs made it impossible for them to achieve that intent.

20 Q. Based on that analysis, does it surprise you at all that
21 approximately 80 percent of the incidents that qualify for
22 Dr. Kleck's sample and which we knew the capacity of the
23 magazine actually involved an LCM?

24 A. No, that's exactly what you'd expect. The LCM makes it
25 easier to discharge more rounds. Discharging more rounds makes

1 it easier to hit more people. Hitting more people makes it
2 easier to make Dr. Kleck's arbitrary threshold as to what is
3 and is not a mass shooting.

4 *THE COURT:* Counsel, I'm a bit confused here. I think
5 the reference here to LCM really is an HCM. Could you inquire,
6 please?

7 *MR. GROVE:* I'm sorry, we've --

8 *BY MR. GROVE:*

9 Q. When you say LCM, what do you mean?

10 A. Large-capacity magazine.

11 *THE COURT:* Okay. Thank you.

12 *MR. GROVE:* Thank you, Your Honor.

13 *BY MR. GROVE:*

14 Q. So we had some discussion earlier, you touched on
15 Dr. Kleck's study of defensive gun use. This is the 1995 Kleck
16 and Gertz study. And you were here while he discussed the
17 testimony as well. Are there any problem areas that concern
18 you with the -- with the way that study was conducted?

19 A. Yes, there are.

20 Q. What are those?

21 A. Well, there are many. The three biggest are that I believe
22 the questionnaire was designed so as to encourage exaggerated
23 responses regarding the number of DGUs. I believe that the
24 principal results -- I know that the principal results are
25 miscalculated, and that miscalculation has not been corrected.

1 And, lastly, the survey failed to -- the survey and the study
2 failed to distinguish between defensive gun uses that were
3 legitimate and legal and those that were illegitimate or
4 illegal. And certainly failed to distinguish between defensive
5 gun uses by people that Dr. Kleck in other contexts would refer
6 to as criminals themselves.

7 Q. One word that came up in Dr. Kleck's testimony was priming.
8 Do you know what that word means?

9 A. Yes.

10 Q. And what is it?

11 A. Priming is the phenomenon where one becomes predisposed to
12 answer a question a particular way because one has previously
13 been exposed to a similar concept and a like concept, a like
14 intention, and that predisposition may interfere with what the
15 facts actually are.

16 Q. Why does priming matter in a survey?

17 A. Well, let me give you a quick illustration.

18 When my son was 6 years old, he was interviewed in a
19 pediatric nutrition study. When he came out of the interview,
20 I asked what they had spoken of. He said, They asked me what I
21 had for breakfast. I said, What did you tell them? He said, I
22 told them I had two eggs, a banana, toast, and orange juice.
23 And I said, You've never had that for breakfast in your entire
24 life. And he said, I know. And I said, Why did you tell them
25 that? And he said exactly these words, he said, I could tell

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1 that's what they wanted to hear. That's 60 percent of what you
2 need to know about priming right there.

3 Now, this is a phenomenon familiar to us in lots of
4 other circumstances as well. Trial attorneys I think put great
5 care into the questions they ask, the phrasing of the
6 questions, and the order of the questions, all motivated by the
7 idea that the answers you get depend on the way in which the
8 questions are asked. On top of that, of course, there is
9 scholarly research as to how this all works out. So in the
10 end, you can predispose the answers, you can get the answers
11 you want, regardless of whether or not they're entirely true,
12 by posing the question the right way.

13 Q. You've reviewed Dr. Kleck's survey instrument, correct?

14 A. Yes.

15 Q. Do you have any concerns about priming?

16 A. Absolutely. The first question says -- the first question
17 is, I believe, What do you believe to be most important problem
18 facing your community? The answers, as given on the survey
19 instrument, are: One, crime; two, other; three, no opinion.
20 Well, so, the very first question puts respondents in a
21 position where it's either crime or everything else. That's
22 going to predispose your respondents to thinking in terms of
23 threat.

24 Q. Now, Dr. Kleck testified that that was actually an
25 open-ended question. After reading the survey instrument, do

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1 you have any reason to disagree with that?

2 A. Yes. That's not a credible opinion, and the reason is that
3 the survey instrument is a script. It's replete throughout
4 with explicit instructions to the surveyor as to how they
5 should interpret various answers, how they should proceed from
6 question to question based on previous answers. It has
7 instructions throughout to assist the surveyor in responding to
8 the questions. If it was truly an open-ended question, then it
9 should have been represented as an open-ended question with,
10 for example, a blank space and then a parenthetical instruction
11 to the surveyor saying, characterize anything that sounds of
12 illegal activity as crime. Characterize anything else they
13 talked about, cost of living, unemployment, war, climate
14 change, whatever it is, characterize that as other. And that's
15 how you proceed. That instruction is not there.

16 And while Professor Kleck claims to remember the
17 conduct of this, his memory with regard to lots of other
18 aspects of this survey was very fragile. I don't see any
19 reason to credit it in this context, given the evidence to the
20 contrary.

21 Q. Aside from priming, are there any other design problems in
22 the survey instrument?

23 A. Yes, there are. There are a variety of problems with
24 regard to the -- I'm sorry. There are -- the biggest
25 additional problem with regard to the design is that there is

1 substantial ambiguity regarding defensive gun uses that were
2 the acts of someone other than the actual respondent.

3 Questions regarding that, coding of all of that was ambiguous
4 in such a way that it is not actually possible to recover which
5 of those -- which acts were actually reported by someone other
6 than the participant. That's a problem.

7 Q. What about the potential culpability of the respondent,
8 does that matter?

9 A. Well, it doesn't matter to Professor Kleck, apparently.
10 But the question of self-defense in this survey is
11 self-reported. Well, everyone has a tendency to justify
12 themselves. And so it's easy to imagine that in responding to
13 these questions, individuals interpreted violent encounters as
14 encounters in which they were somehow justified and their
15 adversary was not. So without any external validation of the
16 defensive character of the interaction, it's a little -- it's
17 uncomfortable accepting individual self-assertion as the extent
18 to which they defended themselves.

19 Q. This is Exhibit 78. What are we looking at here?

20 A. Here, we're looking at my tabulation of numbers that are
21 reported in the article by Professor Kleck and his colleague,
22 Gertz -- Professor Gertz. What we have here is, first in the
23 right-most bar --

24 Q. Is that actually the left-most bar?

25 A. Left-most bar. Thank you. I was confused by the sudden

1 inability of my finger to elicit the arrow that I had hoped
2 would appear here.

3 These are all numbers from the Kleck and Gertz
4 article. The left-most bar, the one that is entirely blue, is
5 labeled NCVS reports. This represents Professor Kleck's
6 summary of the typical number of defensive gun uses reported to
7 the national criminal -- NCVS, National Criminal Victimization
8 Survey, I believe. Roughly speaking, during the period he was
9 talking about, there were 70,000 reports, approximately.

10 And the next bar, which is partially blue but mostly
11 red -- there is the arrow -- that bar represents Professor
12 Kleck's description of other defensive gun use surveys. That
13 is, surveys other than the one that he, himself, conducted and
14 reported on in this paper. His summary of those surveys was
15 that 700,000 -- was that typically they showed at least 700,000
16 defensive gun uses in a year.

17 Well, then, the question is, why does the NCVS here
18 have 70,000 and these other surveys have at least 700,000?
19 Dr. Kleck's explanation of that is, as we heard, that
20 individuals involved in defensive gun uses which might have
21 been of dubious legality would be reluctant to report those to
22 the NCVS because the NCVS is a federally sponsored, federally
23 conducted survey, and respondents would be uncomfortable
24 exposing themselves to federal scrutiny despite the promise of
25 confidentiality.

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1 So taking -- simplifying that, and taking Professor
2 Kleck's explanation at face value, what he's saying is that in
3 a sense, the 70,000 NCVS reports you could think of as
4 presumably legal. The difference between those 70,000 NCVS
5 reports and the 700,000 reports gathered by the other defensive
6 gun use surveys, that difference represented defensive gun uses
7 that were of dubious legality.

8 So as you could see in this middle bar, the lower blue
9 portion represents the 70,000 that would have been of,
10 presumably, legal character. The much larger red bar above it
11 is the part -- is the portion of the response to these surveys
12 that represent defensive gun uses of dubious legality. And
13 according to Dr. Kleck's interpretation of these numbers, what
14 he's saying is that in these other defensive gun use surveys,
15 approximately 90 percent of the reported incidents of defensive
16 gun uses are, themselves, of dubious legality, 630,000 out of
17 700,000.

18 The right-most column represents the Kleck and Gertz
19 survey itself. As we heard, Professor Kleck estimates that 2.5
20 million defensive gun uses -- instances of defensive gun use
21 occurred in 1993, the year of his survey. Once again, he
22 explains the difference between his tabulation and that in the
23 national -- in the NCVS as being driven by the reluctance of
24 defensive gun users to reveal themselves to federal authorities
25 when they're uncertain about the legality of their defensive

1 gun use.

2 So, once again, in this right-most bar, we have at the
3 bottom the 70,000 defensive gun uses that Professor Kleck
4 asserts are presumably legal. And the remainder of that bar
5 represents the excess of defensive gun uses reported to him
6 above those that are reported to NCVS. And you can see it's
7 mostly red there, because by Professor Kleck's own testimony in
8 his article, of the 2 1/2 million defensive gun uses he
9 reports, approximately 2,430,000 of them are of dubious
10 legality.

11 And to put that in percentage terms, according to
12 Professor Kleck's explanation of his results, only about
13 3 percent of the defensive gun uses that he reports are
14 sufficiently legal that their perpetrators would have felt
15 comfortable reporting them to the NCVS survey. The other
16 97 percent of defensive gun uses were revealed to Professor
17 Kleck and his co-author only because their guarantee of
18 confidentiality was sufficiently convincing that these
19 individuals didn't feel uncomfortable admitting to acts that
20 were of dubious legality.

21 Q. Let's talk about problems with execution.

22 I'm sorry. Your Honor, could we admit 78 just for the
23 purpose of demonstrative?

24 *THE COURT:* Any objection?

25 *MR. KRUMHOLZ:* No objection.

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1 *THE COURT:* Thank you. It's received.

2 (Exhibit 78 admitted.)

3 *BY MR. GROVE:*

4 *Q.* This is Table 2 from the Kleck and Gertz study, which has
5 already been admitted, and so I won't -- we won't try to flip
6 through that and find it. I've got it here.

7 *MR. KRUMHOLZ:* What's the exhibit number?

8 *MR. GROVE:* 78.

9 *THE COURT:* Might be helpful to identify it for the
10 record.

11 *MR. GROVE:* This is No. 73. Since this is marked on,
12 we will, actually, ask that it be admitted too, just so the
13 record is clear.

14 *BY MR. GROVE:*

15 *Q.* What are we looking at here, Dr. Zax?

16 *A.* This is the central presentation of the central results
17 from this particular article.

18 *Q.* And as you may recall, since you were here, I had a
19 discussion with Dr. Kleck about which of these calculations may
20 have been incorrect. And then on redirect, there was some
21 additional discussion in which he said that -- actually, the
22 numbers on the right side of the table were actually -- he had
23 come up with the reason that they might have been -- might have
24 appeared to have been miscalculated. Have you gone back
25 through and checked his work?

1 A. Yes.

2 Q. And what did you conclude?

3 A. The correction that Dr. Kleck accepted in the redirect
4 testimony is wrong. That is, it doesn't explain the errors in
5 this table, and wouldn't be expected to. It's not relevant.

6 MR. GROVE: Your Honor, I'd ask that 73 be admitted.

7 THE COURT: Any objection?

8 MR. KRUMHOLZ: No objection, Your Honor.

9 THE COURT: It's received.

10 (Exhibit 73 admitted.)

11 BY MR. GROVE:

12 Q. Dr. Kleck's Opinion No. 6 was as follows: "The
13 large-capacity magazine limitation will reduce possession of
14 large-capacity magazines more among law-abiding citizens than
15 it will among criminals."

16 From the perspective of a social scientist, are there
17 any problems with the way that Dr. Kleck formulated and
18 expressed this opinion?

19 A. Yes. That's not a valid opinion from the perspective of a
20 social scientist.

21 Q. Why is that?

22 A. Let me explain how science works -- social science works.
23 In its simplest form, social science is about saying, people of
24 one sort will behave one way; people of another sort will
25 behave another way. And that's an assertion or hypothesis.

1 And then one would attempt to verify that hypothesis by
2 actually observing people of one sort and measuring their
3 behavior; observing people of the other sort, measuring their
4 behavior; and looking to see if the observed contrast is
5 consistent with the asserted contrast. That's how science
6 works.

7 Now, the problem with this statement is that
8 superficially, it appears to draw a distinction between two
9 well-defined sorts of people, those who are law-abiding, and
10 those who are criminals. The problem with it from a scientific
11 perspective is, Professor Kleck was not willing to make that
12 distinction operational.

13 That is, for example, if the act of buying an illegal
14 LCM makes one a criminal, then that statement is a tautology.
15 That is, there is nothing to test. Once you buy an LCM, you
16 are a criminal; therefore, criminals are more likely to buy an
17 illegal LCM than noncriminals. Because you can't be a
18 noncriminal and buy an LCM illegally. That's one way to think
19 of it that renders it inoperable.

20 The way to make it operable would be to actually
21 propose or adopt a meaningful distinction between law-abiding
22 citizens and criminals. Professor Kleck was asked to draw that
23 distinction. He was asked who a criminal was. His first
24 response and the only definitive response he gave was, everyone
25 is a criminal. Well, if everyone is a criminal, then there is

1 no contrast. There are no law-abiding citizens to compare them
2 to.

3 So until you have a well-defined distinction between
4 criminals and law-abiding citizens, you can't tell which -- who
5 is in each of those two groups; and, therefore, you can't test
6 this hypothesis.

7 Professor Kleck, I have to say, was very reluctant,
8 simply refused to define that distinction. And if you can't
9 define that distinction, you can't test it; and if you can't
10 test it, it's not science.

11 Q. Do you accept Professor Kleck's opinions regarding the need
12 for large-capacity magazines in mass murders and self-defense?

13 A. No.

14 Q. Why not?

15 A. Professor Kleck's opinions are that mass murderers don't
16 need LCMs, even though they're usually equipped with them. And
17 that self-defenders need LCMs, even though there are hardly any
18 examples of them ever using one. His assertions are completely
19 contradictory with what we observed and, therefore, can't be
20 plausible.

21 Q. Do you believe that multiple discharges are often necessary
22 for self-defense?

23 A. No.

24 MR. KRUMHOLZ: Objection, Your Honor. Foundation.

25 THE COURT: Response.

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1 MR. GROVE: We went through this with the sheriffs'
2 data, Your Honor. The -- opinion two is, essentially, that
3 large numbers of rounds aren't necessary for self-defense.

4 THE COURT: I understand that. But what is the
5 foundation that you're relying on for this particular question?

6 MR. GROVE: I can lay more foundation.

7 THE COURT: Okay.

8 BY MR. GROVE:

9 Q. Dr. Zax, earlier we discussed the information that you
10 considered when you reached your second conclusion in this
11 case, is that the need for large-capacity magazines in
12 self-defense is virtually non-existent. Did I state that
13 fairly correctly?

14 A. Yes.

15 Q. What information did you rely on to reach that conclusion?

16 A. I relied on the reports of self-defense in the context of
17 home invasions provided by the 54 sheriffs who replied to your
18 interrogatories. As I said, at the time, there were 19
19 instances in which individuals discharged firearms in
20 self-defense, none in which they -- none reported in which they
21 discharged as many as 15 rounds, and only two examples in which
22 self-defenders in those contexts were equipped with a
23 large-capacity magazine.

24 Q. Did the law enforcement data that you reviewed contain
25 similar data? I'm sorry. Let me be more specific. You

1 reviewed New York City Police Department firearms discharge
2 reports, correct?

3 A. Yes. Yes.

4 Q. Did that contain similar data?

5 A. Yes, it -- with regard to police officers themselves, as I
6 testified, the demonstration there was that out of 33,000 odd
7 policemen in each of three years, there were a total of six
8 incidents in which individual policemen discharged 16 rounds.

9 Q. So based on that background, do you accept Professor
10 Kleck's opinions regarding the need for multiple discharges in
11 self-defense?

12 A. No. There are no examples of discharge of multiple --
13 of -- discharge of many rounds -- there are very few -- sorry,
14 let me start again. There are very few examples of the
15 discharge of many rounds in self-defense. And in particular,
16 Professor Kleck, himself, testified that he believed there were
17 300,000 instances of armed self-defense, I guess, per year.
18 And he couldn't identify a single example in which an armed
19 self-defender had discharged the capacity of a legal LCM in
20 Colorado.

21 Q. Well, leaving aside discharge, do you agree that defensive
22 gun use is as common as Professor Kleck claims?

23 A. No.

24 Q. Why not?

25 A. As I said, I think there are many reasons to doubt the

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1 results from his 1995 article. As he, himself, agreed, that
2 1995 article is out of date, so to speak. The violent
3 crime -- the climate of crime today is much less, and
4 criminal -- I'm sorry, defensive gun uses are much less common.
5 I'm sorry. I'm beginning to tire. Would you repeat the
6 question, please.

7 Q. Commonality of defensive gun use.

8 A. Thank you. And, regardless, the numbers that Professor
9 Kleck cites are clearly inconsistent with the experience in
10 Colorado. The experience in Colorado, as reported by the
11 sheriffs, indicates that defensive gun use, at least in the
12 context of home invasion, is rarer than -- rarer than many
13 things we think of as being extremely unlikely.

14 Q. What about the effect of 18-12-302 on the stock of
15 large-capacity magazines in circulation in Colorado? Professor
16 Kleck has opined it won't make a difference. Do you agree with
17 that?

18 A. No. It's clear that the federal ban, which was much
19 weaker, had a marked statistically significant effect on
20 reducing the number of LCMs in circulation. I expect the
21 Colorado ban will be more successful in that direction.

22 Q. Do you believe that the ban on large-capacity magazines
23 will protect Coloradans from aggression?

24 A. Yes.

25 Q. Why?

1 A. Again, if magazines are smaller, the number of rounds
2 discharged will be fewer, and the number of individuals struck
3 by rounds will be fewer, as well.

4 Q. What about mass shootings, do you think that the ban on
5 LCMS will have an effect on that?

6 A. Yes. Actually, mass shootings are rare enough --
7 fortunately, they're rare enough, to predict them is difficult.
8 Nevertheless, as I said, the revealed preference -- the
9 large-capacity magazines are the mass murderer's weapon of
10 choice. We have to believe that if we deny them their weapon
11 of choice, they will be less effective at achieving their
12 horrific goals.

13 MR. GROVE: That's all I have, Your Honor.

14 THE COURT: Thank you.

15 Cross-examination.

16 MR. KRUMHOLZ: Thank you, Your Honor.

17 **CROSS-EXAMINATION**

18 BY MR. KRUMHOLZ:

19 Q. Good afternoon.

20 A. Good afternoon.

21 Q. You have not attempted to quantify the number of 16-plus
22 magazines that might come into Colorado illegally, have you?

23 A. No.

24 Q. You're not aware of anyone else having done so, correct?

25 A. That's correct.

1 Q. Now, if you had data on monthly sales of 16-plus magazines
2 before July 1, 2013, in the state of Colorado, you could
3 estimate what the future sales would have been in the absence
4 of 18-12-302, correct?

5 A. Yes, one could.

6 Q. But there is no such data that you're aware of, correct?

7 A. That's correct.

8 Q. You're not aware of any studies that address the subject of
9 the rate at which magazines drop out of circulation, correct?

10 A. That's correct.

11 Q. You've not reviewed any literature or studies specifically
12 addressing that topic, the depreciation rate of magazines,
13 correct?

14 A. That's correct.

15 Q. And you're not aware of any data that bears on that topic?

16 A. I am not.

17 Q. And you already testified on direct that you have no
18 expertise with respect to the mechanics of firearms, correct?

19 A. That's correct.

20 Q. So, of course, you have no expertise in how quickly various
21 parts of a firearm wear out, including magazines, correct?

22 A. That's also correct.

23 Q. And absent any data on the rate at which magazines drop out
24 of circulation, you cannot estimate the rate at which the
25 existing stock of 16-plus magazines will diminish in Colorado,

1 correct?

2 A. I personally cannot, that's correct.

3 Q. You testified at length that you expect in your expert
4 opinion that 18-12-302 will reduce the number of magazines --
5 of 16-plus magazines in Colorado, correct?

6 A. I testified that it would reduce the number of those
7 magazines relative to what they would have otherwise been in
8 the absence of the law.

9 Q. Thank you for that clarification. But you haven't
10 quantified that expected reduction, correct?

11 A. That's correct.

12 Q. Now, you testified about your -- how your opinions in this
13 case are informed in part by the application of bedrock
14 economic principles, correct?

15 A. Yes.

16 Q. And in particular, there is the principle that behaviors
17 which become more costly in terms of time, money, effort are
18 less likely to be engaged in, correct?

19 A. Yes.

20 Q. And I believe you described that as the demand curve.

21 A. Yes.

22 Q. The principle that the college freshmen learn in the second
23 week of class, correct?

24 A. Yes.

25 Q. I believe you've also described that kind of principle as

1 being in the category of Econ 101, correct?

2 A. I don't believe I said that here, but I may well have said
3 it in my deposition.

4 Q. Thank you. And I think on direct you did say -- you do use
5 the phrase "fundamental economic logic," correct?

6 A. It's quite likely.

7 Q. And so you would consider that economic principle to be
8 supportive of your opinion that the number of 16-plus magazines
9 in Colorado will decrease, at least in comparison to what that
10 number would have been in the absence of the law, correct?

11 A. Yes.

12 Q. And you talked about -- you talked about incentives. And I
13 believe you mentioned that with respect to gun owners, one
14 incentive for not wanting to violate 18-12-302 is the incentive
15 of avoiding having their gun rights taken away, correct?

16 A. Yes. I testified that I imagined illegal possession of an
17 LCM might jeopardize what might have been otherwise legal
18 possession of other forms of firearms.

19 Q. And so it's your understanding, then, that violation of
20 12 -- 18-12-302 results in a gun owner losing his right to
21 possess a firearm?

22 A. No. I have -- although I have read that law -- that bill
23 with some care, I have not read the other rules and regulations
24 governing gun possession in the state of Colorado. So as a
25 general proposition, being found in possession of the illegal

1 large-capacity magazine would open one up to further scrutiny.
2 Whether that scrutiny would be to further charges of illegal
3 gun possession, it's certainly a risk. I am not ready to state
4 how much of a risk it is.

5 Q. However, you understand that the violation of 18-12-302 is
6 a misdemeanor, correct?

7 A. I believe I remember that, yes.

8 Q. You testified that evidence can come in two forms, correct?
9 And by that I mean, it can come in the form of empirical
10 evidence on the one hand and theoretical evidence on the other,
11 correct?

12 A. Yes.

13 Q. And so would you consider -- is it true that you consider
14 the application of the demand curve principle that we just
15 talked about as being in the theoretical domain of evidence?

16 A. My discussion of the demand curve itself, yes, I agree was
17 in the theoretical domain of evidence. My analysis of the
18 Virginia firearms clearing data -- clearinghouse data, I regard
19 as empirical verification of that theoretical discussion.

20 Q. Now, the demand curve, the idea that behaviors which become
21 more costly are less likely to be engaged in, might apply to
22 different subsets of the population in different ways, correct?

23 A. Yes.

24 Q. For instance, if a cable -- TV cable subscription to the
25 Golf Channel resulted in an increase in one's bill of, say,

1 \$50, many people would be unwilling to bear that cost, correct?

2 A. Yes.

3 Q. Maybe even most people?

4 A. Certainly myself.

5 Q. But there might be a subset of the population for whom the
6 Golf Channel is of sufficient importance that they might be
7 willing to pay that extra amount, correct?

8 A. I would expect so.

9 Q. Now, if we apply the principle we've been discussing,
10 demand curve, to the -- to this case, to the -- to the
11 situation of 18-12-302, the behavior that's being made more
12 costly is the acquisition of magazines of rounds of 16 or more,
13 correct?

14 A. Yes.

15 Q. And so your point is that 18-12-302 will make it more
16 costly for Colorado citizens to acquire 16-plus magazines,
17 correct?

18 A. Yes.

19 Q. And so one added cost of -- one added cost is that Colorado
20 citizens now must drive all the way to Wyoming or some other
21 bordering state in order to acquire a 16-plus magazine,
22 correct?

23 A. That would be one added element of the cost.

24 Q. And it's safe to assume that at least some Colorado
25 citizens will not be sufficiently motivated to make that trip,

1 correct?

2 A. Correct.

3 Q. And another added cost is the fact that if -- we just
4 discussed this -- is the fact that now if a Colorado citizen
5 wants to acquire a 16-plus magazine, he or she must violate the
6 law to do so, correct?

7 A. Yes.

8 Q. One would hope, at least, that most Coloradans are
9 unwilling to bear the cost of violating state law and risking
10 prosecution, correct?

11 A. Yes.

12 Q. But it's true that there will still be people in Colorado
13 who are sufficiently motivated to bear that cost in order to
14 acquire an illegal magazine, correct?

15 A. Unless the cost is enormous, I believe that's correct.

16 Q. Now, you submitted three expert reports in this case,
17 correct?

18 A. Yes.

19 Q. There was an initial one in August of last year, then a
20 supplemental report you submitted in September, and then there
21 is the one that we discussed this morning at some length that
22 was submitted sometime earlier this year. Correct?

23 A. Yes.

24 Q. With respect to your initial expert report in which you
25 opined that 18-12-302 will reduce the number of 16-plus

1 magazines in Colorado, at least in the absence of that law, you
2 failed to account for the possibility that 16-plus magazines
3 could still be illegally imported from other states, correct?

4 *MR. GROVE:* Objection. Assumes facts not in evidence.

5 *THE COURT:* Response.

6 *MR. KRUMHOLZ:* Well, I'd be happy to show the witness
7 his expert report, Your Honor.

8 *MR. GROVE:* The report is not in evidence. Dr. Zax's
9 testimony today here is the expert opinion that he's expressed
10 in this case.

11 *THE COURT:* I overrule the objection. With regard to
12 this expert's opinion, it is as important what he did not
13 consider as it is what he considered; and it is appropriate for
14 plaintiffs' counsel to inquire as to that.

15 You may answer the question. Do you need to have it
16 read back?

17 *THE WITNESS:* Yes, please.

18 (Question read back by reporter.)

19 *THE WITNESS:* Originally, yes, that's correct.

20 *BY MR. KRUMHOLZ:*

21 Q. In fact, you cannot rule out the possibility that illegal
22 importation might be of significant magnitude so as to
23 nevertheless maintain the stock of 16-plus magazines at its
24 pre-bill level, correct?

25 A. That's correct.

1 Q. Let's move on to the Virginia clearinghouse database that
2 you discussed with Mr. Grove. The Virginia clearinghouse data
3 you obtained consisted of annual spreadsheets from 1993 to
4 2013, correct?

5 A. Yes.

6 Q. And those spreadsheets list individual firearms that had
7 been reported to the clearinghouse?

8 A. Yes.

9 Q. And the -- as I understand it, the entry for each firearm
10 also includes several characteristics of those firearms,
11 correct?

12 A. Yes.

13 Q. One of which, as you discussed, was the size of the
14 magazine?

15 A. Yes.

16 Q. On the form that the police use to report a firearm to this
17 database, there is also a field to describe how the firearm
18 came into the possession of police, correct?

19 A. Yes.

20 Q. And the firearms were reported to this clearinghouse
21 pursuant to Virginia law; is that right?

22 A. That's my understanding.

23 Q. And it's also your understanding, is it not, that the
24 law -- the Virginia law established a central repository of
25 information regarding all firearms, and I quote from the law,

1 "seized, forfeited, found, or otherwise coming into the
2 possession of Virginia law enforcement, which are believed to
3 have been used in the commission of a crime." Does that sound
4 accurate?

5 A. That is -- I recall having read that also.

6 Q. And it's your understanding, correct, that all of the
7 firearms included in the database were included because they
8 were suspected of being used in the commission of a crime,
9 correct?

10 A. It's my understanding that all of the firearms recorded in
11 that database were recorded in accordance with the regulations
12 governing the database.

13 Q. Thank you. That was my next question, which is, the sole
14 source of your understanding is based on the statute, correct?

15 A. That's correct.

16 Q. You did not review the spreadsheets to confirm that
17 understanding, did you?

18 A. I do not see how the contents of the spreadsheets would
19 bear on the question of whether or not the firearm was entered
20 in accordance with the statute.

21 Q. Well, weren't there entries, for example, in that -- in
22 that description field that explained how the firearm came into
23 the possession of the police?

24 A. You asked me to read about that.

25 Q. And so some of those descriptions might indicate, for

1 example, that the person who turned in the firearm to the
2 police had found it in -- in the attic of a new home that he
3 purchased?

4 A. That doesn't preclude the possibility that it had been
5 involved in the commission of a crime.

6 Q. But in that circumstance that I just -- that circumstance
7 that I just described, there would be no reason for the police
8 to suspect that, right?

9 A. I don't -- I'm not aware of the laws governing firearm
10 possession in the state of Virginia, whether or not it is legal
11 to leave an unattended firearm in an attic of an unoccupied
12 home is a question that I can't answer. The one thing that I
13 can say for certain is that if the description of the manner in
14 which the firearm came into their possession did not say, this
15 was not involved in the crime, the presumption has to be that
16 it was added to the database in accordance with the statute
17 governing the database, and there was a suspicion that it was
18 involved in a crime. As I understand the statute, it seemed
19 pretty clear to me that what was, essentially, a suspicion, not
20 a determination.

21 Q. Well, at any rate, your opinion is that the exercise of
22 reviewing the spreadsheets in order to try to determine whether
23 your understanding of the reason for its inclusion in the
24 database, that exercise would not be useful, correct?

25 A. Again, unless there are entries that assert that the gun

1 was not suspected of being involved in a crime, I can't think
2 of any reason to overturn the presumption that the database was
3 maintained as the statute required it to be.

4 Q. There appear to be no standardized systems for the person
5 filling out the form to describe how the firearm came into the
6 possession of the police, correct?

7 A. That's my observation as well.

8 Q. And so -- I apologize if I already asked this -- but there
9 is no way to tell from the spreadsheets themselves whether each
10 particular firearm was in fact listed because it was suspected
11 of being used in the commission of a crime, correct?

12 A. The fact that it is included in the spreadsheet is a
13 presumption that it was done so because it was suspected of
14 being included in a crime. My impression of state employees in
15 a variety of different capacities is that they do not go out of
16 their way to fill out unnecessary forms.

17 Q. Now, even though you received spreadsheets from Virginia
18 through 2013, you testified that you only included in your
19 regression analysis the data from '93 to 2010, correct?

20 A. Yes.

21 Q. So you omitted from your analysis three years' worth of
22 data, correct?

23 A. That's correct.

24 Q. And that's because, as you testified on direct, starting in
25 2011, there was a marked decrease in the number of firearms

1 that had been reported to the database, correct?

2 A. Yes. To be more specific, the number of reports from 2010
3 seemed to be on the order of 3- to 7,000 per year. The reports
4 in 2011 and 2012 I think were both 396, and in 2013, it was 700
5 and some. So that contrast seemed so radical, that suggested
6 that there had been a change in the way the database was
7 administered. And I wasn't able to identify the source of that
8 change, so --

9 Q. In other words, you were provided no explanation for the
10 apparent change?

11 A. I was provided no information. And I did find the
12 officials in charge of the database to be somewhat elusive, at
13 least via e-mail.

14 Q. You didn't do a regression analysis that included those
15 years; is that correct?

16 A. That's correct.

17 Q. Now, if the number of firearms reported changes
18 significantly, as you just explained they did after 2010, that
19 would not necessarily affect the proportion of firearms with
20 LCMs that came into the possession of the police, would it?

21 A. Not necessarily. But a change that radical suggests that
22 something substantial happened in the reporting standards.
23 It's possible that that wouldn't have changed the proportions
24 of confiscated weapons that were equipped with LCMs, but the
25 likelihood was that -- I'm sorry, the change was of

1 sufficiently great scope that I felt it was -- it would be
2 improper to assume that the underlying process had not been
3 disturbed.

4 Q. In your view -- are you testifying that it's impossible for
5 the data for the years 2011 to 2013 to be relevant?

6 A. No.

7 Q. You did not examine those 2011 through 2013 spreadsheets to
8 determine whether the proportion of confiscated firearms
9 with -- equipped with ten-plus magazines increased or
10 decreased, did you?

11 A. No, I did not.

12 Q. So it's possible, isn't it, that the proportion of
13 confiscated firearms equipped with ten-plus magazines increased
14 during those years?

15 A. It could have gone in any direction. The relevant question
16 is, would any changes have been motivated by the same factors
17 that dictated the evolution of that percentage over the period
18 of time that I did examine. I wasn't sufficiently confident
19 that I could answer that question affirmatively, to include
20 those years in my analysis.

21 *MR. KRUMHOLZ:* Your Honor, this might be a good place
22 for a break. I'm not sure if you want to take one, though.

23 *THE COURT:* We can take a mid-afternoon recess.
24 That's fine.

25 *MR. KRUMHOLZ:* Thank you.

1 *THE COURT:* Court clock is showing about quarter after
2 3:00, and we'll reconvene at 3:35. We'll stand in recess until
3 then.

4 (Recess at 3:14 p.m.)

5 (In open court at 3:41 p.m.)

6 *THE COURT:* You may resume.

7 *MR. KRUMHOLZ:* Thank you, Your Honor.

8 *BY MR. KRUMHOLZ:*

9 Q. Professor, if we could go back to the spreadsheets for a
10 moment. We were talking about those earlier. And I wanted to
11 ask you, in compiling the data based on the spreadsheets, there
12 was a column for -- that listed the magazine size, correct?

13 A. Yes.

14 Q. And so I just wanted to ask you -- and I know on direct you
15 mentioned that there were many entries that did not contain a
16 description of the magazine size, right?

17 A. I believe I testified that there were 7,981 out of 101,326.

18 Q. Thank you. And I know you explained on direct how you
19 accounted for those missing -- those missing data. And you
20 just counted those ones that were missing as being firearms
21 with less than 11 -- magazines with less than 11 rounds,
22 correct?

23 A. That's how I accounted for them in the regression that you
24 see in document -- the document that has been disclosed.

25 Q. Right. Thank you. I just wanted to ask, then, did you

1 also correct for entries that may have been in error? And let
2 me give you an example. If there were one that said that the
3 magazine limit was 380, and it was apparent that that was --
4 that was a description for the caliber and not the magazine,
5 did you account for any obvious errors like that?

6 A. Thank you for asking. I did notice extreme values that I
7 thought of as implausible, and I did exclude them. I do not
8 remember what the range was, but I know there was some maximum
9 value above which I chose to conclude that the magazine size
10 had been misreported. And it was large, it was certainly in
11 the hundreds, but I don't remember specifically what it was.

12 Q. Thank you. We talked about the example of -- for example,
13 a firearm that was found in an attic by a new homeowner. And I
14 just wanted to ask you, because you indicated you didn't know
15 the specifics of Virginia laws on gun ownership, correct?

16 A. Yes.

17 Q. You're not aware of a Virginia law that would require a
18 license just to own a gun, are you?

19 A. No. I'm not aware.

20 Q. I wanted to ask you, have you heard of something called
21 Project Exile?

22 A. No.

23 Q. I'll just represent to you that Project Exile was a
24 campaign centered in Richmond, Virginia, and coordinated
25 between federal, state, and local law enforcement to

1 aggressively prosecute gun crimes. Did your regression
2 analysis account for the potential influence of Project Exile
3 on the proportion of confiscated firearms equipped with
4 ten-plus magazines?

5 A. No. Excuse me. No.

6 Q. So it's possible, isn't it, that the decline in the
7 proportion of confiscated firearms with LCMs was influenced by
8 the success of Project Exile?

9 MR. GROVE: Objection, foundation. Dr. Zax has
10 testified that he has no knowledge of Project Exile.

11 THE COURT: Sustained.

12 MR. KRUMHOLZ: Thank you, Your Honor.

13 BY MR. KRUMHOLZ:

14 Q. Professor, have you heard of a project called Virginia
15 Exile?

16 A. No.

17 Q. And I'll represent to you, then, that Virginia Exile was an
18 expanded --

19 THE COURT: Counsel, if he doesn't know what this is,
20 I don't know where it leads.

21 MR. KRUMHOLZ: Thank you, Your Honor. I'll move on.

22 THE COURT: Thank you.

23 BY MR. KRUMHOLZ:

24 Q. I just wanted to confirm, Professor, that -- I believe you
25 testified on this -- on direct, your analysis of the Virginia

1 clearinghouse data is in support of your Opinion 1, correct?

2 A. I believe that's true, but it would be helpful at this
3 point in the day for someone to remind me what number I
4 attached to which of my opinions.

5 Q. That's fair. And so let me do that for you.

6 Opinion 1 is the opinion -- this is from defendant's
7 proffered expert opinions, "HB 1224 will reduce the number of
8 large-capacity magazines in circulation relative to the number
9 that would be in circulation without the legislation."

10 A. Thank you. Yes, then my analysis of the Virginia firearms
11 data was in support of that opinion.

12 Q. Thank you. And your regression analysis does not relate to
13 any of your other three opinions, correct?

14 A. That's correct.

15 Q. Now, you did not correlate your findings from the -- sorry.
16 Let me start over. You did not correlate your findings from
17 the regression analysis to crime rates in Virginia during the
18 same time period, did you?

19 A. No.

20 Q. And you did not correlate your findings from the regression
21 analysis with homicide rates either, correct?

22 A. Correct.

23 Q. Now, even if the number of confiscated firearms with LCMs,
24 by which we mean large-capacity magazines, decreased in
25 Virginia, as your analysis suggestions, it is not necessarily

1 the case that the overall number of crimes being perpetrated
2 with such firearms was also decreasing, correct?

3 A. I'm sorry, the first part of that question is incorrect. I
4 didn't demonstrate that the number of firearms with
5 large-capacity magazines declined --

6 Q. Let me rephrase that. I understand that, and thank you.

7 Even if -- even if it's true that the 1994 ban did
8 have an influence on the declining number of confiscated
9 firearms with LCMs, it is not necessarily the case that the
10 overall number of crimes being perpetrated with such firearms
11 was also decreasing, correct?

12 A. Let me assist you here. What I showed was that the ban
13 reduced the proportion of confiscated firearms that were
14 equipped with the large-capacity magazines. My results do not
15 speak to the question of what may have happened to the either
16 proportioned or numbers of crimes that were committed with
17 large-capacity magazines.

18 Q. I appreciate your help. Thank you.

19 A. You're welcome.

20 Q. You discussed with Mr. Grove the fact that the 1994 ban was
21 a federal law, so it applied nationally, correct?

22 A. I'm sorry, could you repeat that?

23 Q. Yes. You discussed with Mr. Grove the fact that the 1994
24 federal law was federal and, therefore, it applied nationally,
25 correct?

1 A. Yes.

2 Q. And in contrast, I think you acknowledge that Section
3 18-12-302 only applies within the boundaries of the state of
4 Colorado, correct?

5 A. Yes.

6 Q. And it's true, isn't it, that there are no limitations on
7 magazine size in the states that border Colorado, correct?

8 A. I don't know that as a fact, but I have no reason to
9 disagree.

10 Q. Okay. Thank you. And so it's true, isn't it, that the
11 number of 16-plus magazines that might be imported into
12 Colorado is not finite, correct?

13 *MR. GROVE:* Objection, vague.

14 *THE COURT:* Sustained.

15 Would you rephrase.

16 *MR. KRUMHOLZ:* Yes, Your Honor.

17 *BY MR. KRUMHOLZ:*

18 Q. It's true that you cannot quantify the number of 16-plus
19 magazines that might be imported into Colorado, correct?

20 A. Imported illegally, yes, that's correct.

21 Q. In fact, so long as bordering states do not enact a similar
22 to Colorado, the supply of 16-plus magazines that would could
23 be imported to Colorado is inexhaustible, correct?

24 A. I agree that there are many large-capacity magazines not
25 currently available in Colorado that under appropriate

1 conditions could become available in Colorado. Of course, how
2 many actually became available would be -- would depend on the
3 cost of acquiring them. And as we've spoken, my understanding
4 is that the law will make that cost quite high.

5 Q. Professor, one must use care in drawing inferences for
6 Colorado based on the experience in another state, correct?

7 A. One must use care whenever one draws inferences.

8 Q. Colorado has different demographics from Virginia, for
9 example, correct?

10 A. I haven't looked at that explicitly, but I would certainly
11 believe it.

12 Q. And you probably haven't looked at this either, but,
13 presumably, it also has a different dispersion of population,
14 correct?

15 A. Yes, I'd expect to find that as well, were I to look.

16 Q. Let's turn to the sheriffs' interrogatories. You compiled
17 some interrogatory responses that were provided by the
18 plaintiff sheriffs in this case, correct?

19 A. Yes.

20 Q. And you would -- you would characterize what you did with
21 the interrogatory responses as an analysis of empirical data,
22 correct?

23 A. Yes.

24 Q. In fact, I think -- I think you called the sheriffs'
25 interrogatory responses "reports," correct?

1 A. I may have used that word. I don't recall.

2 Q. And based on that compilation of interrogatory responses,
3 you arrived at some conclusions concerning the frequency of
4 home invasions in the areas represented by the responding
5 sheriffs, right?

6 A. Yes.

7 Q. Now, you personally had no contact with the sheriffs in
8 connection with the responses, correct?

9 A. Yes.

10 Q. So you don't know what methodology each of the sheriffs
11 used to compile the necessary information to respond to the
12 interrogatories, correct?

13 A. I thought the interrogatories were clear and
14 straightforward. It hadn't occurred to me to characterize the
15 effort necessary to respond as a methodology, but it is true
16 that I have only their submitted responses. I know nothing
17 further about how those responses were compiled.

18 Q. I appreciate that. Thank you.

19 A. I do expect that they responded to the interrogatories with
20 appropriate respect for our request, duly authorized by the
21 court in these proceedings.

22 Q. Nor do you know, Professor, what filing and retention
23 policies each of the sheriffs have in place with respect to
24 their records, correct?

25 A. I certainly don't know what practices they have. I have a

1 strong sense as to what practices they should have.

2 Q. Now, the interrogatory that gave rise to the sheriffs'
3 responses asked them to identify all home invasions to which
4 their respective departments responded since January 1, 2004,
5 correct?

6 A. Yes.

7 Q. It also asked them to identify any of those home invasions
8 in which any person, quote, used or displayed, unquote, a
9 firearm, correct?

10 A. Without a document in front of me, I can't be certain. But
11 I'm a little suspicious of a question that did not distinguish
12 between perpetrators and victims. It may have been phrased
13 that way, but I don't recall it.

14 Q. Would it help, Professor, to take a quick look at the
15 interrogatories just to refresh your recollection?

16 A. If you wish me to testify as to its contents, yes, that
17 would be helpful.

18 Q. Well, I don't -- well, I appreciate that.

19 Your Honor, may we have Exhibit 139 shown to Professor
20 Zax.

21 COURTROOM DEPUTY: Book 139?

22 MR. KRUMHOLZ: You know, I don't know --

23 COURTROOM DEPUTY: Oh, interrogatories.

24 BY MR. KRUMHOLZ:

25 Q. Thank you. Professor, if you could turn to page 3.

1 A. Yes.

2 Q. And just look at paragraph B, the first -- paragraph 1B,
3 the first line.

4 A. Yes.

5 Q. Okay. Now, let me -- having taken a look at it, Professor,
6 you can just put that aside.

7 Now, let me ask you, it's -- it's correct, isn't it,
8 that the interrogatory asks them to identify whether a firearm
9 was fired or otherwise, quote, used or displayed, unquote.
10 Correct?

11 A. I believe that's correct.

12 Q. Now, the word "used," the verb "used" was not defined in
13 the interrogatory, correct?

14 A. I didn't see a definition, no.

15 Q. It would be important to know if each of the 54 responding
16 sheriffs interpreted the word "used" in the same way, correct?

17 A. In some sense, yes. Although it's hard for me to imagine
18 that the range of possible interpretations is very broad.

19 Q. Well, in that case, Professor, how would you -- how would
20 you define the word "used" as it was used in the interrogatory?

21 A. I'm sorry, could you -- the last bit of that, could you
22 repeat?

23 Q. Sorry. How would you define the verb "used" as it was used
24 in the interrogatory?

25 A. I think that the interrogatory, as you say, does not

1 restrict what "use" might mean. So if it were -- I to be
2 answering it, I would report any instance in which any of the
3 participants had displayed a gun or a firearm or done anything
4 more of -- had used it with any greater intensity. I guess
5 it's hard for me to imagine that "use" would refer to anything
6 other than either the initiation or the response to some
7 violent interaction. I mean, I don't think they're using them
8 as planters. So it's hard to imagine a use that wouldn't be
9 relevant to my analysis.

10 Q. I understand. Just so we're clear, then, you would include
11 within the verb "used," a use of the firearm that doesn't
12 include actually discharging it, correct?

13 A. Yes.

14 *MR. KRUMHOLZ:* Your Honor, pardon me for just one
15 second.

16 *BY MR. KRUMHOLZ:*

17 Q. It's possible, though, Professor, that the sheriffs may not
18 have understood the word "used" in the way that you just
19 described it?

20 A. The range of --

21 *MR. GROVE:* Objection, Your Honor. Foundation.

22 *THE COURT:* Response.

23 *MR. KRUMHOLZ:* Your Honor, I -- Professor Zax has
24 testified at length about these interrogatory responses from
25 the sheriffs. They form a significant part of his expert

1 report and his expert opinions. I think he has a foundation to
2 answer this question.

3 *THE COURT:* Well, it's a rhetorical question.

4 *MR. KRUMHOLZ:* Would you like me to move on?

5 *THE COURT:* Yes.

6 *MR. KRUMHOLZ:* I will.

7 *THE COURT:* Thank you.

8 *BY MR. KRUMHOLZ:*

9 Q. Professor, I already said, there were 54 sheriffs who
10 responded, correct?

11 A. Yes.

12 Q. Representing counties from all over the state, correct?

13 A. Yes.

14 Q. And the representative counties included rural counties
15 with very small populations, correct?

16 A. Yes.

17 Q. As well as counties along the Front Range, for example,
18 with much larger populations, correct?

19 A. Yes.

20 Q. And it's reasonable to assume that some of the sheriffs in
21 the larger counties, at least in terms of population, have much
22 larger staffs, correct?

23 A. Yes.

24 Q. And, conversely, the sheriffs in the smaller counties in
25 terms of population would have smaller staffs, correct?

1 A. That would be reasonable.

2 Q. So some sheriffs might have much more limited resources
3 available to them to gather the necessary information to
4 respond to the State's interrogatories, correct?

5 MR. GROVE: Your Honor, I object to this line of
6 questioning to the extent that it implies that the
7 interrogatories were somehow incomplete. It's been represented
8 by the plaintiffs that the interrogatory responses were in fact
9 complete.

10 THE COURT: I'm not sure that's an objection to the
11 question that's posed. I think that's an argument to be made
12 later on.

13 I think the problem may pertain to the way the
14 questions are framed. You're certainly free to ask this
15 witness what he considered and what he didn't consider, but you
16 cannot ask for him to speculate about what someone else
17 considered or did not consider.

18 MR. KRUMHOLZ: Thank you, Your Honor.

19 BY MR. KRUMHOLZ:

20 Q. Professor, were you aware that every sheriff's
21 interrogatory response included the specific objection that the
22 verb "used" was ambiguous?

23 MR. GROVE: Objection, relevance.

24 THE COURT: Response.

25 MR. KRUMHOLZ: Your Honor, the definition of "used" in

1 this case is very pertinent to the question of the necessity
2 for possession of firearms.

3 *THE COURT:* Okay. I'm not sure, listening to your
4 question, what the verb "used" was contained in. We've used
5 "used" in a number of different contexts, and you've most
6 recently been discussing an interrogatory. Now, it's possible
7 that that's what you're referring to. I don't know. Is it?

8 *MR. KRUMHOLZ:* It is.

9 *THE COURT:* Okay. And perhaps the way to get at this
10 is to ask the witness whether he saw the responses to the
11 interrogatories.

12 *MR. KRUMHOLZ:* I appreciate that.

13 *THE COURT:* Thank you.

14 *BY MR. KRUMHOLZ:*

15 Q. Professor, did you see the responses to the
16 interrogatories?

17 A. Yes.

18 Q. And so I'll ask you the question again. Were you aware,
19 then, having reviewed the interrogatory responses, that the
20 sheriffs specifically objected as ambiguous to the use of the
21 word "used"?

22 *MR. GROVE:* Objection, relevance.

23 *THE COURT:* Overruled.

24 *THE WITNESS:* Yes, I noticed that objection. And I
25 have to say, I found it difficult to take seriously. I felt

1 "used" was relatively open-ended and invited report of almost
2 any use -- invited the report of almost any action involving
3 the use of a firearm, which to me seemed appropriate --

4 *BY MR. KRUMHOLZ:*

5 Q. Thank you, Professor.

6 A. -- for the purpose at hand.

7 Q. Thank you. Let's move on to a different topic. Still on
8 the interrogatory responses.

9 Could you turn to -- actually, I don't know if he has
10 it.

11 Ms. Glover, I'd like Professor Zax to take a look at
12 Exhibit 59.

13 *COURTROOM DEPUTY:* Sure.

14 *MR. KRUMHOLZ:* Thank you.

15 *BY MR. KRUMHOLZ:*

16 Q. Professor, do you have Exhibit 59 in front of you?

17 A. Yes, I do. I recognize it.

18 Q. Now, if we look at the third column, it shows population in
19 plaintiff counties by year, correct?

20 A. Yes.

21 Q. And by population in plaintiff counties, you meant that
22 those were the populations of the counties for each of the
23 sheriffs who responded to the interrogatories, correct?

24 A. Yes.

25 Q. Now, we had some discussion about this earlier. In your

1 supplemental report in which you discussed these interrogatory
2 responses, you were careful to note that the population numbers
3 shown in column 3 of Exhibit 59 may be overstated to the extent
4 the sheriffs answering the interrogatory did not have reporting
5 responsibility for the entire county, correct?

6 A. Yes.

7 Q. And you mentioned that you weren't sure of the extent to
8 which that was true, because the interrogatory responses didn't
9 say anything about that issue, correct?

10 A. That's correct.

11 Q. Now, were -- I want to ask, do you know whether there was
12 interrogatory that actually asked the sheriffs to identify
13 that -- that issue?

14 A. My memory is that there was not. However, if I were
15 reporting this data, I would certainly want to report the
16 jurisdiction to which it was relevant. So it would seem like a
17 natural -- it would seem like a requirement for interpreting
18 the data correctly.

19 Q. And so, Professor, your point was that -- in acknowledging
20 that the numbers in column 3 might be overstating, your point
21 was that, for example, the sheriff of Weld County may have no
22 reporting responsibility for the city of Greeley, correct?

23 A. That's possible.

24 Q. And because the city of Greeley has its own police force,
25 correct?

1 A. I have no personal knowledge of that, but I have no reason
2 to disagree.

3 Q. Thank you. And the same could be true for Colorado
4 Springs, correct?

5 A. It could be. Although, at the same time, there may also be
6 joint responsibilities that, again, are not reported here.
7 That is, it's possible that even if a municipality has its own
8 law enforcement agency, that the sheriff's office might have
9 responsibility over that jurisdiction in some domains as well.
10 None of that is in my investigation.

11 Q. What you're saying is, you don't know that to be true?

12 A. I don't know it to be true, and I don't know it to be
13 false.

14 Q. Okay. Now, you acknowledge, wouldn't you, Professor, that
15 to the extent large urban areas like Colorado Springs were not
16 included in the sheriff's -- not covered by the sheriff's
17 interrogatory responses, that the numbers reported in column 3
18 might be significantly overstated?

19 A. Well, the population of Colorado Springs is several hundred
20 thousand. Yes, if the sheriff of that -- the county which
21 Colorado Springs is located did not have any responsibility for
22 Colorado Springs, then the population -- that population in
23 Colorado Springs would -- it should not have been included in
24 these totals.

25 Q. Do you have any data, Professor, that speaks to the

1 incidents of home invasions in urban areas versus rural areas?

2 A. No.

3 Q. And the numbers shown in column 3 of Exhibit 59 obviously
4 don't include the counties whose -- whose sheriffs were not
5 plaintiffs in this lawsuit, correct?

6 A. That's correct.

7 Q. So that would include, for example, the city and county of
8 Denver?

9 A. That's my understanding, yes.

10 Q. So you had no data on how many invasions for the city and
11 county of Denver, correct?

12 A. That's correct. At least -- I'm sorry, at least not for
13 the purposes of this analysis.

14 Q. Right. And it would be reasonable to assume, wouldn't it,
15 Professor, that home invasions are more frequent in Denver than
16 many other parts of the state?

17 *MR. GROVE:* Objection, foundation.

18 *THE COURT:* Response.

19 *MR. KRUMHOLZ:* Well, Your Honor, I only asked if
20 that's reasonable. I'm not asking for his personal knowledge.
21 I'm asking him to express whether that's a reasonable
22 assumption.

23 *THE COURT:* Well, the problem is, whether something is
24 reasonable enough has -- reasonable or not has to be based on
25 something. So, here, I agree with the defendants that there

1 needs to be some foundation laid for how this witness would
2 determine something to be reasonable.

3 *MR. KRUMHOLZ:* Thank you, Your Honor.

4 *THE COURT:* Thank you.

5 *BY MR. KRUMHOLZ:*

6 *Q.* Professor, you testified that you have no knowledge of the
7 incidents of home invasions in urban areas like the city and
8 county of Denver?

9 *A.* That's correct.

10 *Q.* And wouldn't it be important to know that in trying to
11 determine the frequency of home invasions in the entire state
12 of Colorado?

13 *A.* It would certainly be useful.

14 *Q.* Let's go to Exhibit 62, Professor. Do you have that?

15 *A.* Yes.

16 *Q.* This is a table entitled Home Invasions in Plaintiff
17 Counties in which Perpetrators Displayed Firearms, correct?

18 *A.* Yes.

19 *Q.* And I assume that with respect to all of these tables that
20 have this column titled "population of plaintiff counties,"
21 that they're subject to the same caution that you noted with
22 respect to the table we just looked at, correct?

23 *A.* It is the same data in each of these tables.

24 *Q.* Now, look at the title. It says, Home Invasions in
25 Plaintiff Counties in which Perpetrators Displayed Firearms.

1 But then if we look at the headings for column 3 and column 5,
2 they both use the verb "possessed," correct?

3 A. I noticed that, yes.

4 Q. And I think this is implicit in a conversation we had just
5 a moment ago. But just to make it explicit, you do not
6 consider the display of the firearm and the possession of a
7 firearm to be synonymous, do you?

8 A. Ordinarily not. It is possible that I used them as
9 synonyms in constructing this table, in which case that was an
10 inaccuracy that I regret.

11 Q. And do you recall which verb, "displayed" or "possessed,"
12 was used in the interrogatory to the sheriffs?

13 A. I do not have a firm recollection of that. My sense is
14 that possession would not necessarily have been known. That
15 is, if someone was concealing a weapon on themselves as they
16 invaded a home and left without displaying it, it wouldn't have
17 been apparent to anyone else, and therefore wouldn't have been
18 recorded. So if I had to choose right now as to which of these
19 was more appropriate, I would go for display.

20 Q. Professor, you also have a table where you showed for
21 comparison the number of lightning casualties in Colorado for
22 this same period, correct?

23 A. Yes.

24 Q. And your calculations are that from 2004 to 2012, an
25 average of just under three people per million Coloradans --

1 three Coloradans per million were killed or injured by
2 lightning, correct?

3 A. I would have to see the table again to be certain of the
4 quantity; but that's in the right range, certainly.

5 Q. And your point in using that table and showing it here in
6 court was that the number three lightning casualties per
7 million population is rare, correct?

8 A. Yes.

9 Q. And from those numbers, you drew a comparison to home
10 invasions, and you concluded that casualties inflicted by
11 lightning were about as frequent as home invasions in which
12 victims displayed firearms, correct?

13 A. I believe so.

14 Q. And you also noted that casualties inflicted by lightning
15 were twice as likely as home invasions in which perpetrators
16 discharged firearms?

17 A. Again, to be certain, I would have to refer to the specific
18 table; but that does sound like the right order of magnitude.

19 Q. I appreciate that. And in the interest of efficiency, I
20 appreciate your willingness to take my word for it.

21 So your conclusion is that, based on the sheriffs'
22 interrogatories, interrogatory responses, the need for a
23 firearm in self-defense in a home, at least in the areas of
24 Colorado represented by those responses, is as rare as being
25 injured by lightning, correct?

1 A. No. I believe my conclusion was that the experience of
2 using a firearm in response to a home invasion was as unlikely
3 as the experience of suffering an injury or fatality due to a
4 lightning strike.

5 Q. And I appreciate that clarification. And now we're back to
6 a conversation we had a moment ago. When you just answered my
7 question just now, you used the word "used." How did you mean
8 it?

9 A. Again, I am simply repeating the representation that the
10 sheriffs made when they responded to the interrogatories. I
11 guess to the extent that I thought about it, "use" to me meant
12 anything from display through discharge.

13 Q. Okay. Thank you for the clarification.

14 Now, after all of this talk of home invasions, it's
15 your opinion that the benefits of 18-12-302 will be limited
16 with respect to home invasions, correct?

17 A. I'm pretty sure I never framed my opinion in that way.

18 MR. KRUMHOLZ: Ms. Glover, I wonder if we can have the
19 October 31 deposition of Professor Zax handed to him.

20 BY MR. KRUMHOLZ:

21 Q. Professor, could you turn to page 127, line 23.

22 A. Yes.

23 Q. And I'll just read that, that question and answer on pages
24 127 and 128.

25 Question: "Then what benefit is determined from

1 having a 15-round limitation regarding home invasions?"

2 Answer: "With regard to home invasions, I think these
3 data suggest that the benefits would be limited. That is, home
4 invasions -- what few home invasions take place do so without
5 the aid of large-capacity magazines. The absence of
6 large-capacity magazines would probably not have much effect on
7 the frequency with which they occur in the future."

8 Did I read that correctly, Professor?

9 A. Yes, you did, and quite gracefully.

10 Q. Thank you.

11 Let's move to a different topic, Professor.

12 This question about the frequency of home invasions
13 relates to the issue of defensive gun use, correct?

14 A. Yes.

15 Q. And in your supplemental report, you noted that Professor
16 Kleck estimates that there were five times as many defensive
17 gun uses as there were crimes in which offenders used guns,
18 correct?

19 A. I -- yes, I believe I quoted him to that effect.

20 Q. And your point in quoting Professor Kleck to that effect
21 was that if his estimate is correct, then at least 80 percent
22 of the instances in which individuals claim to be defending
23 themselves with firearms, their alleged assailants were not
24 similarly armed, correct?

25 A. I believe that's correct.

1 Q. And you wrote in your supplemental report -- I'm going to
2 quote from it, Professor. And I'll represent to you this is
3 what it says: "This raises the substantial question of what
4 threats these individuals thought they faced and why they
5 understood those threats to be so substantial as to require
6 armed response."

7 Does that sound close to what you remember including
8 in your report?

9 A. That sounds like my golden prose.

10 Q. Now, it's certainly possible that criminals can use weapons
11 other than firearms to accomplish their crimes against their
12 victims, correct?

13 A. Yes.

14 Q. A butcher knife, for example?

15 A. Yes.

16 Q. And it's possible to imagine the scenario in which an
17 elderly person would feel that a much younger and stronger
18 assailant, even one unarmed, is enough of a threat to warrant
19 an armed response, correct?

20 A. Yes.

21 Q. Professor, you opined that law enforcement will benefit
22 from 18-12-302 because law enforcement will be less likely to
23 have adverse interactions with citizens possessing firearms
24 with magazines greater than 15 rounds, correct?

25 A. I believe I did say that, and I certainly agree with it.

1 Q. And in your original report, you stated that HB 1224, which
2 we now refer to as 18-12-302, will confer an advantage on law
3 enforcement, because they may continue to use high-capacity
4 magazines into the future, but private citizens with whom they
5 might have an adversarial interaction will be less likely to
6 possess them.

7 A. That certainly sounds familiar, and I -- I have every
8 reason to believe that's an accurate quote.

9 Q. Thank you. Now, that assumes, doesn't it, that private
10 citizens with whom law enforcement might have an adversarial
11 interaction will actually abide by 18-12-302, correct?

12 A. To at least some degree, yes.

13 Q. Citizens likely to have adversarial interactions with law
14 enforcement, especially interactions that involve firearms, are
15 not likely to be constrained by an external constraint like a
16 Class 2 misdemeanor, are they?

17 *MR. GROVE:* Objection, foundation.

18 *THE COURT:* Response.

19 *MR. KRUMHOLZ:* Your Honor, I listened to Professor
20 Zax's direct, and I think his direct established more than
21 sufficient foundation for him to answer this question.

22 *THE COURT:* In particular, what do you think qualifies
23 him to answer this question?

24 *MR. KRUMHOLZ:* His review of the literature, of the
25 Koper study, his criticisms of Dr. Kleck, which are also

1 informed by the literature that he's read, his expertise as an
2 economist who deals in -- who deals in the application of
3 economic principles to subsets of populations.

4 *THE COURT:* I overrule the objection.

5 *BY MR. KRUMHOLZ:*

6 Q. Would you like to have the question read back, Professor?

7 A. Please.

8 (Question read back by reporter.)

9 *THE WITNESS:* Everyone responds to costs. Even
10 addicts respond to costs. If the cost, however calculated, of
11 possessing a large-capacity magazine goes up, everyone will be
12 less likely to possess one, regardless of their predilection to
13 interact adversarially with the police.

14 Now, it is possible that that predilection -- that
15 people who vary in that predilection will also vary in their
16 response to the cost, but everybody responds to the cost.

17 *BY MR. KRUMHOLZ:*

18 Q. Well, but the premise of my question is what the cost is in
19 this case is a Class 2 misdemeanor, and so as your -- is the
20 answer that you just gave, are you suggesting that everyone
21 will respond to a Class 2 misdemeanor?

22 A. I don't agree that the Class 2 misdemeanor is the sum of
23 all the costs associated with possessing an illegal
24 large-capacity magazine, so I can't answer the rest of the
25 question.

1 Q. By that do you mean to suggest that there are other costs
2 like the ones we already discussed, like driving to Wyoming, so
3 forth?

4 A. There are those costs. There are the additional costs that
5 someone who engages in an adversarial interaction with the
6 police is probably violating other laws as well. I'm not in a
7 position to testify as to how the additional second class
8 misdemeanor to which you refer would compound the penalties to
9 which this individual was likely subject to based on all of the
10 other illegal elements of his or her activities.

11 Q. Professor, you agree that citizens who are generally
12 law-abiding are more likely to obey a statute like 18-12-302,
13 correct?

14 A. I think that's a tautology. There is nothing to agree to.

15 Q. And conversely, Professor, you would -- citizens who are
16 not generally law-abiding are less likely to obey 18-12-302,
17 correct?

18 A. Again, that's a tautology. Agreement is not an issue.

19 Q. Well, to put it in more economic terms, you would accept
20 that there are some people who do routinely abide by external
21 constraints, correct?

22 A. I accept there are variations across the population in the
23 extent to which individuals respect or do not respect external
24 constraints, such as legal requirements.

25 Q. Well, would you accept, then, Professor that the cost of

1 acquiring a now banned magazine is higher for someone who
2 routinely abides by external constraints, as opposed to someone
3 who does not?

4 A. I'm hesitating here because I'm not familiar with
5 sentencing rules, and I am -- what I'm struggling with is, if
6 someone does not typically adhere to external constraints that
7 have prior convictions for other violations, the cost to them
8 of being convicted of -- or found to have an illegal LCM might
9 be different than the cost to an otherwise similar person who
10 does not present with the same prior criminal history.

11 Q. There is no empirical evidence that bears on that question,
12 is there?

13 A. That bears on the question of how the penalties associated
14 with illegal possession of a LCM would vary depending upon the
15 prior criminal history of an individual found to be in illegal
16 possession?

17 Q. No. Thank you for clarifying. That bears on the question
18 of whether the cost of going to acquire a now banned magazine
19 is higher for someone who routinely abides by external
20 constraints, as opposed to someone who does not.

21 A. I'm not aware of any evaluation of that question.

22 Q. Professor, you talked about the -- your opinion that the
23 magazine ban would reduce the number of shots fired in a mass
24 shooting incident, correct?

25 A. Yes.

1 Q. Is -- isn't it inconsistent, Professor, to say that LCMs
2 are not needed and never used with respect to your Opinions 2
3 and 3, and then argue in Opinion 4 that the ban will reduce
4 shots fired?

5 A. I would need you to remind me which opinions are attached
6 to these numbers, please.

7 Q. All right. Opinion 4 is "HB 1224 will enhance public
8 safety by reducing the number of rounds fired in mass shooting
9 events." And then Opinions 2 and 3 are about HB 1224 not
10 adversely affecting self-defense capabilities. Opinion 3, "Law
11 enforcement officers will have fewer interactions with criminal
12 suspects carrying LCMs."

13 A. I don't see the inconsistency.

14 Q. Professor, you have no expertise in the psychology of mass
15 shooters, do you?

16 A. No.

17 Q. And just so we're clear, by mass shooters, I am referring
18 to the perpetrators of mass shootings. Are we on the same
19 page?

20 A. I think we may have been better off if we hadn't defined
21 it. That is, if you want to engage in that discussion, I would
22 require you to return to the conversation we had earlier about
23 selection on the dependent variable. That is, the interesting
24 class to me is individuals who aspire to mass murder, which is
25 a larger class than the class of those who actually succeed in

1 perpetrating mass murder.

2 Q. And I appreciate that clarification, and I remember that
3 conversation that you had with Mr. Grove. And so let me ask it
4 in a different way. Regardless of how we define it, you have
5 no expertise in the psychology of mass shooters, however we
6 define it, correct?

7 A. Apart from the basic economic principle of revealed
8 preference, that's correct.

9 Q. In other words, to the extent you have any insight into the
10 psychology of mass shooters, it's in an application of the
11 theoretical principles that we discussed earlier?

12 A. That's correct. It's the idea that what people choose to
13 do is what suits their goals most effectively.

14 Q. And it would be -- it would be fair to say here that mass
15 shooters are really the policy relevant group when we're
16 talking about 18-12-302, correct?

17 A. No.

18 Q. You don't accept that mass shooters are the policy relevant
19 group for purposes of 18-12-302?

20 A. I certainly accept that they are a policy relevant group.

21 Q. Well, you've already testified that criminals who invade
22 homes rarely use 16-plus magazines to perpetrate their crimes,
23 correct?

24 A. That's correct.

25 Q. And although you have no expertise, aside from your

1 knowledge of the economic theories applicable to subsets of the
2 population, the -- you did testify on direct that you had some
3 idea of the characteristics of mass shooters, correct?

4 A. I am aware of some of the characteristics of mass shootings
5 as they have been reported in the various documents to which
6 I've been exposed through this case.

7 Q. And so you know, for example, that with respect to mass
8 shooters, their crimes often involve meticulous planning,
9 correct?

10 A. I have formed that impression, and I heard Dr. Kleck
11 testify to that effect.

12 Q. And that meticulous planning at least implies a high level
13 of motivation, correct?

14 A. Yes.

15 Q. And you testified on direct about the preference of mass
16 shooters for LCMs in the context of that meticulous planning,
17 correct?

18 A. Yes.

19 Q. Now, in your initial report, you said that, "In sum,
20 available evidence suggests that mass shootings are more lethal
21 when executed using large-capacity magazines. If these
22 magazines become less widely available, there is some chance
23 that mass shootings will become somewhat less horrific." Does
24 that sound accurate, Professor?

25 A. Yes, it does.

1 Q. And there are a couple of qualifications in that statement,
2 are there not?

3 A. Yes, there were.

4 Q. You say "if these magazines become less widely available,
5 there is some chance," correct?

6 A. Yes.

7 Q. And you agree that you did not try to quantify that chance,
8 correct?

9 A. That's correct.

10 Q. You didn't say, for example, a 40 percent chance?

11 A. That's correct.

12 Q. Similarly, in your report you said that there is
13 "suggestive evidence that the reduction in the supply of
14 large-capacity magazines imposed by HB 13-1224 may have a
15 moderating effect on the rare but extremely traumatizing events
16 of mass shootings." Does that sound accurate?

17 A. Sounds familiar, yes.

18 Q. And you used the word "may" in that statement because you
19 cannot quantify the extent to which 18-12-302 would actually
20 prevent mass shooters from somehow obtaining a 16-plus
21 magazine, correct?

22 A. Not at this time. Rather -- I'm sorry. At this time, I am
23 not able to make that quantification.

24 Q. Thank you. Professor, you have no data to support the
25 notion that mass shooters will be affected by the increased

1 cost of obtaining 16-plus magazines in the same way that the
2 rest of the population will, do you?

3 A. That's correct.

4 Q. And you have no data to support the notion that mass
5 shooters will be affected by the increased cost of obtaining a
6 16-plus magazine at all, correct?

7 A. I don't agree with that. Everyone responds to price, even
8 addicts.

9 Q. And I appreciate that, and you mentioned that earlier. So
10 you have no data to support the notion that mass shooters will
11 be affected by the increased cost of obtaining a 16-plus
12 magazine that has been imposed by 18-12-302, correct?

13 A. I hope that I am not misunderstanding the question. It
14 sounds very much like the last one, and my answer is still the
15 same. We have the entire record of economic analysis to remind
16 us that when prices go up, people do less. How much less is an
17 open question, but they do less.

18 Q. Professor, I wanted to talk to you for a moment about the
19 Koper study from 2004. I'll represent to you, because you may
20 not remember at this time of day, anyway, that that report --
21 that study reported that 31 percent to 41 percent of police
22 shootings involved LCMs. Does that sound accurate?

23 A. Yes, I believe I quoted that earlier -- in my earlier
24 testimony today myself.

25 Q. And I didn't remember that, so thank you.

1 The definition used for LCMs in that study was
2 magazines of 11 or more rounds, correct?

3 A. I don't remember that, but it wouldn't surprise me. That
4 was certainly the threshold size that was relevant to the
5 federal ban.

6 Q. And the study actually -- the study didn't actually report
7 on magazine -- on the magazine use, correct?

8 A. I don't recall.

9 Q. And isn't it correct that the Koper study said that the --
10 the use of large-capacity magazines in the murder of police was
11 very rare?

12 A. I don't recall that. It certainly wouldn't surprise me if
13 the murder of police in general was very rare. Still, if 30 --
14 if 30 to 40 percent of those murders were accomplished with
15 LCMs, that seems like a disproportionate use of that particular
16 form of weaponry to commit the crime of murder.

17 Q. Professor, there is no data for the notion that there are
18 people who wanted to commit a mass shooting but were unable to
19 because he didn't have an LCM, correct?

20 A. Maybe I need to clarify this. There is most certainly
21 data. There are the experiences that have been reported
22 through Dr. Kleck's testimony, through Mr. Groves'
23 cross-examination, through *Mother Jones*, through Mayors Against
24 Illegal Guns. Now, that data has not been assembled in such a
25 way as to make the inquiry that you propose feasible; but that

1 data does exist. And, in principle, could be assembled in such
2 ways to make that inquiry feasible.

3 And one of the striking elements of this entire
4 proceeding is how many opinions are being offered on matters
5 which could be quantified, but which no one has expended the
6 effort to do so.

7 Q. And your testimony, then, is that no one has done so with
8 respect to the question I asked?

9 A. To this point, no.

10 Q. Okay.

11 A. But that does not mean that it couldn't be done.

12 Q. I understand.

13 Your Honor, may I have a moment to confer with
14 counsel?

15 *THE COURT:* You sure may.

16 (Off-the-record discussion between counsel.)

17 *MR. KRUMHOLZ:* Nothing further. Thank you.

18 *THE COURT:* Thank you.

19 Redirect.

20 *MR. GROVE:* Very briefly, Your Honor.

21 **REDIRECT EXAMINATION**

22 *BY MR. GROVE:*

23 Q. Mr. Krumholz asked if the appropriate target for Section
24 18-12-302 was mass shooters, and you said no. What did you
25 mean by that?

Jeffrey Zax - Redirect

1 A. I'm not sure I said no. I think I said that they were one
2 of the groups to which the law was directed.

3 Q. That was a poor question. My understanding of the question
4 was, if mass shooters were the only appropriate target group,
5 and you said no. Could you please explain why.

6 A. Because I believe the law will discourage anyone carrying a
7 weapon to -- from carrying a large-capacity magazine. That
8 will reduce the number of shots fired in any circumstance,
9 whether the intent is to scare someone or murder tens of
10 people. So I believe the law would be effective in reducing
11 the number of discharges issued by anyone carrying a firearm.

12 *MR. GROVE:* Thank you, Dr. Zax.

13 May Dr. Zax be excused?

14 *THE COURT:* Any objection?

15 *MR. KRUMHOLZ:* No objection, Your Honor.

16 *THE COURT:* Thank you, sir. You may step down. You
17 are excused.

18 *MR. GROVE:* Our last witness is very brief. If we
19 could give it a shot, we'd love to be able to.

20 *THE COURT:* Please do so.

21 *MR. KOPEL:* Your Honor, we had one question. You had
22 mentioned the plaintiffs offering their proffer regarding what
23 they -- what this witness would have testified regarding
24 Dr. Zax. Did you want that now?

25 *THE COURT:* No, we can do it after this witness.

Randy Hampton - Direct

1 MR. KOPEL: Okay. Thank you.

2 THE COURT: Please step up and be sworn.

3 **(RANDY HAMPTON, DEFENDANT'S WITNESS, SWORN)**

4 COURTROOM DEPUTY: Please be seated.

5 Please state your name and spell your first and last
6 name for the record.

7 THE WITNESS: Randy Hampton. First name, R-A-N-D-Y,
8 last name Hampton, H-A-M-P-T-O-N.

9 MR. FABIAN: Excuse me, Your Honor. At this time we
10 would interpose an objection to this witness inasmuch as he did
11 not provide evidence to the General Assembly. So we would
12 object to his testimony for reasons stated in the trial brief
13 and our previous objections.

14 THE COURT: Thank you.

15 **DIRECT EXAMINATION**

16 BY MS. SCOVILLE:

17 Q. Good afternoon, Mr. Hampton. Thank you for being so
18 patient today.

19 How are you currently serving the state of Colorado?

20 A. I am the public information and website manager for
21 Colorado Parks and Wildlife.

22 Q. And how long have you been the public information officer?

23 A. I've been a public information officer with the agency for
24 ten years.

25 Q. And how long have you been with Colorado Parks and

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1 Wildlife?

2 A. Ten years.

3 Q. Oh, I'm sorry.

4 A. Yeah.

5 Q. It's getting very late in the day. As the public
6 information officer, what responsibility do you have for the
7 information that parks and wildlife communicates to the public?

8 A. I'm responsible for overseeing all of our public
9 information. I'm the statewide spokesman for the agency, so I
10 deal with all media relations. In addition, I oversee our call
11 center. We have nine full-time employees within this section,
12 twenty-four temporary employees within our call center, so we
13 take all telephone calls in-bound from the public. I also
14 oversee the agency website and all of the content on the
15 website to educate the public.

16 Q. So are you familiar with Colorado's hunting regulations?

17 A. Yes. In general, yes.

18 Q. And are hunting regulations one of the topics on which you
19 communicate regularly with the public?

20 A. Almost on a daily basis, if not a daily basis, yes, we
21 receive both telephone calls and inquiries through the website.

22 Q. Could you give us a very brief overview of Colorado's
23 licensing system or permit system for hunters.

24 A. Colorado uses a single license system. Basically, it's one
25 license, one species, one method of take, one season. So when

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1 you either put into draw a license, purchase an
2 over-the-counter license, or purchase a leftover license, you
3 indicate when you want to hunt, where you want to hunt, what
4 species you want to hunt, whether that's the -- you know, male
5 of the species or the female of the species, the method of take
6 that you would utilize, bow, muzzleloader, rifle, and those
7 factors, and then you're issued a license for that.

8 Q. Now, when a hunter is issued a license, for how long is
9 that license valid?

10 A. It depends on the license itself. We have big game seasons
11 that are as short as five days; we have other big game seasons
12 that are a couple of weeks long. Small game license is kind of
13 a season -- what we call season year license. So small game
14 license is valid from April 1 of a calendar year to March 31 of
15 the following calendar year. So some -- some licenses are
16 valid for up to 12 months.

17 Q. After a hunter has successfully killed a species for which
18 he has a license, or she has a license, is that hunter required
19 to keep the license with them?

20 A. They maintain the license with them. They're required to
21 care for the game meat that is harvested, and so the license
22 is -- there is two sections to that license. At that point, a
23 carcass tag, which has to stay with the game meat, as well as
24 the license that has to stay in the hunter's possession.

25 Q. After the hunter successfully kills the species for which

1 he or she has the license, what are they required to do with
2 that animal?

3 *MR. FABIAN:* Objection, Your Honor. Relevance. I
4 thought counsel was laying some type of foundation. If we're
5 talking about hunting, I don't see how it deals with the issues
6 in this case.

7 *THE COURT:* Response. I'm lost too.

8 *MS. SCOVILLE:* I'm laying the foundation for the
9 questions I'm about to ask Mr. Hampton about the hunting
10 exemption in Section 112.

11 *THE COURT:* Could we get on with it.

12 *MS. SCOVILLE:* Certainly.

13 *THE COURT:* Thank you.

14 *BY MS. SCOVILLE:*

15 Q. Mr. Hampton, are you familiar with House Bill 1229,
16 18-12-112?

17 A. Yes.

18 Q. To what activities does that exception apply?

19 A. There is a hunting exemption; but it also extends to
20 hunting, fishing, trapping, or target shooting.

21 Q. Now, that section provides that a background check is not
22 required for a temporary transfer of a firearm while hunting,
23 fishing, trapping, or target shooting, correct?

24 *MR. FABIAN:* Objection, leading.

25 *THE COURT:* Sustained.

1 *BY MS. SCOVILLE:*

2 Q. Mr. Hampton, could you please describe for us the exemption
3 contained in subsection (6)(e)(III).

4 A. Off the top of my head -- would it be possible to look at
5 the bill? I mean, I -- in general, I can explain that. I
6 don't know -- want to be inaccurate in restating that.

7 *THE COURT:* Can you stipulate to this?

8 *MR. FABIAN:* We'd be happy to stipulate to what the
9 statute says, Your Honor.

10 *THE COURT:* All right. Let's do it.

11 *MS. SCOVILLE:* Okay.

12 *THE COURT:* What is it you want to ask from this
13 witness? I'm still not understanding where you're going here.

14 *MS. SCOVILLE:* Certainly.

15 *THE COURT:* We know what the statute says. So what is
16 it that you want this witness to give information about?

17 *MS. SCOVILLE:* Certainly.

18 *BY MS. SCOVILLE:*

19 Q. Mr. Hampton, what does Colorado Parks and Wildlife consider
20 to be activities that are contained within the activity of
21 hunting?

22 A. In terms of this particular enforcement of this particular
23 action, if someone were to have borrowed a firearm, we would
24 consider them to be borrowing that firearm for hunting from the
25 time they left their home, headed to the woods, got to camp,

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1 were there, were hunting, you know, were out looking around for
2 animals, whatever, and returning home.

3 Q. So would Colorado Parks and Wildlife require -- does
4 Colorado Parks and Wildlife believe that a hunter would need a
5 background check to be loaned a firearm for personal protection
6 while hunting?

7 A. No.

8 Q. Does Colorado Parks and Wildlife believe that a hunter
9 would require a background check to be loaned a firearm for
10 personal protection for participating in an activity that does
11 not require a firearm, such as fishing or bow hunting?

12 A. No. Exemption includes fishing.

13 Q. And does Colorado Parks and Wildlife believe that a
14 background check would be necessary for a hunter to be
15 transferred a firearm to poses while that hunter is in a
16 hunting camp in the evening, as opposed to during the daylight
17 while they're actively pursuing the game?

18 A. As long as the hunter has any license, hunting, fishing,
19 and they're doing it in an area that that activity is legal,
20 not required to undergo a background check.

21 Q. Does Colorado Parks and Wildlife provide hunter education?

22 A. Yes.

23 Q. And do you provide other hunter outreach activities?

24 A. Yes, sponsor hunts, those kind of things.

25 Q. After House Bill 1229 or 18-12-112 passed, did Colorado

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1 Parks and Wildlife assess whether that legislation would have
2 an impact on the hunter outreach or hunter education activity?

3 A. Certainly. We took a look -- because background checks
4 were required in certain transfers, we wanted to make sure that
5 our agency's ability to offer hunter education courses, conduct
6 youth hunts, those kind of things would not be impaired by the
7 legislation. We determined that our hunter education courses,
8 our hunter outreach programs, our -- all of our other programs
9 that the agency runs, the exemptions for hunting, family
10 transfer, you know, all of the other exemptions within the
11 bill, shooting range exemption, would not impact our agency's
12 ability to borrow weapons for that purpose.

13 Q. Has Colorado Parks and Wildlife told any organizations that
14 it would not be able to borrow a firearm from that organization
15 because of Section 18-12-112?

16 A. Not to my knowledge.

17 Q. Does Colorado place limits on the number of rounds that
18 hunters may carry in a semiautomatic weapon?

19 A. Yes. There is a limitation for big game hunting with a
20 semiautomatic weapon of five rounds in the cartridge, one in
21 the chamber, so a limit of six rounds total.

22 Q. And for how long has that requirement been in place?

23 A. We were able to look back to 1978, so we know it's been in
24 place since 1978. Our system of tracking regulations and when
25 those passed prior to that, it --

1 Q. May a hunter use a firearm for hunting big game that has a
2 capacity of greater than five plus one if the magazine on that
3 firearm has a limiter?

4 A. Yes, it is possible to limit a magazine if -- if the person
5 wants to do that.

6 MS. SCOVILLE: I have no further questions.

7 THE COURT: Thank you.

8 Cross-examination.

9 **CROSS-EXAMINATION**

10 BY MR. FABIAN:

11 Q. Mr. Hampton, there is other species that are hunted in
12 Colorado other than just big game, correct?

13 A. Yes.

14 Q. Does that include small game and varmints, correct?

15 A. That is correct.

16 Q. There is no capacity limit for hunting small game or
17 varmints in Colorado, correct?

18 A. That is correct.

19 Q. And there is also no magazine capacity limit to hunt with
20 pistols, correct?

21 A. That is correct.

22 Q. And would you agree that people do use center-fire rifles
23 with detachable magazines with more than 15 rounds on small
24 game and varmints in Colorado?

25 A. Yes.

1 Q. Now, many people, when they hunt, they hunt by themselves,
2 correct?

3 A. Yes.

4 Q. And that's -- and when they hunt, usually they're far away
5 from towns and civilizations, correct?

6 A. They could be, yeah, if they're hunting in an area that's
7 far away from town and civilization, yes.

8 Q. Hunters carry handguns for protection while they're in the
9 field, correct?

10 A. Some may choose to, yes.

11 Q. There is no limitation on the type, caliber, or magazine
12 capacity of those handguns carried for protection, correct?

13 A. That is correct. Colorado Parks and Wildlife places no
14 regulatory limit on that, yes, that's correct.

15 Q. And you already testified that you're familiar with the --
16 well, just to be clear, are you familiar with the Colorado
17 Revised Statute 18-12-302, commonly referred to as House Bill
18 1224, limitation on magazine capacities?

19 MS. SCOVILLE: Objection, Your Honor. This is beyond
20 the scope of the direct.

21 THE COURT: Response.

22 MR. FABIAN: I believe they opened the door, Your
23 Honor, talking about capacities for big game hunting.

24 THE COURT: I agree.

25 THE WITNESS: Could you repeat the question for me.

1 BY MR. FABIAN:

2 Q. Sure.

3 A. Thank you.

4 Q. Are you familiar with the law that we've been referring to
5 it as House Bill 1224, but it's codified at 18-12-302,
6 regarding limitation on magazine capacities?

7 A. In general, yes.

8 Q. Now parks and wildlife employs enforcement agents in the
9 field, right?

10 A. That is correct.

11 Q. And these are full-fledged law enforcement officers, they
12 wear badges, they carry guns, correct?

13 A. That is correct.

14 Q. And they're authorized to make arrests?

15 A. Yes. They are level 1 peace officers within Colorado,
16 that's correct.

17 Q. And it's common for these officers, I think you call them
18 wildlife managers, to stop and check hunters in the field?

19 A. Yes.

20 Q. And that includes checking the firearms that hunters are
21 carrying, correct?

22 A. That is correct.

23 Q. If a wildlife manager checks a firearm of someone hunting
24 small game or varmints with a magazine of greater than 15
25 rounds, there is no way for that officer to know whether or not

1 that magazine is legal, correct?

2 *MS. SCOVILLE:* Objection. Lack of foundation.

3 *THE COURT:* Response.

4 *MR. FABIAN:* He testified he's familiar with the law,
5 Your Honor.

6 *THE COURT:* Are you asking for a legal interpretation?

7 *MR. FABIAN:* No. I'm just asking him whether or not
8 an officer would know whether or not that magazine is legal by
9 looking at it.

10 *THE COURT:* I sustain the objection.

11 *MR. FABIAN:* I'll move on.

12 *BY MR. FABIAN:*

13 Q. Now -- I'll just move on.

14 You already testified you're familiar with the
15 background check law, House Bill 1225?

16 A. In general.

17 Q. I'm sorry, 1229.

18 A. In general, yes.

19 Q. Okay. And you testified regarding parks and wildlife's
20 interpretation of what the hunting exemption is, correct?

21 A. Yes.

22 Q. And so can you represent that the parks and wildlife
23 interpretation will be followed by all law enforcement agents
24 of parks and wildlife?

25 A. It's -- it's what the agency has determined. You know, I

1 can't specifically tell you, you know, what every single
2 officer does in every single circumstance, but I -- it is what
3 the agency has determined, and it is the course that officers
4 are expected to follow.

5 Q. Well, it's true that you're telling people, basically, in
6 your information, public information that you're disseminating,
7 that it's okay to loan a neighbor a gun to go out hunting for a
8 nine-day elk season, correct?

9 A. That is correct.

10 Q. So it's your interpretation of the hunting exemption that a
11 person is engaged in hunting from the time they receive a
12 firearm for hunting until the time they give it back?

13 *MS. SCOVILLE:* Objection. I think that misstates the
14 witness's testimony.

15 *THE COURT:* Noted for the record.

16 Counsel, I'm going to ask you to lower your voice.

17 *BY MR. FABIAN:*

18 Q. Would you like --

19 A. You --

20 *THE COURT:* You may answer the question.

21 *THE WITNESS:* Thank you, Your Honor.

22 What we're saying is that if a person is going
23 hunting, they can be loaned a firearm. And as long as they're
24 headed to hunting, participation in the hunt, and returning
25 home, then they are, in our determination, in the act of

1 hunting. We are not saying that that applies more broadly than
2 that.

3 *BY MR. FABIAN:*

4 Q. So if I understand you correctly, if I am a hunter, and I
5 am in my automobile driving to the hunting site, while I'm
6 driving in my car, going to the hunting site, I'm hunting?

7 A. You're participating in hunting, yes.

8 Q. And regardless of what happens -- for example, we're
9 talking about this nine-day season. If I'm -- if I'm hunting
10 that entire nine-day season, I'm hunting regardless of whether
11 I'm actually out in the field looking for game until that
12 season is over, correct?

13 *MS. SCOVILLE:* Objection. That also misstates the
14 witness's testimony.

15 *THE COURT:* Noted for the record. The witness can
16 answer.

17 *THE WITNESS:* Thank you, Your Honor.

18 You are engaged in hunting. If you're in the hunting
19 camp, all of those things, yes, you are hunting. You could
20 have gone hunting and fallen ill and never left the camp,
21 you're hunting.

22 *BY MR. FABIAN:*

23 Q. Well, if I hunt for a nine-day season, and I don't -- I'm
24 not successful, when does the hunt end for me? When am I
25 through hunting?

1 A. For the sake of our interpretation of this particular
2 issue, when you return home.

3 Q. Now, you prepared this information that's being
4 disseminated regarding what you believe the hunting exemption
5 means, correct?

6 A. I did not prepare -- I prepared the information, but it is
7 not my opinion. It is the agency's. It was vetted in the
8 agency.

9 Q. Okay. So is it fair to say it went all the way up to the
10 director?

11 A. Yes.

12 Q. Do you know if any legal consultation was made with respect
13 to the legal interpretation that you were promulgating to the
14 public?

15 *MS. SCOVILLE:* Objection. I am concerned about any
16 revelation of the attorney-client privilege. I'm also unclear
17 what the relevance is.

18 *THE COURT:* Response.

19 *MR. FABIAN:* Your Honor, I have not asked for any
20 communication. I just asked whether there was any kind of
21 legal authority consulted.

22 *THE COURT:* Why is that relevant?

23 *MR. FABIAN:* Well, this is an interpretation of the
24 law, Your Honor. And I'm just asking from where -- what went
25 into the process of making this interpretation.

1 *THE COURT:* I find that that's not relevant. What is
2 relevant is that this is the representation that this agency is
3 making.

4 *MR. FABIAN:* I understand, Your Honor.

5 If I may have a moment.

6 *THE COURT:* Sure.

7 *MR. FABIAN:* I have nothing further, Your Honor -- I'm
8 sorry.

9 *THE COURT:* Just a little more.

10 *BY MR. FABIAN:*

11 *Q.* I'm sorry. Just a clarification. We were talking about
12 the nine-day hunting -- the duration of nine-day hunting
13 season. Any time a person returns home from the field -- say,
14 I want to take a couple of days off, and I go out in the field
15 and I hunt for a couple of days, and I come back. While I'm
16 home, am I hunting?

17 *A.* No.

18 *Q.* Okay. So your interpretation of hunting doesn't include
19 any kind of detours or breaks during the hunting season that
20 the hunter takes?

21 *A.* It -- it's the hunting trip. There are -- you know, the
22 possibility if you're going hunting in the Craig area, that you
23 drive up, you're going to stop maybe at a grocery store to buy
24 supplies, those kinds of things, we would not make someone
25 illegal because they're shopping not hunting, when they're in

1 the grocery store. It's part of that hunting trip, and it is
2 our determination that that would be part of hunting.

3 Q. So is it fair to characterize it that you're talking about
4 enforcement and not what the law actually means, but how it's
5 going to be enforced by parks and wildlife?

6 A. Yes.

7 MR. FABIAN: I have nothing further, Your Honor.

8 THE COURT: Redirect.

9 MS. SCOVILLE: No, thank you, Your Honor.

10 THE COURT: Can this witness step down and be excused?

11 MS. SCOVILLE: He may.

12 THE COURT: Thank you, sir, you may step down.

13 THE WITNESS: Thank you.

14 THE COURT: You are excused.

15 All right. Mr. Kopel, I think you wanted to make a
16 proffer here. But I think the proffer needs to be made by the
17 attorney who was doing the examination.

18 MR. KOPEL: We agree, Your Honor.

19 THE COURT: Okay.

20 MR. KRUMHOLZ: Thank you, Your Honor.

21 I have an e-mail on this that will make this way more
22 efficient.

23 THE COURT: Okay. When is the e-mail dated?

24 MR. KRUMHOLZ: It's from today, this afternoon, an
25 e-mail that I received from Mr. Kopel.

1 THE COURT: Okay.

2 MR. KRUMHOLZ: I -- I should clarify, because I am
3 afraid I didn't make this clear this morning. For the record,
4 Professor Zax's new study was not disclosed to us until
5 January 30, which is one day before the proposed final pretrial
6 order and witness lists were due. But --

7 THE COURT: And I was aware of that at the time I made
8 my ruling. In fact, I included that date in my ruling.

9 MR. KRUMHOLZ: Okay. Thank you, Your Honor.

10 Regarding the expert that plaintiffs could have used,
11 Professor Carl Moody is a tenured professor at the College of
12 William and Mary department of economics. His research was
13 cited in footnote 2 of Justice Alito's opinion in *McDonald v.*
14 *Chicago*, in a study he performed that is presented in an *amicus*
15 brief.

16 If Dr. Moody were to testify, he would testify as
17 follows: Professor Zax's report on the Virginia Firearms
18 Clearinghouse data is defective based on the professional
19 standards of econometrics. Dr. Zax's regression analysis
20 violates standard and accepted procedures of econometrics.

21 Had Professor Moody been able to testify, he would
22 have testified that he would conduct unit root tests and
23 examine differences for the Virginia data. And he expected the
24 results would indicate that the regression analysis could have
25 been invalid. He also would have testified about a regression

1 study he conducted -- would have conducted of data from all 50
2 states from 1977 to 2010 to examine the federal magazine ban in
3 Virginia from 1994 to 2004, or the California magazine ban
4 which went into effect in 2000, had any effect reducing violent
5 crime. He would have found that these magazine bans had no
6 such effect.

7 Thank you, Your Honor.

8 *THE COURT:* Thank you.

9 Counsel, when was that information supplied to
10 Mr. Kopel?

11 *MR. KRUMHOLZ:* Would you like Mr. Kopel to respond?

12 *THE COURT:* You can tell from the e-mail that you got.

13 *MR. KRUMHOLZ:* Sorry?

14 *THE COURT:* I think you can tell from the e-mail you
15 got, can't you?

16 *MR. KRUMHOLZ:* I can't tell from the e-mail, Your
17 Honor.

18 *THE COURT:* Okay. Mr. Kopel, when did you receive
19 that information?

20 *MR. KOPEL:* We contacted Dr. Moody shortly after the
21 March 19 deposition of Dr. Zax on the Virginia clearinghouse.

22 *THE COURT:* Okay.

23 *MR. KOPEL:* And received that -- the information
24 Mr. Krumholz has described came in not all in a single stage in
25 that -- in the succeeding days and weeks.

1 *THE COURT:* When?

2 *MR. KOPEL:* March -- approximately March 28 through
3 the past several days.

4 *THE COURT:* Thank you.

5 Anything else we need to do today?

6 *MS. SCOVILLE:* One thing very briefly, Your Honor.
7 Yesterday or the day before we had discussed stipulations
8 regarding the ATF document which was Exhibit 84. I have that
9 stipulation, and we can mark it as an exhibit and move its
10 admission.

11 *THE COURT:* All right.

12 Mr. Colin.

13 *MR. COLIN:* Your Honor, just clarification about
14 closing --

15 *THE COURT:* Wait a minute. We need to deal with this
16 exhibit. I thought you were rising to the --

17 *MR. COLIN:* No. I thought that issue was resolved.

18 *THE COURT:* All right.

19 *MS. SCOVILLE:* I think I need from Mrs. Glover,
20 please, the most recent exhibit number.

21 *THE COURT:* Okay.

22 *COURTROOM DEPUTY:* The most recent exhibit number
23 looks like 139.

24 *MS. SCOVILLE:* All right. I would mark this as
25 Exhibit 140 and move its admission.

1 *THE COURT:* Thank you.

2 And there is no objection?

3 *MR. COLIN:* No objection.

4 *THE COURT:* It's received.

5 (Exhibit 140 admitted.)

6 *THE COURT:* All right. Are there more witnesses to be
7 called for the State?

8 *MR. GROVE:* The defense rests.

9 *THE COURT:* Thank you.

10 *MR. GROVE:* My understanding, Your Honor, is that the
11 plaintiffs have indicated that they wished to call a rebuttal
12 witness.

13 *THE COURT:* Well, that's what I'm going to ask them
14 next. Thank you.

15 Any evidence to be presented in rebuttal?

16 *MR. FABIAN:* We have one brief rebuttal witness, Your
17 Honor.

18 *THE COURT:* You'll be prepared to call them first
19 thing tomorrow?

20 *MR. KOPEL:* Yes, Your Honor.

21 *THE COURT:* All right.

22 *MR. GROVE:* Maybe we can bring this up with them. We
23 just have no idea who it is or the topic, and so -- we can --

24 *THE COURT:* Who is it you're going to call?

25 *MR. FABIAN:* Mr. Shain will be recalled, Your Honor.

1 MR. GROVE: And the subject?

2 MR. FABIAN: Offer rebuttal evidence regarding
3 Mr. Salzgerber's testimony.

4 MR. GROVE: Okay. We'll discuss this off the record,
5 Your Honor.

6 THE COURT: Thank you.

7 Okay. And your question, then, is -- I know Mr. Colin
8 wants to ask, what about closing?

9 MR. COLIN: That's my question.

10 THE COURT: Okay. What would you like to know?

11 MR. COLIN: Well, first thing is, time. If the Court
12 is, basically, saying however much time you have left, we each
13 out of our 30 hours, I don't anticipate --

14 THE COURT: I don't have a restriction.

15 MR. COLIN: Okay.

16 THE COURT: But what I would say to you, I have been
17 here the entire trial.

18 MR. COLIN: Understood.

19 THE COURT: Therefore, what I need to know in your
20 closing is how the evidence pertains to what you want me to do.

21 MR. COLIN: All right.

22 THE COURT: I'm not -- I don't need you to repeat the
23 evidence to me. I'm not a jury. I'm not going to be deciding
24 this based on an emotional response to something. What I need
25 to know is, based upon the legal framework that will be

1 applied, how does the evidence fit?

2 Does that help?

3 *MR. COLIN:* It does, Your Honor. I have one follow-up
4 question.

5 *THE COURT:* Uh-huh.

6 *MR. COLIN:* There are obviously five plaintiffs'
7 groups, and we have -- certainly don't intend to have all five
8 plaintiffs' groups present any kind of a closing argument. We
9 would like, however -- three of us have very discrete areas
10 that we've been focusing on in the trial, and we'd like to
11 maintain that for closing. It would not extend the closing
12 unnecessarily. We're all talking about 15 to 20 minutes
13 apiece. That's our thought.

14 *THE COURT:* I don't have a problem with that.

15 *MR. COLIN:* Great. Thank you.

16 *THE COURT:* How about for the State?

17 *MR. GROVE:* Just me.

18 *THE COURT:* Okay.

19 Then we'll move to closings after we have the last
20 witness tomorrow morning.

21 How long do you think that witness is going to last?

22 *MR. FABIAN:* Your Honor, I would expect direct
23 examination to last no more than five minutes.

24 *THE COURT:* Okay. Then we'll start at -- the
25 leisurely hour of 9 o'clock.

REPORTER'S CERTIFICATE

I certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter.

Dated at Denver, Colorado, this 15th day of June, 2014.

s/Therese Lindblom

Therese Lindblom, CSR, RMR, CRR

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