IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

UNITED STATES OF AMERICA	)	
	)	
Plaintiff,	)	CRIMINAL ACTION FILE
	)	NO. 1:11-CR-411-WSD
v.	)	
	)	ATLANTA, GEORGIA
CLIFFORD DEANGELO JACKSON (1) and CLIFFORD DURHAM, JR., (3)	)	
	)	
Defendants.	)	

TRANSCRIPT OF PROCEEDINGS
BEFORE THE HONORABLE WILLIAM S. DUFFEY, JR.,
UNITED STATES DISTRICT JUDGE

VOLUME 1
Tuesday, July 24, 2012

APPEARANCES OF COUNSEL:

For the Plaintiff: OFFICE OF THE U.S. ATTORNEY
(By: Nekia Shantel Hackworth)

For Defendant Jackson (1): FEDERAL DEFENDER PROGRAM INC.
(By: Vionnette Reyes Johnson)

For Defendant Durham (3): William Boyd Hollingsworth

Proceedings recorded by mechanical stenography and computer-aided transcript produced by
NICHOLAS A. MARRONE, RMR, CRR
1714 U. S. Courthouse
75 Spring Street, S.W.
Atlanta, GA 30303
(404) 215-1486

I N D E X

Tuesday Morning Session

July 24, 2012

9:42 a.m.

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P R O C E E D I N G S

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(In open court:)

THE COURT: Good morning, ladies and gentlemen.

This is the pretrial conference in the United States v. Clifford Deangelo Jackson and Clifford Durham, Jr., which is Criminal Action 11-CR-411.

Would counsel please announce their appearances?

MS. HACKWORTH: Good morning, Your Honor. Nekia Hackworth on behalf of United States. I'm accompanied by Special Agent Cynthia Myers with the FBI.

MS. JOHNSON: Vionette Johnson representing Clifford Jackson. Good morning.

THE COURT: Good morning.

MR. HOLLINGSWORTH: Good morning, Your Honor. William Hollingsworth representing Clifford Durham.

THE COURT: Good morning.

As we get started, let me make some observations.

One, when we start at 9:30, we start at 9:30. And we can't have that next week. You will be here on time.

Second, we have in our chambers gone to what

I think are unusual steps to make sure that you understand exactly what's going to happen at the trial, including what *voir dire* questions are going to be asked in the form of background questions and qualifying questions.

All of that is made available to everybody. Why you can't review those before you prepare your individual *voir dire* I don't know.

But I'm managing this case in the way that I think creates judicial and counsel efficiencies and fairness for the defendants. I expect for you when we do that to comply with the instructions that we give you such as to make sure you don't ask questions in your *voir dire* that you know are already going to be asked.

And so therefore I want you as we go through this trial to think about what we can do to make this more efficient, and please abide by the instructions that I give you.

The thing that got us off to the worse start is we had things scheduled for today. It wasn't until either yesterday or the day before that I understood that this is going to be a day-long hearing because there are going to be two out-of-state witnesses that were never forecasted to the Court.

It is unbelievable that you didn't know that there were going to be two additional witnesses from out of state

and advanced and forecasted to me that we were going to have a much longer hearing than I expected when I believed there was only one witness.

But we have now rescheduled those other things and I have set this whole day aside. So the people that you have inconvenienced by not telling me what the plan was will have to be inconvenienced. But that's not fair to them. They represent clients, criminal clients, and they are entitled to schedule their work and represent their clients as they believe it's in their clients' interest.

So we are going to wipe the slate clean based upon the way this has been managed so far. I'm going to actively manage the case. You all know that. But you are required to comply with my instructions in order to make sure that that is accomplished.

So with that, here is the order of what we are going to do today.

We are going to do the pretrial conference first. That will take a little longer because I now have to rule on a number of redundant and ambiguous *voir dire* questions which I wouldn't have had to do if you had complied. But it's time to move the case forward, so I have invested the time necessary to do that, and I will do that this morning.

Secondly, we are going to revisit the presentence

report issue. I'm not quite sure where that stands and I'm not sure whether that's an issue that is going to result in additional production of information, but we will see.

And then finally we will conduct the *Daubert* hearing.

Any questions?

MS. JOHNSON: No, sir.

MS. HACKWORTH: I'm sorry, Your Honor, I'm having a difficult time hearing. Your last question? I apologize.

THE COURT: Any questions?

MS. HACKWORTH: No, Your Honor.

THE COURT: Mr. Hollingsworth?

MR. HOLLINGSWORTH: None, Your Honor.

THE COURT: All right. Let's go through the ordinary things that we go through in the pretrial conference. We will begin with *voir dire*.

Voir dire, as I had hoped you would know by now, is a three-step process. It consists of background questions, qualifying questions, and your individual *voir dire*.

The background questions you have. Is there anybody that does not have a copy of the background questions now?

Apparently not.

Do you have the qualifying questions which I have drafted and provided to you for this case?

MS. HACKWORTH: Yes, sir.

MS. JOHNSON: Yes, Your Honor.

THE COURT: If you have any questions about the background questions or comments on the qualifying questions, those should be delivered to me no later than noon on Thursday.

Finally, there are the individual *voir dire* questions, and I will rule on those now.

By the way, individual *voir dire,* by me allowing you to ask questions, the reason why I approved the questions -- if I intended to ask the questions myself, I wouldn't have had to invest the time myself in this. If it looks like you are -- so, therefore, I'm going to rule on the questions that may be asked.

If you in your individual *voir dire* decide that you are going to ask questions other than those that have been approved, I will stop that and ask the questions myself.

So the purpose of my looking at these questions and ruling on them is so you know what may be asked.

Beginning with the government's, there is a question in the qualifying questions about whether or not any family members or the panel members themselves have been employed by the United States Attorney's Office, so you want to ask the question of whether they have had any dealings with the United States Attorney's Office.

Would that include people that have participated in volunteer programs with them, weed and seed, or are you talking about having been asked to be witnesses or otherwise been implicated in investigations by the United States Attorney's Office?

MS. HACKWORTH: Your Honor, the question is intended to be all-inclusive. So it can be anything from participating in the volunteer program, as the Court has indicated, or being a target of an investigation perhaps. But it's meant to be very broad.

THE COURT: Then you need to narrow it. Because the next question is how were they resolved. I read from this that this was somebody who was implicated in an investigation or otherwise by the United States Attorney's Office.

So that means this does not encompass what you just said. It needs to be tailored to what you are intending to seek as you now announced it.

MS. HACKWORTH: Would Your Honor like for us to do that now or submit --

THE COURT: When I am done doing this, I want you to resubmit your *voir dire* so I can see it in a final form.

MS. HACKWORTH: Certainly, Your Honor.

THE COURT: No. 2 is covered because, as you know,

all of the witnesses in the case will be qualified to the *voir dire*. So No. 2 is not necessary.

No. 3 is fine.

The next -- let me now just do the ones to which I have a problem.

No. 6 I think is already covered in the background questions, so that's not allowed. And the remainder of the questions are fine.

MS. HACKWORTH: Thank you, Your Honor.

THE COURT: Mr. Jackson's questions, No. 8, what would be the purpose of asking whether panel members are acquainted with me professionally or socially?

MS. JOHNSON: Your Honor, that is a question that I typically ask, and my follow-up question would be if they know you personally or professionally, would that in any way affect your ability to be a fair and impartial juror in this case.

THE COURT: I'm not going to allow that question.

MS. JOHNSON: You are not?

THE COURT: I am not.

MS. JOHNSON: Okay. Thank you.

No. 10 I will allow, but I want you to add FBI or prosecutor in military or civilian life.

MS. JOHNSON: Okay. So I'm clear, after FBI, I will add or prosecutor?

THE COURT: Yes. 10 and 11 were redundant and confusing. I have taken the content of 11 and embodied it in 10 so it's a single question.

MS. JOHNSON: Okay. Thank you.

THE COURT: Same with 13 and 14, those are redundant, and I'm going to limit it to in Question No. 13: Do you have any members in your immediate family that are attorneys or have worked in a law office?

MS. JOHNSON: Okay.

THE COURT: So 14 now is covered in 13.

15 you may ask: Have you ever studied or applied to work for any law enforcement agency?

No. 16 is covered already in the background questions, and so it's not necessary.

The same with 17.

The same with 18.

No. 20 is ambiguous and does not provide them with a sufficient foundation for them to evaluate how they will vote -- they don't even have the instructions on what the voting method is, so it is not allowed.

No. 21 you may ask but amended as follows: Was there anything about any previous jury experience that you may have had that led you to feel that you cannot be a fair and impartial juror in this case?

No. 22 is --

MS. JOHNSON: Sir, I'm sorry to interrupt, but I'm taking very careful notes of everything you are saying. So if you wouldn't mind repeating how you would like me to word No. 21, because I want to get it right?

THE COURT: Was there anything about any previous jury experience that you may have had that leads you to feel today that you cannot be a fair and impartial juror in this case?

MS. JOHNSON: Thank you.

THE COURT: No. 22 is of course covered in the qualifying questions.

No. 23 is not allowed.

24 is allowed amended as follows: Do any of you disagree with the principle that in a criminal case it is necessary for the government to prove the charges against the defendants beyond a reasonable doubt?

25, of course, is likely to be covered by the government, it's one of their questions, but you may ask if they don't: Do any of you believe that the testimony of law enforcement personnel or other government witnesses is more believable than the testimony of other witnesses solely because they are law enforcement or government employees?

No. 26 is not allowed because I think it's ambiguous, and in fact there is an instruction they will get at the end of the trial on how to consider the testimony of a

defendant who testifies, if in fact they do, as well as the other credibility criteria. So it's unfair I think to ask them this in a vacuum.

No. 27 is fine, although I would suggest you add to 27: Do you belong to the National Rifle Association or any other gun control organization? So that we ask that in one question.

No. 29 I think is ambiguous. I don't know what credence means, and again they don't have the instructions to which they are entitled in evaluating the credibility of witnesses.

You may ask as an alternative to No. 30: Do you believe that a defendant should be required to testify in his own defense?

Next is on 32, 32 is so broad that we would spend all day talking about what people do to protect themselves against crime. So that's not allowed.

No. 33, you can ask it as amended. At the end of the question, it should be: Affect your ability to fairly and impartially consider the evidence in this case and reach a verdict.

34 again is hopelessly overbroad. It's not allowed including because it does not inquire into a bias or prejudice that a panel member might have. If that were the case, nobody would be able to be a panel member in the

United States.

36 is too broad. Everybody has been falsely accused of something, so that is not specific enough, and it does not seek to obtain information to determine bias or prejudice on behalf of a panel member.

37 is redundant of 30.

Those are my rulings on your *voir dire*.

The *voir dire* for Mr. Durham, these are very difficult to rule on because there are some questions that are asked three times in these 58 *voir dire* questions that you have offered.

So I will tell you the ones that I will allow, and then if you want to go back and look at what you have done to see if there is something else that you want to ask, you may do so so long as it's not redundant of the qualifying questions or the background questions.

So these are the ones that seem reasonable to me and are reasonably calculated get information that's useful to determine bias or prejudice on the part of panel members.

No. 2. As you know, there is already a question in the background questions that asks whether or not somebody has hiring or firing responsibility. It seems to me you only have that if you are a supervisor. I don't think it's a problem with asking how many people they have supervised or

have supervised in the past, so No. 2 is allowed.

No. 10 is allowed.

No. 12, which will combine 11 and 12, may be asked as follows: Please describe all clubs, civic or other volunteer groups or associations to which you belong. And you may follow up by saying: Do you hold a leadership position in any of these, and if so, what position do you hold?

No. 13 is approved.

No. 17, you may ask if you or any of your close friends or immediate family members are employed by the state or federal government, including state or federal law enforcement. If so, would that impact your ability to be a fair and impartial juror in this case?

No. 20 you may ask as follows as amended: Do you think that you will give more weight to the testimony of government employees merely because of their position as government employees?

21 you may ask: Do you have any relatives, any immediate family members or close friends who work in law enforcement? If so, would that affect your ability to be a fair and impartial juror?

No. 23 you may ask, but you should follow up by saying: If so, will that affect your ability to be a fair and impartial juror?

And you may ask for those that may have had an unpleasant experience with law enforcement, to generally describe the experience.

MR. HOLLINGSWORTH: Excuse me, Your Honor, which number was that? 24?

THE COURT: 23.

MR. HOLLINGSWORTH: 23.

THE COURT: 24, you may ask that, and you may ask to generally describe what the victim experience was, and then you should ask, if so, would that affect your ability to be a fair and impartial juror in this case.

A large number of the questions under the miscellaneous section are covered by questions that are already going to be asked, so let's pick up with 39 which seems now to go into new matter.

Have you formed any general opinions about prosecutors or defense attorneys that would affect your ability to be a fair and impartial juror, that question is allowed.

40 is allowed, but it should be amended as follows: Does anyone here personally know someone who has been tried in federal court? If so, who is that person? And then ask if that would affect their ability to be a fair and impartial juror in this case?

42, you may ask an amended question. Specifically,

does the fact the defendant has been charged with criminal offenses alone affect your ability to be a fair and impartial juror in this case?

43, although by this time I'm sure it will be asked, you may ask that if it hasn't.

47, it's somewhat redundant of other things that have been asked, but you may ask: Has anyone on the panel ever had a close personal friend, immediate family member, or themselves been charged with any federal or state crime other than a misdemeanor? You may ask them to describe that, and then you may ask: Will those charges affect your ability to be a fair and impartial juror in this case?

49 seems intrusive. Why do you want to know whether or not people attend church?

MR. HOLLINGSWORTH: Your Honor, I don't want to know where they attend church, just if they did attend church.

THE COURT: All right. Well, if you ask it in this general way, that's allowed.

Then in this season -- and I don't know -- well, tell me how Question 52 would help you determine whether or not based upon political affiliation somebody is or is not able to be fair and objective?

MR. HOLLINGSWORTH: Well, from the defense perspective, Your Honor, certain people that are members of

certain political parties in my experience sometimes seem to be more aligned with the government's theory than -- and therefore less impartial.

THE COURT: Well, then in those same parties, there are people that have exactly the opposite view. So how does mere political affiliation --

MR. HOLLINGSWORTH: It cuts both ways, Your Honor, and just knowing -- I guess just knowing if they feel -- because a lot of people don't affiliate themselves with political parties, and some people do identify themselves very strongly with a political party. And whichever one it may be, that may have an impact on the way they decide the case, in my opinion.

THE COURT: I don't know. We had a trial last week, and jurors are increasingly upset with this kind of intrusion into their personal lives.

I guess I'm not convinced that by somebody saying that they are an independent, a Democrat or a Republican or unaffiliated, how that informs you as to what their belief would be in a particular case.

MR. HOLLINGSWORTH: I guess, Your Honor, the last case I tried in federal court, I asked the panel this, because one of the people raised their hands up and said they were a member or they were like a leader of a certain county's Tea Party in Georgia.

And from my perspective when we had our trial, that juror ultimately was one of the deciding jurors in the case, and he took a leadership role with the jury. He was actually the foreman.

And I guess that just made me think that maybe I should ask that question so that I know if there is anybody very strongly aligned with a certain political party, and some of those people will take a leadership role and they can take the jury and --

THE COURT: Well, it's interesting, that example doesn't -- this question would not elicit that information.

MR. HOLLINGSWORTH: All I'm asking is if they feel strongly associated with. I can rephrase it, or I don't have to ask it if the Court --

THE COURT: Well, you already asked if they hold leadership positions in a voluntary, civic or --

MR. HOLLINGSWORTH: We could add just political organization and that will cover that.

THE COURT: That's fine.

54 is fine.

56 I think we are already asking.

I think everybody that appears here is going to be familiar generally with Stone Mountain, Georgia, and its area. What is it specifically that you are trying to determine?

MR. HOLLINGSWORTH: Well, Your Honor, the robbery happened at a specific geographical location, and I just want to know out of the panel, they may come -- if they are coming from a broad range of metro counties, some people will have never been to the city of Stone Mountain before and have never -- know that geographic location.

THE COURT: I know that, but if you ask me that question, I would say yes.

MR. HOLLINGSWORTH: I could be more specific and say is anybody familiar with the specific geographical layout, city limits of Stone Mountain or the roads or the inner city of Stone Mountain, Georgia. Because that's what I'm looking at.

The same with the Clairmont Road area. I could be more specific. Is anybody very familar with where the Wells Fargo is. We described the address from the previous case where that Wells Fargo is located, with that general vicinity of Clairmont Road.

THE COURT: 57, you can ask if anyone is familiar with the Stone Mountain, Georgia, downtown area.

MR. HOLLINGSWORTH: Yes, Your Honor.

THE COURT: And what area of Clairmont Road are you talking about? It's a long road.

MR. HOLLINGSWORTH: I don't have the address off the top of my head, but where the Wells Fargo, the robbery

was committed in the 252 case.

I'm just concerned if there is anybody, because I'm taking that there is going to be a witness that describes that crime or there is evidence to the jury describing that crime, if there is somebody that knows that particular area, geographic location.

THE COURT: Well, what is that particular area? Is it near the interstate?

MR. HOLLINGSWORTH: Yeah, is it on the right side coming north? It's near the interstate.

THE COURT: So you might want to say are any of you familiar with the Clairmont Road area of Atlanta, Georgia, in the vicinity of I-85.

MR. HOLLINGSWORTH: Yes, Your Honor.

THE COURT: All right. So why don't you take those that are approved, and after you look at the other questions that have been asked and compare those with the qualifying questions and the background questions, if there are other things here on your *voir dire* that you want to add, please get those to me by noon on Thursday and I will rule on them that afternoon.

MR. HOLLINGSWORTH: Yes, Your Honor.

THE COURT: So after all the *voir dire* is completed, probably -- and the panel members are brought in and are seated in the back. And you may make a chart if you

want.

There will be eight people on the first row and six people on every subsequent row, and then we will move over to the left side of the courtroom as I'm looking at the courtroom, and again eight people in the first row and six people in following rows.

And they will be seated with the lowest number on each row against the wall. So in the first bench, Panel Member No. 1 will be against the wall, Panel Member No. 8 will be against the aisle.

In this case we are not going to identify jurors by name. We will identify them only by number. So you will need to make sure that when we make a record, that we are using only people's numbers and not their names.

After all the *voir dire* is completed -- I don't know how long this will take, but it will probably be either late morning or early afternoon, we will take a break and do challenges outside the presence of the panel members beginning with challenges for cause, and then we will take up peremptory challenges.

Peremptory challenges after challenges for cause will be exercised against the first 28 people listed that survive challenges for cause, with the government getting six peremptory challenges and the defense getting ten, which I understand you will cooperate and use -- you will have in

total ten, which you will have to decide amongst yourselves how to exercise the challenges.

Then I will verify who the twelve principal jurors are, then we will take the next four people. Each side will get one peremptory challenge, which will leave two, and those will be our alternates with the first alternate being the one with the lowest panel member number.

After the jurors and alternates are selected, we will seat them and we will go, depending upon the time, likely go right into openings, unless it's time for a break, and then we will go right into my -- into the presentation of evidence. Openings, of course, will be after my preliminary instructions.

In my preliminary instructions I do give them a brief statement of what the elements of each of the offenses is, and I have given that to you. I have drafted that.

If you have any comments on that, you can submit those to me by noon on Thursday. All you have to do is make pen-and-ink edits if you think they are appropriate for me to consider and fax it or PDF it to me, and I will decide on a final summary to be given to the jurors.

You have all been involved in this case for a long time. My goal is that when the jurors are here, we should be using their time efficiently. They will be the only people here not getting paid for what they do, and it's a

significant public service and sacrifice that they make to be jurors.

And that means when they are here, they ought to be listening to testimony. They should not be listening to us consider evidentiary issues. That should be done on our time.

I don't like to have bench conferences and I don't like to dismiss the jury to the jury room while we have a discussion on evidence. That should be done on our time, meaning before we start in the morning, after we end in the evening, or during one of our lunch or midday, midmorning or midafternoon breaks.

I am here as early as seven, probably will not leave until seven, so I have great capacity to hear anything off our regular trial hours. And I implore you, we should do that rather than having things that you know are going to come up, allowing them to come up and putting the jury in the position of having to watch an argument either up here or them waiting in the back when they are not fulfilling their duty, which is to listen to evidence in the case.

So I'm requesting your cooperation to let me know what those issues are so we can rule on those on my time and I can consider them on my time.

We get a lot of work done during a trial day. On Monday we start at 9:30 because that's the soonest we can get

the panel members down. The trial days will begin at nine, end at five, one hour for lunch, a fifteen-minute break midmorning and midafternoon.

I have given and you should have before you my standard jury charge in criminal cases that covers all of the redundant charges or charges that are typical in a jury case. What is not there are the instructions on the charges in the case and anything else that might be requested specifically for this case.

Have you submited your jury charges to me yet?

MS. HACKWORTH: The government has not, Your Honor, but we plan to do that between today and tomorrow.

MS. JOHNSON: I have not, Your Honor, except that I did submit a charge on the issue of the 404 (b) evidence. In light of your order, I thought we may want to talk about that particular charge before we start the trial.

So I did submit just one charge on -- and it's a charge to be given after the 404 (b) comes in.

THE COURT: You mean a limiting instruction?

MS. JOHNSON: Yes, sir.

THE COURT: Well, the limiting instruction I have drafted, I will read to you:

The government has offered evidence that the defendants pleaded guilty to the 2011 attempted robbery of a Wells Fargo bank branch and firearms offenses. You must not

consider these convictions as evidence to support that the defendants committed the robbery charged in this case. You may consider evidence of the 2011 conduct for the limited purpose of determining if the defendants intended to commit the crimes charged in this case.

MS. JOHNSON: I don't have an objection to that. My purpose was to highlight that the evidence is only coming in for intent.

Having said that, I want the record to be clear that we are objecting to the evidence, but I do not object to the -- if the evidence does come in, I do not object to the limiting instruction suggested by the Court.

THE COURT: And I will also have a copy of this delivered to you, so if you want to make some editorial comments, get those back to me by noon on Thursday.

MS. JOHNSON: Thank you.

THE COURT: And to the extent that there is any question about whether the evidence comes in, I did enter an order on this on June 28th, which I assume you have. So you know my ruling and my reasoning on that.

MS. JOHNSON: Oh, I do, Your Honor.

THE COURT: All right. So if you want to propose jury charges, I should get those in no later than noon on Thursday.

MS. JOHNSON: Yes, sir.

THE COURT: The fact that I have given you my standard charge means that you don't have to give me instructions that duplicate my standard charge, although if you want to make some editorial comments on the standard charges, again on the copy I have just given you, you may make notations and fax or PDF those back to me for my consideration.

MR. HOLLINGSWORTH: Your Honor, just to clarify, so if we have any that are the same as yours, you don't want us to submit those?

THE COURT: No. Those are right out of the pattern jury instructions, they have some wordsmithing that I have done because they are awkward in some cases, but that's to relieve you of the burden of having to present charges in the case that are not peculiar or unique to this case, and it's my effort to try to save you some time.

MR. HOLLINGSWORTH: Yes, Your Honor.

THE COURT: We will do the verdict form, so you don't have to submit that. It seems to me that it will be pretty straightforward, and I will present that to you at the charge conference.

Because we cover a lot of ground each day, the government has to make sure that they have enough witnesses to testify on the first day.

MS. HACKWORTH: Certainly, Your Honor.

THE COURT: Occasionally that is not planned for and we end up having to stop early, and we should not have to.

The indictment, you should look at it. I don't think it needs to be redacted. As you know, that will go back with the jury, but this is not a case where there is superseding indictments where we sometimes redact that.

I don't know if there is a forfeiture provision. I don't think there is.

There is not. So that's not an issue. All right.

My standard practice is openings are fifteen minutes, closings are thirty minutes. Are there any objections to that amount of time? It seems to me a pretty straightforward case.

MS. JOHNSON: No objection from Mr. Jackson, Your Honor.

MS. HACKWORTH: No objection from the government, Your Honor.

MR. HOLLINGSWORTH: None for Mr. Durham.

THE COURT: All right. Thank you.

Well, are you going to split that time? Because if that's the case, I probably will reconsider how much time I give the government.

MS. JOHNSON: Well, I thought you meant fifteen

minutes and thirty minutes per defendant.

THE COURT: So half an hour opening and an hour closings?

MS. JOHNSON: No. For example, I thought you meant fifteen minutes for Mr. Jackson's opening, fifteen minutes for Mr. Durham's opening, and then thirty minutes for Mr. Jackson's closing.

THE COURT: Half an hour openings and one hour closings in a case like this?

MS. JOHNSON: Right. Because you have multiple defendants.

THE COURT: Well, I know, but it's the same facts.

MS. JOHNSON: Well, but the evidence is very different as to both defendants.

THE COURT: We did a fraud case -- I mean, a bribery case last week and didn't take that long to get a full discussion of a much more complicated case.

MS. JOHNSON: No, I understand that. And I think I have been in front of the Court enough that you know that if I don't need the entire time, I won't use it. There is no need to say any more than is necessary.

But because we have -- we don't have a joint defense. Our interests are not aligned, and so we are separate in our representations, and we both need sufficient time to be able to present our arguments to the jury.

THE COURT: All right. Well, I will do that. Why don't I -- if you want twenty minutes or -- how long do you need for your opening?

MS. HACKWORTH: I definitely think that fifteen minutes is sufficient for our opening, Your Honor.

THE COURT: How about closing?

I will give you an hour for closing. If they get an hour, you get an hour.

MS. HACKWORTH: Thank you, Your Honor.

THE COURT: But I will tell you, that's way too much time in a case like this.

MS. HACKWORTH: I was just going to say, we absolutely will not take that much time.

THE COURT: This will be the only cases where there were two hours for argument. That would be -- if you want -- if you want to lose this jury, you take the full amount of time that I give you.

All right. Anything else we need to cover that we haven't gone over as far as the process?

MS. HACKWORTH: I do have a question, Your Honor. Because it's my first time appearing in a trial in front of you -- and if you said it, I apologize -- is there a time limit for each side doing *voir dire* to ask the questions that the Court has approved?

THE COURT: No. I don't think you can do that in a

criminal case.

MS. HACKWORTH: Okay. Thank you, Your Honor.

THE COURT: Any other questions about the process?

MS. JOHNSON: Not for Mr. Jackson.

MR. HOLLINGSWORTH: No, Your Honor, not for Mr. Durham.

THE COURT: So where do we stand then taking up this issue of the presentence reports? Where do we stand on that issue?

MS. JOHNSON: Yes, Your Honor. My understanding, after speaking with the probation officer that is preparing the presentence reports, is that he has prepared a draft of Section C of the presentence report that deals with -- that's the section called offender characteristics.

Importantly from my perspective is that that section covers any mental health issues. It also covers any issues of alcohol or drug abuse.

Now, the presentence report has not been disclosed to the parties yet, so the defense doesn't have it, the government doesn't have it.

THE COURT: Well, it hasn't been finalized yet either.

MS. JOHNSON: Correct.

THE COURT: So it's subject to being edited by the probation writer at any time.

MS. JOHNSON: That is a possibility, but I expect that the Section C, the offender characteristics, which is based on the interview of a defendant when they are asked, you know, tell me about your substance abuse, that part has been drafted.

So my request would be that the Court conduct an *in camera* inspection of that section which is available from the probation office and thereby determine whether there is any information in there that contains *Brady* that could be used for impeachment and make that information available to the parties.

Because if, for example, Theodore Spencer has said that he has been using drugs during the relevant time in question, that certainly would affect his ability to remember what happened, and that could be something that we need to explore further. So --

THE COURT: Are you saying you know that to be in the report?

MS. JOHNSON: No, no. That's why I'm asking the Court to conduct an *in camera* inspection for you to determine if there is something that should be shared with the parties.

Now, you may review it and he may have chosen not to answer that question or he may have denied any drug use. I don't know.

But because there was the potential of that information being there which could be used for impeachment, I'm asking the Court to take a look at that evidence and then make a ruling based on what you see.

THE COURT: Well, he would be one of the few defendants that answered that question. But what's the government's response to that request?

MS. HACKWORTH: Your Honor, given that this information is not in the possession of the government, at this point we believe we are under no disclosure obligations with respect to the PSR itself, and at this point really have no dog in the fight. We defer to the Court's determination of whether or not, you know, Your Honor should conduct that *in camera* inspection.

But we have no objection to the defense making the request or the Court doing so.

THE COURT: Who is the report writer?

MS. JOHNSON: It's Kevin Bennett, Your Honor.

THE COURT: All right. Are there any other non*Daubert* issues that I need to consider?

MS. HACKWORTH: Not to the government's knowledge, Your Honor.

MS. JOHNSON: I don't believe so, Your Honor.

THE COURT: Mr. Hollingsworth, how about from you?

MR. HOLLINGSWORTH: Nothing, Your Honor.

THE COURT: All right. Then let's move onto the *Daubert* hearing, and I will turn it over to you.

MS. HACKWORTH: Your Honor, before we get started, we wanted to cover two administrative matters just to make sure the Court felt comfortable with how the government had thought about proceeding.

First, we plan on calling essentially one witness, who is a firearms/toolmarks examiner in this case, John Webb, to testify.

Mr. Webb has prepared a Powerpoint presentation that he believes will aid the Court in analyzing whether or not he meets the *Daubert* -- his examination meets the *Daubert* test and will aid the Court in understanding his testimony, and also include some photographs of -- illustrations of firearms and toolmarks examinations.

You see the first slide has already been posted here. Our understanding is that one of the defense experts may also have a Powerpoint presentation as well.

But we just wanted to make sure the Court felt comfortable with us using that as part of Mr. Webb's testimony?

THE COURT: That's fine. It would probably be helpful to me.

MS. HACKWORTH: Thank you, Your Honor.

The second matter might be a little bit more

atypical. The firearms and toolmarks unit from the FBI lab in Quantico has been very gracious in that they have in addition to having Mr. Webb here to testify, they have also brought down another firearms and toolmark examiner who, if the Court were to allow, would be available to sit at counsel table and provide any assistance to Special Agent Myers or to myself as needed throughout the course of these proceedings.

That individual is Mr. Eric Smith, who is sitting in the gallery here. But again we defer to the Court's determination on whether or not that's appropriate to have him sit at counsel table.

THE COURT: I don't have any objection to that. Does the defense?

MS. JOHNSON: No, Your Honor.

And actually I was going to ask the Court if the defense experts could remain in the courtroom during the testimony as well. These are very technical issues, and it would be helpful I think for both sides to be able to consult with their experts during the presentation of the evidence.

THE COURT: Is there any objection from the government?

MS. HACKWORTH: No, Your Honor. We would like for our expert to remain as well, if that's possible.

THE COURT: All right. Then let's get started.

MS. HACKWORTH: Thank you, Your Honor.

At this time the government calls Mr. John Webb to the stand.

THE COURT: If you will step into the witness box, I will have you sworn in.

-- -- --

JOHN WEBB

being first duly sworn by the Courtroom Deputy Clerk, testifies and says as follows:

-- -- --

DIRECT EXAMINATION

BY MS. HACKWORTH:

Q. Good morning, sir.

A. Good morning.

Q. Would you please state your name for the record?

A. It's John Webb, last name spelled W-e-b-b.

Q. And, Mr. Webb, where are you currently employed?

A. I am employed in the FBI Laboratory, Firearms and Toolmarks Unit, in Quantico, Virginia.

Q. And what title do you have at the Firearms and Toolmarks Unit of the FBI?

A. I'm a physical scientist, firearms and toolmark examiner.

Q. And what are your responsibilities and duties as a

physical scientist, firearms and toolmarks examiner?
A. My day-to-day duties involve receiving, examining, and then reporting my findings on all types of firearm and toolmark related evidence.
Q. How long have you been employed by the FBI?
A. I entered into the FBI in 1998.
Q. And please describe your educational background for us?
A. Well, I received a Bachelor of Science from the University of North Carolina in Chapel Hill, and a Master of Science in Criminal Justice with a forensic science concentration from Virginia Commonwealth University.
Q. And I also should have asked you, Mr. Webb, before becoming a physical scientist with the FBI Firearms and Toolmarks Unit, did you have any different titles before getting that particular position?
A. Actually when I entered in 1998, I was a technician in the unit instead of a firearms examiner.
Q. And at what point did you transition to being an actual examiner, do you recall that year?
A. In 1998 -- or I'm sorry, in 1999 I began my training as a firearms examiner.
Q. Now, Mr. Webb, have you received any specialized training in the area of firearms and toolmarks analysis in order to become an examiner in that area?
A. Yes, I have.

Q. If you could describe that for us?
A. As a technician I went through a training program to become familiar with the types of material that the unit deals with on a daily basis, as well as protocol, procedures, how the FBI operates.

When I began training as an examiner, I continued that knowledge with -- basically supporting it with the end goal being able to effect identifications, write reports and testify.

This training lasted approximately two years. It was day-to-day, on-the-job, working side-by-side with qualified examiners, examining hundreds of firearms and bullets and cartridge cases fired from those firearms, comparing those items under a microscope to see if there were similarity between those items, conducting numerous toolmark examinations, gunshot residue examinations, shooting incident reconstruction training, attended training seminars that were outside of the FBI. Of course, read voluminous literature in the field of firearms identification.

At the end of this two-year training period, I successfully completed a series of oral examinations, and at that point was recognized by the FBI laboratory as a qualified examiner.

Q. If you can estimate for us, Mr. Webb, while working with the FBI lab, how many firearms and toolmarks examinations

have you conducted?

A. Well, over -- 2011 I can estimate that, and then infer beyond that.

In 2011, which was my last rating period, I worked over sixty cases, and that included approximately two thousand items of evidence.

Q. And is that -- are those numbers similar to previous years or ballpark estimates of the numbers of examinations that you conducted in prior years while working with the FBI?

A. It's typical. Sixty might actually be a little low, but it is typical.

Q. Mr. Webb, have you ever testified in federal court as an expert in the field of firearms identification?

A. Yes, I have.

THE COURT: Could I go back for a second?

MS. HACKWORTH: Yes, absolutely.

THE COURT: You have been awful general about -- I mean, I know enough about what I think his section does to know that there are a variety of different things that he analyzes. The question here is cartridges, cartridge comparisons.

MS. HACKWORTH: Yes, Your Honor, also bullet fragments.

THE COURT: There is also ballistics about -- so I

don't know what part of his work has been dealing with comparing firearms themselves versus comparing cartridges that may have come from a common firearm or bullet fragments to show that bullets came from the --

MS. HACKWORTH: I'm happy to drill down on that, Your Honor.

BY MS. HACKWORTH:

Q. Mr. Webb, if you can remember or if you can give us any type of estimate regarding the examinations that you have conducted, are you able to approximate how many examinations --

THE COURT: No, you need to go further back than that. What is it that he does?

MS. HACKWORTH: Okay.

THE COURT: You have talked about generally firearms and toolmarks. I don't even know what you mean by those.

MS. HACKWORTH: Oh, absolutely. So we will press forward in our examination -- in my questions to you then, Mr. Webb.

BY MS. HACKWORTH:

Q. We talked about firearms and toolmarks examinations. What does that mean? Can you tell us what that means?

A. Firearm examination or toolmark examination is a

forensic discipline where we associate bullets and cartridge cases that were fired from a firearm and toolmarked evidence such as cut locks to determine if those items originated from a particular source, say a firearm.

THE COURT: So what's a cut lock?

THE WITNESS: A padlock that someone uses bolt cutters to defeat to cut the shackle on it to get into the back of a truck or shed.

THE COURT: So it's not just firearms. It's other kinds of tools?

THE WITNESS: Well, actually firearms are considered in the field a type of tool.

A tool in the relevant scientific community is basically any hard substance that will leave a mark on a softer substance. So the softer substance will be the toolmarked item.

Bolt cutters, clearly a tool, are made of hardened steel and designed to cut shackles. Firearms, which are made of hardened steel, are designed to fire ammunition components, which consist of nickel, brass, copper, lead. All of those are much softer.

So the firearm as a tool will impart toolmarks onto the bullets and cartridge cases.

THE COURT: Okay.

BY MS. HACKWORTH:

Q. And I know we have a Powerpoint presentation that addresses some of these things. There is a clicker there, and so you can feel free to use that. And you have talked about what firearms identification is, what a tool is.

Let me ask you this. What is a toolmark? Because I know I have used that terminology already. What is a toolmark?

A. A toolmark is the mark that would be left in a softer substance by a harder substance.

Q. Okay. And are there different types of toolmarks?

A. Yes, there are.

Q. And what are they?

A. Two general classifications of toolmarks are impressed toolmarks and striated toolmarks.

Q. And what does it mean to have an impressed toolmark, for those of us who may not know?

A. And impressed toolmark is simply when a tool comes into pressure contact with a softer substance.

So a day-to-day example would be if you are parked in a parking lot at Lowe's and someone lets a car loaded with four-by-fours go and it rams smack into the side of your car. That's going to leave a dent. That's an impression type of toolmark.

In the firearms field, it would be a firing pin striking the primer of a cartridge case. That would be an

example.
Q. And is there a term in your field called class characteristic? Are you familiar with that terminology?
A. Yes, I am.
Q. What does that mean, and how does it relate to the field of firearms and toolmark examinations?
A. Class characteristics are design features of tools and firearms that are determined by the manufacturer.

When a manufacturer makes a gun, they determine what caliber that's going to be, and therefore the diameter of the bore. They determine the number of lands and grooves that are present within the rifle.

A tool manufacturer determines whether to make a quarter-inch wide flathead screwdriver or Phillips head screwdriver. Those are class characteristics.
Q. And so just to make sure we are all on the same page, for example, would Glock have a specific set of class characteristics for Glock firearms?
A. That is correct.
Q. And are you familiar with the terminology individual characteristics as it relates to your field?
A. Yes, I am.
Q. And what does that mean?
A. During the manufacturing process of any tool, the working surface of the tool -- and that working surface is

the part of the tool that comes into contact with the toolmarks area -- is under a constant state of change and wear. In addition to that, the manufacturing methods of those tools will impart individual characteristics to that working surface.

Those individual characteristics are then transferred to workpieces, such as bullets and cartridge cases, and are individualized to that tool that produced them.

Q. And both these class characteristics and these individual characteristics, do they play into your examination --

A. Yes.

Q. -- of toolmarks?

A. Yes, they do.

Q. You mentioned that the purpose of firearms identification is to determine whether things like a bullet or a cartridge case came from a particular firearm. Is that correct?

A. That's correct.

Q. What is the government's standard for making such an identification, if any?

A. The AFTE Theory of Identification is the standard in the relevant scientific community for an identification.

Q. And what is AFTE?

A. AFTE, I'm sorry, is the Association of Firearms and

Toolmarks Examiners. It is basically our professional society in the relevant scientific community.

Q. Okay. And you said there is an AFTE standard. What is that standard?

A. The standard of identification, which we will cover later in the slides, basically dictates that a qualified examiner can make an association between two toolmarked items of evidence if there is significant agreement between the individual marks observed on those items of evidence.

Q. And what does that term mean, significant agreement or sufficient agreement? What does that mean?

A. The second part of the AFTE Theory of Identification addresses that. Significant agreement is explained as agreement observed such that it is greater than the agreement observed between known nonmatches or toolmarks known to have been made by different tools and is consistent or greater than toolmarks made by the same tool.

Q. And is there a way for you to know when you see something that constitutes sufficient agreement or significant agreement?

A. The way that I recognize significant agreement is based upon the science itself and the training, rigorous training I have had, and the volumes of work I did during my training period at the FBI.

Q. And how long, to your knowledge, has sufficient

agreement been the basis for firearms/toolmarks identification?

A. Since the beginning of the science.

Q. And how long would that be?

A. Well, firearms identification began back in the early 1900s, so approximately a hundred years.

THE COURT: A quick question about that. When you say the significant agreement, I thought I heard you say where the things being compared, one is known and one is not. Did you say that?

THE WITNESS: We are comparing two items that we know are a match. So, for instance, I would test fire a firearm, collect two bullets from that firearm and examine them under a comparison scope. That would be a known match.

And there is --

THE COURT: That's because you know the firearm from which they were expelled?

THE WITNESS: Yes, sir. I just fired them and collected the specimens, so I know that.

THE COURT: What if you only have the specimens and you don't know the source?

THE WITNESS: If we have specimens and we don't know the source, we can still conduct comparisons and effect our conclusions without the source.

The known match and the known nonmatch I'm referring to are controls that the theory is based upon.

THE COURT: But if you don't have a control, what do you do, and do these standards apply?

THE WITNESS: Yes, these standards do apply if we don't have controls.

Not having controls is actually pretty typical in case work. When I was in training, one of the things that I would receive on a regular basis from my training coordinator is an envelope of bullets and cartridge cases, and I had no idea what firearm they were fired in, whether it was the same firearm, the same make and model of a different firearm, or two completely different firearms.

It would be my responsibility to organize these specimens I received to whether they were excluded from each other or could be identified to each other.

Receiving samples like that without that known control is basic training in any firearms laboratory. I did that kind of training as regularly as my daughter takes elementary spelling tests.

THE COURT: So going to this case where the firearm is not known --

THE WITNESS: Yes, sir.

THE COURT: -- and all you have are cartridges and fragments, what has been your training to compare cartridges

and fragments to determine whether or not the cartridges, the source of which is unknown, came from the same firearm or the fragments came from the same firearm or the fragments were associated with the cartridge?

THE WITNESS: Those examinations would be subjected to the exact same methods based on the same theory as any case received with a firearm. They have to go through a multilevel analysis to determine if an association does exist.

THE COURT: And how many times in actual case work have you had to compare cartridges and fragments to determine whether the cartridges and fragments came from the same firearm even if you don't know what firearm that was?

THE WITNESS: Well, essentially every firearm case that comes in would meet those conditions whether we receive a firearm or not. When we examine evidence, we will examine each item of evidence one at a time and list its class characteristics.

Now, if those class characteristics match a firearm, then we can continue with that comparison. If they don't match a firearm, then those items, bullets and cartridge cases, would still be intercompared to see if they can be associated with each other.

So whether we receive a firearm that is part of the

case, a firearm that's completely unrelated, or no firearm at all, each item of evidence undergoes the same rigorous individual examination.

THE COURT: So what percentage of your work has involved -- let's just stick with cartridges for a second -- where you have cartridges, you do a comparison of them, you don't know what gun they might have come from and would have to evaluate whether or not there are identifying individual characteristics and I guess manufacturing characteristics so as to reach some conclusion of whether they were fired from the same albeit unknown firearm?

THE WITNESS: What percentage of cases? Eighty, 85 percent of them are firearms cases.

THE COURT: How about bullet fragments? What percentage of your cases are you looking at bullet fragments, either comparing two kinds of fragments to determine if they came from the same weapon or comparing fragments to shell casings to see if they came -- were fired from the same weapon?

THE WITNESS: Again, it would be a very high percentage. That's typical evidence we would receive in a firearms case.

THE COURT: All right. Go ahead.

BY MS. HACKWORTH:

Q. In this case, Mr. Webb -- well, actually we will speak

more generally.

You confirmed for Your Honor that you can do cartridge-case-to-cartridge-case comparisons; correct?

A. That's correct.

Q. And you can do bullet-fragment-to-bullet-fragment comparisons; correct?

A. Yes, I can.

Q. Does the FBI have a resource available to it where --

THE COURT: Let me ask one more thing. Do you do bullet-fragments-to-cartridge comparisons?

THE WITNESS: We can do in class characteristics. We would not be able to individually associate a bullet as having been fired from a particular cartridge case.

THE COURT: All right. So that's iffier?

THE WITNESS: It's not an association type of examination other than make and model.

For instance, some manufacturers make very uniquely-designed bullets for special purposes. If we see that bullet in case work, we know from our experience, oh, that's a Federal Hydra-Shok bullet. And if we have a cartridge case that is consistent with those that Hydra-Shok bullets are loaded into, we can say that is consistent with.

But there is no means by which to say that that

bullet came from that particular cartridge case.

THE COURT: And I would assume you couldn't further say that that fragment or bullet in the cartridge case, even if you had two bullets and two cartridges that have the same characteristics, you couldn't say that they came from the same gun?

THE WITNESS: No, it would be possible to say if they came from the same gun, just not the bullet to the cartridge case itself. That's a single unit of ammunition.

But if both bullets and both cartridge cases were fired in the same gun and that firearm was reproducing individual marks that we could observe and identify under the comparison microscope, then we would be able to opine that, yes, they were fired from the same gun and from that gun that was submitted.

THE COURT: All right.

BY MS. HACKWORTH:

Q. I wanted to ask about a situation where you don't have a firearm available as part of case work, for example, is there a resource or database available to you in the FBI lab that lets you make some assessment of where that ballistics evidence possibly came from?

A. Yes, there is.

Q. And what is that resource?

A. We have a database referred to as the general rifling characteristics database. It is essentially a compilation of class characteristics for thousands upon thousands of firearms, different makes and models, calibers.

The class characteristics I'm referring to are the number of lands and grooves within the barrel, the direction of twist, the dimensions of those.

So if I or any other firearms examiner examines a bullet, they can enter those class characteristics into this database which will return a list of firearms that may have fired that firearm -- that bullet, excuse me.

Q. And when you get those results back, what, if any, level of certainty does your laboratory place on those types of assessments about the type of firearm that the ammunition may have come from?

A. Well, the list can be pretty extensive, so there is no level of certainty. These are just observations on these firearms that are consistent with the evidence we analyze.

And we let the investigators know that when we issue this report that this list isn't all-inclusive, there could be other items out there.

Q. And what level of certainty is placed on conclusions reached when conducting these firearms and toolmarks examinations?

A. Well, when we conduct an identification in our comparisons, we reach that conclusion to what's called a practical certainty.

Q. And I'll ask you to take a step back so that we are all on the same page. What are the conclusions that can be reached as a result of a firearms/toolmarks examination?

A. So the conclusions that we can reach when conducting our examinations are an exclusion, inconclusive, or an identification.

Q. Okay. And could you explain those for us?

A. Well, this would be a good point to go through our demonstration.

Q. You can click through, that's fine.

A. Let me talk about our examination methods before we get into the conclusions.

Q. Absolutely, please. Tell us, what are the examination methods used by you and your lab?

A. Now, these examination methods are based upon standard operating procedures that were developed through examiners in the laboratory and our quality assurance systems and were approved by an accreditation body, ASCLD Laboratory, which is the American Crime Lab -- excuse me, American Society of Crime Lab Directors. This is just a laboratory accrediting body.

So when we begin our analysis, we start with a level-one

analysis. Following our standard procedures, we examine each item of evidence for class characteristics.

These class characteristics again are the diameter of the bullet, the caliber of the bullet, the number of lands and grooves on that bullet, the direction of twist, the widths of those lands and grooves. Those are types of bullet class characteristics.

When we conduct a level-one analysis between two items of evidence, two bullets, at this point if there is a clear discernible difference in class characteristics or a measurable difference in class characteristics, we can effect an elimination on those two specimens.

Q. And your next slide mentions a level-two analysis. What is a level-two analysis, Mr. Webb?

A. So if during a level-one analysis the items examined do not reach a conclusion status, we continue our examination to level two. This is a microscopic side-by-side comparison of these two items.

This type of analysis, this method of analysis is standard now in the field of firearms and toolmark identification. This comparison microscope allows us to examine two specimens simultaneously, so we can examine a bullet from a crime scene on one side of the microscope and let's say a bullet that is test fired from a weapon or a bullet from another crime scene on the other side of the

scope.

This allows us to orient the items and see if there is that significant agreement in those individual marks I talked about earlier, if that does exist.

If there is significant agreement, then I can determine that an identification exists between these two items. If there is insufficient microscopic marks or they lack agreement, then it's a no conclusion.

Q. And you may have already said it, but I want to make sure we are clear for the record. The three conclusions that can be reached are no conclusion -- is that correct? One is no conclusion?

A. That's correct.

Q. One is identification?

A. That's correct.

Q. And one would be exclusion or elimination?

A. Yes, ma'am.

Q. And you told us in very plain language what each of those means.

Is there any standard that your laboratory has or that the profession has in reaching these three -- one of these three conclusions?

A. Yes, the standard is accepted across the relevant scientific community as it was explained earlier in the AFTE Theory of Identification from -- that was formally drafted in

1992.

Exclusions are based upon measured class differences, clearly discernible differences between two items of evidence. A .45 caliber cartridge case was not fired in the same weapon that fired a .22 Rimfire cartridge case. Physical size makes it impossible. So that would be a basis of an exclusion.

This example for bullets, although there are similarities in these two bullets on the screen, both of them appear to have six lands and grooves, the one on the left has a right twist, the bullet on the right has a left twist.

A barrel with a right-hand twist cannot produce left-hand twist marks on a bullet. So that is a basis for elimination.

Likewise these two bullets are different caliber, so the .45 caliber bullet could not have been fired in a .38 caliber weapon.

Q. So, Mr. Webb, is this an example of an elimination that can occur, for example, at a level-one analysis? When you are looking at the class characteristics, you can eliminate at this level due to these differences?

A. That is correct.

This is an example of an elimination based upon discernible differences between two items. What we are

looking at here is a comparison of two 9-millimeter cartridge cases under a comparison microscope. So on the screen, although it's difficult to see --

Q. And at the top of that, you should have a little red dot. Is that working for you?

Let me see here.

A. It works on the wood, but it doesn't reach the screen. It did earlier, so maybe it's a battery issue.

Q. Okay.

A. Well, the screen itself image is basically split into two, and down the middle is a hairline that allows us to observe the right side of the microscope on the right and left side on the left. These are the two specimens we can examine simultaneously.

Now, both of these are 9-millimeter Luger cartridge cases, so they can be intercompared as that. Both of them -- here we go -- have parallel striae, these breech face marks. These are parallel scratch marks that are created when a tool passes across the surface.

So these two items both have breech face marks that appear with the same class. However, the problem we have is the firing pin impression and the aperture difference.

This cartridge case was fired in a firearm that uses a hemispherical firing pin. A hemispherical firing pin would be like if you pushed a poolball or a basketball into the

sand, it would leave a rounded impression. That would be hemispherical.

The cartridge case on the right was fired in a firearm that has a rectangular firing pin cutout or an aperture as dictated by this rectangle here and uses an elliptical firing pin impression.

So based upon the difference of the aperture design and the shape of the firing pin impression, we can eliminate these two cartridge cases as having been fired from the same firearm.

Q. And, again, is this an example of an elimination that could take place at the level-one step?

A. That is correct.

Q. Now, what would be the standard for making an identification?

A. For an identification, the degree of similarity observed between two specimens under that comparison microscope has to be better than any similarity we have seen of specimens fired from different firearms or created by different toolmarks.

In addition to that, the agreement that we see under the microscope must be consistent with that agreement that we see in known matches or toolmarked items such as bullets and cartridge cases known to have been fired from the same firearm or created by the same tool.

Q. And I know that here in the slide you have the word bullets in parentheses. This particular standard does apply equally to cartridge cases?

A. Exactly. If you applied this to cartridge cases, you would just exchange the word bullets for cartridge cases, and instead of fired from a barrel, they would be fired in a particular firearm.

Q. And, Mr. Webb, am I correct that you also have a slide that has an illustration of an identification? It might appear after this particular one.

A. Correct. This is an identification of two bullets fired from the same barrel. Again, we have the hairline splitting the screen, and the bullet on one side was a bullet fired from the gun as well as the bullet on the right side.

And we are looking at a land impression here. And as the bullet travels down the barrel, the lands or the raised portions within the barrel actually engrave the edge of this bullet, the side of this bullet, and leave fine microscope striations or fine microscopic scratch marks on the surface of that bullet. And as depicted in this photograph, those microscopic marks are in sufficient agreement.

Now, at this point, this is just a representative slide. I want to point out, if this were a bullet with six

lands and grooves, this photograph is a nice starting spot, but we would rotate the bullet 360 degrees to ensure that that level of agreement exists on the surface of the entire surface.

Q. And just -- I know we are not experts in this field or at least I'm not an expert in this field, but a person looking at this slide, is there a way for us to see that there is sufficient agreement just by looking at the picture that you provided for us?

A. What we are seeing are the reproduced striated toolmarks on both sides of this hairline. So these fine scratch marks moving left and right, if there is sufficient agreement, if they were fired from the same barrel and they are reproducing mark, they should seem like continuous lines across that hairline.

Q. And do you have an example of cartridge cases that were fired or determined to be fired in the same firearm?

A. These are two cartridge cases that were fired in a Glock pistol.

And I want to point out a couple things on this one. One of the marks that we have yet to talk about are subclass marks, and I think this would be a good point to talk about subclass marks.

Subclass marks are defined as a more restrictive group of toolmarks. They are created incidental to

manufacture. They are not intended by the manufacturer, and at the same time they have a type of carryover that should not be confused with individual marks.

An example of a subclass mark is when you are sharpening a blade, even if it's a smooth blade, if the sharpening wheel has a little bit of wobble to it, if you look at that blade carefully after it's been sharpened, it will actually appear to have a little bit of serration because the pressure on that blade varies as that grinding wheel wobbles.

In firearms, if a broach or cutting tool is used to create a breech face, if those breech face marks are not further polished or hand ground, the broach could produce subclass marks, which are marks that appear consistent but should be able to be distinguished from individual marks by a qualified examiner following current protocols.

So in this slide, an example of a potential subclass mark might be the breech face marks, these parallel breech face marks just below -- again, this is the square firing pin aperture here. So these breech face marks, there might be what appears to be some agreement between these two lines, these couple of lines moving across the hairline.

Now, as a qualified examiner, one of my parts of

training is becoming familiar with subclass marks, reading the literature on subclass marks, examining specimens not only that were fired from the same gun and different gun, but different firearms that might bear subclass marks, being able to recognize where those are produced and how to avoid them in conducting an erroneous conclusion.

So on a specimen like this Glock cartridge case, what we would have conducted an examination on are these aperture sheer marks.

During our training we go to firearms and manufacturing facilities, and we see how these firearms are made, and we recognize different manufacturing procedures that may create subclass marks.

In this instance, we know that the Glock firing pin apertures are physically punched out, so it's a fracture that is creating this striated mark present on these cartridge cases. That mark is going to be individual to that particular firearm.

So while the subclass mark may have some carryover, we are trained and aware in the current literature and follow proper approved procedures to look in areas where we know there is not a chance for subclass marks and effect identifications there.

Q. So this is --

THE COURT: Let me interrupt.

MS. HACKWORTH: Yes, please.

THE COURT: So the hairline distinguishes between two separate cartridges that are, when looking under a microscope, that are moved to see whether or not along that hairline there is an alignment --

THE WITNESS: That is correct.

THE COURT: -- between the two?

THE WITNESS: Yeah. Comparison microscope is basically --

THE COURT: That's what they use on *CSI* all the time?

THE WITNESS: Yes, sir.

THE COURT: They show the two and bring them together and then all of the sudden they match up?

THE WITNESS: Exactly.

BY MS. HACKWORTH:

Q. And so, Mr. Webb, as you have indicated, the whole subclass characteristics phenomena, you are trained or as part of your training you stay up-to-speed on what is considered a subclass characteristic?

A. Absolutely.

Q. And is that something that remains in your consideration as you are conducting your examinations?

A. Every examination, yes.

Q. Now, you talked about -- oh, actually I want to move on

before we finish here with this particular point, we have talked about exclusions and identifications.

What about no conclusion? What about that third option, that third outcome of an examination?

A. So a no conclusion opinion we can render when class characteristics are similar -- say two bullets were fired, they are .38 caliber, same caliber fired from a barrel rifle with six lands and grooves, right twist, and the dimensions of those are the same. So it's possible they are fired from the same barrel or any other similar barrel of .38 caliber six ring.

We conduct the level-two analysis and see insufficient agreement. At that point we can neither say whether that bullet was fired from that barrel or not fired from the barrel. It's an inconclusive.

So an example of two bullets would be -- again this is a hairline, and you have a bullet from a scene, for instance, on one side, a bullet that was test fired within the laboratory on the other side, and although the land impression, the distance from here to here is the same for both bullets, the fine individual marks that we need for identification are not in agreement.

There may be one or two striated marks that appear to line up, and that's normal in the random nature of these marks being created. But we need to see that significant

agreement that I showed earlier on the identification photo to effect an identification.

For cartridge cases, it's the same. We would have two cartridge cases again from two different Glocks, and the -- although the marks down here, the subclass I talked about, aren't present, there also is insufficient agreement on this aperture sheer mark.

Q. Now, you talked about generally speaking how these examinations are conducted, what types of conclusions can be drawn from the examinations.

Are these the procedures -- I want to make sure the record is clear. Are theses procedures that are followed by the firearms/toolmarks unit of the FBI lab?

A. Yes, we follow current procedures as written by examiners in the unit and quality assurance unit in the laboratory, and these procedures are approved by ASCLD Lab.

THE COURT: Can I go back -- I want to go back to this slide for a second, because I notice that you didn't talk about this legend cartridge case fired in a consecutively-manufactured firearm?

THE WITNESS: Yes, sir.

THE COURT: So there when you first look at more of a macro-level level-one analysis, it really looks like they could have come from the same firearm.

But when you look at it microscopically, which

would be a level-two analysis, and you begin to look at the finer detail, you say, yeah, these are pretty close, but they are not the same, and in fact in in this case they can vary for the same gun manufactured by the same manufacturer on the same assembly line, but from one manufacturing event to exactly the next manufacturing event, you can have these kinds of differences as displayed on the screen?

THE WITNESS: Oh, yes, sir. And we have a good deal of literature and studies that are done with consecutively-manufactured firearms.

The point of doing a consecutively-manufactured firearm test is really to test our hypothesis to see if manufacturing techniques are creating individual marks such that a qualified examiner might effect a misidentification.

The two tools are creating indistinguishable marks, and consecutively-manufactured firearms and tools are the easiest way to do that. Because these tools are made upon a factory line, one right after the other, the same working conditions, the same tooling process is used to make each one.

And there have been numerous validity studies where we would take these ten barrels, for instance, or ten slides, conduct test fires from those, submit them to laboratories where hundreds if not thousands upon thousands of

examinations will be conducted, testing not only the theory are these tools creating individual marks, but can examiners distinguish them.

And so far, all of those -- just about all of those studies have come back with a zero or extremely low error rate.

THE COURT: So is that something that laboratories have to undergo from time to time are outside people coming in to test whether or not the laboratory is properly following protocols and applying standards?

THE WITNESS: The FBI laboratory currently undergoes a couple different levels of review.

ASCLD Lab, the accreditating body, will come in and review not only our methods and our procedures, but do examination review to make sure that we are following the proper procedures.

THE COURT: And is that a peer review?

THE WITNESS: That's different than a peer review. This is an outside agency that comes in to ensure that we are following proper operating procedures, proper methods.

They also review training. All of our trainees are subjected to a review to make sure that they are doing the right thing.

The peer review, that and confirmation -- which

we'll talk about a little bit later on how we conduct -- actually it might even be the next slide.

That's a drill bit.

This is some of the quality assurance elements that are employed in the laboratory currently, and these are more or less standard across the field of accredited laboratories.

Opinions of exclusion and identification require the confirmation of a second qualified examiner. So not only do I do a thorough analysis of each item of evidence, but when I render an exclusion or an identification, I have to document that.

So I will take a high-resolution photograph of that identification, similar to what we saw earlier, and record that in my notes. And at some point another qualified examiner will have to come in and examine these specimens independently and determine whether I reached a valid conclusion or not.

THE COURT: Is that independent second opinion done knowing what your opinion was, or was it done independent of your opinion?

THE WITNESS: It is knowing what my opinion was.

The reason for that is that I have to produce my notes page with my photograph and my opinion, but more importantly the inventory of what items I looked at so that

they can do 100 percent verification of the items I looked at in my conclusions.

THE COURT: Okay.

THE WITNESS: After that, actually all case work is subjected to a thorough technical review. So after I put my entire case packet together, another examiner will do 100 percent verification of my documentation to make sure that everything is properly represented, that there is enough documentation to support my conclusions, and that I followed the proper procedures as laid out in our standard operating procedure guides.

At that point, all of our documentation undergoes an administrative review. This is a third-level review where the unit chief of the laboratory -- excuse me, the unit chief of the firearms/toolmarks unit will thoroughly go through my documentation and ensure that my administrative file and my case notes are all in proper order.

One addition to the confirmation that I was talking about, cases will come into the laboratory that undergo a blind verification process. So where you mentioned earlier does the examiner know my conclusions, we will receive cases that I will work as an examiner and make -- say, make identifications.

At that point, I will repackage the evidence and it will be handed to another examiner who will start the process

from the beginning as well and reach their own independent conclusions. They may or may not know that I have actually worked on the evidence, but they certainly don't know my conclusions.

THE COURT: And why would that be done, or is that just a system -- you do that systematically to double-check your processes generally?

THE WITNESS: Exactly. It's another step within our quality assurance program that allows us to verify that examiners are following the proper procedures, using the same procedures based upon the same hypothesis, and reaching similar conclusions.

BY MS. HACKWORTH:

Q. And, Mr. Webb, responding to Your Honor's questions, you mentioned standard operating procedures that are part and parcel of the FBI firearm and toolmarks unit's work; correct?

A. Correct.

MS. HACKWORTH: If I may approach, Your Honor, I would like to show the witness what has been marked as Government's Exhibits 1, 2 and 3.

THE COURT: All right.

MS. HACKWORTH: Thank you. And I have provided a copy to defense counsel.

BY MS. HACKWORTH:

Q. Mr. Webb, do you recognize what is contained in Government's Exhibits 1, 2 and 3?
A. Yes, I do.
Q. What are they?
A. These three documents are the FBI laboratory Firearms and Toolmarks Unit standard operating procedures for:
Exhibit 1 is bullet examinations and comparisons.
Exhibit 2 is the examination and comparison of fired cartridge cases and shotshell cases.
And Exhibit 3 is the examination of firearms.
Q. And as a qualified examiner, is it part of your responsibility to be familiar with these SOPs?
A. Yes, it is.
Q. And are those documents fair and accurate representations of the SOPs that are in effect at your lab?
A. That is correct.
MS. HACKWORTH: Your Honor, at this time the government moves to admit Exhibits 1, 2 and 3 into evidence.
THE COURT: Any objection to me considering those?
MS. JOHNSON: No, Your Honor.
THE COURT: All right. I will.
BY MS. HACKWORTH:

Q. And, Mr. Webb, if you take a look at -- you can choose either exhibit. We will say Government's Exhibit 1.

Next to the last page, there appear to be some references there; is that correct?

A. That's correct.

Q. What is the purpose of those references? What are those references?

A. These references indicate that the SOPs were, although drafted more recently and by current qualified examiners in the system, they are based upon firearms identification as has existed over the past one hundred years.

A lot of the basis of firearms identification is the same. You know, some of the technology and some of the methods and procedures have changed.

Q. And are these the type of SOPs that would be reviewed by, for example, that ASCLD accrediting agency that you discussed?

A. That's correct.

Q. And we talked a lot about -- well, a little bit about training that a qualified examiner would have to go through at the FBI lab. What, if any, types of testing does a qualified examiner have to go through while being employed with the FBI lab?

A. While employed at the laboratory, currently the -- we take proficiency tests. These are tests that somewhat mimic

case work that are distributed to the FBI through a private company, Collaborative Testing Services, CTS.

Q. And what is CTS?

A. CTS is just a company that produces proficiency tests for various fields in forensic science, including firearms and toolmarks.

Q. So this would be an external entity?

A. That's correct.

Q. And every examiner is required to take these proficiency tests?

A. That's correct.

Q. How often are they required to take these tests?

A. We take two proficiency tests each year, one in firearms and one in toolmarks.

Q. And are there any internal proficiency tests? And by internal, maybe those that are drafted or created by those working inside of your lab?

A. Trainees can take internal proficiency tests.

Q. Would a qualified examiner such as yourself take the internal proficiency test?

A. No, I would take an external proficiency test.

Q. Now, Mr. Webb, have you ever made an error during proficiency tests? You talked about needing to take those twice a year. Have you ever personally made an error during your testing?

A. Yes, I have.
Q. And when was that?
A. I made an error in the test that was submitted June and July of 2011.
Q. What was the nature of the error that you made?
A. This was a bullet examination proficiency test where we were given five bullets. The nature of my error was a wrong or incorrect class characteristic measurement.

When we measure lands and grooves on a bullet, it's done on a microscope where it's a zoom microscope, and we have to adjust the zoom to a discrete value in order to properly read the dimension of these lands and grooves.

Of the five bullets I measured, the first four were fine. On the fifth one, the zoom had gotten knocked off of its proper setting, and I read that value wrong and reported the wrong value in my notes.

Q. Was any corrective or remedial action --

THE COURT: I'm sorry, the value of what? The value of the --

THE WITNESS: The width of those land and groove impressions on the bearing surfaces of the bullet.

BY MS. HACKWORTH:
Q. And what, if any, corrective or remedial action was taken after that error was made?
A. I went under a corrective action process where I did not

conduct any case work for a four-month period following that.

And during that period, I was subjected to internal proficiency tests, internal competency tests, a review of the methods and the standard operating procedures.

It was determined that my error was essentially a human error, misadjusting the zoom on the microscope, but oddly enough it was found and changed on this.

And this kind of speaks to the kinetic nature of our science, is that it was realized that this error was possible. So at that point our SOPs were changed to eliminate that chance of an error ever happening again either in a proficiency test or in case work.

Q. And the exhibits that are Government's Exhibits 1, 2 and 3, do they reflect those changes, if you know?

And I will also ask you while you are looking, what is the effective date of those SOPs?

A. This is August 19th of 2011.

I do not actually see it in this SOP.

Q. To your knowledge, though, Mr. Webb, are these the SOPs that were in effect at the point when you did case work for this particular matter?

A. No.

Q. Oh, these were not the SOPs?

A. No. The SOPs that I followed when I did case work on

this matter dictated that confirmation was required for eliminations, which was the change made.

Q. Okay. Well, what we will do is we will make sure to get together those as well.

I just want to make sure I confirm that while these are SOPs of the FBI lab and the FBI lab does have SOPs, to your recollection these are not the SOPs that apply to this particular case?

A. That appears so.

Q. Okay. Now, you used the -- oh, I'm sorry, I don't want to go forward before I finish, close this loop.

You told us what the corrective and remedial action was. Did you successfully complete that corrective action as required by the lab?

A. Yes, I did.

Q. Okay. And when did you complete that?

A. I completed that in late November 2011.

Q. Okay, late November 2011. And what, if any, additional review or any additional action was taken after November 2011 to ensure that you were ready to go back to your case work?

A. The first 25 cases that I worked after that date that I restarted underwent a complete third level of review in addition to the technical and administrative review.

Q. And to your knowledge, was your work in this case

subject to that additional review?
A. Yes, it was.
Q. We have talked a lot about, generally speaking, firearms and toolmarks identification and examination. I want to ask you some more general questions about the science itself, peer review, general acceptance, things of that nature.
MS. HACKWORTH: I just wanted to check in with Your Honor to make sure that we didn't need to pause for a break or anything like that before I move to one of the *Daubert* areas here.
THE COURT: No, but your problem is that I can do this all day without taking a break.
MS. HACKWORTH: Oh, no, I'm fine, I can go. I just want to make sure to be sensitive to Your Honor and others as well.
THE COURT: I will let you know if I need -- if you need to be sensitive to me. Let's move on.
BY MS. HACKWORTH:
Q. I know you have another Powerpoint presentation that relates to the next area that we are going to go to.
A. Yes.
Q. So we are going to pull that up for you.
And the first question I have for you is you used the word science here. Why is firearms and toolmarks

identification considered to be a science?

A. There are a lot of different definitions for science, which is what makes it difficult. So for firearms identification, I consider it two different types of science, as does the relevant scientific community now.

It's an applied science. It's applying well-known sciences such as metallurgy, physics, looking at friction and impression marks, chip formation, metrology, tribology, different sciences dealing with how tools wear and the examination of individual marks.

So it's applying these physical sciences to solve the problem or support or refute a hypothesis: Do tools create individual marks and are those individual marks identifiable or distinguishable by qualified examiners?

It also falls under the category of an empirical comparative science, empirical science being the science of theory and observation.

So we have our theories, propositions. Now, can we test those propositions to determine if they are valid or if they can be refuted.

Q. And does firearms and toolmarks identification have any fundamental propositions?

A. Yes.

Q. Okay. What are those?

A. Our fundamental testable propositions are that class --

microscopic marks imparted onto objects by different tools, talking objects such as bullets and cartridge cases, will rarely, if ever, display agreement sufficient to lead a qualified examiner to conclude that those objects were marked by the same tool.

In essence, a qualified examiner will rarely, if ever, commit a false positive error or misidentification.

Q. And is there a second proposition?

A. What makes this proposition possible is the second proposition, the premise that manufacturing processes involve the transfer of rapidly-changing random microscopic marks onto these working surfaces, like the barrel bores, the breech faces, the firing pins, the screwdrivers, the bolt cutters, and these individual marks are caused by the tooling process, phenomena of tool wear and chip formation. They are also caused by other tooling processes such as electrical or chemical erosion.

Furthermore, after production of these tools, the individuality of those microscopic marks will continue to change through use, through abuse, through environmental conditions, rusting, wear, corrosion, all those type of factors.

Q. Are there any journals or other publications in the area of firearms or toolmarks identification?

A. If you don't mind, I actually would like to show a

graphic of proposition one.

Q. Absolutely. Feel free.

A. What we are looking at on the screen now are a comparison of two different tools.

On the upper left-hand corner you have a single tool, and again this is an image through a comparison microscope. So we have a hairline running vertically, item one on one side and a second toolmarked item on the other side. And we can see that there is sufficient agreement of these striated marks on both sides of this hairline.

A separate tool, the same make, same manufacturer and same material being cut, is depicted here with the hairline going in between. And again we see sufficient agreement between those two toolmarked items.

Now, if we take a toolmarked item from tool number one and an item from tool number two and compare them, at the bottom we see that divided by the hairline. And although those individual marks are present and observable, there is very little agreement between those two toolmarked items.

Q. And I know you also have some images on proposition number two as well. Did you want to provide us any information on those?

A. Proposition two, what we are talking about, the individuality of these tools due to the manufacturing

process.

The screwdrivers are a fine example because they are very simple to see. The screwdriver blades are ground, and you will have fine grind marks on the surface of them and down on the tip.

Subsequent to the sale of that screwdriver, my daughter will use it to pry open paint cans or something like that and leave dings and scratches and basically defects on the surface of that tool.

Well, if that tool is then used and produces toolmarks on the surface, like say prying open a door or a window, reproduces those individual marks, then an examiner will be able to effect an identification if those marks are reproduced and if they are in sufficient agreement.

Q. And my earlier question to you was about whether or not there were peer-reviewed journals that relate to firearms and toolmarks examinations and identifications as you discussed for us here today.

A. Yes, there are.

Q. Can you give us examples of what those are, to your knowledge?

A. There are several journals out there. I will talk about the most relevant ones.

The *Journal of Forensic Sciences* is the journal published by the American Academy of Forensic

Science. That's an American association of forensic scientists which includes firearms and toolmarks examiners.

That publication I believe has been out since 1943, and articles submitted to the *Journal of Forensic Sciences* are subjected to a rigorous panel peer-review process. This isn't checking for spelling and grammar. It's checking for technical accuracy and to see whether other experts agree whether the procedures were done properly and based upon sound methodology.

The Europoean counterpart to the American Academy is the Forensic Science Society, and they publish the *Journal of the Forensic Science Society*. They undergo -- excuse me, articles submitted undergo the same rigorous review process.

The *AFTE Journal*, which is the Association of Firearms and Toolmarks Examiners, that's the most relevant journal to our science. It is the association of our scientists, and it's the journal that uses its format to convey new ideas and information, validity studies, test results. Anything involving the field is published in the *AFTE Journal*.

Currently articles submitted to the *AFTE Journal* undergo a review by I think it's a panel of eight different subject matter experts as well as review by the editor and the editor-in-chief.

Q. And as part of your work, knowledge, training and experience, do you regularly review these types of journals?

A. Yes. Yes, I do.

Q. And with respect to the question of the acceptance of this area of science in the community, I think a great place to start is who would be considered a part of the relevant scientific community for purposes of firearms and toolmarks examinations?

MS. JOHNSON: Objection to the question. It calls for a legal conclusion that this Court will be making.

THE COURT: Overruled.

A. General acceptance is defined by acceptance within the relevant scientific community.

Clearly the relevant scientific community includes firearms and toolmarks examiners. It expands further out to including forensic science organizations that cover all the topics of forensic science, which would include associations I just talked about, like the Forensic Science Society in the U.K. and the American Academy here in the States.

So there are organizations that obviously recognize firearms and toolmarks examinations as valid. In addition to that, there are academic programs worldwide that support firearms and toolmarks identification, or teach some part of it.

West Georgia Science and Technology over at Carrollton has firearms and toolmarks identification classes. Michigan State University, University of North Florida, North Texas, George Washington University. There is a website for the support of firearms and toolmarks examinations that lists approximately forty universities that have some kind of firearm or toolmark course.

In addition to the academic programs, there is academic research that's conducted. Iowa State University has a laboratory that has conducted at least -- and published at least three studies since 2004 on the statistical validation of firearms and toolmarks identification.

There are grant programs through the NIJ, National Institute of Justice. Those are reported on and published usually in the *Journal of Forensic Science*.

In addition, laboratories obviously recognize the firearms and toolmarks unit. I can't think of a state in the Union that doesn't have a firearms laboratory.

And it's been accepted in court. One of the -- in 2007 it was accepted in the U.S. District Court in the Middle District when an FBI examiner testified to their findings on firearms comparison.

And, let's see, just this summer there have been three cases, two in Arizona and another in D.C., where testimony was accepted.

Q. So based on your knowledge, training, experience and education in this area, is it fair to say that firearms identification and examination procedures as you described them for us today are accepted in the scientific community you just described for us?
A. That's correct.
Q. And you actually -- I mean, this is a little side point here. You mentioned that there are labs across the country; right?
A. That's correct.
Q. Both at the federal and the state level?
A. Yes.
Q. Now, are all labs accredited?
A. No. Accreditation is not a requirement.
Q. So there can be a firearms and toolmarks lab that isn't accredited by, for example, ASCLD?
A. That's correct.
Q. Now, you did also mention earlier in your testimony about something called a validity test, and we also talked about proficiency tests as well.
Could you describe those tests for us and how they relate to firearms identification?
A. In order to be science, a valid science, you have to have a premise, a hypothesis that's testable, and those tests should be able to either validate that hypothesis or be able

to refute them. So there can be tests done on that hypothesis.

There are several different kinds that are in the firearms/toolmarks field currently. Validity tests are one of the most common, and I spoke about that briefly earlier, the consecutive manufactured tools that I talked about.

Proficiency tests are offered to laboratories to test not only an examiner's proficiency but the processes within that laboratory, whether they are valid and following the methods.

Then the other tests include the university research including the Iowa State research I mentioned earlier and private industry research.

Q. Either based on those tests or maybe through some other means, have error rates been determined for firearms identification?

A. Some error rates have been established both through validity tests and through CTS tests, but these error rates require a bit of discussion before we directly apply them to any practice or methods that we have.

There are several different types of errors that could exist in the science. One of the most common would probably be practitioner error, just human error, making a mistake, like an incorrect measurement.

There could be errors that reflect weaknesses in either proposition one, an examiner cannot distinguish between toolmarks, or proposition two, that a tool is not creating individual toolmarks, that some manufacturing process is creating indistinguishable toolmarks.

And then there can be errors in the process with quality assurance, that kind of thing.

The CTS tests, which have been -- we have data from 1978 on CTS tests and their error rates, and I'm going to break them down in the next couple of slides. Although it's a gauge of error in the field, it can't be applied directly to case work as can the validity studies.

The problem with the CTS tests is there is no regulation as to who takes those. You could take a CTS test in firearms examination and submit it for a score. Defense counsel could take them. Trainees take them and submit them. Anyone who is interested in taking the test and pays the fee is allowed to take that test and submit the results.

The quality control would be different in some laboratories. Laboratories that aren't accredited might take the CTS test. So there are variations in the results that are submitted for analysis which makes it extremely difficult to apply that error rate to case work.

Talking first about some of the validity test error rates -- and I will briefly go over these tests so you have a

general understanding of what they are talking about.

Dave Brundage did a test in 1998. This was a consecutive barrel test that I mentioned earlier. And out of three thousand examinations conducted by examiners within the United States, there was zero errors, zero false positives.

Charles DeFrance of the FBI laboratory did a study of consecutively-manufactured Smith & Wesson barrels using a different type of rifling technique. These tests were done within the laboratory, and again there were zero errors.

Steve Bunch and Douglas Murphy did a test in 2003 looking at consecutively-made Glock slides. Three hundred and sixty comparisons were conducted with zero errors.

Eric Smith conducted a test in 2005. Rather than using consecutively-made weapons, he used weapons that are commonly seen in case work. They were not consecutive. They had been out in the field, used by citizens, and were submitted to the lab for these tests. There were several hundred comparisons of both bullets and cartridge cases, and there were no misidentifications or false eliminations.

The Brundage study that started in 1998, actually Hamby continued that in 2009. He took those ten consecutive barrels and sent them internationally I think to twenty different countries. The comparisons totaled around thirty thousand, and still there were no false positives, no false

negatives.

Fadul did a study of Glock barrels in 2011. That comparison of consecutively-manufactured barrels yielded a zero point four percent error rate.

And then Weller in 2012 working with NIST, the National Institute of Standards and Technology, as well as University of California/Davis, conducted an objective comparison using instrumentation -- rather than examiners' eyes, they used confocalmicroscopy -- to see if individual marks were being reproduced that were distinguishable. And there was no error in that test either. The instrument was able to distinguish between different groups of test firearms.

Q. And I think you also have some information available to us, Mr. Webb, regarding the CTS proficiency test error rates as well; is that correct?

A. That's correct.

Q. Tell us what your understanding of the literature is in this area regarding the proficiency test error rates?

A. A couple different brackets of years to talk about in the CTS test.

From 1978 to 1991, that data was collected. Now, the original report that went out on the error rate from that time period I think showed a false positive of around 12 percent and a false negative I believe higher than that.

The problem with that high number is that CTS at the

time considered no conclusions as a wrong answer. I don't know of any accredited laboratory following today's methods and procedures that would consider no conclusion a wrong answer. It simply means that an examiner was unable to determine if an association existed or not.

So removing those inconclusive errors, the error rate for false positive for firearms -- and this is bullets and cartridge cases -- was reduced to a little over one percent, and a little over one percent again for false negatives.

During the test again in 1992 to 2005, the error rates are seen as -- they are fairly consistent. Again, it's 1.5 percent for false positives and 0.5 for false negatives.

One of the interesting periods for the CTS test was 1992. 1992 was the only year that the CTS test was administered to laboratories nationwide and there was actually a question are you a qualified examiner. When they tabulated all of the results that came back, there was a 0.38 percent of false positives.

They removed I believe the -- there were twenty respondents that were either in training or had nothing to do with the firearms field, they just took the test. Once those were removed and the errors were calculated just for qualified examiners, the error rate fell to zero percent for false positives and a little over a half a percent for false

negatives.

Q. Now, just looking at the error rates that you presented to us here today, is it fair to say that the CTS error rates were slightly higher than the validity test error rates? Is that a fair statement?

A. Yes.

Q. You also mentioned to us the fact that almost anyone can take a CTS proficiency test; correct?

A. That's correct.

Q. Is that higher error rate related to the fact that it's open season, anyone can take the proficiency test, to your knowledge based on your experience in this field?

A. That seems like a reasonable answer, yes.

Q. Now -- oh, and also, have any of these studies that you discussed with us today been published in various journals, journals that you referenced before?

A. Oh, yes. All the validity studies have been published either in the *AFTE Journal* or the *Journal of Forensic Science*.

Q. Are there any procedures or processes in place to reduce the risk of errors that a firearms or toolmarks examiner might make?

A. Absolutely.

Q. And what are those?

A. In the FBI laboratory, following our current protocols,

examiner trainees are subjected to a comprehensive training program. This training program again is written by examiners in the laboratory with the help of our quality assurance team and has been reviewed by accreditating bodies.

We follow standard operating procedures. This is procedures that are, although not dictated in the field, they are laid out through different papers as to a proper way to conduct an examination. So we follow those recommendations.

We are an accredited laboratory by ASCLD, so they have approved all of our dictations, all of our documentation, all of our procedures.

Our instruments have to be certified, and performance checks are done on those instruments before they are used in each case.

Chemical resources when they are used have to undergo a testing to see whether they are producing valid results or not.

The documentation that we produce follows a very standard profile. Our labs are the standard format that everyone uses within the firearms toolmarks unit. It has to capture minimum amount of data, and that data is consistent across for different examiners.

Identifications and eliminations are documented with high-resolution photographs and will be assigned and

confirmed by another qualified examiner.

We also undergo, of course, the blind proficiency testing that I talked about earlier, and that is documented.

Whenever an examiner produces results from a case after it has gone through that confirmation process, their work is subjected to a rigorous technical review by another subject matter expert, qualified examiner in the unit.

At that point, an administrative review is conducted by the unit chief.

Q. Now, Mr. Webb, have you ever testified in federal court as an expert in the field of firearms identification?

A. Yes, I have.

Q. Approximately how many times?

A. I estimate that I have testified thirty times over my career at least, and I would say 75 percent of those have been federal court.

Q. All right. And the remaining instances would be state court proceedings?

A. State courts, yes.

Q. And I want to, nearing the end of my questions here, just ask about your work on this particular case. You did review evidence in this particular case; correct?

A. Yes, I did.

Q. And Your Honor asked you at the beginning about the type

of evidence that you reviewed; right?
A. Yes.
Q. And basically you reviewed cartridge cases and bullet fragments; correct?
A. That's correct.
Q. And you issued conclusions about comparisons that you did between casings and casings and fragments and fragments; right?
A. That's correct.
Q. I believe I started with this question earlier but didn't complete this loop, so I want to make sure the record is clean. What level of certainty do you place on conclusions that are reached from firearms/toolmarks examinations?
A. Following our established protocols, using all the current methods in the FBI laboratory, I am absolutely certain of my conclusions on the examinations I conducted on these specimens.
Q. I'm sorry, your voice trailed off a little bit. Mr. Webb, you said you were absolutely certain?
A. Yes, that's correct.
Q. And is there a -- is there a term called practical certainty that's used in your lab?
A. That's correct.
Q. And what does that apply to?

A. Practical certainty is applied to what level of certainty we associate with an identification.

Q. Okay. So that's distinguishable -- and I want to make sure everybody is clear. Absolute certainty applies to your process that you apply to the evidence?

A. Correct.

Q. And practical certainty relates to your examination itself?

A. Exactly.

To clarify, one of the misnomers in firearms identification is that an examiner would identify a bullet as having come from a particular gun to the exclusion of all others in the world, absolute certainty.

We don't do that. That's not valid. That's like saying I examined every firearm that ever existed, every firearm that's in existence today, and every firearm that will ever exist, and can say absolutely without a doubt to the exclusion of all others.

That's just irresponsible, and it's an unattainable standard in any science, I believe, and we do not issue reports or findings such as that.

We issue reports when I associate or identify an item in evidence, a bullet or cartridge case coming from a firearm, that's to a practical certainty, and that's based upon three different tenets.

Do I believe my results to be true and accurate? Which I do, based upon the history of the science, the theory of identification, the standards to which I applied this case, the methods that I followed, the conclusions I reached, and the association -- or I'm sorry, the confirmation that was agreed upon by other examiners.

And is that, you know, based on some kind of validity? Well, the theory of identification, the propositions of identification have been tested over and over, and the error rates appear to be extremely low. There has yet to be any research that disproves the theory of identification or the propositions.

Now, we are still going to test it. We will be under constant scrutiny, because firearms identification is a kinetic science and we can't stop just because a certain number of papers have been issued. So as technology advances, methods advance, we will continue to test the science.

But at this point, I am confident in my conclusions based upon the research that has been done.

And I will clearly, you know, concede that there is no absolute certainty that we can apply to that identification, hence the practical certainty.

Q. And in working on the evidence that was submitted to you through the lab in this case, did you apply the

methodology that you have described for us as you testified about today?

A. Yes, I did.

Q. And so any conclusions that you reach are based on that methodology; correct?

A. That's correct.

Q. And the levels of certainty that you would attribute to the conclusions that you rendered in this case would be to that degree of practical certainty as you just defined it?

A. That's correct.

MS. HACKWORTH: If I may have one moment, Your Honor?

Your Honor, I have no further questions at this time. But Eric Smith from the Firearms and Toolmarks Labs did inform me that we could get a proper SOP that was actually in place when the examination in this case was conducted.

So if the Court would allow, we would be happy to get that and would submit that into evidence instead of the ones that were tendered here today, with leave of the Court, of course.

THE COURT: So what are his conclusions?

BY MS. HACKWORTH:

Q. Mr. Webb, could you tell us, if you have that documentation in front of you, what your conclusions were

relating to the bullet-to-bullet comparisons or bullet-fragment-to-bullet-fragment conclusions that -- examinations that you did in this case?

A. I'm sorry, Your Honor, I did not bring my report and conclusions. I did not know I would be testifying to that today.

Q. I do have your reports available, if that would refresh your recollection about what you reviewed and what your conclusions were?

A. Please, thank you.

MS. HACKWORTH: If I may approach, Your Honor?

THE COURT: You may.

A. Okay.

Q. Thank you, Mr. Webb.

Let me flip through my notes here.

Mr. Webb, did you examine a bullet fragment that was retrieved from a white Land Rover designated by you as Q-8?

A. Yes, I did.

Q. And did you also examine a bullet fragment to retrieve from a location called Weeyums Philly Style designated by you as Q-12?

A. Yes, I did.

Q. And did you compare those two pieces of evidence?

A. Yes, I did.

Q. When examining and comparing those two pieces of

evidence, based on those examinations and comparisons, what, if anything, did you conclude about them?

A. Based upon the significant agreement of the individual microscopic marks I saw in the land impressions on specimen Q-8 and specimen Q-12, that they were identified as having been fired from the same firearm.

Q. And again, you issued that conclusion with a degree of practical certainty?

A. That is correct.

Q. And, Mr. Webb --

THE COURT: With respect to these conclusions, this conclusion you have just stated and the other conclusions which I guess you are about to state --

THE WITNESS: Yes, sir.

THE COURT: -- did you follow the procedures and the methodology and the standards that you have described over the last couple of hours?

THE WITNESS: Yes, sir.

BY MS. HACKWORTH:

Q. And with respect to the cartridge cases in this case, Mr. Webb, did you examine a cartridge case retrieved from a white Land Rover designated by you as Q-9?

A. Yes, I did.

Q. And did you also examine two cartridge cases retrieved from Weeyums Philly Style designated by you as Q-14 and Q-15?

A. That is correct.
Q. Did you compare those pieces of evidence?
A. Yes, I did.
Q. What, if any, conclusions did you reach based on your examinations and comparisons?
A. Comparing those two items again, there was significant agreement in the individual marks between Q-9 and between Q-14, Q-9 and Q-15, and therefore those items were identified as having been fired in the same firearm.
Q. And again that conclusion is based upon a degree of practical certainty as you defined it and testified about here today?
A. That is correct.
MS. HACKWORTH: That's all we have, Your Honor. Thank you.
THE COURT: While I can do this forever, I realize not everybody can.
MS. JOHNSON: And, actually, Your Honor, I was going to ask for maybe five minutes before we start the cross. I think we can fit the cross in before lunch, if that works for the Court?
THE COURT: Before lunch would mean in two minutes.
MS. JOHNSON: Okay. Then we cannot, and I'm happy to eat and have more energy when I come back.

THE COURT: No, we will just change lunchtime.

MS. JOHNSON: Okay.

THE COURT: But let's take a short break. Let's take ten minutes. Be back in ten minutes, and we will do the cross then.

MS. JOHNSON: Great. Thank you.

THE COURT: We will be in recess.

(A recess is taken at 11:57 a.m.)

-- -- --

(In open court at 12:12 p.m.:)

THE COURT: Take the stand again, please.

THE WITNESS: Thank you.

THE COURT: All right. Proceed.

MS. JOHNSON: Thank you.

-- -- --

CROSS-EXAMINATION

BY MS. JOHNSON:

Q. Mr. Webb, let me start by asking you about your qualifications. You have a Bachelor's of Science in Geology?

A. That's correct.

Q. And then you have a Master's degree in Criminal Justice?

A. Yes, ma'am.

Q. And since 1997 or 1998, you have been working with law

enforcement agencies?
A. Yes, ma'am.
Q. And you have been with the FBI since 1998?
A. November of 1998.
Q. How many cases have you testified as a defense witness?
A. I have never been called by the defense.
Q. You discussed with us during your direct a problem that you had with the proficiency test last summer?
A. Yes.
Q. And if I understand your testimony, you made an incorrect measurement as to a land impression; is that correct?
A. That's correct.
Q. And that would be a mistake that relates to what's called a class characteristic; is that right?
A. That's correct.
Q. Now, as someone with a degree in Geology, I assume you are familiar with the ISI Index?
A. ISI Index? No, I'm not.
Q. The Thomson Reuters Web of Knowledge?
A. I have heard of that.
Q. Okay. You are aware that this is an index of scientific publications from around the world?
A. My understanding, it's a company that does basically -- it's like a data mining company that did 13 billion in

revenues last year.
Q. But that was not my question. My question was whether it's an index of scientific publications from around the world?
A. Right. That's the data mining.
Q. It contains thousands of scientific articles?
A. I believe so.
Q. Now, the journal published by the Association of Firearm and Toolmark Examiners -- and I will just call it AFTE for short -- that journal is not listed in the Thomson Reuters Web of Knowledge; is that right?
A. I am not aware of that.
Q. Okay.
THE COURT: Is it Thomson Reuters or Thompson Reuters?
MS. JOHNSON: You know, you will have to excuse my accent, Judge. I am probably mispronouncing it. I think you are right.
THE COURT: That's the publication company; right?
MS. JOHNSON: Yes, yes, thank you.
And just to warn you, I am going to mispronounce other words because they are very technical.
THE COURT: Well, Reuters is the news agency. It's been around forever.
MS. JOHNSON: Yes, yes.

THE COURT: It got acquired by Thomson.

THE WITNESS: It's a subsidiary.

MS. JOHNSON: Yes.

BY MS. JOHNSON:

Q. Now, the *AFTE Journal* is a trade magazine; is that right?

A. I would not characterize it as such.

Q. Well, let me ask you, is it available to the general scientific community?

A. Yes, it is.

Q. I went onto Google Scholar, would I be able to pull up articles?

A. Google Scholar? I do not know.

Q. You do know that the general scientific community researches under Google Scholar?

A. I don't know that that's a standard, but I'm sure it's a resource that you can use.

Q. Okay. But sitting here today, you cannot tell me whether *AFTE Journal* articles are listed in Google Scholar?

A. They are in the Library of Congress, but I don't know if they are Google Scholar.

Q. And if I understood your testimony during direct, the so-called peer review of the *AFTE Journal* is done by the *AFTE Journal* editorial board; is that right?

A. Correct.

Q. Now, the members of AFTE are law enforcement; is that right?
A. I don't know that all of them are law enforcement, no.
Q. Okay. Now, you can only be a member of AFTE if you derive a substantial portion of your livelihood from the examination, identification and evaluation of firearms or toolmarks?
A. To be a member, yes, that is correct.
Q. Now, when you are looking at shell casings or at bullet fragments, you told the Court you want to look first for class characteristics; is that right?
A. That's correct.
Q. Now, class characteristics originate generally in the design phase?
A. That's fair to say, the design phase of the tool.
Q. Right. So this could include the diameter; is that right?
A. Yes.
Q. The direction of the twist?
A. Correct.
Q. The number of land and groove impressions?
A. Yes.
Q. The width of the land and groove impressions?
A. Yes.
Q. And class characteristics cover a wide variety, if we

are speaking of bullets, of bullets?
A. I'm sorry, can you --
Q. Class characteristics can cover a wide variety of bullets?
A. There are many class characteristics for different rifle barrels, bullets fired from rifle barrels. Is that --
Q. No. My question has to do more when you see class characteristics, a lot of the same bullets can share the same class characteristics?
A. Bullets fired from the same firearm would share the same class characteristics, that's correct.
Q. Bullets fired from different firearms could share the same class characteristics?
A. Oh, yes.
Q. So a wide variety of bullets can share class characteristics?
A. Yes.
Q. Now, for the samples at issue in this case, the Q-8, the bullet fragment from the Land Rover, and the Q-12, the bullet fragment from the Weeyums Sandwich Shop, you found that they shared some class characteristics?
A. That's correct.
Q. You noted in your report that they were both .38 caliber 9-millimeter bullet jackets?
A. That's correct.

Q. And you noted that they were fired from a barrel with a right twist?
A. May I refer to my notes just to confirm?
Q. Sure.
A. Thank you.
Now, Q-12?
Q. You found --
A. Six lands and grooves, right twist.
Q. Correct. And how about Q-8?
A. Q-8 was also fired from a barrel rifle with six lands and grooves with a right-hand twist.
Q. Now, there are a number of firearms that could have imparted the class characteristics that you noted in your report for Q-8 and Q-12?
A. Yes.
Q. And you mentioned the GRC database, the General Rifling Characteristics database?
A. Yes, I did.
Q. So when you ran this information through the GRC database, it identified a number of firearms that include class characteristics like those present in those two samples?
A. Yes.
Q. How many firearms were identified when you ran the samples through the GRC database?

A. What do you mean by identified?
Q. The printout you got back from GRC say for Q-8, how many firearms did you get on that -- on that query?
A. I do not have my notes in front of me, so I could not tell you without referring to them.
Q. But you attached those printouts to your report; correct?
A. No. The reports were submitted for discovery back in April. That is not directly part of the report.
Q. That's not what, I'm sorry?
A. That's not a part of the report itself, the notes that I took.
Q. I'm going to show you the report dated February 2nd of 2012 that was produced in discovery.
A. Thank you.
Q. Is that the report that you generated?
A. Yes, it is.
Q. Okay. And when I was asking you about the information that you got back from the GRC database, is that included in that report?
A. Yes, it is.
Q. Okay. So as to the Q-8 sample, how many firearms were returned as possible matches of class characteristics?
A. There were 72 firearms with similar class characteristics.

Q. I'm going to ask you the same question for the Weeyums Philly Steaks, the Q-12.

You also received information through the GRC database as to a number of firearms that had the same class characteristics; is that right?

A. That's correct.

Q. And for that sample, how many firearms had the same class characteristics?

A. There were 79 firearms with the same class characteristics.

Q. Okay. So in one report it identifies 72 firearms, the second report identified 79 firearms, but it didn't identify all the same firearms. Am I correct?

A. All of the same firearms? There are many of the same firearms.

Q. All?

A. No. The numbers are different, so clearly there is a different return.

Q. Okay. Thank you. Let me take those back from you.

By the way, does it look like I have your complete reports?

A. It appears so.

Q. Okay. And you still have Government's Exhibits 1, 2 and 3 up there with you?

A. That is correct.

Q. Now, if you look at the bottom of those exhibits, does that indicate that those were the laboratory standards in place from August of 2011 until March 6 of 2012?
A. That is correct.
Q. But it's your understanding that Government's Exhibits 1, 2 and 3 would not be SOPs in place at the time that you conducted the analysis in this case?
A. That is not correct.
Q. Okay. So were they in place when you conducted the analysis?
A. These were in place when I conducted the analysis. The documentation that we were referring to earlier that I could not find in this document is actually in a separate document.
Q. Okay. So it's a matter of we have -- or the government hasn't presented the -- an additional document that speaks to the issue you testified about?
A. Right. You have the document in the files for discovery. They just were not submitted yet today.
Q. Okay. The Powerpoint that we have been looking at this morning, did you prepare that Powerpoint?
A. I worked on that Powerpoint. I did not prepare it from scratch, but I augmented.
Q. Okay. Are you personally familiar with all the assertions that that Powerpoint?

A. Yes.
Q. We talked a little bit but not a whole lot about subclass characteristics, so I want to ask you about that.
Subclass characteristics are shared by a smaller subset of the tools; is that right?
A. That's correct.
Q. So the big category is class characteristics; right?
A. Yes.
Q. And then we have kind of like an inverted triangle, then we have subclass characteristics?
A. Subclass may or may not exist, but that would be --
Q. A second category?
A. Yes.
Q. A smaller category?
A. Possibly, yes.
Q. And subclass characteristics are produced incidental to manufacture?
A. Yes.
Q. They generally originate in the production phase?
A. The manufacturing production, yes.
Q. Okay. And examples could be striations or scratches imparted to work pieces during reaming; right?
A. During reaming?
Q. Yes.
A. No, I would not agree with that.

Q. Okay. Could they be imparted to work pieces during broaching?
A. During broaching, yes.
Q. During blanking?
A. During blanking, possibly.
Q. And actually, so the record is clear, broaching is when you use a tool to remove material; right?
A. That's correct.
Q. So, for example, when they are manufacturing a barrel, they will reuse a tool to remove the material from the inside?
A. Yes.
Q. And blanking is a metal working process to form the rough shape of a metal work piece?
A. It's one of the first processes of manufacturing, it can be.
Q. What else can cause subclass characteristics?
A. In firearms identification?
Q. In firearms manufacture.
A. Yes. The broaching that you spoke about is one of the most common sources of subclass characteristics.

Now, broaching can also happen on the breech face of a slide. It's not just on a barrel.

Q. Now, subclass characteristics can create a marking on perhaps hundreds of weapons in a given production run?

A. I am not sure there is a basis for that that I can agree with that, for hundreds of weapons.
Q. Now, are you familiar with the term family resemblance in the firearm literature?
A. Family resemblance?
Q. Yes.
A. I do not use that term, so I'm not sure how you are using it.
Q. Are you familiar with the concept that firearms made by the same tool or machine will bear a strong resemblance to each other?
A. We would have to further define strong resemblance.
Q. Well, some people call it subclass carryover. Have you heard that term?
A. Class characteristics will absolutely have a strong resemblance. Subclass, it's possible, which is why I was referring to the consecutive manufacturing studies.
Q. So let me ask you again, are you familiar then with the term subclass carryover?
A. Subclass carryover, yes.
Q. And there are a number of articles published that talk about how subclass carryover can be shared by a number of weapons produced in the same production line?
A. There are articles, yes.
Q. Now, in your report, when you were discussing the Q-8

bullet fragment from the Land Rover and the Q-12 bullet fragment from the Weeyums Sandwich Shop, you did not note the existence of any subclass characteristics; is that right?

A. The area that I effected the identification in is not from subclass characteristics.

Q. So you did not see any subclass characteristics?

A. No.

Q. Now, is there a directory or a research book in your field that identifies all of the subclass characteristics that are out there?

A. There are certainly directories of the research that has been done on subclass characteristics, not only in firearms and case work, but as well as manufacturing methods that may be prone to create subclass marks.

Q. Okay. So there is a book you say?

A. No. References.

Q. Okay, there are references. But is there a book that compiles all of the subclass characteristics?

A. Not that I'm aware of, no.

Q. Okay. Is there a reference that describes subclass characteristics for every single gun manufacturer?

A. No.

Q. Are there any objective standards to determine what constitutes a subclass characteristic?

A. Objective standards? I'm sorry, could you restate?

Q. Are there objective standards to determine what constitutes a subclass characteristic?
A. There is an understanding of how they are formed.
Q. Right.
A. And that can be observed during the manufacturing.
Q. Right. But that is sort of beauty is in the eye of the beholder. This is in the eye of the examiner; right?
A. The examiner would observe the manufacturing process.
Q. Right.
A. Yes.
Q. But there is no -- well, you already told us there is no research book out there that talks about all the subclass characteristics that can be found?
A. No. Just the articles in the literature.
Q. Okay. So when an examiner concludes that something is a subclass characteristic, it's based on their subjective opinion?
A. The -- could you restate that?
Q. When an examiner concludes that something is a subclass characteristic, this is based on their subjective opinion?
A. Well, objectively an examiner would know how these marks are being produced and where they are being produced. The level of agreement of these marks would be a subjective opinion. But their existence could be observed and agreed

upon in a more objective manner.
Q. Okay. So let me go to what you just said. You said an examiner would know how subclass characteristics are being produced?
A. Yes.
Q. So in your opinion, it would be important for an examiner to know the various fabrication techniques used in the manufacture of the specific firearm at issue in the case?
A. The specific firearm in the case would be good, but a more general knowledge of how firearms are manufactured is essential.
Q. Now, would you agree with me that in the AFTE literature, examiners are warned that it is critical to know the specific fabrication technique before you can dismiss subclass characteristics?
A. Agreed.
Q. So with that in mind, your opinion in this case is two bullets were fired in the same barrel; right?
A. That is correct.
Q. How was this particular barrel manufactured?
A. This barrel, I do not know.
Q. How was this particular breech face manufactured?
A. The breech face would not have marked the bullet.
Q. That was not my question. How was it manufactured?

A. The breech face of the firearm that was not submitted?
Q. Right.
A. I don't know.
Q. And the breech face would have -- would leave a marking on the shell casings?
A. Correct.
Q. And you had shell casings in this case as well; right?
A. Cartridge cases, yes.
Q. Yes. And so your answer is you don't know how this particular breech face was manufactured?
A. No.
Q. You don't know how the particular -- or do you know how the particular extractor was manufactured?
A. The extractor?
Q. Correct.
I need you to answer outloud.
A. No, I do not.
Q. Do you know how the particular ejector was manufactured?
A. No, I do not.
Q. Do you know how the particular firing pin was manufactured?
A. No, I do not.
Q. Is it acceptable to base a conclusion of correspondence or individualization on subclass characteristics?
A. Is it acceptable?

Q. Correct.
A. No, it is not.
Q. Now, in the evidence you examined, you made no notation of subclass characteristics; is that right?
A. I do not know. I would have to refer to my notes again.
Q. Okay. You did not examine bullets fired from barrels manufactured immediately before the suspect barrel?
A. No, I did not.
Q. You did not examine bullets fired from the barrels manufactured immediately after the suspect barrel being manufactured?
A. No, I did not.
Q. Do you know how long the manufacturing tool used to make the barrel or barrels in this case were used at the manufacturing plant?
A. No.
Q. Do you know what type of lubrication would have been used during the fabrication of this component?
A. No, I don't.
Q. Do you have any idea how many similar barrels were manufactured by the manufacturer using the same tool and die combination?
A. No, I do not.
Q. Let's go to the third category of markings made by

toolmarks, the individual characteristics. If I understand your testimony, individual characteristics are unique to a particular firearm?

A. Individual to a particular firearm.

Q. I'm sorry, I didn't hear?

A. Individual to a particular firearm.

Q. Okay. And individual characteristics can be from irregularities in the production process; is that right?

A. That is correct.

Q. Or incidental to the way the firearm is used?

A. That is correct.

Q. And your theory is that individual characteristics can only be made by one firearm?

A. The individual characteristics of a firearm?

Q. Yeah. Or I should not say your theory. Your hypothesis is that individual characteristics can only be made by one firearm?

A. Well, two different firearms or two different tools will not create individual characteristics in sufficient agreement such that a qualified examiner would create false ID opinion. False identification, excuse me.

Q. Okay. Is there a directory or research book in your field that identifies all of the individual characteristics for a particular firearm?

A. No, there is not.

Q. So when you conclude that something is an individual characteristic, this is based on your subjective opinion?
A. It's based upon the theory of identification, the research that's been done to validate that theory, and upon the procedures and methods I applied to the case.
Q. So would you agree with the proposition that currently the interpretation of individualization or identification is subjective in nature?
A. Yes.
Q. Have you ever deliberately compared striated toolmarks that you knew were made by different tools?
A. Yes.
Q. How many of these comparisons have you made?
A. Hundreds, if not thousands.
Q. And what was the purpose of making comparisons of this sort?
A. The reason we conduct comparisons of known matches and known nonmatches is to develop a knowledge of what that significant agreement is that we talk about in identification.

So we will look at known nonmatches and see the level of agreement that may exist and the level of disagreement that may exist, and then compare that with known matches for the same evaluation.
Q. So what is the best known not matched -- I'm sorry, let

me start over.

What is the best known nonmatch agreement that you have personally compared?

A. Specifically?

Q. Yes.

A. For barrels?

Q. What's that?

A. For barrels?

Q. Well, it would be for tools, right. But let's say for bullets.

A. Sure, sure. Well, I compared a pair of consecutively-made Ruger revolver barrels. These were five barrels that I intercompared, and there actually was subclass marks in the groove impression of these bullets. However, when I examined the land impressions on them, there was sufficient agreement between those to tell the difference between the five consecutive barrels.

But knowing that there was that subclass in an area where it did not effect an identification, I would consider that one of the best known nonmatches that I have ever looked at.

Q. Right. But in terms of counting the shared markings, because you look at the striae, right, and you look at the lines and you can see how many you can count, what is the best nonmatch that you have seen?

A. That's incorrect, we do not count.
Q. Well, out in the West Coast they count.
A. Okay.
Q. I mean, you know about CMS; right?
A. Yes.
Q. Consecutive-matching striae?
A. Yes.
Q. And you are aware that that is a counting system that they use; right?
A. That is a system that some use in California, I believe.
Q. Okay. But you personally do not use it?
A. No.
Q. Okay. So when you are comparing these points of comparison, you don't base it on a point system?
A. No.
Q. In California they do.
A. My understanding is there are some practitioners who do.
Q. Now, you keep mentioning sufficient agreement, so let's spend some time talking about that.
The theory behind firearm identification is that what you conclude to be individual characteristics are unique to a particular firearm; is that right?
A. Individual to a particular firearm.

Q. So if I fire a blue gun, it should always leave the same markings in the bullet jacket and the cartridge case per your hypothesis; right?
A. If you fire a particular gun, would those marks be persistent? Is that what you mean?
Q. I am asking you if it would always leave the same markings?
A. No, it may not always leave the same markings. Class characteristics, yes. Individual, perhaps not.
Q. So you can have a situation with bullets fired from the same barrel that will not share individual characteristics?
A. Oh, sure.
Q. And you can have situations of bullets fired from the same barrel that will share characteristics?
A. Individual and class, correct.
Q. So you told us you don't count the striae, so instead you use a standard called sufficient agreement; right?
A. Correct.
Q. And the definition is agreement is significant when it exceeds the best agreement demonstrated between toolmarks known to have been produced by different tools and is consistent with agreement demonstrated by toolmarks known to have been produced by the same tool. Is that a fair summary?

A. That's correct.
Q. Okay. So let's say you and I are toolmark examiners, and you examined some bullets and reached a conclusion of identification, and I examine the same bullets and reach a conclusion of inconclusive. At that point you and I are supposed to confer and discuss it; right?
A. Correct.
Q. And then one of us has to convince the other of who is right?
A. I think that's a poor characterization.
Q. What is that?
A. I think that's a poor characterization of the process.
Q. Well, we have to reach sufficient agreement?
A. For an identification --
Q. Right.
A. -- two qualified examiners must observe sufficient agreement.
Q. Right. If you and I cannot agree, then it's an inconclusive?
A. That is correct.
Q. Now, going to the bullet jackets in this case, what was your level of agreement?
A. My level of agreement?
Q. Yes.
A. Could you define that?

Q. Well, I think you mentioned practical certainty?
A. Yes.
Q. Okay. So is practical certainty 80 percent?
A. We do not assign a percentage to practical certainty.
Q. So it could be one percent?
A. Again, we do not assign a percentage.
Q. And the reason you don't assign a percentage is because you do not know the error rate from a statistical standpoint; is that right?
A. The reason I don't assign a percentage is it's not accepted in the relevant scientific community and it's not in any SOP that I am aware of.
Q. Are you aware of reports from the National Academy of Science that have indicated concern that error rates have not been established in firearm and toolmark identifications?
A. Yes, I am.
Q. During the direct testimony, the Court was asking you a question or some questions regarding presence or absence of a firearm. I want to go over some of your laboratory procedures and ask you some questions about that.

When you have bullets and shell casings and firearms, the first thing you do is you test fire the firearm; is that right?

A. No, that's not correct.
Q. Well, I guess the first step is you obtain appropriate ammunition for the test firing?
A. No, that's not correct.
Q. Do you still have Government's Exhibit No. 2 in front of you?
A. Yes, ma'am.
Q. I'm going to ask you to go to the second page.
Actually, I'm sorry, page number three, Item 6.3, examination of cartridge cases, shotshell casings when a firearm is submitted for comparison. Do you see that?
A. Yes.
Q. What is the first step?
A. The first step, as it's listed here, is obtain appropriate ammunition for the test firing of a firearm.
Q. Okay. What is the second step?
A. The second step is test fire the firearm using at least two shots, in parentheses, using established safety protocols for test firing.
Q. What is the third step?
A. Place test-fired specimens in an appropriately labeled test specimen envelope.
Q. And the fourth step is that you compare the test-fired cartridge cases to the evidence using a comparison microscope; is that right?

A. That's correct.
Q. And the idea behind that is that you can develop a sample to compare with the shell casings that have been obtained as part of the evidence; is that right?
A. That's correct.
Q. And so on the one side you have a known sample, and on the other side you have the question sample. Is that right?
A. That is an examination we can perform, yes, sure.
Q. And that way you can identify class characteristics, subclass characteristics and individual characteristics; is that right?
A. Yes.
Q. Okay. Now, in this case you did not have a firearm, is that correct, that was submitted -- and let me rephrase that because I do know you do have two firearms.

But you do not believe that the shell casings were fired from the submitted firearms; is that correct?
A. That's correct.
Q. Now, you -- and I want to clarify this. Did you say that in 80 to 85 percent of your cases, no firearm is submitted?
A. It's a ballpark. I have never done a count, but that seems like a fair number.
Q. Okay. And in those 80 to 85 percent of your cases, do

all those cases involve bullets or shell casings?
A. Again, that would be a fair estimate.
Q. Okay. Now, you mentioned during your direct testimony the *Natson* case out of the Middle District of Georgia; do you recall that?
A. Yes, I do.
Q. And you are familiar with that case?
A. A little, yes.
Q. And you do know that in that case there was a firearm submitted along with bullets? You are aware of that; right?
A. I am not aware of the particulars, but that sounds accurate.
Q. Okay. But in that case, the FBI analyst had known samples from which to work with; right?
A. Yes.
Q. Now, you mentioned a number of validity tests during your direct testimony. I want to ask you some questions about those.
Are you familiar with the design of those experiments?
A. With some of them, yes.
Q. Are you familiar with the working hypothesis of those experiments?
A. With various ones, yes.
Q. On the first one that you discussed, the Brundage in 1998, how many guns were involved in that study?

A. The Brundage study involved ten consecutively-made Ruger firearms -- or excuse me, Ruger barrels.
Q. And those same ten consecutive firearms were used in the Hamby study that you cited as well?
A. That's correct.
Q. It's the same ten guns?
A. Yes.
Q. How many firearms were used in the DeFrance study?
A. DeFrance, it was five firearms.
Q. How many firearms were used in the Bunch and Murphy study?
A. That was ten Glock slides.
Q. And those are different from the Brundage and Hamby, or is it the same?
A. Yes. Although they were consecutively-manufactured, it was a different make and model of firearm.
Q. How many guns were tested in the Smith study?
A. I believe that was ten as well.
Q. Okay. And those are different from the Brundage, or is it the same ten?
A. They were Rugers, but I believe a different model of Ruger.
Q. Are you 100 percent positive?
A. I am not.
Q. Okay. In the Fadul Glock study of 2011, how many

weapons were tested?
A. I don't recall how many Glock barrels were used for that study.
Q. How about the Weller study?
A. The Weller, it was ten.
Q. And were those ten different from the ten-gun studies we have talked about before?
A. That's my understanding, yes.
Q. Okay. So by your validation studies, we have testing of approximately 45 firearms? I just added them.
A. Approximately, sure.
Q. Okay. Now, you know there are three hundred million guns in the U.S.?
A. I do not know that.
Q. Do you still have your two reports in front of you --
A. Yes, ma'am.
Q. -- relating to the case?
Let me start by asking you about report 91A-AT-106886. That is the report relating to the Land Rover evidence. Do you have it in front of you?
A. Yes, ma'am.
Q. Okay. If you could flip to the -- towards the back of your report -- and if I may show you where I want to go, it may make it quicker.
A. Okay.

Q. Oh, you don't have the full discovery package. Let me get you my package.
A. Thank you.
Q. So I want to ask you about this document. It's entitled 5-11-2011, it's addressed to the laboratory from Cynthia Myers, and it gives you a synopsis of the case.
Is that part of the materials that you received when the evidence was submitted to your lab?
A. Yes, it is.
Q. Okay. And is that a standard communication that you would have received when you received a package with some evidence?
A. Yes, from within the FBI, that is correct.
Q. And I want to refer you to the second page of that communication. Is that report giving you details of the attempted bank robbery of the Wells Fargo Bank? Is it giving you some information concerning the Wells Fargo Bank?
A. Yes.
Q. Okay. And towards the bottom of the report, you were told that a witness at the bank recognized one of the robbers as Mr. Jackson?
A. It does say that at the bottom of page two.
Q. Yes. And you were told that a firearm was fired from the Land Rover?

A. It doesn't say that specifically.
Q. What does it say, referring --
A. I see the paragraph you are talking about, this paragraph.
Q. Yes. Tell me what -- I'm getting old, I can't read it, so what does it say?
A. As police officer approached the vehicle, one of the robbers fired a shot at the officer.
But it does not place one of the robbers in the Land Rover, just adjacent to.
Q. Okay. Thank you.
And then farther down page two, you are told that investigation revealed that Durham and Jackson are responsible for the 11-20-2010 robbery of the Weeyums Philly Steak Restaurant. Does it say that towards the bottom of page two?
A. Of page two? No.
Q. Oh, I'm sorry, I have to go to page three.
Oh, I'm sorry, you are right. It's on page three. Does it tell you that investigation revealed that Durham and Jackson are responsible for the 11-20-2010 robbery of the Weeyums Philly Steak Restaurant?
A. That's what the author of this communication wrote.
Q. And it gives you the address of the restaurant?
A. Yes.

Q. And it tells you that the robber shot an employee in the arm during the robbery?
A. Yes.
Q. Okay. Thank you.
I want to ask you about the next report also dated February 2nd of 2012 that's identified by your lab at 192B-AT-107035. I know you have the short version there, so let me give you the copy from discovery.
And there is a communication from the lab to Cynthia Myers again. Is that right?
A. No. That is from Cynthia Myers to the laboratory.
Q. Right. And it's dated 6-2-2011; is that right?
A. Yes, that's correct.
Q. And again this is a standard communication when you receive evidence in the lab?
A. Correct.
Q. Let me make sure I am on the right line.
Okay. And when it gives you the details, it tells you that on November 20, 2010, Durham and Jackson robbed a Weeyums Philly Style Restaurant; is that right?
A. That is what the author wrote in this document, yes.
Q. And if you go to the next page, the second paragraph tells you that Durham, Jackson and Rogers and Mark Zanders are in federal custody for the bank robbery of the Wells Fargo Bank; is that right?

A. That is what it says.
Q. Thank you.
MS. JOHNSON: If I may have one moment, Your Honor? That's all I have. Thank you.
THE COURT: Mr. Hollingsworth, do you have anything?
MR. HOLLINGSWORTH: Judge, I don't have anything to ask.
THE COURT: Any redirect?
MS. HACKWORTH: Your Honor, I will have about five or seven minutes of redirect.
THE COURT: Go ahead.

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REDIRECT EXAMINATION

BY MS. HACKWORTH:
Q. Mr. Webb, I will begin at the end where Ms. Johnson left off.
You provided some information about communications you received about the nature of the case?
A. Yes.
Q. What is the purpose of those types of communications and that information?
A. The purpose of the electronic communication that we receive on case work is to ensure that we are receiving the proper evidence for the case and that administratively the

case is being handled properly.

So there is volumes of information in that document, case files, titles, identifications, evidence numbers, that has to be cross-checked with items received to make sure that there is integrity of the evidence.

The other part is there is typically a short dictation of the case, and part of this is to explain the examinations that are requested.

The other benefit that comes from that is oftentimes in the laboratory, we will have perspective of useful examinations for that case that the case agent might not have.

Q. Mr. Webb, Ms. Johnson also asked you about your familiarity with a report from the National Academy of Sciences. Do you remember that?

A. Yes.

Q. And I want to make sure that I'm clear. Were you asked about the forensic science report from the National Academy specifically?

A. It wasn't clear which report.

Q. Okay. Let me ask you a more general question. Are you familiar with a National Academy of Science report that is titled in part *Strengthening Forensic Science* that came out in 2009?

A. Yes, I am.

Q. And what is your understanding of the purpose of that report?

A. The purpose of that committee and report was to do a broad overview of the impression forensic sciences and other forensic sciences. Part of this was to assess how those sciences are handled in comparison with DNA analysis.

DNA analysis has the support and mandate of Congress, but none of the other sciences do. So there was an attempt to discern if this was possible and evaluate what could be done.

The recommendations in general -- there were thirteen recommendations, but in general they suggested the formation of a new federal organization to oversee the other forensic sciences, promote research, promote education, conduct analyses, set standards, various other requirements, and basically enclose the rest of the forensic fields in that manner.

Q. You testified on cross that it was your understanding that in either that or another report that I will reference, that the academy critiqued the fact that there was no error rate established for firearms identification?

A. I don't know that it said no error rate established.

Q. Okay. Well, there was one -- a critique was lodged regarding error rates as relates to firearms identification?

A. Right, I believe so.
Q. With respect to that 2009 *Strengthening Forensic Science* report, what, if any, critiques were lodged regarding firearms identification, to your knowledge?
A. Essentially, although there was the acknowledgment that individual marks may exist that allow an examiner to discriminate between tools, the general consensus regarding firearms evidence is that more research should be conducted, more objective research, analytical research using instrumentation, and I believe statistics were also supporting.
Q. To your knowledge and based on your understanding of that report, were there any conclusions either way about the admissibility of firearms evidence in a legal proceeding?
A. No. No, there were not.
Q. Now, are you familiar with a 2008 report that was also published by the National Academy of Sciences?
A. Yes, I am.
Q. And am I correct that the report is titled at least in part *Ballistics Imaging*?
A. Yes.
Q. And what was the purpose of that report, based on your understanding?
A. My understanding of that report was to conduct a survey

of ballistic imaging systems used in the firearms field at the time and to see if a nationwide ballistic imaging system was feasible.

Q. And based on your understanding of the purpose of that report, were any critiques lodged regarding firearms identification in that 2008 report?

A. In my understanding, there is a statement in that report that questions the repeatability and reproducibility of individual marks.

Q. And despite that particular statement, were any conclusions made or drawn about the admissibility of firearms evidence in a legal proceeding?

A. No conclusions were drawn in that report. However, the chair of that committee did issue in an affidavit later that that report has no bearing on firearms identification and its admissibility.

Q. I want to also ask you about -- you were asked on cross about sequencing of firearms evidence or firing of bullets or shell casings in this case, your knowledge of it. Do you remember that?

A. The order of progression, yes.

Q. Correct. Ms. Johnson I believe asked you do you know what bullet was fired before the bullets you tested?

A. Oh, that, yes, I recall.

Q. And I believe she may have also asked you do you know

what was fired after the bullets you tested, for example?
A. Correct. No, I do not.
Q. And you answered no, that you didn't know the order of sequencing?
A. That's correct.
Q. Was that information provided to you by even electronic communications to the best your recollection or knowledge?
A. No, it was not.
Q. So all you know is that you have evidence from certain locations?
A. Exactly.
Q. And finally, you were asked about subclass characteristics. That's one of the main things that Ms. Johnson started off with in her cross-examination. Do you remember that?
A. Yes, I do.
Q. How is it that you become aware of subclass characteristics in a particular piece of evidence if they exist?
A. An examiner gains knowledge of the existence of subclass characteristics the same way anybody else would gain knowledge about any kind of scientific endeavor. It's research, studying the literature out there.
There have been many studies on subclass characteristics

and where they have been seen in manufacturing, where they have been seen in case work, and caution examiners where to make -- where to effect identifications on toolmarks and what areas to avoid.

So did a lot of research and reading to get a base of that information, and then took advantage of these consecutive barrel tests, examining items myself to see what level of agreement was in these areas where subclass marks can be generated, and then what level of agreement would be in the areas where we actually effect an identification and how that differs.

Q. And what does that mean? I want to make sure we are all on the same page, Mr. Webb. You say you are looking for areas where an identification can be made. Is that different from where subclass characteristics would be found?

A. Absolutely.

Q. Okay. Explain that. What does that mean?

A. On a bullet, the rifling process we talked about earlier, the cut rifling can leave subclass marks in the groove of a barrel. The groove is the recessed area in between the raised lands. So there can be subclass marks within the groove of a broach or cut barrel.

When we effect an identification as I did on this case, we look at the land impressions. The way the land impressions were formed is they are drilled and reamed,

which means the tool is working in a round fashion up the bore of the barrel, and then the bullet will pass perpendicular to those tool marks, those randomly-created toolmarks.

So that area does not and has not, as far as I know in all the literature and research that's been done, has never produced subclass marks. So when identifications are made on bullets, it's strictly in the land impressions and not the groove impressions.

Q. So based on what you just shared with us, Mr. Webb, is it a correct statement that subclass characteristics are irrelevant for purposes of making an identification?

A. They are not irrelevant. An examiner needs to be aware of them and make sure that they are effecting identification on areas that are not subclass.

But any identification made in this case and other cases that I have worked, the subclass characteristics did not take a part of that identification. That information was not used to render an opinion.

Q. And that is the case in this particular examination that you did for this particular case; right?

A. Yes.

MS. HACKWORTH: Thank you, Mr. Webb.

Nothing further, Your Honor.

MS. JOHNSON: Very briefly, Your Honor?

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RECROSS-EXAMINATION

BY MS. JOHNSON:

Q. The prosecutor asked you about the relevance of subclass characteristics. Would you agree with me that there is always a risk of confusing subclass and individual characteristics?

A. Considering that subclass characteristics are not always produced, no, I would not agree with you.

Q. So you don't think there is a danger of confusing subclass and individual characteristics?

A. There is some manufacturing marks that do not lend themselves to creation of subclass marks, subclass characteristics. So in those instances it would not be as important.

Q. Right. But on manufacturers that do produce subclass characteristics, in your opinion, does an examiner have to be concerned with subclass characteristics?

A. Absolutely.

Q. Okay. And is there a risk of confusing subclass with individual characteristics if you are not careful?

A. If an examiner is qualified and working under established protocols such as we do in the FBI laboratory and is aware of the literature, I think that risk is minimal.

MS. JOHNSON: Okay. Thank you.

THE COURT: All right. I assume Mr. Webb is going to stay with us; is that right?

MS. HACKWORTH: Yes, Your Honor, that is correct.

THE COURT: Mr. Webb, you can step down. Thank you for your testimony.

THE WITNESS: Thank you.

THE COURT: Well, that's taken about four hours. How long -- I'm assuming we might not get done today at this rate.

MS. JOHNSON: Right. I expect my next witness, I don't think her direct is all that long. It's Dr. Carriquiry. I would say conservative I would say two hours.

My witness after that is longer.

THE COURT: So we are not going to get done today.

MS. JOHNSON: We can see how far we get.

THE COURT: I know, but this is really inconsiderate of the Court.

MS. JOHNSON: And it's completely my fault.

THE COURT: When did you know about these witnesses?

MS. JOHNSON: I had spoken with the witnesses for several -- probably for at least a month and a half.

I decided to retain them for the case in early July.

I advised the government that I intended to bring them in as witnesses. My intention originally was trial witnesses, but in light of the *Daubert* hearing, I decided to bring them in.

I probably made the decision to bring them in about two weeks ago for this hearing.

THE COURT: So why did we find out about it on Sunday?

MS. JOHNSON: The government knew they were coming in. It was a complete overlook on my part. I should have thought to alert the Court beforehand.

If you want to blame someone, blame me. It's completely my fault, Judge.

THE COURT: Well, I think it's unlikely we are going to finish today.

MS. JOHNSON: Yes.

THE COURT: So I think you ought to pick one of your witnesses, and we will check, we might do it tomorrow.

This is really not acceptable.

MS. JOHNSON: And, Judge, I take full responsibility. It's completely my fault. I should have alerted the Court beforehand, and for that, you know, I'm in the wrong, and I'm sorry.

THE COURT: All right. We are going to take one hour lunch break. We will see you back at 2:30.

(A recess is taken at 1:22 p.m.)

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Tuesday Afternoon Session

July 24, 2012

2:32 p.m.

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(In open court:)

THE COURT: All right. Call your witness, please.

MS. JOHNSON: Thank you.

We call Dr. Alicia Carriquiry to the stand.

THE COURT: Now, are you calling her as an expert?

MS. JOHNSON: Yes, I am.

THE COURT: So are we going to have a *Daubert* hearing on this witness as well?

MS. JOHNSON: The purpose of her testimony today is to help you assess the witness presented by the government.

THE COURT: I know, but she still has to be qualified.

MS. JOHNSON: Okay.

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ALICIA CARRIQUIRY

being first duly sworn by the Courtroom Deputy Clerk, testifies and says as follows:

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DIRECT EXAMINATION

BY MS. JOHNSON:

Q. Dr. Carriquiry, could you please tell us your full name?

A. My full name is Alicia Carriquiry. And shall I spell that for you? C-a-r-r-i-q-u-i-r-y.

Q. And what do you do?

A. I am a professor of statistics at Iowa State University.

Q. And so do you specialize in statistics?

A. Yes, that's what I do.

Q. Have you been retained by my office to work in this case?

A. Yes, I have.

Q. And are you being compensated for your work?

A. Yes, I am. I am being paid $250 an hour for a maximum of twenty hours, I believe.

Q. So if you spend more than twenty hours working on this case, you don't get paid for it?

A. I already spent more than twenty hours working on this case.

Q. Let's talk about your education and training. I understand you first attended the Universidad de la Republica in Uruguay, graduating in 1981?

A. Yes, with a degree in Engineering.

Q. And then in 1985, you received the Master's of Science degree in Animal Science from the University of Illinois?
A. Yes. It was in Animal Breeding and Genetics.
Q. In 1986 you received a Master of Science degree in Statistics from Iowa State University?
A. Yes.
Q. And then you received your Ph.D. in Statistics and Animal Science in 1989 from Iowa State University?
A. Correct.
Q. I want to ask you about your work experience. From your resume' I see you have taught at Iowa State University and at Duke University as a visiting professor?
A. That's correct.
Q. I see that you have also taught abroad at universities in Chile and Uruguay?
A. Yes. And in Mexico and in Brazil, several other places, yes.
Q. But you have mainly been based at Iowa State since 1990?
A. Yes.
Q. And I understand you have risen through the ranks at Iowa State from assistant professor to associate professor to professor and now to distinguished professor?
A. Yes, I have.

Q. Is that the highest level of attainment for professor at Iowa State University?
A. Yes, that is. There is nothing else that I can achieve.
Q. Okay. In your resume', I see you have also been involved in the external review committee for several universities?
A. Yes, I have.
Q. You have been involved in the external review committee with the University of Toronto in Canada?
A. Yes. The University of Toronto, Carnegie Mellon University, Harvard University, several other statistical programs, yes.
Q. I want to ask you about your editorial activities. Can you briefly summarize them for us?
A. I have been editor or associate editor of several journals in statistics. These are journals that we would consider top-tier journals. One that of them is *Statistical Sciences*. Another one is the journal, the *Annals of Applied Statistics*.

I am now editor in representation of one of the professional societies of the *Electronic Encyclopedia of Statistics*.
Q. You are also currently working on developing calibration equations for the CDC here in Atlanta?

A. Oh, yes. I have collaborated with several federal agencies. CDC is one of those.

Q. And I see you have written at least one paper for the FBI --

A. Yes.

Q. -- on bullet lead concentrations?

A. Yes. So we did -- in the late 1990s, we obtained funding from the FBI to try to determine whether we could establish probability of coincidental match in the case of bullet lead. So if you find two specimens and you declare chemically that they match, can you say that they have the same origin.

And it was just very similar to the problem that we are looking at today.

Q. Okay. And I'm going to get into that a little later after we qualify you.

A. Okay, fine.

Q. But I want to ask you about your service in national panels and committees and advisory boards. Are you currently a member of the Scientific Advisory Board for the Environmental Protection Agency?

A. Yes, I am.

Q. And when is that term set to expire?

A. Two years from now.

Q. And you have also done work with the National Academy of

Sciences?
A. I have done a lot of work with the National Academy of Sciences, yes.
Q. What is the National Academy of Sciences?
A. The National Academy of Sciences is a nonprofit organization that was chartered by President Lincoln back in the 1800s, and it is charged with pretty much being the arbiter of scientific issues for the United States.
So when Congress has questions about the science of anything or federal agencies have questions, they go to the National Academy of Sciences for the academy to provide what typically is the final answer to some issue.
Q. And in looking through your resume', you have worked on about nine or ten different projects with the National Academy of Sciences over the last ten years or so?
A. Yes. In fact, I'm a member of a couple of standing committees in the National Academy of Sciences, and I am chairing one of the committees currently.
Q. Okay. Let me show you what has been previously marked for identification purposes as Defendant's Exhibit No. 1.
Is this a copy of the resume' that you provided to me?
A. Yes.
Q. Okay. And does it accurately set out your qualifications, academically and professionally?
A. Yes. There is a couple of papers that were recently

accepted for publication that are not listed here, so --
Q. Because that resume' dates back to May of 2012; right?
A. Right.
Q. Okay. So you have a version including additional papers that have --
A. Yes. And another grant from the National Science Foundation and a few other things.
Q. Okay. But that document in general fairly characterizes your credentials?
A. Yes, it does.
Q. Okay.
MS. JOHNSON: I would move Defense Exhibit No. 1 into evidence.
THE COURT: Any objection?
MS. HACKWORTH: No objection for this hearing, Your Honor.
THE COURT: It's admitted.
BY MS. JOHNSON:
Q. There is one project mentioned on your resume' that you did for the National Academy of Sciences that I want to ask you about.
Were you part of the Committee on Assessing the Technical Feasibility of a National Ballistics Database from 2004 to 2007?
A. Yes, I was.

Q. How did you come to be involved with this committee?
A. The National Academy of Sciences assembled a panel of experts in the areas that were thought to be relevant for the question at hand, and the panel of experts included image scientists, included computer science people, included firearms examiners, included engineers, materials scientists, and it included several statisticians.
Q. As part of your work for this ballistics committee, what type of materials did you review?
A. Well, we pretty much reviewed the existing literature in terms of all the relevant literature that included much of the ballistics -- what we would call ballistics literature, if you will.
Q. And what specifically did the work on this committee entail?
A. Well, like most other Academy of Sciences panels, the work -- typically the Academy of Sciences doesn't create data. It reviews the science that is available to answer a specific question.

In this case, the question was is it feasible to create a national reference database so that when bullets are recovered from a crime scene, for example, they could go back and be compared to the collection of firearms that would be included in that particular database.

And in order to answer that question, of course the

panel held many meetings, discussed the issues, looked at the literature, and reached a conclusion that was written up in a report.

Q. Okay. So at the end, the committee published its results?

A. Yes.

Q. Okay. Let me show you what has been marked for identification purposes as Defense Exhibits No. 2.

And for short -- I know it has a long title, but for short I'm going to call it the *Ballistic Imaging Report*?

A. Okay.

Q. Is that the report that you were involved in writing along with other members of the ballistics committee?

A. Yes. This is it.

Q. Okay.

MS. JOHNSON: I would move Defense Exhibit 2 into evidence.

MS. HACKWORTH: No objection, Your Honor.

THE COURT: It's admitted.

BY MS. JOHNSON:

Q. Dr. Carriquiry, as a result of the work that you have done for the National Academy of Sciences, for the ballistics committee, for the FBI and for other agencies, have you been qualified to testify as an expert statistician in cases involving bullets and firearm and toolmark

identifications?
A. Yes, I have.
Q. Have you testified as a witness for the prosecution?
A. Yes, I have.
Q. Have you testified as a witness for the defense?
A. Yes, I have.
Q. Have you rendered opinions as a statistician as to the probative value of the toolmark identification evidence?
A. Yes, I have.
MS. JOHNSON: Your Honor, at this point I would tender Dr. Carriquiry as an expert in statistics.
MS. HACKWORTH: For that purpose, Your Honor, we have no objection.
THE COURT: All right. She's qualified only on that issue.
MS. JOHNSON: Thank you.
BY MS. JOHNSON:
Q. Now, you have been sitting in court during the testimony of Mr. Webb?
A. Yes.
Q. Okay. And Mr. Webb has talked about the relevant scientific community on toolmark identifications?
A. Right.
Q. Are you a member of the relevant scientific community?
A. Yes, I am.

THE COURT: What relevant scientific community?

MS. JOHNSON: Mr. Webb has used the term relevant scientific community --

THE COURT: With respect to toolmark --

MS. JOHNSON: -- to toolmark identification.

THE COURT: But she's only been qualified in statistics.

MS. JOHNSON: Yes, she has. Let me --

THE COURT: So her opinion is only relevant with respect to statistics.

MS. JOHNSON: I understand that.

THE COURT: All right. Go ahead.

MS. JOHNSON: Okay.

THE WITNESS: Could I say something?

MS. JOHNSON: No.

THE COURT: She's asking questions.

MS. JOHNSON: Yeah, I will ask you. We will take it -- we have a lot of ground to cover.

THE WITNESS: All right.

BY MS. JOHNSON:

Q. Let's talk about the specifics of this case and how your expert opinion as a statistician relates to this case.

A. Okay.

Q. First of all, you are a scientist?

A. Yes.

Q. Okay. In school they teach us about the scientific method. Can you tell us what that is?

A. Sure. So briefly, scientific method has some steps that one has to follow.

The first one is you formulate a hypothesis, and hopefully you formulate it in a precise enough way that you know how to go about collecting information to either confirm or disprove your hypothesis.

You have to collect relevant information. In other words, if you are carrying a study, you have to make sure that the observations you are collecting are representative of the population as a whole and so on.

And then you analyze your data with the appropriate methods, typically statistics, and reach a conclusion that either proves or disproves your hypothesis.

Q. Okay. Can you give us an example of applying the scientific method to test a hypothesis?

A. Sure. Can I go back to the bullet lead example?

Q. Yes. But I'm going to ask you to slow down a little bit so the court reporter can take it all down.

A. Okay. So as an example I will use a research project that we carried out with funding from the FBI. This was at Iowa State University in the late 1900s, and our report to the FBI was published in 2000.

The hypothesis was that once you establish a match

between two bullets in terms of their chemical composition, that match implies that there was a single source for those two bullets.

Typically the FBI agents would interpret this to mean they came from the same box or they came from the same batch of lead or something along those lines. It was a little unclear.

The FBI provided us with data they had collected where hundreds of bullets had been chemically analyzed and the concentration of several trace elements had been determined.

We don't question whether the FBI can measure things correctly. Presumably they can. It's an accredited lab. They have the best instrumentation.

And so the question was not whether there was a match. The question was whether the match implies common source. And that's a statistical question, not a materials science question or an engineering question or any question.

That's a statistical question because it is asking about the probability of a coincidental match, if you will. What's the probability that two bullets will have the indistinguishable chemical fingerprint and still come from different sources of lead. And so in that case, the hypothesis was if the two bullets were chemically

indistinguishable, then they must have a common source.

The data that we had collected -- or the data that the FBI had collected was a good data set in the sense that there was statistical design principles behind that data set. We could defend it statistically, if you will.

And our analysis then -- now comes the analysis part. The methodology that we employed was the appropriate methodology for that type of study. And we found that the conclusions did not confirm the hypothesis.

There was a nonnegligible probability of a coincidental match. By nonnegligible, I mean pretty high, like 27 percent, and it varied from manufacture to manufacture. We had bullets from four different manufacturers.

And so this was one case where the scientific method was correctly applied, and the conclusions did not support the hypothesis.

Q. So once the studies were conducted and it was determined that the hypothesis that had been used was flawed --

A. That's right.

Q. -- did the FBI stop using the bullet composition analysis?

A. For a couple more years. But there were many challenges in court about this very high probability of a coincidental match. In order to settle the question, the FBI ironically requested a report from the National Academy of

Sciences.

The National Academy of Sciences established a panel that included statisticians and materials scientists and judges and lawyers and other experts, and they concluded that in fact the probative value of bullet lead was not high enough -- was not very high.

Q. So in the end, did the FBI stop using the bullet composition analysis?

A. To my knowledge, they are not using it anymore.

Q. Now, let me shift gears and ask you how does the scientific method that you have described apply to firearm toolmark examinations?

A. Well, it hasn't been applied.

So there is a hypothesis. The hypothesis -- there is two fundamental hypotheses in toolmark examination. One of them is what's called a unique hypothesis, and that says that each firearm or each tool will leave unique marks on softer material.

The other hypothesis is a hypothesis of reproducibility that says that the same tool will continue to leave the same type of marks on the same type of materials.

Q. Let me ask you, as part of your work for the National Academy of Sciences and the ballistic committee, have you come across well-designed statistically-valid experiments that show that each firearm will leave a unique and

reproduceable set of markings on a bullet or a shell casing?

A. No.

THE COURT: So you have no opinion on it?

THE WITNESS: No, I have a very strong opinion.

THE COURT: I'm sure you do because -- what data set did you use to study this issue as opposed to the lead issue?

THE WITNESS: Well, you know, there are any number of data sets that have been --

THE COURT: No, what data set did you use?

THE WITNESS: It doesn't matter. I haven't used a single one because I am analyzing the data, not collecting the data. The data are collected by the firearms examiners, for example.

THE COURT: So have you looked at data collected by all the firearms examiners?

THE WITNESS: Well, funny you should bring this up. The data that are collected by the firearms examiners --

THE COURT: Doctor, it's not funny that I brought it up.

THE WITNESS: Sorry.

THE COURT: I brought it up because I have a legal duty to do here in connection with a criminal case for which

I am to make a determination under the law.

THE WITNESS: Your Honor, it was a slip of the tongue.

The data that have been collected by firearms examiners are typically not available to the general scientific community. So, for example, the data that were collected in Brundage and that were reanalyzed many, many, many different times of those ten barrels, I would never have access to this data.

BY MS. JOHNSON:

Q. Let me ask you -- while we are on it, let's go ahead and put that up so that we are all talking about the same thing.

And I'm showing you part of Mr. Webb's Powerpoint setting out a number of validity test error rates. And you would agree with me that that that looks like pretty low error rates?

A. Very low.

THE COURT: Here is where I am lost. I can only evaluate her if she has done sufficient investigation and research to opine on these error rates.

So I need for you to establish what she has done. Because what I have heard so far is that she can't express an opinion because she hasn't had access to the data.

MS. JOHNSON: Okay.

BY MS. JOHNSON:

Q. Let me ask you this. When you were part of the ballistics committee with the National Academy of Science, did you -- as part of the committee, did you review the literature on firearm and toolmark identifications?

A. The literature, yes.

Q. Okay. So you reviewed articles available in peer-reviewed journals?

A. Correct.

Q. Okay. And did the other members of the ballistics committee have access to these articles as well?

A. Well, it depends on what job you are talking about. If you are talking, for example, about the *AFTE Journal* that was discussed earlier where all of those studies except for the Weller were published, no. The general community doesn't have access to those articles.

In order to get the *AFTE Journal*, you have to be a member of AFTE. To be a member of AFTE, you have to derive most of your income from firearm examining or toolmark examining.

And so we really cannot talk about the *AFTE Journal* as being a scientific journal. Every scientific journal is available to the entire scientific community. The *AFTE Journal* isn't.

And so I come across occasionally one of those articles

or not if somebody happens to have access to it. In our committee, in the Ballistics Imaging Committee, there happened to be one retired firearms examiner, and he had access to these *AFTE Journal* articles.

And so he provided access to some of the rest of us from all the other scientific areas because we wouldn't have been able to have those.

Q. Okay. So you had access to the article from the *AFTE Journals* that the member of the ballistics committee had access to?

A. Yes. And I got access to another one because you gave it to me.

Q. Okay. I want to go through the list of publications that Mr. Webb mentioned contain writings relating to toolmark identification.

And let me start with the *Journal of Forensic Sciences*. Are you familiar with that journal?

A. Yes. I have reviewed papers for that journal. I have been one of the peer reviewers.

Q. Okay. Is that journal --

A. Indexed?

Q. -- indexed, yes.

A. Yes.

Q. What does it mean to be indexed?

A. Yes. Mr. Webb today spoke to this, but the answer was

not quite right.

Q. Well, let's -- just tell me your answer. Don't worry about Mr. Webb's.

A. All the scientific journals in every area, the social sciences, the medical sciences, engineering sciences, you name it, in all the scientific areas have what's called an ISI Index.

An ISI Index is granted to journals only when they meet certain criteria. The criteria -- one of the criteria is serious peer reviewing by the wider scientific community. The other criterion is impact in the scientific community.

The *AFTE Journal* is not indexed. It would never be indexed because it's not even open to the scientific community.

Q. Okay. Well, let's stay on task, and we are talking about the first -- the *Journal of Forensic Sciences*.

A. Oh, yes.

Q. That one is --

A. Yes, that's peer reviewed. It meets all the scientific requirements.

Q. Okay. If I go into Google Scholar --

A. You will find the *Journal of Forensic Sciences*, yes.

Q. Okay. Now, has the *Journal of Forensic Sciences* published any writings relating to who constitutes the

relevant scientific community in the field of toolmark and firearm analysis?

A. Yes. As a matter of fact -- well, the *Journal of Forensic Sciences* is published by the American Academy of Forensic Sciences, which is a very well-reputed body, of course.

And I read an editorial written by a former president of the American Academy of Forensic Sciences.

Q. And let me stop you there. Let me show you what has been marked as Defendant's Exhibit No. 4.

A. Yes.

Q. Is that the editorial that you are referring to?

A. Yes, by former President Thomas Bohan, who has a Ph.D. and a J.D.

Q. And when was that published?

A. This was published in 2010 in response to the 2009 --

Q. Okay, let me take it one question at a time.

A. Okay. Sorry, 2010.

Q. And where was it published?

A. It was published in the *Journal of Forensic Sciences*.

Q. And you have reviewed that article as part of your preparation for testifying today?

A. Yes. I was already aware of this article.

Q. Okay.

MS. JOHNSON: I would move Defense Exhibit No. 4

into evidence.

MS. HACKWORTH: No objection, Your Honor.

THE COURT: It's admitted.

So this is an op-ed peace that she's read?

MS. JOHNSON: Yes.

BY MS. JOHNSON:

Q. Okay. And in Defense Exhibit No. 4, the author discusses who the relevant scientific community is for toolmark identification?

A. Yes.

May I just say that this is not like an op-ed that appears in the newspaper. This is the president of the American Forensic Sciences -- American Association of Forensic Sciences.

THE COURT: Former president writing an ed piece; correct?

THE WITNESS: He was the president -- let's see. I believe he was the president when he wrote this thing.

He was president in 2009 and 2010, and this appeared in 2010. So this is -- he is speaking for the Academy of -- the American Academy of Forensic Sciences.

THE COURT: Sort of like the American Bar Association president occasionally writes things expressing his opinion on behalf of the organization?

THE WITNESS: Exactly. So this is on behalf of the

American --

THE COURT: I have read a lot of those.

THE WITNESS: Okay.

THE COURT: They are very personal.

THE WITNESS: So on behalf of the American Academy of Forensic Sciences, Mr. Bohan -- or Dr. Bohan, I should say, explains that -- let's see, where was it?

Well, first of all, he says that authoritative bodies such as the National Academy of Sciences are the ones that have the final word on things such as has a science been validated or not or a method been validated or not.

THE COURT: Look, this is going to take more than two hours. If all she's going to do is read me somebody else's article, I can read it myself.

MS. JOHNSON: Okay.

THE WITNESS: Okay, fine.

THE COURT: Can I have it, please?

BY MS. JOHNSON:

Q. So let's go back to the list of publications cited by Mr. Webb. In your review of the *Journal of Forensic Sciences*, have you found any article discussing toolmark identification other than the document we just moved into evidence, Defense Exhibit No. 4?

A. I can't claim I have reviewed the entire set of publications of the *Journal of Forensic Sciences*. The

ones -- all of the ones that Mr. Webb referred to today appeared in the *AFTE Journal*, not in the *Journal of Forensic Sciences*.

Q. Okay. Now, as to the *AFTE Journal*, can you get that from Google Scholar?

A. No.

Q. I want to go back to the validation tests Mr. Webb referred to. And let me ask you, for example, have you seen the 2011 Fadul article?

A. Yes, I have.

Q. In your opinion, is that a well-designed statistically-valid experiment to show that firearms will leave a unique and reproduceable set of marking on the bullet or casings?

A. No.

Q. Now, in the article, Mr. Fadul notes that the National Academy of Sciences has ignored a large body of literature on the subject of uniqueness and reproduceability of toolmarks.

A. Uh-huh.

Q. As a member of the ballistics committee of the National Academy of Sciences, do you agree with his statement?

A. He talks about the large list of *AFTE Journal* articles that the Academy of Sciences disregarded. The Academy of

Sciences cannot be considering articles that are not published -- that are published in a journal such as *AFTE* that has no scientific standing, if you will.

So there is many things such as the op-eds that His Honor brings up that the academy ignores, the *AFTE Journal* publications -- first of all, the academy doesn't have access to those publications. But even if it did, it probably would not consider them terribly scientific.

Q. Well, let me ask you this. You have had access to the Fadul 2011 study?

A. Yes.

Q. And from a statistical standpoint, are there statistical flaws with that study?

A. That is a study that was conducted to test this Miami barrel. It was a very small study with a very specific -- with a very specific question behind it.

There is absolutely no talk about the design of the study, so were the barrels that were tested representative of the population of these particularly rifled barrels, were the appropriate statistical methods used, and the answer is no.

Q. How many barrels were tested in that study, if you remember?

A. Oh, I can't remember, but it's probably below ten.

Q. Okay. How many firearms are there in the United States?

A. About three hundred million.

Q. Now, Mr. Webb testified about a study done at Iowa State University?
A. Right.
Q. And you are in the faculty at Iowa State?
A. Yes, I am.
Q. Are you familiar with that study?
A. Well, I believe that he must be referring to the study that was conducted by two of my colleagues and a Ph.D. student. I am familiar with that study because I was in the committee, in the Ph.D. committee of that particular student.

So, yes, and there were several publications that resulted from the study. I'm not sure why he brought it up, because it has absolutely nothing to do with toolmark examining.

So this study was conducted to come up with -- so what they did was come up with a statistical model, a set of equations that could describe the distribution of the crystals in three dimensions that are formed when a tool has friction with a different material.

And that's a very complex issue from a statistical point of view. It requires very sophisticated mathematics. And that's mostly what the study was about.

Presumably in some future time it might be usable in, you know, in an application, but for now this is very basic

statistical research.

Q. Okay. Now, did that study have anything to do with firearms?

A. Well, no. It has nothing to do -- I mean, no, there were no firearms that had anything to do with that study.

Presumably, depending on the type of -- the type of instrumentation that may be used in the future to look at the marks left by firearms, perhaps this study will have relevance.

This was a first step, I think, in trying to put an objective model, statistical model to some of these markings that we talk about a lot but we don't know how to quantify. And right now its application is nowhere close -- I mean, it's not ready for prime time, the methodology. It's a very basic method, statistical method.

Q. Okay. I want to show you what has been marked for identification purposes as Defendant's Exhibit No. 3.

A. Okay.

Q. Is that a copy of the publication *Threatening Forensic Science in the United States: A Path Forward*?

A. Yes, it is.

Q. Was that published by the National Academy of Sciences in 2009?

A. Yes.

Q. And does that publication also provide a report from the

National Academy of Sciences as to toolmark and firearm identifications?

A. It's a more general report. It talks about many different forensic sciences, but it does have a section on toolmark and firearm identification, yes.

Q. Okay. And was that report based in part on the work that you and other members of the committee on ballistics had done the previous year?

A. Yes. So essentially they agree with much of what we said in the other report, everything we said in the other report.

MS. JOHNSON: I would move Defense Exhibit No. 3 into evidence.

MS. HACKWORTH: No objection, Your Honor.

THE COURT: It's admitted.

You keep referring to it as a ballistics report. My understanding is that Exhibit 2 is a report of whether it's possible to develop a national ballistics database; correct?

MS. JOHNSON: That is correct, Your Honor.

THE COURT: Which would be similar to the national fingerprint database as a resource to law enforcement.

MS. JOHNSON: The witness may be -- she's more familiar with it. She may be able to tell -- is it similar to the national fingerprint --

THE WITNESS: It's kind of similar.

By the way, the title of the report is *Ballistic Imaging*, so that's why I think everybody refers it to as a ballistics report. So that's --

THE COURT: But the purpose was to determine whether or not --

THE WITNESS: The purpose was to determine whether -- yes, so the purpose was to determine whether the science today allowed us to construct reference database similar to the fingerprint database that would permit reliable identification of or association of bullets to firearms.

THE COURT: Have you ever done any statistical studies on the reliability of the fingerprint evidence?

THE WITNESS: Actually there are a lot of people working on that, and one thing about --

THE COURT: Have you?

THE WITNESS: No, not me. But there is a lot of difference in fingerprint examining and -- or in fingerprint reliability and firearms.

In particular, the fingerprint, there is a very well-defined number of points of matching that have to be met in order for a fingerprint to be declared a match.

THE COURT: Have you ever compared two bullets or two shell cases?

THE WITNESS: Have I done it? Yes, I have done it, but not because I do it for a living. I have done it because I need to -- as a statistician, I need to see how this data is generated.

THE COURT: So how many times have you done that?

THE WITNESS: Only once.

BY MS. JOHNSON:

Q. Did the -- did the committee -- and I'm just calling it the ballistics committee for short.

A. Uh-huh.

Q. Did the ballistics committee, were you all able to start developing a national database for ballistic evidence?

A. No. We advised the government not to do it.

Q. And why is that?

A. Because the committee found that the two fundamental assumptions of uniqueness and reproducibility have not been properly tested or proven.

Q. Now, let me go back to Mr. Webb's testimony and ask you, you were here when he testified that markings can be classified as class, subclass or individual characteristics?

A. Yes.

Q. Yes. Do you agree with his description of the three types of characteristics that toolmark examiners look for?

A. Sure. I mean, he's the expert on finding marks and comparing them.

Q. Now, Mr. Webb testified that there were class characteristics between the Weeyums bullet and the bullet recovered from the Land Rover, and he testified specifically that there were barrel rifle -- right twist with six lands and grooves. Is that a class characteristic?
A. Yes.
Q. Can more than one firearm produce those class characteristics?
A. Mr. Webb produced a list of seventy-some firearms that produced the same class characteristics.
Q. Now, Mr. Webb's opinion that the bullet fragment from Weeyums and the bullet fragment from the Land Rover were fired from the same barrel. In your opinion as a statistician, is Mr. Webb's statement based on science?
A. No.
Q. Okay. Can you explain your opinion?
A. Yes. I completely respect Mr. Webb's conclusion that the two samples match and that the striae align nicely and all these other things. But from there to say that the same gun has fired both bullets, that is simply speculation and not science.
THE COURT: He didn't say that, of course.
THE WITNESS: In the report it says both bullets were fired by the same gun.
THE COURT: Is your testimony based upon your

understanding of his opinion as you have just stated it?

THE WITNESS: No, I'm just interpreting his report.

THE COURT: Oh, I see, you are interpreting his report, you are not listening to his testimony today? That wasn't his testimony today.

MS. JOHNSON: Well, let me -- in my notes I have that his testimony was that it was fired in the same barrel with practical certainty.

THE WITNESS: Right.

MS. JOHNSON: Right, okay.

THE COURT: That's different from what you just said.

THE WITNESS: I'm sorry, I was referring to what he wrote down in his FBI report.

THE COURT: Well, listen carefully to the question, because she asked you what he testified to.

THE WITNESS: Oh, I'm sorry. Okay.

BY MS. JOHNSON:

Q. Okay. So going through his testimony that it was fired in the same barrel with practical certainty --

A. Uh-huh.

Q. -- from a statistician's standpoint, is that based on science?

A. No, it is not based on science.

Q. Okay.
A. And the reason --
Q. If you please, why not?
THE COURT: You are talking about science only from a statistical perspective since that's all you been qualified on?
THE WITNESS: Well, let me compare firearm examining with -- can I compare it with like DNA matching or with bullet lead analysis? These are all similar types of questions. The question is does a match imply equal source.
And the answer is in some cases it does, as in the case of DNA, and in some cases it doesn't, as in the case of bullet lead. And in the case of firearms, we simply do not know.
Why don't we know? Because there haven't been sufficiently large and carefully-designed studies that would answer that question.
Can it be answered? Of course it can be answered. Today we heard that numbers are not part of a firearms examiner's toolbox, if you will. Well, they should be.
THE COURT: That is not what we heard today.
THE WITNESS: Okay.
THE COURT: That numbers are not part of a firearms

examiner's --

THE WITNESS: Sorry, that was my interpretation. It was said that numbers are not used.

THE COURT: No, that's not what he said.

THE WITNESS: It was said that practical certainty doesn't imply numbers. Maybe we can read the record.

THE COURT: I will read the record.

BY MS. JOHNSON:

Q. Now, let me ask you this. In DNA, when results are delivered, are they delivered to a certain degree of scientific certainty?

A. Yes. Probability is attached to the results. So you say these two samples match or do not match with such-and-such a probability.

And it's a very well-established margin of error, if you will, that has been put on DNA. Same is true for fingerprints.

Q. Okay. What is the known or potential rate of error in firearm examinations?

A. It is not known.

So we know all these validation tests that have been carried out have to do with the error that the examiner will make when establishing a match. That is very low from all of what we read in the literature.

Q. And this would be human error?

A. Yes, or I don't know whatever type of error. But that's not the interesting error.

The interesting error is the error of reaching the wrong -- what's the probability that you are reaching the wrong conclusion when you establish a single source for the two bullets. That is the error that hasn't been established, and that's the error that *Daubert* really refers to, what's the chances that you are reaching the wrong conclusion.

Q. Let me ask you this. Are you familiar with the term called coincidental match?

A. Yes.

Q. Okay. What is coincidental match?

A. Coincidental match is the probability that you will declare that the match implies the same origin for the two items when in reality they have a different origin.

So the match is, if you will, coincidental, although coincidental is kind of like an unhappy term. It's the matching of two items that do not have the same origin.

Q. As part of your work for the ballistics committee, were you able to come up with a rate of error?

A. No. In fact, one of the conclusions -- one of the conclusions that is somewhere in the report is that while

this could in principle be done, the science is not advanced enough for that to happen.

Q. Was the committee able to develop a database?

A. No.

Q. And why not?

A. What do you mean by database?

Q. A ballistics database.

A. Well, that was not the charge of the committee. The committee was supposed to advise whether a ballistics database should be constructed, and the advice was no, this would be not practical at this time.

Q. Okay. Let me ask you this. During his testimony, Mr. Webb referred to an affidavit by a member of the National Academy of Sciences?

A. By the co-chair, Dr. Roth, John Roth.

Q. Are you familiar with --

A. Oh, yeah, I know John Roth for many years. He's a colleague, yeah.

Q. Are you familiar with the affidavit that Mr. Webb discussed?

A. Yes, I am familiar with the affidavit.

Q. Do you recall the government's attorney asking whether the committee had expressed an opinion as to the admissibility of the toolmark and firemark identification evidence? Do you recall that question?

A. Yes, I do.
Q. Let me ask you, was the committee tasked with rendering an opinion as to the admissibility of the evidence?
A. No.
Q. What was the task of the committee?
A. The committee -- let me go back to this issue of admissibility. The issue of admissibility is an issue for the courts. The National Academy of Sciences would never express itself in terms of this is admissible or this is not admissible. So the question was interesting, but completely irrelevant.

The charge of the committee is to look at the science. It's the matter of -- it's a matter for the Court to decide whether the science justifies admissibility or not.

In this particular case, the Academy of Sciences expressed itself on the science of toolmark examining, and the conclusion was that it is simply not there yet.
Q. Thank you.
A. It would never say anything about admissibility.
Q. Okay. Thank you.
A. Sure.

THE COURT: Cross?

MS. HACKWORTH: Okay. Thank you, Your Honor.

-- -- --

CROSS-EXAMINATION

BY MS. HACKWORTH:

Q. Good afternoon, Doctor.

A. Hello.

Q. I want to try to say your last name. Dr. Carriquiry?

A. Pretty close, yes.

Q. Would you mind saying it for me again? I'm sorry.

A. Carriquiry.

Q. Carriquiry?

A. Perfect.

Q. Okay. So please forgive me if I don't do a good job at that. I'm not meaning to be disrespectful. It's completely unintentional.

A. No problem.

Q. My name is Nekia Hackworth, and I'm one of the prosecutors working on this case.

We haven't met before, have we?

A. No, we haven't.

Q. I want to ask you a couple of questions about your testimony on direct; okay?

A. Okay.

Q. I would like to begin at the end, the recency effect, if you will.

You just testified that the National Academy of Sciences wouldn't opine on the admissibility of evidence; right?

A. Right.
Q. And you gave the more specific example referencing my question and Mr. Webb's response --
A. Right.
Q. -- about the admissibility of firearms evidence; right?
A. Right.
Q. I just want to make sure that I understood something you said that was closer to the beginning of your examination. You talked about work that you did in the bullet lead analysis area?
A. Yes, yes.
Q. Am I correct in understanding that there was a committee of some sort that was formed by the National Academy of Sciences that looked at the bullet lead analysis --
A. Yes.
Q. -- issue?
A. Yes.
Q. And you said on direct examination, if I understood you correctly, that that committee determined that, quote, the probative value, unquote, of bullet lead analysis was not very high?
A. Right.
Q. Okay. And I don't --
A. Maybe different words. I mean, I'm paraphrasing.

Q. Okay. Well, I don't know how much you know about the legal process, but just let me know. Are you familiar with the fact that the term probative value is something that is relevant to the issue of admissibility of evidence in a court of law?
A. Yeah, yeah.
Q. So when you say that a National Academy of Science committee wouldn't opine on admissibility, that's not quite correct?
A. Well, maybe I should have -- I don't remember the exact words in the report, so maybe what I should have said is that the committee found that the probability of a coincidental match was too high to ignore. Would that be -- without using the specific term probative value, which I don't know whether it's in the report or not. That was -- that was my talking.
Q. And at this point, based on your work on the National Academy of Science committees, has there been a similar finding with respect to firearm/toolmark identification, that the coincidental match numbers are too high to ignore?
A. No. The finding is that nobody knows what the coincidental match probability is. So it could be zero, it could be 100 percent. It's just unknown.
Q. Right now there is no determination in that regard?

A. Nothing.
Q. Now, you also mentioned and Ms. Johnson went over with you some of the examination and review you did of some of the validity tests in the area of firearms identification. Do you remember that?
A. Yes.
Q. I'm going to put this up here for you. This is the same slide. My personal copy, but the same information is on it.
Now, Dr. Carriquiry, am I correct that the primary test that you spoke about on direct examination was this Fadul test?
A. That's the only one that I had read. I haven't been able to access the others.
Q. Okay. I'm going to drill down a little bit on that. For the Fadul test, what was your understanding of the size of the sample for that particular validity test?
A. Can I check? I don't remember the exact --
Q. Yes. And do you have that in front of you?
A. I don't know. Let me check.
By the way, can I say something?
Q. If you would -- ma'am, if you don't mind, I will ask you a question and you can absolutely respond. Just take a moment to find that and I will make sure to follow up with you.

A. No, I have a Fadul 2012 here, but I don't have the Fadul 2011. But --
Q. All right. So you don't have that copy in front of you, but it's your testimony that you have reviewed that study?
A. Yes.
Q. But it's your testimony right now that you don't recall the size of that sample in that particular study?
A. I could get it. I have it over there, or somebody probably has it. I don't recall it off the top of my head now.
Q. I think you may have mentioned your recollection of the type of firearm that was used in that study. Do you recall that as well?
A. I believe it was the Miami barrel of the Glock Firearms.
Q. So a Glock firearm was what was being tested. And you also stated that there was a very specific question that was being asked or that was the hypothesis in that test, but you didn't say what that specific question was?
A. Right.
Q. What was it?
A. This had to do with this particular type of rifling of this particular type of barrel that used to be a problem for firearms examiners to work with because, you know,

identification was not easy and sometimes there were errors made when trying to work with this particular type of rifling of a barrel.

And so the company, the manufacturing company came up with a different type of barrel that was called the Miami barrel. I believe that Mr. Fadul -- or Dr. Fadul, I should say, is a member of the Miami-Dade Police Crime Lab.

And so they were testing whether this new type of barrel was more easily identifiable than the old type of barrel. So that was the specific question.

Q. So just to make sure I understand you correctly, the purpose of that particular study was to determine whether or not a particular bullet was fired from that particular firearm?

A. Right.

Q. And that -- would you agree that that is the case in many of these validity studies?

A. Yeah. And I don't -- you know, I am completely comfortable with those error rates. I completely believe that firearms examiners can put two samples together and match markings.

Q. So you actually agree with that theory of identification?

A. I totally agree that two specimens can be declared a match. I don't agree with the conclusion that follows, which

is a match implies a single source. That's the issue, and that's a statistical issue.

I have no questions with the firearms issue and the examining itself. I have a question with the interpretation of what the match means.

Q. Okay. I will follow up with you on that as well, but I'm going to go back to the Fadul study.

So we are in agreement that they were trying to make a match between a bullet and a barrel?

A. That's right, that's right.

Q. Okay. And would you also agree -- in fact, this is the basis of your critique -- that this was not a statistical study, that was not the goal of that Fadul study?

A. I believe it wasn't, no.

Q. And beyond the Fadul study, your testimony today is that you did not have access to any of the other validity studies?

A. No. And Fadul comments on some of those. So, you know, I understand what some people did only through some other references, yes.

Q. And is it also your testimony that one of the reasons you did not have access to the Brundage, DeFrance, Bunch and Murphy, Smith, Hamby studies was because they were to your knowledge only published in the *AFTE Journal*?

A. Oh, I know they were published in the *AFTE Journal*.

Q. Now, you also did mention, though, on direct examination that you did obtain a copy from Ms. Johnson, who is the defense attorney in this case; correct?
A. Yes, yes. Of the Fadul 2011, yes.
Q. Oh, of the Fadul 2011 study?
A. Yes.
Q. So this is something that couldn't be Googled? Would that be your testimony today?
A. It couldn't be found in any scientific index.
Q. Now -- well, let me ask you this. You said that you worked with at least one retired firearms examiner --
A. Yes.
Q. -- when you were on one of these National Academy --
A. In the Ballistics Imaging Committee, yes.
Q. So that would be the 2008 committee; is that right?
A. '7.
Q. I should say the 2008 report, I'm sorry.
A. Yes.
Q. And that you were able to obtain some of this information or something from one of those -- that retired examiner?
A. Yes. Some of the -- I mean, not necessarily these exact ones, but some relevant publications that have appeared in *AFTE Journal*, for example, could be obtainable.
Q. And those particular publications did relate to firearms

and toolmarks?
A. Oh, gosh, you are talking six years ago, so presumably.
Q. Are any of your opinions today based on your review of those articles that you don't recall right now?
A. Yes, on some of those.
Q. I just want to make sure we are clear. Your opinion today is based on -- and your critique of the validity test is based on the Fadul 2011 study; right?
A. Right.
Q. And also your review of some articles or tests or publications that were given to you by a retired firearms examiner back in '08?
A. And --
Q. Yes or no for that question first?
A. Yes.
Q. And that right now you don't remember the names of any of those articles?
A. I have a pile of articles in the back there that haven't been published in *AFTE Journal* that I could probably talk to you about.
Q. Well, right now I'm talking about those that were provided to you that it's your recollection came from AFTE through this firearms examiner?
A. I have some of them there. Can I recite the titles? No, but I can show them to you.

Q. And I just want to ask you just right now as you sit here, do you remember any of the titles of those particular articles? And that's yes or no. If you don't remember, that's fine. I just want to know.
A. I remember some of the others. Can I tell you the others?
Q. Sure. Do you remember the authors, you can tell me that, and I have some additional questions?
A. Bonfante, Miller. What was the name of this fellow, Biasotti I believe the name is. Well, those are some of the names, for example.
Q. Okay. You said Miller, Biasotti?
A. No, Biasotti. DeKinder.
Q. DeKinder? Do you remember the sample size of any of those -- using the validity test for any of those particular articles?
A. Yes. Typically they are pretty small. So a large test may have fifty guns.
Q. And I just want to be clear. I'm asking based on literature that you actually reviewed --
A. Yes.
Q. Okay. So based on what you actually reviewed, your testimony is that the largest sample size would be fifty guns?
A. To my knowledge, about fifty guns, yeah.

Q. And would it also be your testimony -- oh, let me ask you this.

What about the types of firearms that were tested in these studies?

A. It varies greatly. So, for example, in some studies they look at consecutively-rifled barrels. In some other studies they look at -- for example, Mr. Smith here looked at case guns, if I am not mistaken, so those would vary. So it varies.

Q. Okay.

A. But I can say one thing, however. In no case the sample of guns is representative of the population of guns in any statistical sense.

Q. Let me ask you this. Would you agree that all of these studies that you can recall as you sit here today having reviewed, were any of those actually statistical studies?

A. No.

Q. Was that the purpose of those particular studies that were being done?

A. The conclusions that are drawn are statistical in nature. However, the studies are not designed in a statistical defensible way.

Q. So the answer to my question is no, these were not statistical studies?

A. The minute you draw a conclusion from some data, you are

doing statistics, whether you like to or not.
Q. Let me ask the question this way. Would you agree that the goal of those studies is to determine whether or not a bullet can be identified as having been fired from a particular barrel or firearm?
A. Well, it depends. For example, Mr. Fadul specifically refers to the fact that his results confirmed that the National Academy of Sciences is wrong because his results confirmed the uniqueness and the reproducibility hypothesis.
So in that sense, that is a statistical study according to your definition.
Q. Well, I'm just taking a step back. Is the generic or general goal of those studies to match a bullet to a firearm? I understand you take issue with the conclusions reached and how they are phrased, but generally speaking is that the goal of those studies that you have reviewed?
A. Generally speaking, yes.
Q. Now, you also mentioned an Iowa State study that you are familiar with that some of your colleagues have worked on. What are the names of those colleagues, to the best of your knowledge or recollection?
A. I recollect that perfectly well. So the student was Melissa Bingham. The two faculty members in my department were Dan Nordmann and Steven Vardeman.
Q. Are you familiar with another study that has taken place

at your institution, Dr. Carriquiry, by an individual with the last name of Chumbly?

A. Scott, yes.

Q. Scott Chumbly. You are familiar with that?

A. I am familiar with Scott Chumbly.

Q. Okay. Are you aware of a publication that came out in the *Journal of Forensic Sciences* that was authored in part by Scott Chumbly?

A. No.

Q. Okay. This is in 2010.

A. No.

Q. And I will tell you the name of it. It's *Validation of Toolmark Comparisons Attained Using a Quantitative Comparative Statistical Algorithm*. Does that title sound at all familiar to you?

A. I haven't read that paper at all. So -- sounds fantastic.

Q. Well, I know you are not familiar with it. I will tell you the goal of it, and you can tell me maybe you have heard of maybe the purpose of this study --

A. Okay, go for it.

Q. -- even if you don't know the authors.

That the purpose of that study was to have a machine analyze toolmarks produced by certain screwdrivers, and to also have human examiners examine those same screwdrivers --

A. Right.
Q. -- to determine which could do it better, if either.
Does that sound at all familiar to you? Have you heard of that?
A. I haven't heard of it. I'm guessing that the other author is Max Morris. Could it be Max Morris?
Q. I do not know. I know Scott Chumbly is one of them.
A. Scott Chumbly is not a statistician, by the way, but I'm thinking that he collaborated with one of my colleagues, but I don't know that.
This sounds an awful lot like the validation studies that are described in toolmark examinings. So, yes, sounds reasonable.
Q. And this is from the university where you worked, one of your colleagues?
A. Absolutely. I mean, there's interesting science done everywhere.
Q. Let me also ask you about Google Scholar, things of that nature, because I don't use Google Scholar often. Is it your testimony that any scientifically -- or all scientifically critical journals are included in Google Scholar?
A. Pretty much, yes. Google Scholar only lists journals that are indexed, and so if you are not -- and only the credible scientific journals are indexed.
And that's not my opinion. That's the opinion of the

scientific community.
Q. And are you aware, though, that the *AFTE Journal* is part of the Library of Congress? Are you aware of that?
A. Everything is a part of the Library of Congress, so -- *Archie Comics* is a part of the Library of Congress. So that doesn't mean --
Q. Well, I am just asking specifically about the *AFTE Journal*.
A. My answer is yes, I know, because I know that everything published in the United States is part of the Library of Congress.
Q. And are you also aware that membership is not needed to gain access to AFTE --
A. That's not correct.
Q. Let me finish. One moment, I'm definitely going to let you answer. Let me make sure I finish my question so the court reporter has a clean record.
Are you aware of the fact that membership in AFTE is not required in order to gain access to AFTE publications?
A. I think you are wrong on that one.
Q. Well, I know -- if I am getting your testimony wrong, let me know. But you did just share with us that you obtained one of the AFTE published tests from Ms. Johnson; correct?
A. That's not free access to a journal, is it?

Q. Well, I'm asking you the question. Is it correct that Ms. Johnson provided you with a copy of a validation test published in AFTE?
A. That's correct.
Q. And do you know whether or not Ms. Johnson is a member of AFTE?
A. I don't know that.
Q. Is she --
A. Actually, no, I'm sorry, I do know that. She's not a member of AFTE. And you know why she's not a member of AFTE? Because she does not belong to the profession of toolmark examiners. And in order to become a member of AFTE, you have to derive most of your income and your livelihood or be retired from the profession of firearm examining or -- sorry, toolmark examining.
Q. And we would both agree based on your testimony that she was able to provide you with a copy of that particular publication; correct?
A. Yes.
Q. Despite not being a member of AFTE?
A. Right.
Q. All right. Let me move on to a different topic. Generally speaking -- and I know this is your critique, but I want to make sure that the record is clear. You probably heard the testimony of Mr. Webb about the age of the theory

or the school of thought of pattern matching; right?
A. Yes.
Q. And you remember his testimony saying that these theories are over -- either over or almost a hundred years old; right?
A. Yes.
Q. And based on your knowledge and understanding of pattern matching, are you aware that there is no statistical requirement to be able to make a match? Are you aware of that?
A. No. I imagine that if you look at enough lines and you can put them together one next to the other, you can declare that these are similar in match.

Although this is, you know, in many -- for example, the FBI in the case of bullet lead would put a statistical number, the probability of a match, when it did the chemical fingerprinting of bullets.

To my knowledge, firearms examining is the only forensic discipline that doesn't use any numbers.

Q. So your answer to my question is yes, you are aware that a statistical number is not required to make a match?
A. It's not used. I do think it should be required.
Q. And I understand that's your critique. But right now it is not used; correct?
A. That's correct.

Q. And it is not required under that school of thought?
A. Right.
Q. And also you are familiar with the AFTE Theory of Identification; correct?
A. Yes.
Q. And would you also agree that under the AFTE Theory of Identification that a statistical probability is not used; right?
A. It couldn't possibly be used because we don't even know how many striae should match before we can declare a match. So yes, I agree with you.
Q. Okay. And it's not required under that school of thought?
A. No.
Q. Also I want to ask you, you talked about sample sizes on some of these validity tests?
A. Uh-huh.
Q. And you talked about guns, just generally speaking how many guns were used; right?
A. Yeah.
Q. Are you aware of the facts that in terms of comparisons, that it's not the number of guns that's relevant for purposes of the sample size? Are you aware of that?
A. So you are going to tell me that what's relevant is the number of comparisons?

Q. Well, I'm asking you what you are aware of.

A. Oh. An experiment consists of different parts. One of them is how many guns you include in your experiment, and that has relevance in terms of how much you can generalize your conclusions to the overall population of guns.

And of course how many observations you collect from each gun, that's also relevant, because that has to do with how reliably you can estimate what the markings from that particular gun is.

And of course, in this case, as an added source of validity, if you will, and that's the examiners themselves. And many examiners, you know how proficient those people are and how well they do their identification.

And so in most of these studies, there is very few guns, there is -- in most of these there are ten or fifteen samples obtained from each gun, and then there is hundreds of examiners that are invited to look at this -- to look at the samples.

But the issue is their conclusions apply to that particular set of guns used in that particular study, because in order for they to be able to say something in general, extrapolate outside that particular study, you have to have a representative sample in the relevant way of guns and of ammunition.

Q. I want to ask you this. Are you aware of the fact that

in the world of firearms and toolmarks examination, each land impression that is compared is considered to be a distinct comparison? Are you aware of that, that they consider each land analyzed to be a point of comparison?

A. But you see, that is one of the falacies.

Q. I'm asking are you aware. That's my first question. And you can explain.

A. Yes, I am aware, and that's one of the issues.

Shall I continue? I mean --

Q. Well, I think you stated what your issue is with the basis of the theory and how it is used.

A. There is more.

Q. Would you agree, though, that given that each land is considered a separate point of comparison, that when looking at sample size, limiting it to the guns itself might be inaccurate?

A. This is where you are wrong. So even if you compare each land a separate observation, the observations that you get from the same ammunition and the same gun are not independent.

In statistical terms, that means that if you have ten lands, let say, from a single piece of ammunition, in reality you may have what we call one degree of freedom.

So it's not like you can just multiply the number of lands and the number of bullets to get this gigantic sample

size. That might be the number of observations, but the effective sample size from which you can draw conclusions is very small.

Q. Well, let me ask you, because you actually talked about and we are talking a little bit about now what actually happens during the course of a firearms toolmark examination; okay?

A. Uh-huh.

Q. You testified on direct that you have done that one time?

A. Once, yes.

Q. And just out of curiosity, when you did that, did you find agreement between the two samples that you compared?

A. They showed me -- this was done in the DesMoines Crime Lab, and the agent that was showing me this allowed me to look at actually two samples, one where there was a match and one where there was no match.

Q. Okay. So when you did the one examination, you didn't actually put the samples underneath the microscope and do your own --

A. Oh, I did put them under the microscope, but I knew when they were supposed to match and when they were not supposed to match, so --

Q. And how long ago was that?

A. 2005, perhaps. This was during the time when we were on the ballistics committee. I can't remember.
Q. So, Dr. Carriquiry, have you ever completed any firearms or toolmarks identification training?
A. No.
Q. Have you ever been certified by any accrediting organization in the area of firemarks and toolmarks identification?
A. No.
Q. Have you ever taken any proficiency tests in firearms or toolmarks examinations?
A. No.
Q. Have you ever toured a firearm manufacturing plant?
A. I have toured an ammunition manufacturing plant, but never a firearms manufacturing plant.
Q. And was that a part of the work on the comparative bullet lead analysis?
A. Yes, I went with some FBI agents to a plant in Minnesota, yeah.
Q. And where did you say that was again? You said in Minnesota?
A. Yeah. CCI?
Q. Okay. And how long ago was that?
A. Twelve years ago, ten years ago.
Q. Would you agree, Dr. Carriquiry, that the principles

underlying comparative bullet lead analysis and the propositions are different than the firearms/toolmarks identification?

A. No, I would absolutely not agree with that.

Q. Okay.

A. They are exactly the same.

Q. Okay. And is that based on the fact that you are trying to -- I think your testimony on direct was that your belief is that the common goal is to match two things together and identify them as coming from a common source?

A. Yes.

Q. Okay. And so it's on that principle that you believe the comparative bullet lead analysis is similar to I guess the AFTE Theory of Identification?

A. Yes. It's a common source issue that is common to everything, yeah.

Q. How many times, Dr. Carriquiry, have you been qualified to testify in a federal trial regarding firearms or toolmarks examinations?

A. Oh, to be perfectly honest with you -- and this is not glib -- I don't know which ones were state court and which ones were federal court.

So I testified in Baltimore, and I have testified in Los Angeles -- this is on statistics on firearms examining -- and here. And then the other two times were on different

issues.

But I don't know which one was federal and which one was not. I'm sorry.

THE COURT: But when you did testify, you testified as an expert after the toolmark identification expert had testified, then you testified for the defense? Is that right?

THE WITNESS: In the ballistics, yes. Although in Baltimore it was kind of like this, an admissibility hearing, a *Frye* hearing.

THE COURT: Well, this is not a *Frye* hearing.

THE WITNESS: No. This is a *Daubert*, right.

THE COURT: Yes.

THE WITNESS: But Maryland is not a *Daubert* state.

THE COURT: It's very different.

THE WITNESS: Isn't it called *Frye?* What is it? I don't know what it is.

So I'm not an expert testifier. I'm not an expert witness, a professional expert witness, so you will forgive me, but --

THE COURT: So in Baltimore, were you testifying for the court to determine whether or not some other expert's testimony was admissible?

THE WITNESS: Yeah. So in fact, it was a very similar case to this. So there was a match that -- so there

was a match between two bullets, and the question was could those two tie -- were those two tying to the same nonexistent gun.

THE COURT: Was that a trial?

THE WITNESS: It was a hearing pretrial.

BY MS. HACKWORTH:

Q. I would like to see if we are talking about the same case here, Dr. Carriquiry. Was this back in December of 2011?

A. Yes.

Q. Does that sound -- it was fairly recent?

A. Yes.

Q. Was it the case of *State of Maryland v. Dominic* --

A. *Carozza*.

Q. -- *Carozza*. And that's C-a-r-o-z-z-a?

A. Yes.

Q. And in that particular matter, you testified for the defense, as Your Honor just asked you; is that right?

A. Yes.

Q. Now, but isn't it correct, though, Dr. Carriquiry, that really the issue there was more the comparative bullet lead analysis, that the issue was not toolmark identification?

A. Well, we talked about both things. So I did a lot -- part of my testimony was on the bullet lead analysis and part

of it was on the ballistics. But mostly it was on the bullet lead analysis.

Q. And so really that was the main purpose of your testimony was in the area of expertise when you worked for the National Academy of Science?

A. Yes.

Q. And you also mentioned LA?

A. Yes.

Q. Is that the case of --

A. Knight, Roger Knight?

Q. I was going to say *People in and of the State of California v. Brad Miller*?

A. When was that?

Q. Does that sound familiar to you?

A. No. Maybe I have the wrong name.

Q. And actually I might be mistaken. This was a case in which you actually did not appear in person to testify.

A. Oh, okay, okay.

Q. So I am mistaken in that regard.

A. All right.

Q. But do you recall submitting an affidavit in this particular case?

A. Could be.

Q. Okay. This was back in May of 2012. Do you remember that, that there was a ruling about your testimony back in

May of 2012?
A. Oh, yes. I do remember.
Q. Do you recall that in that particular case, that what was at issue there was the same thing that's at issue here, and that's trying to match bullets fired from a firearm to bullets taken from, you know, another crime scene?
A. Yes, I remember.
Q. Okay. And in that particular case, you were submitting that affidavit for the defense?
A. That's correct. And we had only a conference call.
Q. Okay.
A. I was not there in person.
Q. Okay. And were you asked to opine regarding the unreliability of firearms evidence of that sort, like you are doing here today, to talk about your opinion on firearms and toolmarks?
A. Yes.
Q. All right. And did you make the same assertions in that affidavit that you are making here now or similar?
A. Similar, yes.
Q. And would it be correct, though, Dr. Carriquiry, that the judge excluded you from that particular proceeding, finding that you were not qualified to talk about firearms and toolmarks examinations?
A. Yes. Sadly, the judge didn't understand the issues.

Q. The judge made a finding that you were not a part of the relevant scientific community; isn't that correct?
A. He was in disagreement with the American Academy of Forensic Sciences, indeed.
Q. And isn't it also correct, Dr. Carriquiry, that the court there said that your opinions were conclusory, overly broad, and unsupported, and thus had low probative value, that they used that terminology?
A. No, I wasn't aware. No, I wasn't aware. I never saw the results of that case. But that's kind of creative.
Q. But you remember that case saying -- you are aware that you were excluded; right?
A. Absolutely, I do remember being excluded.
Q. And so we come down to we talked about Baltimore where you did not testify about firearms and toolmark examinations; right? We talked about the case where you submitted the affidavit where you were excluded in that particular situation, in that particular case that's more akin to the case here?
A. Uh-huh.
Q. You also mentioned another case in LA. What about that case? Tell us, what was the nature of your testimony in the case in LA?
A. That was a case against a Mr. Roger Knight. I appeared in a hearing similar to this one in front of a judge, and the

issue was in fact the exclusion or not of firearms -- or at least of the conclusions that the firearms examiners had reached. And the conclusion was to the exclusion of every other gun in the world, this is the gun that fired this two pieces of ammunition.

There was no gun in that case, just like in this case, I mean, for that particular thing. And I was admitted as a witness, as an expert witness on statistics as it applies to firearms examining, and so it was a little bit more specific than in this court.

And I don't -- I don't know what the result of that was. I testified, and I left.

Q. Well, I can definitely tell you -- and you said Knight, is that K-n-i-g-h-t?

A. I think so.

Q. Are you aware of the fact that the judge in the *Miller* case, the one where you just did the affidavit, actually cited back to your testimony in the *Knight* case? Are you aware of that?

A. That couldn't be possible, because one was after the other.

Are we talking about the same -- I have it -- well, not with me, but I have it over there. So the *Knight* was not too long ago.

Q. It sounds like they were close in time. They were

around the same time?
A. Yeah, but the *Knight* was after the *Miller*.
Q. Well, let me read this to you. You can tell me if this comports with your memory of your testimony in the *Knight* case?
A. Okay.
Q. And I'm reading now from the *Miller* case.
In that *Knight* case, Dr. Carriquiry, did you say that you had not reviewed many other research papers on firearm identification because they are unavailable and you do not consider papers published in the *AFTE Journal* as reliable?
A. Probably.
Q. Okay. Do you remember also referring to identification methods made by firearms examiners as absurd?
A. Probably.
Q. Do you remember saying that you are more qualified than firearms examiners themselves in interpreting the results using probabilities and statistics? Do you remember saying that?
A. I am.
Q. And I'm reading this from the *Miller* opinion. They are citing to you in that prior case; okay?
A. Okay.
Q. All right. And even incorporating what you said in

Knight, you were excluded in a subsequent case because your opinion was found to be of no probative value?

A. If you say so.

Q. Let me ask you about your educational background.

A. Uh-huh.

Q. You said you have a Ph.D. in Animal Science and Statistics?

A. In Statistics and Animal Science.

Q. You also have a Master's of Science in Statistics and Animal Science?

A. Two separate Master's, yes.

Q. Okay. And is it fair to say that you have a specialty at least to some degree in Animal Breeding and Genetics?

A. No, that was thirty years ago when I got my Ph.D.

Q. Okay.

A. And people change, and so I have -- most of my publications are actually not in Animal Breeding and Genetics.

Q. Would you agree that you do have some recent publications that seem to relate to the area of nutrition?

A. Oh, yes. That's one of my areas of expertise, as a matter of fact.

Q. Okay. Have you had any classes as part of your educational background in metal impression pattern recognition?

A. In what again?
Q. Metal impression pattern recognition?
A. No.
Q. What about in the field of firearms examination?
A. Have I taken classes?
Q. Yes.
A. No.
Q. Okay. What about any prior training in firearms examination?
A. No. But I teach a class in the forensic sciences at Iowa State on the interpretation of forensic evidence. So would that qualify me as -- since I teach in that forensics seminar, just as Dr. Chumbly also teaches a class in that same forensic certificate.
Q. And is firearms examination a part of the class that you teach now?
A. Yes. And I am talking about how can you interpret results of firearms examinations. Can you, for example, conclude an equal -- a common origin.

Again, we are confusing two different things. I have no quarrels with the examination itself, you know, the techniques and whatever it is that they do. This is all fine and dandy.

I have quarrels, very well-based scientifically-justifiable quarrels with the conclusions that examiners

reach or think they reach when they talk about a single source. So we are talking about two different things.

Q. Just so you know, Dr. Carriquiry --

A. Carriquiry. It doesn't matter.

Q. -- I'm not confused, I'm perfectly clear on the deliniation between those two.

A. Okay.

Q. But I, as a prosecutor, am asking you very specific questions for the record; okay?

A. Okay.

Q. So I'm drilling down now to understand your experience and expertise specifically in the area of firearms examination; okay?

And as you just said, you do teach part of -- as part of your class in forensic science, you do have maybe a module or a class that relates to firearms examination; right?

A. That relates to the data interpretation from firearms examinations and from any other type of evidence. So it is a general statistical question that we explore.

Q. And you have already answered, though, that you have no formal training with respect to the examinations themselves?

A. No.

Q. Now, are you a member of the American Statistical Association?

A. Yes. I was vice president of the association, as a matter of fact.
Q. Okay. And does that association publish a list of members who can be considered experts in various fields? Are you aware of that?
A. The American Statistical Association publishes a list of what they call fellows.
Experts in different fields, what do you mean? Oh, I mean, okay, so if you have a problem, can you call a specific statistician that specializes in that problem?
Q. Correct.
A. Yes. As a matter of fact, yes. That list was created when I was on the board of directors of the American Statistical Association.
Q. So one example would be if someone needs a statistical specialist in the area of let's say law and litigation --
A. Yes.
Q. -- there may be someone designated by the ASA for that purpose?
A. Absolutely.
One thing you should know is that the association doesn't decide the experts. People volunteer to be listed as experts in certain areas.
You are going to ask me whether I am listed. I have never volunteered. I have too much to do already, and the

last thing I want is for strangers to be asking me to be an expert on something or another. So my name doesn't appear because I haven't put it forth.

Q. So you are not an expert -- there is a category for forensic sciences applications and analysis. You are not an expert in that particular field?

A. I haven't put my name down. If I put my name down, I am going to be listed as one.

Q. But you still do appear when retained to testify as an expert witness in court proceedings like these?

A. Very few times, yes.

Q. Just a couple of final questions, Dr. Carriquiry. I want to ask you about your three most recent publications.

A. Okay.

Q. Because what we are here talking about today, right, is your statistical critique of firearms examinations; okay?

A. Okay.

Q. And I'm looking on pages -- I'm looking at page thirteen of your CV. I don't know if that copy is still up there or not. I'm happy to give it to you.

A. It's not up-to-date, by the way. There is later publications, but that will do.

Q. And I think you testified about that on direct, that's correct.

A. So it doesn't matter. Thank you.

Q. And I'm looking on page thirteen.
A. Okay.
Q. Dr. Carriquiry, this is in the section that's just above the bold face title that says papers submitted or in preparation?
A. Right.
Q. And there is a couple things listed there. There is a number -- the last one is number 74. And I understand there is probably more, but the last one listed is number 74?
A. Correct.
Q. Am I correct that this publication was in the area of household consumption and expenditure survey for nutritional assessment and planning?
A. Yes.
Q. And that was in the *Food and Nutrition Bulletin*; correct?
A. That's correct.
Q. Okay. That was in 2012; is that right?
A. That's right.
Q. Okay. And then you also had one in 2012 that related to sodium and potassium intake among adults?
A. Correct.
Q. Okay. That's number 73?
A. Yes.
Q. And that's in the *American Journal of Clinical*

Nutrition; correct?

A. That's correct.

Q. And just one last example, you also had an article about carotene-rich orange sweet potatoes and their effect in increasing vitamin A intakes among children and women in rural Uganda?

A. Correct.

Q. And you testified that you do have a specialty in nutrition?

A. Yes, yet I have no degree in nutrition. I have never taken a class in nutrition. I have never taught nutrition.

The issue is that in every area there is need for statistics. And so if you look at my publications, you will see that I have published in forensics, in nutrition, in traffic safety, in agricultural economics, in economics, and brain anatomy, in -- gosh, you know, statistics itself.

And so you are just making my point -- thank you very much -- that the fact that I don't have formal training in nutrition doesn't mean that I don't know what I'm talking about when I do analysis of nutritional data.

Have I collected any of this data myself? No, somebody else has collected the data.

Q. Let me interrupt you and ask you this. Let me ask you this, because we are on the path where I was going.

A. Yes.
Q. You identify publications that you have in the CV or others that are not on the CV that relate to firearms identifications and comparisons, toolmarks, something of that nature?
A. Yes. I report that was sufficiently scientific to be -- I'm sufficiently well written to be published by the National Academy of Sciences. So to be a co-author of a report by the National Academy of Sciences is a pretty big deal.
Q. Are you talking about the 2008 *Ballistic Imaging Report*?
A. Yes.
Q. We definitely covered that. Beyond that --
A. So you asked me whether I had any publications, and I'm telling you, yes, I have that one, and that's a pretty big publication.
Q. So we have that one. Are there any others that we overlooked while having you here today?
A. No.
Q. Okay. And I think the final area I want to ask you about, Dr. Carriquiry, is your work for this particular case.
A. Okay.
Q. Did you have the opportunity to examine the cartridge cases that are at issue in this particular case?
A. The cases themselves?

Q. Yes.
A. No.
Q. It sounds like you may have examined something else. Did you have an opportunity to review Mr. Webb's case file?
A. Yes, I have. Yeah.
Q. And the opinions that you have rendered today, are they based on your -- in terms of his ultimate conclusion as they relate to this -- as it relates to this case is based on your review of his opinion; right?
A. Yes. I am commenting on his conclusions, yes.
Q. Okay. So you didn't view the cartridge cases?
A. No.
Q. Did you have an opportunity to look at the actual bullets?
A. No.
Q. Did you do -- so since you didn't look at the cartridge cases and you didn't look at the bullet, does that also mean you did not have an opportunity to conduct your own firearm or toolmark examination or identification similar to that conducted by John Webb?
A. Of course not.
MS. HACKWORTH: One moment, Your Honor.
BY MS. HACKWORTH:
Q. Just a final question for you, Doctor.
In lodging your critique against firearms or toolmarks

identification, as you testified about it here today, had you ever considered taking a course in the actual methodology of the toolmark identification process to further give credence to your opinion in this area?

A. It's a pretty good point, and should I do it? Probably I should. But only to -- only to diffuse this type of questions that have nothing to do with the price of pork.

I am not critiquing the examination methods themselves. I am critiquing the statistical conclusions that are drawn from those examinations. And in that sense, I am overqualified to do that. I don't need to take any more statistics classes. I have taken everything.

Q. And your ultimate critique is based on the limited documents that we discussed today; correct?

A. My critique is based on my knowledge of statistics and what you can and cannot conclude from certain types of data, and it --

Q. Thank you, ma'am.

THE COURT: So what do you think should be the statistical probability of a match before it's allowed?

THE WITNESS: Before we can declare it a good type of evidence?

THE COURT: Yeah.

THE WITNESS: That's a matter for you to decide. So --

THE COURT: Well, what's your opinion?

THE WITNESS: I'm a statistician. So my opinion as a lay person when it comes to law issues would be that something that has a 30 percent probability of coincidental match is probably not very good to present in court. Something that has perhaps a 3 percent probability or a 5 percent probability of coincidental match might be more reasonable.

And so I cannot tell you what you can declare reasonable or not. That's an issue for the courts to decide. The only thing I can tell you is that those numbers have not been computed.

And, you know, an example that I sometimes give is the issue of blood type. So you might find blood at a crime scene and you might have a suspect, and the blood type of the suspect and the blood type of the crime scene sample match.

Well, there is no question that there is a match. But does the match imply that your suspect left the blood? And the answer to that is not necessarily, because we know that there is a large percentage of the population that shares the same blood type.

And how do we know that? Because we have looked at blood types for a gazillion human beings, and we know that's the case.

The same with DNA. If you find DNA -- if you find a biological sample at a crime scene and you have a suspect and you find that the DNA matches, you would be inclined to conclude that there is a common source, that your suspect left that sample there.

The reason is that we have gigantic reference databases by ethnic groups and what have you that allow us to come up with that conclusion, because we know what the probability of certain combinations of alleles are.

The claim is that we don't know what that probability of a coincidental match is for firearm examining. Can it be computed? Of course, it should be -- it can be computed. But the problem is that it hasn't.

THE COURT: So when you say all forensic sciences but for this one have probabilities, what's the probability for fiber matching, do you know?

THE WITNESS: Well, actually it's a very good point.

THE COURT: There isn't any, is there?

THE WITNESS: For fiber there isn't.

THE COURT: For hair there isn't either, unless you are looking at it from DNA?

THE WITNESS: That's right.

THE COURT: So how about for shoe imprints, there is no probability for that, is there?

THE WITNESS: No. I, you know --

THE COURT: So it's not true that there is a probability for all evidence.

THE WITNESS: I should have said for all biological evidence.

THE COURT: Oh.

THE WITNESS: And so there is for fingerprints -- but the question that we should be asking is can we get there, and the answer is, yes, we can.

THE COURT: You know, there is nothing in the years that you have done this for you to go to one of your Cyclone colleagues and do a study on your own to get exactly what you are claiming somebody else should have gotten.

THE WITNESS: I don't have the -- do you know how big a study that should be in order to say something for the population of guns in general?

THE COURT: So are you now saying that it's impossible to do it?

THE WITNESS: No, but it requires the means of the federal government. An individual researcher can certainly not undertake this. There is no way. So --

THE COURT: So your view is that the federal government should fund this massive, expensive study to come up with a probability, and until that's done, this evidence should never be admitted?

MS. JOHNSON: The federal government funds --

THE COURT: Isn't that what you are saying?

MS. JOHNSON: Yes. The same as the federal government has funded all kinds of massive studies through the National Science Foundation, through the National Institutes of Health, through many of the federal agencies that fund major research. We are not talking about a study with ten guns here.

THE COURT: You ought to apply for one of those.

THE WITNESS: I -- it's beyond me.

THE COURT: Because it's too complicated and too expensive?

THE WITNESS: It would require a team of people to plan well and to do well, that would include firearms examiners, it would include statisticians, it would include the general scientific community. That's what I'm saying.

THE COURT: All right. Go ahead, please.

-- -- --

REDIRECT EXAMINATION

BY MS. JOHNSON:

Q. I just want to clarify a few points.

You are not an attorney?

A. No.

Q. You have no legal training?

A. None.

Q. And you mentioned before, you are not a professional witness. You are a professor at a university?
A. Yes.
THE COURT: Well, this is her third engagement in the last six months, so maybe she is becoming one.
THE WITNESS: I hope not.
THE COURT: All you have to do is say no.
THE WITNESS: I know.
MS. JOHNSON: Well, I beg.
BY MS. JOHNSON:
Q. So my point is to the extent that we have been using words in the courtroom as probative and all that, you don't have any legal training?
A. No.
Q. Okay.
THE COURT: Well, I want to make it clear that she brought up *Frye*. Nobody else brought up *Frye*.
MS. JOHNSON: I agree with that, Your Honor.
BY MS. JOHNSON:
Q. Let me ask you in terms of the government was asking you about all of the AFTE studies that you have reviewed. If I understand your testimony, those studies are not available to the general scientific community?
A. That's correct.
Q. The studies that you have reviewed, you don't have them

committed to memory?
A. No.
Q. No. So if I ask you to list them all, you could not list them all?
A. I don't have anything committed to memory. My Social Security number.
Q. Okay. And the studies that you did review, you were able to do so because one of the members of the ballistic committee was a retired AFTE person?
A. There were some of those, yes.
Q. And the government asked you about the Fadul 2011 study, and you indicated that I provided you with a copy of that study?
A. That's right.
Q. Do you have any idea how I secured that study?
A. No.
Q. Now, the government was asking you about your most recent publication listed on your CV, and one of them is number 73 having to do with sodium and potassium intake among U.S. adults?
A. Yes.
Q. Do you see that?
A. Yeah.
Q. Does that mean that you went to people's houses and saw how much -- you know, how much sodium they were consuming,

how many bananas they were eating?
A. I didn't, but somebody did.
Q. And so what you did is you looked at the statistical evidence?
A. Yes.
Q. Okay. And so as a statistician, someone else does the studies, does the analysis, and then you look at the studies from a statistical perspective?
A. Typically I look at the data that has been collected by somebody else, somebody that actually knows the science.
MS. JOHNSON: That's all I have. Thank you.
THE COURT: Mr. Hollingsworth, anything from you?
MR. HOLLINGSWORTH: Judge, I have no questions.
MS. HACKWORTH: I have nothing further. Thank you, Your Honor.
THE COURT: All right. Thank you for being with us. You may step down.
THE WITNESS: Sure.
THE COURT: How long is your next witness?
MS. JOHNSON: William Tobin.
THE COURT: How long is he?
MS. JOHNSON: He's going to be a long witness.
THE COURT: What's he being called for?
MS. JOHNSON: He is a materials scientist and metallurgist, so he has worked in the field of toolmark

examinations.

THE COURT: How so? What's he being offered on?

MS. JOHNSON: He is being offered as a metallurgist, materials scientist.

THE COURT: And what opinion is he going to express?

MS. JOHNSON: I'm sorry, I'm having trouble hearing.

THE COURT: What opinion is he going to express?

MS. JOHNSON: He is going to express quite a number of opinions.

He is going to -- and I'm roughly summarizing his opinions, but he's going to opine that the theory of individualization has not been sufficiency tested.

He is going to opine that the theory or the hypothesis of uniqueness and reproducibility has not been sufficiently tested.

He has reviewed the materials from AFTE. He will present to the Court tests conducted with different or -- yeah, with different error rates than the ones presented by the government. He has written on the topic.

He has peer reviewed a paper that has been accepted for publication that deals with some of the validation tests that Mr. Webb spoke about.

I'm sure I'm not covering all of the topics, but he

has -- his testimony I expect is going to take some time.

THE COURT: How do you define that?

MS. JOHNSON: I'm sorry, some time.

THE COURT: What you mean by some time? Four hours?

MS. JOHNSON: I would think if Mr. Webb took four hours, I would say about the same, Your Honor.

THE COURT: Well, let me ask you this. This case is supposed to go to trial on Monday.

MS. JOHNSON: Yes.

THE COURT: Unbeknownst to us, we are now taking about ten hours of testimony, upon which I have to issue an opinion. That testimony won't be -- and I have already canceled everything for tomorrow as I have canceled everything I had for today, which gives me very little time to write an opinion.

How, Ms. Johnson, do you think I'm supposed to do that?

MS. JOHNSON: Judge, I understand you, and as I said this morning, it's completely my fault that I didn't notify you with more time that I had these witnesses.

The reality is I have to do the best job I can for my client, and I think I would not be doing that if I don't raise these issues.

These are cutting-edge issues. The reason issuing

an opinion is so complicated is because I recognize that these are novel issues.

THE COURT: Well, they are not that novel, but they -- because I understand what you are doing here.

MS. JOHNSON: You know, I mean --

THE COURT: I understand what you are doing. Don't interrupt me, please.

But you have put me in an impossible position because, one, I am now interfering with my schedule for other people, including people in your office that are being put off because of you, that there are people that I have hearings I have to conduct that I can't conduct because of you.

And now in a hearing that I thought maybe even as I heard yesterday was going to take a day, now we are talking about almost two days. We have a very busy trial schedule, and I set aside next week to get this case tried.

How am I supposed to get an opinion on this cutting-edge issue, which you didn't even have the courtesy to call me and tell me that you were taking this cutting-edge issue and putting on two days' worth of testimony, how am I supposed to get ready for a trial on this cutting-edge issue? Can you explain that?

MS. JOHNSON: You know, Judge, the only thing I can say is that I have screwed up, and I have to balance my

screwing up with doing the best for my client.

And I know it's no excuse. I know it does nothing for the Court. I mean, I know -- I know this is hard, and I understand completely what the Court is saying.

And I could -- the easy path to take would be saying I am not going to present any witnesses, I'm not going to push the issue.

THE COURT: No, the easy task would have been to call me two weeks ago to tell me you had long discussions with all of these experts on this cutting-edge issue and it was going to be an issue in the trial somehow.

MS. JOHNSON: Granted, granted. I agree with that. That would be -- that should have been -- that is what I should have done, absolutely. You will get no argument from me, Judge. You are absolutely right.

And I know you are upset with me, I know that.

THE COURT: Well, I'm not upset just because of the impossible position you -- I'm upset with the way that you have treated other people.

You know, I have got a fellow that's coming in, has a meeting with me about termination of supervised release. I can't do that now. You want to know something? He wants his supervised release terminated early, and I made special arrangements to meet with him. And now I can't do that.

There is somebody who needs a revocation hearing

that I have put off once who is represented by one of the people in your office. I have just canceled that.

I had a defendant who wanted to come in today and plead guilty to an offense. I have had to cancel that.

It's not me, Ms. Johnson. It is the impact that this has had on other people, including those who are defendants in cases. And it's the impact on the public and the community, it's not just me.

Although I will tell you, it has a very important personal impact on me and my staff, and it's not fair.

MS. JOHNSON: Judge, I know it's not fair. And, you know, I don't know what else to tell you other than I'm very sorry. And it's completely my fault, it is.

THE COURT: I don't see how this case can be tried on Monday because of this situation and the circumstances that I have been put in as a result of this completely unpredictable process.

So I'm going to postpone the trial, as much as I hate to do that, because we have almost forty proceedings scheduled in August, because I was banking on this case being tried next week and sandwiched all this in between a trial that we ended on Friday.

Do you see any way that I can get this order done between now and Monday?

MS. JOHNSON: No. I mean, I understand, Judge. If

I were in your shoes, I would have a very hard time writing up an order, because you are going to have to review the evidence, review the testimony.

THE COURT: Look, you never told me we were going to have two binders' worth of documents.

MS. JOHNSON: Well, there is actually very little that I would be referring to in those materials in writing. I just did it -- since the Court didn't want me to spend time with the witness reading specific portions, I just put the whole book into evidence, because I didn't want to do it during the course of the examination to try to move it along.

You know, Judge, I completely understand that I have put you, your staff, and every person that has a case before you in a very, very difficult position. I completely understand that.

And I want you to know that if I could go back in time and call or e-mail your clerk three weeks ago when I decided to see about bringing the witnesses in, I wish I could. I wish I could. Because you are -- you know, you are absolutely right.

THE COURT: We are going to be in recess, and I want to see counsel in chambers right away.

(A recess is taken at 4:26 p.m.

-- -- --

(In chambers at 4:37 p.m.:)

THE COURT: All right. This is a status conference in the Durham/Jackson case.

We need to find out what to do with this. We now have a one-day transcript. We are going to have another probably five hours of testimony tomorrow, and Nick can't transcribe it probably until -- I mean, he already wants me to have you pay for an expedited transcript because if he has to get it for me, it's really not fair for him not to be compensated for that, and I'm sympathetic to that.

I think it's going to take me four days to do this just to write the order, and I can't get ready for a trial on Monday if I don't get the transcript until Saturday at the earliest.

So what do we do?

MS. JOHNSON: Well, I mean, the Court said that it would have to move the trial in order to have enough time to consider all the issues.

I am prepared to try the case, but at the same time I do not object to moving the trial.

THE COURT: All right. I'm going to tell you, Vionnete, that's disingenuous to come in here and tell me that you are prepared to try the case when you have put me in this position.

MS. JOHNSON: What I mean by that is in terms of my

witness interviews, I have done them, I have prepared cross-examinations, I have done a draft of the jury instructions. So when I say I am prepared to try the trial, that's what I mean in terms of my own personal preparation.

Now, I appreciate what you are saying, Judge. I mean, I just mean in terms of my own personal preparation, I have been working long hours, I have been working all weekend to get ready.

THE COURT: Well, including to get ready for this that I didn't even know about.

MS. JOHNSON: Yeah. I mean, I have worked hard in this case. I have put in a lot of time.

And I recognize what you are telling me, Judge, is that you are going to have to put on time in this case as well.

THE COURT: We have so many things scheduled in August.

MR. HOLLINGSWORTH: Judge, I was going to say I don't have an objection to the case being continued. And my client has been recalcitrant to anything other than trial.

THE COURT: Excuse me, I didn't understand.

MR. HOLLINGSWORTH: He's been recalcitrant to doing anything other than going to trial and has resisted

anything. And a moment ago in court he was passing me a note, you know, saying that he might change his mind.

And then I was talking to the government. And if we had a little bit extra time, I could -- maybe we can take one last ditch effort with her supervisor and maybe try to resolve this short of a trial.

THE COURT: Well, you can tell me that, but I don't want to get involved with that.

MR. HOLLINGSWORTH: Okay.

THE COURT: In looking at the calendar, the best week for us would be September 10th without us having to move a lot of scheduled sentences on hard cases.

Could you all present to me a consent motion to, in light of these circumstances, to reset it for September 10th?

MR. HACKWORTH: Your Honor, I am -- I will just say for the record I think our office and definitely our trial team would do whatever is easiest for the Court.

I am now currently scheduled to be in Japan from September 5th until September I believe 16th. But given the nature of the case and the number of witnesses, I do not think Ms. Clerk would object to having someone else sit in for me and try the case if that is the best date that works for everyone. We don't want to further inconvenience the Court or any of the parties. And I'm sure that my supervisor

would be fine with that as well.

I know it's been hard for us to find a mutually convenient date. That's why I'm hesitant to say can we find another one, because I don't want to be a trouble-maker.

MR. HOLLINGSWORTH: I was going to say, I know it has nothing to do with it, but I'm expecting -- my wife is expecting a child at the end of September. So if we did it the 10th, it would be preferable than after that date.

MR. HACKWORTH: We could definitely find someone to step in. Ms. Clerk is well prepared. We can definitely find an able-bodied AUSA to step in. I don't think that would be an issue.

THE COURT: In every case I have from your office, somebody is stepping out because -- well, you all look at your calendars. If -- and if you want to tweak that, if there is -- I hate for people to have their -- but it's hard when you are working around a two-week travel time to -- and I guess we can go back and look at August to see.

But I think under these circumstances, I will need the parties to agree to the rescheduled date and agree that it should be rescheduled. Because otherwise we just can't get the material we need to consider this issue, which I now understand what's going on. I just wish I had known it a long time ago. Not even a long time ago; two weeks would have been easier.

So we will look at our calendar again and look at August. I guess if we rescheduled something, it would be easier to do it at the end of August.

But, Jessica, you and I will look at that. We will get you that information back tomorrow, and then we will find a date to set this down.

All right. Anything else we can discuss?

MR. HACKWORTH: Nothing for the government, Your Honor. Thank you.

MS. JOHNSON: No, Your Honor.

THE COURT: See you tomorrow at nine.

(Proceedings adjourn at 4:43 p.m.)

C E R T I F I C A T E

UNITED STATES OF AMERICA :
:
NORTHERN DISTRICT OF GEORGIA :

I, Nicholas A. Marrone, RMR, CRR, Official Court Reporter of the United States District Court for the Northern District of Georgia, do hereby certify that the foregoing 240 pages constitute a true transcript of proceedings had before the said Court, held in the city of Atlanta, Georgia, in the matter therein stated.

In testimony whereof, I hereunto set my hand on this, the 25th day of July, 2012.

/s/ Nicholas A. Marrone

NICHOLAS A. MARRONE, RMR, CRR
Registered Merit Reporter
Certified Realtime Reporter
Official Court Reporter
Northern District of Georgia