

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE NORTHERN DISTRICT OF GEORGIA
3 GAINESVILLE DIVISION
4

5 UNITED STATES OF AMERICA)
6 v.) NO. 2:02-CR-38
7 WILLIAM EMMETT LECROY, JR.)
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13 VIDEOTAPED DEPOSITION OF MICHAEL J. SAKS, Ph.D.

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Tempe, Arizona
December 5, 2003

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9	NO.	DESCRIPTION	MARKED	IDENTIFIED
10		(None marked)		

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1 DEPOSITION OF MICHAEL J. SAKS, Ph.D.
2 was taken on December 5, 2003, commencing at 11:02
3 a.m., at Arizona State University, Computing Commons
4 Building, Room 123, Tempe, Arizona, before KATHRYN A.
5 BLACKWELDER, Certified Court Reporter No. 50666 for the
6 State of Arizona.

7

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10

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21

Also Present:

22

23 Robin Smart, Videographer
24 Minnie Ward
25 (Appearing via videoconference)

24

25

1 THE VIDEOGRAPHER: Today is Friday, December
2 5th, 2003. The time is 11:02 a.m., which is indicated
3 on the video screen. This is the videotaped deposition
4 of Professor Michael Saks in the matter of the United
5 States of America versus William Emmett Lecroy, Jr.
6 This matter is being held in the United States District
7 Court for the Northern District of Georgia, Gainesville
8 Division.

9 Our location today is the Arizona State
10 University Computing Commons Building, Room 123, Tempe,
11 Arizona. The court reporter is Kathryn Blackwelder of
12 Arizona Reporting Service, Incorporated, located at
13 2627 North Third Street, Suite 3, Phoenix, Arizona
14 85004. My name is Robin Smart. I'm the legal video
15 specialist for the firm of Video Dep, Incorporated,
16 located at 2111 East Baseline Road, Suite A1, Tempe
17 Arizona, 85283.

18 Counsel, please identify yourselves for the
19 record.

20 MR. KISH: I am Paul Kish. I am one of the
21 attorneys for William Lecroy.

22 And on the other end of the video
23 teleconferencing system is Russell Vineyard, an
24 assistant United States attorney, representing the
25 United States of America.

1 And we are in the case, as you have just
2 said, of United States versus William Emmett Lecroy,
3 Jr., which is 2:02-CR-38, a criminal matter in the
4 United States District Court for the Northern District
5 of Georgia in the Gainesville Division.

6 We are here today to take a Rule 17 of the
7 Federal Rules of Criminal Procedure deposition of
8 Professor Michael A. (sic) Saks. This deposition is
9 being taken by agreement between the parties in lieu of
10 Professor Saks' personal appearance at a court hearing
11 in Georgia. The deposition is being transcribed; the
12 deposition is being videotaped.

13 Furthermore, the parties have agreed, and the
14 defendant has, in writing, waived his personal presence
15 at this deposition.

16 As we have agreed to prior to starting the
17 deposition, the parties, if they have any objections,
18 will make them on the record. The witness will answer
19 the questions, and then the answers will be obviously
20 subject to a later ruling on the objections, if there
21 are any, if we need to go that far.

22 Does that comport with your agreement,
23 Russell?

24 MR. VINEYARD: It does, Paul.

25 MR. KISH: All right. Then I will ask the

1 court reporter to swear Professor Saks, and we will get
2 started.

3

4 MICHAEL J. SAKS,
5 called as a witness herein, having been first duly
6 sworn by the Certified Court Reporter to speak the
7 truth and nothing but the truth, was examined and
8 testified as follows:

9

10 EXAMINATION

11 BY MR. KISH:

12 Q. Can you tell us your name, please?

13 A. Michael J. Saks.

14 Q. And how are you employed, Mr. Saks?

15 A. I'm a Professor at the University of Arizona
16 where I am primarily in the law school. I have a
17 secondary appointment in the Department of Psychology.

18 Q. If it's all right with you, I will call you
19 Professor Saks.

20 A. Whatever.

21 Q. Okay. Professor Saks, give us a little
22 background of your educational history.

23 A. My undergraduate education was at Penn State.
24 I then went to Ohio State University for my Ph.D. in
25 experimental social psychology. And then I went off to

1 Boston College to be a psychology professor, although
2 much of my research involved the law, the legal system,
3 the legal process.

4 So after about 10 years, I went to Yale Law
5 School in their MSL program, not a JD program -- it's a
6 one-year program for people from other fields -- and
7 went back to Boston College after that. And not long
8 after that, I started being invited to teach at law
9 schools. And after now about 20 years, I am here at
10 Arizona State.

11 Q. Prior to your appointment at Arizona State
12 University, were you working at any other law schools?

13 A. Before that, I was a chaired professor at the
14 University of Iowa College of Law and had a secondary
15 appointment in the Psychology Department there.

16 And prior to that, I was the visiting
17 interdisciplinary professor at Georgetown University
18 Law Center. And sort of across about a 10-year period,
19 I taught at the University of Virginia in their summer
20 LLM program for judges, where the course I taught in
21 that program was essentially research methodology and
22 statistics for judges.

23 Q. Professor Saks, what would you describe as
24 your field right now with your appointment here at
25 Arizona State University?

1 A. Well, I've long considered myself to be doing
2 any kind of empirical research, or often typically
3 reviewing empirical research for others, in a variety
4 of areas.

5 I guess the two that I work on most -- one is
6 forensic science, or science more generally as it is
7 used in courts. And second, I do a lot of research on
8 the tort litigation system. Again, I'm not looking at
9 it from the doctrinal perspective of legal scholars,
10 I'm looking at it from the empirical perspective of
11 social scientists.

12 And my teaching is related to that in that
13 I -- the principle course that I teach law students is
14 a course in using science where I'm trying to get them
15 up to speed on research methodology and statistics so
16 that they will be more conversant with studies and so
17 forth, and a few other courses.

18 Q. Professor Saks, to simplify this, I'm showing
19 you a copy of one of the motions filed in this case
20 entitled "Defendant's Motion to Exclude Testimony from
21 Forensic Document Examiner and Request for a Daubert
22 Hearing," and ask you if this is a copy of your
23 affidavit in this case which contains a copy of your
24 curriculum vitae -- actually, it's a copy of you
25 affidavit which contains --

1 A. I'm seeing everything but the curriculum
2 vitae.

3 Q. Right. But the affidavit --

4 A. Yes.

5 Q. -- has your professional background?

6 A. Yes. And I can certainly supply one.

7 Q. Professor Saks, did there come a point in
8 time in your professional work when you began to get
9 interested in the field of forensic document
10 examination?

11 A. Well, the way that started out, I didn't seek
12 it out, oddly enough. I had been asked by some
13 colleagues in Boston if I would participate with them
14 in a project that the Congressional Office of
15 Technology Assessment had engaged them in to do a
16 review of polygraph -- research -- What we were
17 basically doing was a thorough literature review on the
18 accuracy of polygraph testing, and I worked on that
19 project with them.

20 Congress was concerned about whether the use
21 of polygraph testing in national security situations
22 might be doing more harm than good. If the polygraph
23 was insufficiently accurate, it might be that it was
24 the spies who were passing nicely and it was the loyal
25 citizens working in the Defense Department or the CIA

1 who were nervous and being identified as suspect.

2 So we did that review, it was -- the report
3 was filed and finished, and there was a small article
4 that appeared in a newspaper. And some lawyers in New
5 York, who were working on a case that involved
6 handwriting identification, saw that article and
7 wondered if they might have a similar literature review
8 conducted for the capabilities of handwriting experts
9 in much the way we had done for the Congress on
10 polygraph examination. And they called up some of the
11 people on the research team, and either I was the lucky
12 one or the unlucky one who wound up saying, sure, I can
13 dig up those studies and review them and write about
14 them.

15 Q. Before we go into that situation, it sounds
16 like what you did for the Office of Technology
17 Assessment, and also what these lawyers were asking you
18 to do, was to evaluate research, is that right?

19 A. That's right.

20 Q. What training do you have in that field of
21 evaluating research?

22 A. Well, in my own doctoral training, a very
23 heavy component was to take statistics courses and take
24 courses in research design. And actually, what we did,
25 and what I am confident is done in many doctoral

1 training programs in many fields, is to read lots of
2 studies in the field. You don't just take them at face
3 value, you assess the methodology, and some are very
4 poorly designed, some are very well designed. And you
5 take the better ones more seriously than the poorer
6 ones. But the ability to read and evaluate a study and
7 the ability to design a study go hand in hand.

8 Q. Now, we've got these lawyers in New York who
9 contacted you about doing a review of the literature
10 and/or studies concerning the field of document
11 analysts. Did you do that sort of review?

12 A. In a sense, I did. It turned out to be the
13 strangest one of these I had ever done, because I dug
14 and I dug and I dug and I could not find empirical
15 studies.

16 Q. Now, what year are we talking about here?

17 A. This would have been maybe the mid-'80s.

18 Q. Okay.

19 A. And I did find one study, a very flimsy study
20 done by a law professor, a very famous law professor,
21 actually, Fred Inbau, at Northwestern, who had been a
22 colleague of Wigmore's (phonetic) and had done a study,
23 I think it was the late 1920s, where he tried to get
24 handwriting experts to participate in a study.

25 His hope was to show that they were better

1 than the postal officials, the bank tellers, and so
2 forth, who were normally called upon to do this. And
3 they wanted to establish -- And at that time it was
4 still somewhat controversial whether handwriting
5 examiners were going to be regularly admitted in court.
6 And he was a proponent of that, tried to do a study of
7 that.

8 And perhaps the most interesting thing about
9 his study was that he found that it was -- he was able
10 to find very, very few -- we're talking about one or
11 two or three, I forget the exact number --
12 handwriting -- people who put themselves forward as
13 handwriting experts who were willing to participate in
14 the test. But that was the only study I found.

15 And the lawyers in New York were very pushy
16 about this and said, "Have you checked everything?"
17 One of them even came up to New York -- came up from
18 New York to Boston, where I was living at the time,
19 took me over to the Harvard Law Library and said, "Did
20 you go through this journal from the very first issue
21 to the very most recent issue? Well, if you missed any
22 of them, let's do them now."

23 There were a few obscure journals that I was
24 able to locate only at the Massachusetts state police
25 crime laboratory, and they were very gracious to let me

1 come over and look through their library. They wanted
2 to be sure that I had looked through every published
3 study that existed, at least in English, and the end
4 result was, I'd say, essentially zero.

5 Q. Now, did there come a time when you became
6 aware of an organization and/or set of organizations
7 that performed some tests that were supposed to design
8 proficiency of handwriting analysts that originated
9 with a grant from the old law enforcement assistance
10 administration?

11 A. Well, I had been aware of a proficiency
12 test -- or, became aware. I'm not sure exactly when I
13 did. But at some point I became aware of
14 proficiency -- one large proficiency test that had been
15 conducted, Joseph Peterson was the lead author.
16 Peterson, Fabricant, Field, and someone else.

17 And they had done a large-scale study of
18 about 200 crime laboratories throughout North America
19 and sent them various known quantities and asked them
20 to tell them -- to identify what species -- hair is
21 this, is this a chemical or drug. That did include
22 handwriting.

23 Q. So this was a test of crime labs for all
24 their different components --

25 A. Yes.

1 Q. -- in the forensic labs, not just
2 handwriting?

3 A. Right.

4 Q. Okay. How did the handwriting analyst do on
5 this test -- or, this evaluation?

6 A. Well, let's see. That would be the first one
7 mentioned in the chapter in Modern Scientific Evidence,
8 the 1975 test.

9 Q. Now, the book that you're referring to, is
10 this a textbook?

11 A. This is a treatise written largely for
12 practitioners.

13 Q. And what's the title of it?

14 A. The title is Modern Scientific Evidence,
15 subtitle, the Law and Science of Expert Testimony.

16 Q. Are you one of the authors of this treatise?

17 A. I'm one of the coeditors/coauthors.

18 Q. Okay.

19 A. And in the chapter on handwriting it refers
20 to the 1975 test in which the participating
21 laboratories were given a letter made up of both
22 handwriting and typewriting. They received four
23 examples of handwriting written by four different
24 people. They were asked to determine if any of the
25 four suspects had written -- had prepared the writing.

1 And 89 -- In this test, 89 percent correctly
2 identified the writer of the questioned letter,
3 six percent -- oh, I'm sorry. One percent gave a
4 partially correct/partially incorrect answer,
5 five percent asserted they could not reach any
6 conclusions, and four percent identified the wrong
7 person as being the author of the article.

8 That, it turns out, is the only one that
9 existed until the -- I guess the mid-1980s, the
10 Forensic Sciences Foundation decided that they would
11 like to conduct regular proficiency testing, and they
12 engaged an organization called the Collaborative
13 Testing Service, CTS, to conduct those. Those were not
14 generally known. Those were kept, I suppose you could
15 say, in house. They were -- They weren't published in
16 a public place, they were put on -- I think at that
17 time they were Xeroxed or mimeographed.

18 Q. How did you get access to them, the test
19 results?

20 A. I was at a meeting -- a conference on the
21 ethics of forensic science, because at one time I had
22 done some research on ethics and was asked to bring in
23 kind of an empirical perspective to this group. This
24 was a symposium that ended up being published in the
25 Journal of Forensic Sciences.

1 And among the people that were at this small
2 conference was Douglas Lucas, who was a -- I believe he
3 was the head of the Toronto crime laboratory. And in
4 sort of side conversation I was talking to him about my
5 difficulties finding research on handwriting, and he
6 mentioned that he was on an advisory committee to the
7 testing -- to the Collaborative Testing Service --
8 testing under the -- he was a member of the Forensic
9 Sciences Foundation which oversaw the work of CTS. And
10 he said that if I would get in touch with a certain
11 person at CTS and say that Doug sent me, they could
12 arrange to have me receive copies of the proficiency
13 studies that had been done to that time, which I did,
14 and which eventually -- so when you read the article
15 that Risinger, Denbeaux, and I published in the
16 Pennsylvania Law Review --

17 Q. This is 1989?

18 A. 1989.

19 -- you will see reference not only to the
20 Inbau study, such as it was, but you will see reference
21 to the 1975 Forensic Science Foundation study and the
22 1984 and 1986 and '87, which I was given copies of by
23 Collaborative Testing.

24 Q. So now, we'd started our little exploration
25 here by you telling us that one of your expertises is

1 in research methodology.

2 So by the time you've realized that there is
3 this relatively sparse body of data out there, were you
4 able to form any initial perceptions as to whether
5 there was any research into the fundamental principles
6 or claims by forensic document examiners?

7 A. Well, let's divide it into two categories.
8 One is fundamental claims; such as, no two people have
9 indistinguishably similar handwriting.

10 Q. Okay.

11 A. No one person writes the same way twice, so
12 much so that you can't tell every writing from every
13 individual. Everything I have ever written --
14 According to the folklore of handwriting experts, if
15 you took everything I have ever written, you could
16 distinguish every single one of those writings from
17 every other writing, in addition to being able to
18 distinguish my writing from the writing of every other
19 person on earth, or at least in English-speaking
20 countries -- English-writing countries. Those I didn't
21 learn much about until later. The other category --

22 And the short answer is that there had been
23 no research on those issues. There are some things
24 that are sometimes put forward purporting to establish
25 those, but they aren't.

1 Q. Now, at that time, also -- again, we're
2 focusing on the late 1980s -- what had you found, after
3 performing your research methodology, as to whether
4 there was any data or research out there on the
5 performance of accuracy or error rates by forensic
6 document examiners?

7 A. And that's the other half, and that was --
8 that was and has remained a central focus. And the
9 conclusion we reached was that there -- I guess you
10 could say a couple of things. One is that there was
11 very little research. It's not clear how much weight
12 one would really want to put on these studies, because
13 only those who wish to take them take them.

14 Q. When you say these studies, what are you
15 referring to?

16 A. The Forensic Science Foundation proficiency
17 studies.

18 Q. Okay.

19 A. They are offered, by subscription, to crime
20 labs in the United States -- or, I think it may be the
21 United States and Canada. And my understanding is that
22 now people from other countries take them as well. But
23 they're entirely voluntary. If labs wanted to take
24 them, they could take them; if they didn't, they
25 didn't. Often those that --

1 So, for instance, in the 1986 test, 48
2 laboratories requested materials, only 31 returned
3 them. Did the ones not returning them feel a lack of
4 confidence that they had done well so they didn't want
5 to do it? Or did they just not have the time to turn
6 to it?

7 At some labs you would have four -- as
8 many -- it seemed, from reading the details of the
9 reports, as many as four examiners working collectively
10 on one test. In others, one examiner. And I am
11 told -- It wasn't evident from the reports, but I am
12 told by document examiners that sometimes they would
13 give it to the rookie. So it's only giving you a very
14 rough sense.

15 But what we concluded was that that rough
16 sense of things certainly did not inspire confidence in
17 the claims of document examiners, because from one
18 study to another the error rate would fluctuate. It
19 might be --

20 So, for instance, I told you that in the 1975
21 study, 89 percent gave correct answers. In the 1985
22 study, only 41 percent gave correct answers. And,
23 indeed, in the 1985 study, 22 percent gave
24 substantially incorrect answers, and --

25 Q. Professor, I'm sorry to interrupt you. This

1 might be a good time to talk about the field of
2 research methodology and how the field of research
3 methodology looks at expert -- or, looks at areas where
4 people are comparing one thing to another.

5 Are there types of errors that are described
6 in the literature of research methodology that are
7 generally used? In other words, whether it's in DNA,
8 handwriting, comparing frogs, cancer cells, is there a
9 general way of looking at how a test is set up to
10 compare error rates?

11 A. Well, I'd say that any and every field of
12 science is concerned about how it designs its studies.
13 Because, I mean, one of the sort of bumper sticker
14 slogans is that a finding of fact is only as good as
15 the methods used to find it. So any researcher --
16 Let's assume good faith, honest, sincere, not trying to
17 pull the wool over anyone's eyes. Such a researcher
18 wants to design the best possible study that he or she
19 can to get the most valid possible answer.

20 A whole literature -- I don't know that I'd
21 call the field of research methodology a field, because
22 every field of science, whether you're talking about
23 medical research -- and you ticked off a number of
24 them -- medical research or genetics or psychology, or
25 there are people that do research in sports. Any and

1 all of them want to do well-designed research.

2 So there is, indeed, a literature. If you
3 went to the library and typed research methods into a
4 search of a library's database, you'd get a huge
5 collection of books, and they would come from this
6 whole array of fields. If you read those books, you'd
7 find that there is a lot of commonality among them
8 because it really is -- you could think of it as
9 applied logic.

10 So if I wanted -- so suppose I wanted to know
11 whether -- whether children at the age of two are
12 rambunctious and disobedient, you know. Would you just
13 ask one parent about one child? Well, maybe you'd
14 like -- rather than that, maybe you'd like to get --
15 you'd like to observe the children directly, you'd like
16 to get a sample, a representative sample of them.
17 Maybe you'd like the observers to not have expectations
18 about what it is they should expect to find. And so an
19 enormous array of understandings, basically either they
20 are logically obvious or there are studies of studies
21 to evaluate whether you're getting dependable answers
22 or not from them.

23 Q. Now, it sounds like you're saying that the
24 studies in this field, as of the late 1980s, were less
25 than satisfactory. Would you agree with that?

1 A. In --

2 Q. Forensic document examination.

3 A. -- forensic document examination?

4 Yes. Insufficient. I mean, if you think
5 about a field that's been coming into court a little
6 bit in the mid-19th century, though judges were very
7 skeptical of it. But by the turn of the century most
8 courts were allowing it, though judges often had unkind
9 things to say about it. But by the late 1920s it was
10 in and no one was asking any questions.

11 For such a field that struggled to gain
12 respectability and admission, to discover that by the
13 end of the 1980s you can find exactly four or five --
14 five proficiency studies, which suffer from some of the
15 shortcomings I mentioned, and I know that Professor Kam
16 is critical of them and they are certainly less than
17 ideal. It's an incredible pilosity of research.

18 And I believe that every commentator since,
19 including Professor Kam and others -- and I think I
20 mention them in my affidavit -- concur that the field
21 simply dropped the ball, never undertook to evaluate
22 its own claims about its own performance abilities.

23 Q. But now there have been -- there has been
24 research since that period in the late 1980s when you
25 first created these opinions of your own, right?

1 A. Right.

2 Q. Now, the claims of the field of forensic
3 document examiners, after this newer research -- and
4 we'll go into the specifics of the newer research. But
5 would you say that the basic claims of forensic
6 document examiners have been supported by the most
7 recent research?

8 A. Well, whether you talk about just the first
9 five studies or you talk about the most recent
10 research -- If you look at what the claims had been up
11 until the 1980s, up until we published our Pennsylvania
12 Law Review article, the claims were that every
13 qualified document examiner would reach the same
14 conclusion on the same evidence, 100 percent. Well, I
15 don't think anyone can take that claim seriously
16 anymore.

17 Q. Why not?

18 A. When you give the same test to scores,
19 hundreds of document examiners and they give different
20 answers --

21 Q. Are you talking about Dr. Kam's test?

22 A. No. I'm talking about the proficiency
23 studies, but we could include Dr. Kam's test

24 Q. Okay.

25 A. When different document examiners give

1 different answers, and they do in virtually -- no, I
2 guess I could say in every single one of these studies.
3 You never have the 100 percent consensus on what the
4 right answer is that the field had been claiming for
5 decades.

6 In addition, the claim that they -- that the
7 nature of writing, the theories they had about it were
8 such that not only would they all agree on what the
9 right answer is, but they would reach the right answer.
10 Once you start testing and giving them problems to
11 solve and you know what the right answer is -- In an
12 actual crime situation, you don't know the answer,
13 whether it's what gun a bullet came from or who made a
14 writing or many other kinds of questions. It's in
15 dispute. And as a matter of simple logic, you just
16 don't know, so you need to test. You need -- The
17 court would like an answer, so we turn to experts to
18 tell us the answer.

19 But in these studies, they know, to a
20 certainty, who created the writing and they know
21 whether two writings were made by one person or whether
22 the two writings were made by two people who happen to
23 write very, very similarly, so that sometimes document
24 examiners got them wrong.

25 Now, I'm not sure where I was heading with

1 that.

2 Q. Well, I had asked you about some of the
3 recent research. But I want to talk now about
4 something that gets more to the heart of our inquiry
5 here, which is error rates, which is a field that,
6 under the Daubert decision, most endeavors have to go
7 through.

8 What do you -- what does an error -- Does an
9 error rate the same all the time, or does it vary with
10 the particular task at hand?

11 A. Well, in the -- first of all, I'll take --
12 When the Supreme Court talks about error rates, I'm
13 going to take that to mean the results, the findings,
14 how often do they get it right, how often do they get
15 it wrong. And if I am thinking in terms of the whole
16 array of research that has been done to date, which I
17 am aware of, I think what's striking about it -- I'm
18 turning to a piece of paper where I have a summary for
19 myself of what it shows. I think what's striking about
20 it is that the accuracy rates, the error rates, the
21 refuse or decline to offer an answer rates fluctuate.
22 They're quite volatile from one study to another study
23 to another study.

24 Q. Can I just make sure we have our terms right
25 here?

1 So in the research of making comparisons of
2 known and potentially-questioned documents, there are
3 three potential answers of subject that the research
4 can give; either that the known and the questioned were
5 written by the same person, the known and the
6 questioned were not written by the same person, or the
7 third possibility is that the examiner cannot make a
8 choice, it's inconclusive. Would that be right?

9 A. Generally. In the context that I think we're
10 talking about where the question is did person X create
11 a particular writing, that is correct.

12 Q. Okay. Okay. So what does -- I interrupted
13 you. I'm sorry.

14 A. Well, the research -- Well, let me just add
15 that if the question is whether a signature is genuine
16 or not, then another question arises, which is, is it
17 forged or is it -- was it made by the person that it
18 purports to have been made by? When you look at the
19 research that has been done, the error rates -- or, the
20 accuracy rates, they are really quite varied.

21 So, for instance, if you look at all of the
22 studies of signatures, which is the area which,
23 according to the literature of document examiners,
24 should be the most consistent writing -- the most
25 consistent -- they would say that the most consistent

1 writing that I or any person would do would be my
2 signature, because it is very special, it's very
3 well-practiced, as opposed to my printing or my cursive
4 writing.

5 And so if you present signatures to document
6 examiners, which you give them questioned and known --
7 of course the questioned is only questioned to them,
8 the researcher knows who made it. You give them
9 signatures which, to them, are questioned versus known.
10 Sometimes they were made by the same person; sometimes
11 they were simulations or free-hand forgeries, there's
12 different kinds of forgeries. The error rates run --
13 In different studies you find error rates running as
14 high as 28 percent, which includes 22 percent
15 misattributions of authorship, saying that it was
16 written by someone other than it was written by. And
17 in six percent of those, they looked at a forgery and
18 erroneously called it genuine.

19 You find other studies where the error rates
20 are as low as zero percent. Now, that doesn't mean
21 100 percent got the right answer. In the particular
22 study that I'm thinking of that had such a good
23 performance, 92 percent -- 92 or 94, depends on the
24 study, percent would say it is genuine, it is a
25 forgery, and up to eight percent would say that they

1 were unable to decide.

2 MR. VINEYARD: Dr. Saks, if I could interrupt
3 for just a moment.

4 Mr. Kish, I think it would be helpful for the
5 record if Professor Saks could identify which studies
6 he's giving these percentages from.

7 MR. KISH: Yeah, I was about to do that.

8 THE WITNESS: Okay.

9 MR. VINEYARD: Thank you.

10 MR. KISH: No problem.

11 BY MR. KISH:

12 Q. In giving your summary here, Dr. Saks, we've
13 gone through, in a little bit of a chronological order
14 of the field of research out there, from Professor
15 Inbau's 1930 study up to the one study by the crime
16 labs in the '70s and then the Forensic Science
17 Foundations' work in the 1980s.

18 Are you including only those in the answers
19 you just gave, or are you including the more recent
20 studies?

21 A. This overview I'm giving is everything.

22 Q. All right. Now, let's talk about the
23 everything, and then we can go back.

24 After the 1980s, what other research have you
25 relied on in rendering your opinions?

1 A. Subsequent to our Pennsylvania Law Review
2 article, that did not prompt research in the field of
3 handwriting identification. Subsequent to the Supreme
4 Court's opinion in Daubert, I do not believe research
5 commenced.

6 But then in the mid-1990s following
7 challenges in court, then -- I don't know the exact
8 details of the relationship -- but at around that time,
9 Professor Kam was entered into a contract to do some
10 research for the FBI on handwriting, and that led to a
11 number of studies, which for convenience I refer to as
12 Kam one, Kam two, Kam three, Kam four, just by their
13 chronology. I understand there is a Kam five which I
14 have not read, but I think I know the data because I
15 was in another courtroom when it was actually generated
16 and calculated. So there's that body of research.

17 There is a study done by Galbraith,
18 Galbraith, and Galbraith, who were very upset about the
19 Pennsylvania Law Review article, and I think by the
20 mid-1990s had published a study where they attempted to
21 show that handwriting experts really were quite good.

22 I should say, by the way, that all of this --
23 everything I am saying appears in the chapter on
24 handwriting identification in Modern Scientific
25 Evidence and its supplements, and so I view myself as

1 just elaborating on them.

2 Q. Professor, is there also some research
3 overseas that you've relied on in rendering your
4 opinions?

5 A. There are several researchers in Australia.

6 I guess what we ought to mention is that
7 outside of the United States, and I guess outside of
8 North America -- or, particularly Europe and Australia
9 and New Zealand, it's much more common for forensic
10 science experts to be more like -- I don't want to be
11 pejorative here, but I think I'll say more like normal
12 scientists or real scientists in that they are as
13 likely to be found working in university laboratories
14 as in crime laboratories, or the university laboratory
15 is the crime laboratory.

16 So these Australian researchers have
17 doctorate in -- I forget exactly what area of research,
18 neuro -- one is a neuroscientist of some kind. But
19 they are trained researchers, but they, at some point
20 in their career, became associated with the police
21 investigative agencies of their countries.

22 They -- they read -- At some point they came
23 across the Pennsylvania Law Review article and they
24 said, "Good point. We should start doing research."
25 So they have begun doing research and there are a

1 number of studies --

2 Q. Have you also looked at some of the --

3 A. -- by them.

4 Q. I'm sorry. Have you also looked at some of
5 the work done by a Dr. Srihari, which is spelled
6 S-r-i-h-a-r-i?

7 A. I have. At some point in the, probably late
8 1990s, the National Institute of Justice put out a
9 request for proposals. They decided -- I think a lot
10 of -- Well, I think it's probably obvious that all of
11 this really was provoked by the Supreme Court's
12 decisions in Daubert, and especially in Kumho Tire, so
13 that fields which had gone unexamined for many decades
14 suddenly were going to be examined. And to, I'll say
15 test them, although I'm being too generous. The
16 request for proposals talk more about doing research to
17 prove that they are right, that they are as good as
18 they say they are.

19 My understanding is that the only research
20 proposal that has been funded by the National Institute
21 of Justice -- and I may be a little out of date on
22 this. But as far as I'm aware, the Srihari research
23 was the only study on handwriting that had been funded
24 by NIJ. And it is really a study of computer assisted
25 or computer substitutes for people. They're not

1 studying handwriting examiners, they are studying
2 computerized systems for reading, writing, extracting
3 features, and calculating the probability of a match or
4 a nonmatch.

5 Q. Professor, perhaps this is as good a time as
6 any to ask you that, after we've gone through all these
7 areas that you've looked at and all the tests that
8 you've analyzed, have you testified about the results
9 of your examinations in court before?

10 A. Yes.

11 Q. Have you been qualified as an expert witness
12 in this field?

13 A. Well, I've testified only in Daubert
14 hearings.

15 Q. About how many times have you testified in
16 Daubert hearings?

17 A. Eight or nine, I think.

18 Q. All right. Now, after -- We know what
19 you've looked at and we know that you've testified in
20 Daubert hearings before.

21 Let's get back to your overview of what the
22 research shows about error rates for forensic document
23 examiners.

24 A. Well, getting back to signatures, we find
25 that --

1 Q. And I'm sorry. If I could just interrupt you
2 for a moment.

3 A. Yes.

4 Q. I really do apologize.

5 One of the main points of inquiry in the
6 present case is printing.

7 A. Okay.

8 Q. What does your evaluation of the research
9 show the performance of forensic document examiners is
10 vis-a-vis the examination of printed documents?

11 A. Well, again, if one looks at all of the
12 studies -- when I say all of the studies, you need to
13 know I am talking about, I think, two or two and a
14 half. The 1986 Forensic Sciences Foundation
15 proficiency study involved printing. The 1999 Forensic
16 Sciences Foundation proficiency study involved
17 printing.

18 And then Professor Kam disclosed, in U.S.
19 against Hidalgo, that an earlier study, which I'll call
20 Kam two, had contained some writings which were also
21 printing. One would not know that from having read the
22 report of the study, but during his testimony in --
23 that was a case I testified in that was here in
24 Phoenix -- his testimony in August of 2002, the issue
25 came up and he said, "Oh, well, I can go analyze those

1 data, they are in there."

2 In the intervening -- The hearing resumed a
3 month later, during which time he had run some
4 analyses. So we have those, but I will -- so I can
5 talk about all three of these.

6 But the short of it is that, in printing, the
7 error rates have run as high as 54 percent. Of that
8 54 percent, 45 percent of those errors were false
9 positive errors that the examiners in the tests said
10 that identified as the author of the questioned writing
11 someone who had not, in fact, authored the questioned
12 writing. In nine percent there were false negatives,
13 they failed to detect the actual author. And in
14 32 percent of the ones of these high error rate -- the
15 high error rate study, 32 percent were inconclusive.
16 That's the -- that's the 1986 study. If I had said
17 1986. Yes, 1986. By the time you get to the 1999
18 study, now the error rate is zero percent.

19 So we have a range of error depending upon --
20 I'm going to argue that it's the nature of the task.
21 There are easier and harder printing tasks to present
22 to people. The examiners have done as well as zero
23 percent error, though I should add that that doesn't
24 include the 17 percent who were unable to exclude an
25 innocent writer. So we have a suspect, did the suspect

1 write it? They say, "Well, I can't say one way or the
2 other." But those who did venture an answer were able
3 to get it completely right to being as wrong as
4 54 percent with 45 percent false positives.

5 Now, Professor Kam's study. My problem with
6 his study is -- If his published study is the same as
7 what he presented in court, it had a problem that we
8 researchers would call -- we would either call it a
9 confound, or we might just say he's sort of
10 comparing -- you do want to -- well, comparing apples
11 and oranges, perhaps.

12 Here's the problem. He has the collective
13 body of data from the Kam two study, which apparently
14 included printing and cursive writing. He then -- He
15 then split that into two groups. One group consisted
16 exclusively of printing; the other group consisted of a
17 mixture of printing and cursive. So -- And then he
18 says, "Well, I look at the accuracy rates for the
19 document examiners and for" -- I can't recall if he
20 presented data for the laypersons. He probably did.
21 And he said there's no difference.

22 And since I don't have his published study --
23 and he did this kind of quickly in mid-hearing, if you
24 consider a month to be mid-hearing -- the problem is
25 what you really want to do, if you want to know whether

1 cursive writing is harder or easier for a document
2 examiner or a layperson to identify the author of
3 compared to printing, you want to have cursive writing
4 and printing, you don't want to have some mixture.

5 It would be as if we were testing the
6 efficacy of a drug and one group got the drug being
7 tested and the other one received -- the people in the
8 other group got pills that were a mixture of the
9 placebo plus the medication. What that's going to do
10 is move the two groups closer together, because they're
11 not as different as they are in reality.

12 Q. Other than these three studies, is there
13 anything out there in the world that you have seen that
14 talks about the proficiency of forensic document
15 examiners when they are looking at hand printed
16 documents?

17 A. To the best of my knowledge, these -- and I
18 do try to track these things, that is the curse that
19 has befallen me. These are the two -- or, two, I'll
20 say, and a half studies --

21 Q. And for the record, Professor, I am showing
22 to Professor Kam what has already been admitted into
23 the record as Government's Exhibit No. 25, which is --

24 A. I'm Saks.

25 Q. I'm sorry.

1 -- Dr. Kam's most recent study. You have not
2 seen this?

3 A. I have not received a copy of that.

4 Q. Okay. Now, one of -- Previously you have had
5 some comments about Dr. Kam's work and the question of
6 incentives. Tell us why you have some problems with
7 some of his research on the issue of incentives.

8 A. Well, the first of his studies that he did,
9 he took a group of -- a small group of document
10 examiners, seven, eight, nine people, something like
11 that. He took a similarly small group, although I
12 think not as small, group of laypersons. I think they
13 were students, I think undergraduate students at his
14 university, Drexel University, and he gave them some
15 tasks, some document examination problems, and
16 published the results.

17 Our critique of that was that not only do the
18 two groups differ presumably in their training, the
19 amount of time they spend looking at and worrying about
20 writing, but I argued that they obviously also differed
21 in their incentives to do well. For the document
22 examiners, this was perhaps one of the scariest moments
23 in the history of their field.

24 You will recall that when Professor Inbau, in
25 the late 1920s, 1930, tried to do a study of document

1 examiners, he could barely find any who would

2 cooperate. Professor Kam --

3 And I've spoken with document examiners.

4 They are quite willing to agree that this was a very,

5 very frightening moment for them because they had not

6 been previously tested. If their performance were

7 poor, it would be a terrible discovery for their field

8 and for them personally.

9 All right. So they are highly motivated to

10 do as well as they can do. Meanwhile, you have these

11 undergraduates who were invited into the office or the

12 laboratory for an hour or so, given what for them

13 appears to them to be a rather boring, meaningless

14 task. And it's hard to imagine why they would work on

15 it with the diligence that the actual document

16 examiners work on it.

17 So it raises the possibility -- this is what

18 we would call a rival hypothesis, to explain the

19 research findings. Is the difference a consequence of

20 the training of the two different groups or, in one

21 case, lack of training? Or is it a consequence of the

22 extremely high motivation of one and very low

23 motivation of another?

24 When we looked at the actual data -- In that

25 particular study he published the detailed results.

1 That was the first and last time he did that. We were
2 able to look at the actual accuracy numbers for the
3 laypersons, and they formed a bimodal distribution;
4 which is to say, virtually every -- perhaps every,
5 there may be one I haven't thought of -- but virtually
6 every human trait or skill is distributed in the
7 population by a normal distribution.

8 If you just think of shoe sizes. Most people
9 have shoes near average size. Some people have
10 unusually small feet. Other people have enormous feet,
11 not very many of them. And we're all -- I'll sort of
12 draw one in the air for the camera, a normal
13 distribution.

14 Q. Is that sometimes called a bell curve?

15 A. Also called a bell-shaped curve.

16 Q. Okay.

17 A. The accuracy and error numbers for the lay
18 people in Professor Kam's study, Kam two, formed a
19 bimodal distribution. They were -- and a sheet in my
20 affidavit reflects this. There are some -- Some of
21 the participants did quite well, bordering on as well
22 as the FBI examiners in the study. They made only two
23 or three errors, whereas the FBI examiners, most made
24 zero in that test and one or a few made one. So the
25 FBI examiners made zero or one, the top performing lay

1 people made one or two or two or three errors.

2 Then you have a small number of people in the
3 middle who are making a moderate number of errors, six
4 or seven or eight, whatever. It's in the graph.

5 Then you have a large number of people who
6 are making a gigantic number of errors, way up in the
7 20s.

8 Q. So that's different than what you would
9 expect the distribution to be, the way it is normally
10 found in most human endeavors?

11 A. That is very unusual.

12 By e-mail I queried all of my colleagues at
13 the Arizona State Psychology Department. One should
14 understand, we're talking about physiological
15 psychologists, psychologists who study child
16 development, psychologists who study perception,
17 psychologists who study animal behavior. I said, "Can
18 any of you think of any trait or ability which is
19 bimodally distributed?"

20 And someone -- Everyone came back saying no,
21 except one person who said, "Well, you could say that
22 mental retardation is distributed that way." That the
23 vast majority of people are on a normal bell-shaped
24 curve, but down at the low end there is a bump of
25 people who have a variety of different kinds of

1 retardation.

2 Q. So does that --

3 A. So it's very unusual.

4 Q. Does that bimodal distribution of the error
5 rate by laypersons in Dr. Kam's only published study
6 that included his data cause some problems for you in
7 evaluating his final conclusions?

8 A. Well, I can't tell you with any certainty
9 what the reason for it is. I can tell you it's very
10 unusual.

11 And then you begin to ask yourself, what
12 might account for that? And if I were asked to bet, my
13 bet would be on motivation. That if you have a group
14 of people who were highly unmotivated, some of them are
15 just going to blow the task off. They just want to do
16 the minimal job and get out of there. You have some
17 people who are very conscientious and try to do a very
18 good job, even when it's just something like that.
19 Now, that's just a hypothesis.

20 If one were interested in testing it, what
21 one could do would be to do an experiment where you
22 offer people -- you repeat that aspect of the
23 experiment, where you're giving them minimal incentives
24 to do well, take another group that's doing extremely
25 well, that's receiving very high motivation, strong

1 incentives, see if you get the same distributions.

2 Professor Kam, in a published article, Kam
3 three, asserts that there will be no differences. I
4 haven't seen the study -- a study done that really
5 seeks to test that, but in --

6 Well, another commonplace of human
7 psychology is that if you can motivate people to
8 perform better, they perform whoppingly better,
9 including even things like willingness to endure pain.
10 You can get people to endure much higher levels of pain
11 if you perform an intervention that motivates them to
12 put up with the pain. You pay people a lot of money,
13 they do a better job. And I've cited some studies of
14 physicians in my affidavit on that point.

15 Professor Kam, in Kam three, did attempt to
16 test -- well, actually, I should say that in Kam two he
17 offered some incentives. But in examining the payoff
18 matrix, the incentive schedule, it seemed to me that he
19 had, and I will say inadvertently, created a situation
20 where the lay people could make more money by guessing
21 when they weren't so sure. And that would lead to a
22 high false positive error rate, but it would also lead
23 to a higher true positive error rate, which meant they
24 would make more money.

25 Q. Professor, you mentioned to us earlier that

1 one of the major precepts of the entire field of
2 forensic document examination is the idea that no two
3 people write exactly the same, which you sometimes
4 refer to as the principle of uniqueness or
5 individuality.

6 Have you found any research which proves that
7 hypothesis?

8 A. I have never seen any.

9 Q. Are you aware of the Srihari study, which is
10 sometimes referred to as supposedly verifying the
11 principle of uniqueness?

12 A. I have seen the study. And although I don't
13 know if I cite it in the affidavit, I did publish a
14 commentary on it in the Journal of Forensic Sciences
15 which details the methodological shortcomings of the
16 study, though one doesn't have to inquire into the
17 methodological shortcomings. The simple bottom line of
18 the study was that the study was unable to distinguish
19 every writer from every other writer.

20 So even within the four corners of that
21 study, in its relatively small scope -- which was
22 between 1,500 and 1,600 writers, which for a study of
23 that kind is a relatively small number, the sample size
24 is going to have to change depending on the study --
25 there's a lot of epidemiological research that requires

1 tens of thousands of subjects to be able to get an
2 answer that means something.

3 But you ought to -- You know, if we said --
4 I'm in a room with four people. If you said can the
5 writing of the four of us be distinguished one from
6 another, I'd be shocked if it couldn't be. Would we
7 then say, based on that, quote, study, that no two
8 people on earth write indistinguishably alike? I don't
9 think we would say so, because we realize for something
10 like this you need a much bigger sample.

11 But even with the Srihari sample, their
12 bottom line conclusion was that not every writing could
13 be successfully distinguished from every other writing.
14 That does not sound like uniqueness and detectable
15 uniqueness to me.

16 Q. What about the studies on twins?

17 A. The studies on twins. I mean, to me that's a
18 complete puzzle, because people don't do twin study --
19 it almost doesn't compute for me. Those were studies
20 done for other purposes. People went back, so let's
21 see the ways in which twins are similar or different.
22 Actually, some of the twin studies concluded that the
23 twins were writing indistinguishably similarly.

24 But I think the Judge -- Judge Marton in U.S.
25 against Hidalgo, his opinion in that case points out,

1 and I think quite sensibly, that that doesn't
2 necessarily mean there are people who do write alike
3 just because some twins did. Because the measurement
4 of the writing was not sufficiently fine-grained. But
5 people are doing -- it's an odd sort of study, because
6 it --

7 Or, to point to that as proof that no two
8 people write alike, first of all, again, the studies
9 don't, on their face, say that. And number two, why
10 would one -- I haven't heard document examiners, when
11 they explain why it is that people write
12 indistinguishably alike, I don't believe I've ever seen
13 them say anything about genetics. So why would you
14 think that just because you have monozygotic twins
15 that's going to make them write alike, although it
16 probably does play a part. It's always about learning,
17 at least the literature of document examination talks
18 about learning.

19 There are, of course, people, not document
20 examiners, but there are scientists who study
21 handwriting who do studies of these things and study
22 handwriting acquisition and so forth. But the
23 differences are related to learning; the similarities
24 are related to learning or random variations.

25 I should add that there was one document

1 examiner in the 1950s, Harris, who became curious about
2 the question of uniqueness, wrote an article entitled
3 How Much Do People Write Alike. He went to the voter
4 registration records of Los Angeles County and he went
5 looking through those records and reports, in the
6 article, that he found quite a few signatures, people
7 who had the same name and who -- so we have different
8 people, let's say different people named Harris or
9 different people named Smith. And he reports that he
10 found signatures that were indistinguishably alike, so
11 much so they weren't worth photographing for the
12 article. He does present a number of samples in his
13 article, but said there were quite a few of them.

14 If I ask a document examiner, why doesn't
15 that tell you that you can't rely on the assumption
16 that no two people write alike? They say, "Well, all
17 that proves is that you need more writing, you need a
18 larger sample. They don't say that when they're
19 working on a case where all they have is a word. Then
20 they seem to think it is enough.

21 Q. Professor, finally, when it comes to the
22 question of whether or not the research shows that
23 forensic document examiners perform better than
24 laypersons when it comes to correctly matching a known
25 and a questioned writing, what is the state of the

1 research to answer that question?

2 A. Well, on the one hand, there are only a
3 couple of studies that have attempted to compare
4 document examiners to laypersons.

5 Q. What are those studies, for our record here?

6 A. One of them is Kam two, there's -- Well,
7 actually, Kam one, Kam two, and Kam four.

8 Q. And Kam five, the hand printing one?

9 A. Although, that's a reanalysis of data that
10 appeared in Kam two, so we'll sort of fold it in with
11 Kam two.

12 There's the Galbraith, Galbraith, and
13 Galbraith study. And there are a couple of studies by
14 the Australian researchers, Found and Rogers.

15 Q. Now, based on those three bodies of work, can
16 you provide an answer, from your expertise of looking
17 at research for a number of decades now, as to whether
18 or not the research shows that forensic document
19 examiners perform better than laypersons when it comes
20 to correctly matching a questioned and a known item?

21 A. Let me -- Yes, but let me give you a
22 two-part answer.

23 One answer is the research -- For reasons
24 I've discussed, the research suffers from some flaws,
25 essentially the motivational problem. And I've

1 discussed this with Professor Kam. He says he's not
2 interested in trying to do more research that tries to
3 solve that problem. He believes that you'll get the
4 same results, he doesn't have to do the study.

5 I've discussed it with the Australian
6 researchers, and they are thinking about how they might
7 undertake to do a study which tries to do a better job
8 of equalizing.

9 So there is a risk that the differences we
10 observe are differences in the motivation to perform
11 well rather than ability. This is what psychologists
12 call ability versus performance. How good are you at
13 something versus how well do you do when you perform
14 it, when you do. We don't always perform at our best.
15 Motivation could be one of the things -- is one of the
16 things that produces a gap between those.

17 But if you take the studies at face value,
18 just look at the numbers -- and you can just look at
19 the numbers in Professor Kam's article. Actually, the
20 pattern -- this pattern that I will describe repeats
21 itself in all or most of the studies, these four or
22 five studies that undertake to compare; and that is,
23 that the lay people do every bit as well as the
24 handwriting experts in making the identification.
25 Their numbers are as high as the experts. In one study

1 they're higher, but it's not statistically
2 significantly greater. I don't know what Professor
3 Kam's most recent reanalysis shows on that point.

4 But, in general, the studies show the lay
5 people are as good at coming up with a correct yes,
6 it's a match, yes, the questioned and the known were
7 written by the same person.

8 Where they differ is that the experts are
9 better able to -- let me just -- I won't say better
10 able, because that assumes a skill. What the numbers
11 show is fewer errors of erroneous association, what
12 Professor Kam calls a wrong association rate, what most
13 researchers would call a false positive error rate.

14 Now, that could be explained by the
15 incentives. If you will indulge me, I will give a
16 small psychology lesson under the heading of signal
17 detection theory, which actually was developed in
18 engineering and stolen by psychologists.

19 If you ask a radar operator, which is where
20 this all developed, or a doctor who's trying to read an
21 x-ray or an MRI, there's an image, and you're trying to
22 determine is that a plane or is it a cloud? Is it one
23 of our planes? Is it one of their planes? Is that a
24 tumor? Is it not a tumor? There is a signal, and the
25 signal is mixed in with noise.

1 And this is exactly the problem handwriting
2 examiners face. There is variation among writers;
3 there is variation within writers. Each writer's
4 writing varies. So when they are looking for the
5 signal; that is, certain features which they would say
6 yes, that means it was made by the same person, that is
7 mixed in with noise and they're trying to separate the
8 signal from the noise.

9 And there are -- Two psychological factors
10 affect the accuracy rate in diagnosis or detection or
11 matching of things. One is the raw acuity, the raw
12 perceptual ability of the observer. So one question
13 is, is there something about the ability of document
14 examiners, through their training or their innate
15 characteristics, that allows them to see things that
16 other people cannot see?

17 I think that's not what it is, because
18 Professor Kam has said that when he points out certain
19 features of the writing that differ when he's
20 debriefing his subjects -- his lay subjects and says,
21 "Look, you said this is a match, but let me -- I'll
22 point out some differences here," they immediately see
23 the differences. They weren't attending as much or
24 they didn't give it as much significance, but they had
25 no trouble seeing it. Where there is an --

1 The next step in the decision-making process
2 is what we call the decision threshold. So if I'm a
3 laboratory technician trying to tell whether a slide
4 with cells on it consists of cancer cells, you look at
5 those cells and they look a little unusual, do they
6 look so -- they can range from looking absolutely
7 normal to grotesque and everywhere in between. And
8 some examiners -- technicians differ in their ability
9 to see, though that's not usually the big difference.
10 The technology accounts for the big difference in the
11 raw acuity.

12 But where they differ is where do they put
13 the line, the threshold, the cutoff when it gets -- if
14 it's up to this much different I'll call it normal, but
15 once it gets over this line I'll call it abnormal,
16 cancer. That appears -- Based on Professor Kam's
17 comments about his conversations with his research
18 subjects and the data, it would look as though the big
19 difference is in where the threshold is put.

20 Document examiners put the threshold --
21 appear to put that threshold high, at least when they
22 are taking tests where they know the researcher knows
23 the answer. They put the threshold very high. So it's
24 -- basically, that means it's conservative. I'd rather
25 make -- It's as if you're saying I would rather make

1 mistakes of failing to declare a match than to make a
2 false positive error. I know that's going to get me
3 into a lot of trouble. I won't do that. And if I'm
4 anywhere near that line, I think I'll call it
5 inconclusive.

6 And if you look at all the research -- I take
7 that back, not all the research -- much of the
8 research, again, this is that volatility, some of the
9 research shows whoppingly high inconclusive decisions,
10 examiners saying, "I'm not going to make a decision on
11 this one." Others are low.

12 Arguably, what's happening is they don't want
13 to make mistakes in a test and they -- if they're
14 anywhere near that threshold they say, "I'm not going
15 to make a decision." Whereas the lay people,
16 especially in studies where they are rewarded for
17 trying and just hitting --

18 It would be like me in a shooting gallery.
19 If they say you don't lose any -- you have all the
20 ammunition you need and you don't lose any points for
21 not hitting things, I might as well fire off as many
22 shots as I possibly can to get as many ducks or
23 whatever hit as I possibly can, because that's how I'm
24 going to score points and make money. That's a very
25 low threshold. I'm not aiming very hard.

1 So that if you can move that threshold with
2 motivation -- So imagine the jurors are more motivated
3 than undergraduates at a university who were asked to
4 do the professor a favor for an hour or be paid a
5 modest sum of money for their efforts. So it may be a
6 threshold phenomenon.

7 Now, that would explain the finding that you
8 elicited from me, which was that in terms of getting
9 correct matches, the lay people and the experts are
10 doing equally well. Well, that's facilitated by the
11 lay people using a low threshold.

12 The experts are getting the same high match
13 rate, high association rate. But because they are
14 being very conservative, they are avoiding making
15 errors. And one of the major ways they avoid making
16 errors is they put it over in the inconclusive
17 category, unless it's an easy test. If it's an easy
18 test, then they don't have to do that, you get smaller
19 inconclusive results.

20 MR. KISH: That's all the questions that I
21 have for Professor Saks. Do you have any, Russell?

22 MR. VINEYARD: I do. Do you want to take a
23 break or go ahead and --

24 MR. KISH: Do you want to go forward?

25 THE WITNESS: I'm willing and able to keep

1 moving.

2 MR. KISH: Let's go forward.

3 MR. VINEYARD: Okay. If at any time you do
4 need a break, just let us know.

5 And if you could change the camera setting so
6 that we're focused on Dr. Saks, I'd appreciate that.

7 Let me also state that shortly after your
8 direct examination began, your colleague, Stephanie
9 Kearns, joined us. So she has been here in Atlanta
10 with us for most of the proceedings.

11

12 EXAMINATION

13 BY MR. VINEYARD:

14 Q. Now, Dr. Saks, you are both a professor of
15 law and a professor of psychology at Arizona State
16 University?

17 A. That's correct.

18 Q. And while you are a professor of law, you are
19 not a member of the bar of any state?

20 A. That's right.

21 Q. And, in fact, you have never practiced law?
22 You're not a lawyer?

23 A. Correct. And I will add I do not have JD, I
24 have an MSL.

25 Q. Which you described in your direct testimony

1 that you obtained in a one-year study program at Yale?

2 A. That's right.

3 Q. And likewise, although you are a professor of
4 psychology, you're not a psychologist, I take it?

5 A. Well, I think I would say I'm a psychologist,
6 if by psychologist you include research psychologist.
7 I know most lay people think of psychologists as doing
8 therapy and diagnosis, much like psychiatrists, but the
9 vast bulk of the work done in psychology, historically
10 and presently -- and if you went into a psychology
11 department in a university, you'd find a small number
12 of clinical psychologists and a large number of all the
13 other kinds. I'm one of those other kinds.

14 Q. Your Ph.D. is in experimental social
15 psychology, as I understand it?

16 A. That's right.

17 Q. Now, you're not a member of any forensic
18 science organization, I understand?

19 A. That's correct.

20 Q. And you obviously are not a forensic document
21 examiner, since that's the field that you critique?

22 A. Right.

23 Q. You're not a member of any associations that
24 forensic document examiners are members of, I take it?

25 A. Correct.

1 Q. And you have received no training in the
2 field of forensic document examination?

3 A. Also correct.

4 Q. And you described earlier that your field of
5 work includes research and reviewing the research of
6 others, is that accurate?

7 A. Yes. Although I think I will say that that's
8 what all researchers do. They don't just do their own
9 research, they unavoidably review other people's
10 research.

11 Q. But you have not conducted any studies of
12 your own in the field of handwriting comparison like
13 the studies we've discussed, have you?

14 A. I have done a couple of studies that you
15 might say are relevant, but not of the type we're
16 talking about.

17 I'll tell you the two studies that I'm
18 thinking of. I did write an article -- or, coauthored
19 an article that's in the Journal of Forensic Sciences
20 that attempts to introduce signal detection theory to
21 document -- strike that -- to forensic scientists
22 generally. It's sort of -- It's an attempt to suggest
23 the next step in proficiency testing, the next step
24 beyond just counting up rights and wrongs, but doing
25 the analysis that will separate it into pure accurate,

1 inaccurate, and threshold. Those can be mathematically
2 separated. And I did reanalyses of some handwriting
3 comparison data to demonstrate how that could be done,
4 also firearms data in that article.

5 And I secondly did a study, which is under
6 review at the Journal of Forensic Sciences, where we
7 did a comparison between handwriting examiners and
8 handwriting scientists from a variety of other fields
9 such as bio- -- I don't know why I'm blocking on the
10 names, but various cognitive science fields and
11 artificial intelligence, various fields that belong to
12 an organization called the International Graphonomic
13 Society. We've obtained a number of them as
14 respondents, and we've got what is regarded as the
15 premier -- a number of people from what is said to be
16 the premier document examiner group, the letters of
17 which I won't remember, but they'll be glad to tell you
18 who they are. I think it's the American Society of
19 Questioned Document Examiners, but don't hold me to
20 that.

21 In any event, in this survey we present to
22 them with a series of statements which come from the
23 document examiner literature. They're statements of
24 belief that document examiners hold; such as, no two
25 people write indistinguishably alike. And we asked

1 them to rate the extent to which they believe that
2 their field considers that proposition to be true.

3 And then the result of that was we were able
4 to compare the extent to which, within the field of
5 practicing American document examiners, or at least of
6 this one professional group, the extent to which they
7 agree with those things, those statements. For
8 shorthand, I'll say is generally accepted within
9 document examiner field. And then, by comparison, to
10 another field which is very concerned with handwriting
11 and its nature, its acquisition, identification, and so
12 forth, but our scientists are doing research, not
13 practicing.

14 So, other than those two studies, I have --
15 then your -- the implication of your question is quite
16 right. And none of those -- neither of those studies
17 is of the type we've been discussing.

18 Q. And the study that you just described at the
19 end there, is that a study you did with -- or, survey,
20 I should say, with Holly VanderHaar?

21 A. That's correct.

22 Q. And is that listed in your attachment to your
23 affidavit in this case, that being on the next to last
24 page --

25 A. Sounds like it is.

1 Q. -- listed as Michael Saks and Holly
2 VanderHaar on the, quote, general acceptance, closed
3 quote, of handwriting identification principles?

4 A. That's correct.

5 Q. And it includes parenthetically that it's
6 under review for publication?

7 A. Uh-huh. That's right.

8 Q. So that survey has not been published?

9 A. Correct.

10 Q. And have you received any comments on that
11 survey from the Journal of Forensic Science?

12 A. The Journal had it reviewed for the first
13 time earlier this year and had two forensic document
14 examiners review it who wrote a scathing critique.
15 They thought absolutely everything imaginable was wrong
16 with the study. They went so far as to say that not
17 only should it not be published, but that the Journal
18 should never publish anything that I ever write and
19 submit to it.

20 And I had a conversation with the editor who
21 agreed -- he's now having it rereviewed. He said he
22 sent it to -- My complaint was, I said, "Look. Why
23 don't you have survey researchers look at it? Why
24 don't you have statisticians look at it? Why don't you
25 have people who understand research look at it?"

1 The studies by Kam, which are rather -- have
2 very obvious flaws, I presume won gold stars from the
3 document examiners because they liked the conclusions.
4 When they see a study, the conclusions of which they do
5 not like, they do not want to see it published and they
6 say absolutely wild things in their -- some of them
7 just blatantly untrue, about the study that are plainly
8 obvious from reading the manuscript.

9 So I pointed this out to the editor who first
10 sent it to a statistician who reported privately to him
11 that the statistical analysis seemed quite fine. And
12 he said that, in his judgment, there were three
13 questions remaining for him about the study. One had
14 to do with the nature and quality of the sampling, and
15 I forget what the other two were. But he was going to
16 have it rereviewed by, let's just say other reviewers,
17 and to see if he could get a fair and intelligent
18 reading of it before he made his final decision.

19 Q. Professor, are you aware that during the
20 course of conducting the survey that certain of the
21 forensic document examiners who were surveyed raised
22 issues about the questions with either yourself or
23 Ms. VanderHaar?

24 A. I am aware of that.

25 Q. And do I understand correctly this is a

1 survey that was conducted by e-mail, in part, at least?

2 A. I'd say completely. We took names of
3 document examiners and handwriting scientists from the
4 two respective organizations I referred to, we obtained
5 their membership lists. And those who had e-mail
6 addresses, we contacted them and requested their
7 participation and, by e-mail, provided them with this
8 list of 10 questions and asked them for their ratings
9 of them.

10 Q. Is it fair to say that you got a fair number
11 of forensic document examiners who responded to that
12 e-mail raising questions about the validity of the
13 questions?

14 A. I think it would be more correct to say that
15 initially they simply participated. In the early
16 stages, they took the -- they answered the
17 questionnaire, they sent it back, sometimes adding
18 comments.

19 At some point, a couple of the members
20 contacted -- Holly was the one who was actually
21 carrying out the back and forth in the e-mail. They
22 responded to the invitation to participate by saying,
23 "Who are you? What is your purpose in this research?"
24 In essence, they were asking are you friend or foe.
25 And they said, "We want to meet with you. We want to

1 tell you how to do the study."

2 This is highly irregular. It's not irregular
3 to get participants in a survey to make comments
4 saying, "I don't like this question. I can't answer
5 this question."

6 What is very unusual, in fact, unheard of in
7 my experience, is for potential respondents to say, "We
8 and our group are going to refuse any further
9 cooperation until we gain some control over this. We
10 want you to stop your study in its tracks and let us
11 oversee what happens, or we won't let it go forward."

12 Now, researches do get useful criticisms from
13 participants. And what you normally do is complete the
14 research protocol. And there are only rare exceptions
15 where you don't, such as in medical research where you
16 discover that your treatment is killing people or your
17 treatment is so good that it's obvious that you don't
18 need to continue with your control group. But other
19 than situations like that, you complete the study and
20 then you step back and say, can these criticisms help
21 me evaluate it and help me design a better study.

22 Which is exactly what you could say the
23 dialogue between Moshe Kam and Saks and Risinger and
24 occasionally Denbeaux has been. His early studies had
25 flaws, we pointed them out, he designed improved

1 studies, next we would criticize those, he'd design
2 better ones. So this is a process. So we're happy to
3 be part of this process, but we're not happy to stop
4 the study in midstream. And that is one of the great
5 sins for which these reviewers, one of them at least,
6 said it was a terrible study and we were terrible
7 people for doing it in the way we did it instead of in
8 the way they did it.

9 And if I may add, just to give you an example
10 of one of the criticisms. One of the criticisms was,
11 you are presenting abstract general propositions from
12 the field's literature. Why don't you instead present
13 a specific case scenario because, they would say, what
14 answer we arrive at is highly dependent upon the
15 details of the case, and we don't like to talk about
16 abstract principles. We would rather tell you whether,
17 in a specific scenario, how much writing, what writing,
18 what circumstances was the writing made under. We'd
19 rather know all of those details, then we'll give you
20 an answer.

21 Now, that's not a crazy way to do a study,
22 but it seemed to us that the study we had chosen to do
23 was much more in line with the questions the law has;
24 which is, whether the principles are generally accepted
25 and, of course, the principles will have to be applied.

1 That's another step.

2 And the principles may be applied well or
3 poorly, correctly or incorrectly. And there may be
4 perfectly good reasons to make exception and say, well,
5 the normal principle is thus and such, but in this
6 particular case, I'm going to depart from the
7 principle. And I've seen cases where document
8 examiners do that, and the court can decide whether, in
9 those cases --

10 Q. Professor Saks --

11 A. -- whether the document examiner was right or
12 not to do so.

13 Q. Professor Saks, if I might just -- I've
14 allowed you to go on for quite a while now, and I'm
15 going to have to interrupt occasionally, as Mr. Kish
16 has.

17 A. That's fine. I'm sorry.

18 Q. I know this is an area that you care a lot
19 about. But you have relied on what I will refer to as
20 the VanderHaar survey in your affidavit in this case,
21 is that correct?

22 A. I must say I do not recall, but I'll be happy
23 to look in there.

24 Q. Well, I could refer you to a couple of
25 paragraphs; that is, paragraph 8 and paragraph 39,

1 simply as well as listing it at the end of the sources
2 that we'd looked at earlier.

3 A. Yes. Uh-huh.

4 Q. So this is not a published article that would
5 be available to me to review, is it?

6 A. Not in a journal, but obviously I could send
7 you a copy.

8 Q. It is something you could make available to
9 me?

10 A. Certainly.

11 Q. Okay. I would appreciate that.

12 And in terms of the underlying data, is that
13 something that would be available to me as well?

14 A. Well, you know, that raises an interesting
15 question. Normally my answer would be of course. But
16 I do have to tell you that Professor Kam has refused to
17 make his data available many years after publication of
18 it, and that somehow annoys me and makes me not want to
19 share my underlying data, though in principle I will.

20 The convention is that researches are
21 entitled to their first crack at publication, and
22 within one or two years after that they should make
23 their research -- their data available for others to
24 re-examine. And I guess I'll say -- I know that
25 Professor Kam says no, I will not, it's mine. What I

1 will say instead is, let me think about it.

2 But I do want to say one more thing. There
3 was one very good criticism in the mix of vituperation
4 that came from the two document examiners. And it was
5 that the group of handwriting scientists did not
6 necessarily contain only handwriting scientists. There
7 were other people in that organization. And that
8 person suggested that it would be a better study if we
9 separated them out and did the analysis only with the
10 handwriting scientists.

11 So the current version of the study has made
12 that change and -- so the numbers may change a bit from
13 that study to the one that currently -- the first draft
14 to the current draft.

15 Q. In paragraph 39 of your affidavit, I mean,
16 you cite this VanderHaar survey on the principle of
17 individuality, as I'll call it, or uniqueness, I
18 believe, as Mr. Kish may have referred to it, is that
19 correct?

20 A. I'm going to take your word for it, because
21 you've read it more recently.

22 Q. Yes, paragraph 39 there.

23 A. Yes. Yes.

24 Q. Now, isn't it true that your coauthor of your
25 1989 article; that is, Professor Denbeaux, does not

1 take exception or does not dispute the issue of the
2 individuality of handwriting, does he?

3 A. I honestly do not know what his view on that
4 particular point is.

5 Q. Okay. And you're not familiar with his
6 testimony in this case, I take it?

7 A. No, I'm not.

8 Q. Sir, would you agree that you are an advocate
9 against the admission of expert testimony by forensic
10 document examiners?

11 A. I think of myself as an advocate for good
12 science and an advocate for knowledge about fields so
13 that a court can make an informed judgment about
14 whether it passes the test or not.

15 And what we have said in every -- well, I
16 don't know about every publication, but we've said
17 repeatedly, and I'll say it now, that we really don't
18 know the answer.

19 And I'm not against the admission of
20 handwriting experts if we can determine that they have
21 the skills that would qualify them -- well, qualify is
22 the wrong word. If they meet the standards, if they
23 meet the test of Daubert and Kumho Tire, then I would
24 say, by all means, admit them. The only way we will
25 know whether they do or not is not because they assure

1 us that they are excellent and accurate, because
2 they've made assurances in the past that the existing
3 research has shown to be seriously at odds with what
4 the facts seem to show.

5 And I think I'm really here to say, let's
6 look at the data, let's see what the data show, let's
7 try to evaluate the data in light of the methodological
8 quality of the research. And it's not my decision to
9 make. If you ask me my opinion, I would tell you. But
10 what I'd rather do is help illuminate what's there and
11 let the lawyers argue about it and let the judge decide
12 it.

13 Q. Well, would you at least agree with me that
14 your 1989 article advocated against the admission of
15 expert testimony by forensic document examiners?

16 A. On the basis of what was known at that time,
17 it seemed to us there was no basis for admitting it.

18 On the basis of what is known now, it's
19 certainly not a clear case for admission. I think it's
20 -- I think it -- I guess there's something there to
21 look at. At least now there is something there to look
22 at. We've learned some things about the nature of
23 writing and the abilities of document examiners.

24 Q. And you would agree with me that every
25 Federal Circuit Court of Appeals that has addressed the

1 issue has ruled that forensic document examiners'

2 testimony is admissible as expert testimony?

3 A. I don't know if, in my role, I should be
4 discussing the law, but I will if no one sees any
5 problems with that. You've asked it, so obviously you
6 don't see a problem. I guess you can object and the
7 Judge can decide whether the Judge wants to hear it or
8 not.

9 My reading in this, and virtually every area
10 of forensic science, is that whatever the District
11 Court does is okay with the Court of Appeals, that they
12 are being as differential as the Supreme Court has told
13 them the test is. If you look at what the District
14 Courts have done, you'll see quite a different picture.

15 Because what you're pointing to is the fact
16 that when handwriting expert testimony is barred,
17 either partially as in U.S. v. Hines, or barred in its
18 entirety, those cases have not been appealed. And I'm
19 assuming that the Courts of Appeals will do what
20 they've been doing with everything else, just about, in
21 the forensic science area, including handwriting, which
22 is to say there's no clear error.

23 Q. And so the answer is that every Federal Court
24 of Appeals that has addressed the issue has ruled that
25 testimony by forensic document examiners is admissible,

1 is that correct?

2 MR. KISH: I'm going to object to the
3 question. It's been asked and answered. And
4 furthermore, he gave you the answer, which was that the
5 only appeals that are out there, as we both know, are
6 appeals by defendants arguing against the admission of
7 document examiners' testimony.

8 So with that objection, you can answer the
9 question, Professor.

10 THE WITNESS: I don't actually know all those
11 cases. I actually pay a lot more attention to the
12 District Court opinions. I would have to read --

13 BY MR. VINEYARD:

14 Q. You don't know the answer to that question?

15 A. Actually, let me refer to the chapter in
16 Modern Scientific Evidence and its supplements which
17 reviews every published opinion and a number of
18 unpublished opinions. And if it concurs with you, then
19 for sure that's what the cases show.

20 Q. Are you going to take an opportunity to do
21 that now, or are you just suggesting that's what you
22 would need to do to answer the question?

23 A. That is what I would need to do. And since I
24 would stand by what is in there, you or the court or
25 anyone could read it, and I'm sure that reading the

1 opinions themselves is the best source of the answer to
2 that question.

3 Q. Certainly. But if, assuming, then, for
4 purposes of my question that that is true, that would
5 comport with what you expected would happen when you
6 wrote your article in 1989, isn't that right?

7 A. Well, 1989 was before Daubert, Joyner against
8 General Electric, and Kumho Tire, so I think we're in a
9 different legal universe today.

10 Q. But at the time you wrote your article in
11 1989, you wrote that you and your coauthors were not so
12 naive as to think that courts would be receptive to
13 demands to exclusion of such testimony, meaning the
14 testimony by forensic document examiners. Is that what
15 you wrote in your article in 1989?

16 A. And that -- Yes. And that was in light of
17 the dominance of the Frye test. So that if the
18 question a court was called upon to ask itself was
19 whether there was general acceptance within the field
20 of forensic document examiners, then they would surely
21 find the answer to be that the field accepted itself,
22 and therefore, was admissible.

23 Q. And your advocacy, as I'll describe it, in
24 the 1989 article, has, in a sense, created a, quote,
25 cottage industry for you and Professor Denbeaux to

1 regularly testify at Daubert hearings, hasn't it?

2 A. It certainly didn't then. We certainly
3 testify -- well, I don't know how many cases Professor
4 Denbeaux testifies in. I testify in as few as I can.
5 And the fact that I'm here in Phoenix instead of
6 Georgia is one indication of my reluctance. But I do
7 get dragged into them from time to time.

8 I would point out that we certainly testify
9 -- Let me put it this way. My job is not to testify.
10 If I were a forensic document examiner, that would be
11 my livelihood, it is what I would do every day. I do
12 this as only a tiny fraction of how I spend my time.
13 And if the fraction got smaller, it would be fine with
14 me.

15 Q. But nonetheless, you do testify. I believe
16 you testified here today, approximately eight or nine
17 times you've testified in Daubert hearings?

18 A. That's my recollection. It may be a few more
19 or a few less.

20 Q. And I presume you're compensated for
21 testifying in those cases --

22 A. Yes.

23 Q. -- as well as this case?

24 A. Yes, I am.

25 Q. And what is your compensation for this case,

1 Professor Saks?

2 A. My rate is \$150 per hour.

3 Q. Do you recall, from the cases in which you've
4 testified, how much you have been compensated over the
5 years for testimony in this area?

6 A. Well, my rate is -- my rate has generally
7 been \$150 per hour, and the time involved ranges from
8 -- well, actually, I should say, some defense lawyers
9 are extremely good negotiators and have talked me into
10 an hour -- calling it one hour no matter what I do, so
11 there's \$150. And some have taken several days. So in
12 terms of a source of income, this isn't much.

13 Q. Are you aware of any other, quote, experts
14 who provide the sort of testimony that you and
15 Professor Denbeaux are called upon to provide in
16 Federal Court?

17 A. Are you referring specifically to
18 handwriting?

19 Q. I am.

20 A. There probably are a couple of people. I'm
21 not -- I've heard of a few people who were asked -- who
22 have research methodology skills or otherwise
23 understand enough about how to read studies and
24 evaluate them who occasionally do.

25 If your question is whether Mark Denbeaux

1 and I are the names you are most likely to find in
2 published opinions of experts who have been asked to
3 testify in Daubert hearings opposing -- being called by
4 parties who are opposing admission, the answer is
5 certainly yes. Although, I think I will add that I
6 have, on at least one or maybe two occasions, been
7 asked by prosecutors, when it served their purposes, to
8 show how bad handwriting expert testimony was. So it's
9 not only the defense.

10 Q. But my question really goes to, is there
11 anyone other than you or Professor Denbeaux, who you
12 could name for us, who has testified in Daubert
13 hearings concerning the admissibility of forensic
14 document examiners?

15 A. Well, I learned that Carole Chaski is it --
16 is that the last name -- in this case, I believe. On
17 information and belief I think a linguist has
18 testified. I believe that a scientifically trained law
19 professor in California has done so, and I'm very
20 reluctant to name his name because I don't have much
21 confidence in my memory that I've got the right person.
22 But that might be the extent of it.

23 I don't know where you are going, though. If
24 you are asking about the -- what other people think of
25 this viewpoint, you might look at the scientific

1 evidence literature in law and see what legal scholars
2 have had to say about it, of which there are quite a
3 few. And even those, such as Professor Enwinklereed
4 (phonetic), who does think that handwriting expert
5 testimony should be admitted, has some rather
6 devastating things to say about the purported expertise
7 based on what the research shows, but for his own
8 reasons thinks that at the end of the day the law
9 should let it in.

10 So I don't think we are presenting a
11 viewpoint that is not widely shared, except of course
12 by those who do make their livings testifying as
13 handwriting experts.

14 Q. Well, you would agree with me that you have
15 some financial stake in the continuing debate and
16 continuing Daubert hearings, wouldn't you?

17 A. If you mean do I earn some money by doing
18 this, the answer obviously is yes.

19 If you asked whether I would gladly remove
20 myself entirely from it, if there were a more effective
21 way for the courts to become informed, I would say I
22 would do it in a heartbeat.

23 Q. Well, in addition to testifying in some
24 cases, were you called upon simply to provide an
25 affidavit, I guess, in lieu of actually testifying?

1 A. Some -- Well, that's not what I am asked to
2 do; it is sometimes what I can get by with. If a
3 lawyer wants me to come testify and I say, "Look. This
4 is getting very tiresome. I'm going over the same
5 ground forever. When will this end? How about if I
6 just learn enough about your case that I can talk about
7 the way in which the general background information may
8 connect with it and let me put that in an affidavit."
9 And occasionally lawyers will accept that.

10 And I must say, I say no -- A, I say no far
11 more than I say yes. And B, if I can refer them to
12 others, I do so.

13 And I will add further that I have been
14 looking into ways of training others who begin with
15 some, either basic forensic science knowledge or basic
16 research methodology and statistical knowledge, who are
17 willing to learn all of this body of information to
18 whom I can refer, with zero kickbacks, just somebody
19 else.

20 So if the courts continue to have Daubert
21 hearing after Daubert hearing, or if the research does
22 not -- if the research continues to inch along, one
23 study every year or two, compared to fields where you
24 get hundreds -- by now in almost -- outside of forensic
25 science, if we had a question before the court, we

1 would be doing meta analyses based on hundreds or
2 thousands of studies. We are moving along at a snail's
3 pace in the research. If that continues, and I suppose
4 it will, I am trying to develop other experts who can
5 do this instead of me or in addition to me.

6 Q. Could you estimate for us how many times
7 you've simply provided an affidavit --

8 A. I think --

9 Q. -- above the eight or nine times that you've
10 testified?

11 A. I think maybe three, possibly four. Yeah,
12 three or four times.

13 Q. I presume that you're aware of the Paul
14 decision, the 11th Circuit, which excluded your
15 coauthor's testimony -- affirmed exclusion of your
16 coauthor's testimony? That is Professor Denbeaux.

17 A. I read it quite some time ago, and I could
18 not -- if I were teaching it in class, I'd have to read
19 it all over again. I don't remember the details other
20 than that it was -- there was some unpleasantness
21 regarding my coauthor.

22 Q. I assume that you have not similarly been
23 excluded from testifying ever as an expert, have you?

24 A. That's correct.

25 Q. I want to ask you some questions about the

1 1989 article.

2 That was published in a law review -- the
3 University of Pennsylvania Law Review?

4 A. That's right.

5 Q. And that is not a peer-reviewed publication,
6 is it?

7 A. That's correct.

8 Q. You do publish articles on topics,
9 occasionally -- other topics in peer review journals,
10 don't you?

11 A. Yes, I do.

12 Q. And we discussed earlier a couple of examples
13 that you cited that might be considered as articles
14 relating to this field in which you have sought to have
15 those published in peer-reviewed journals, one
16 successfully and one pending review, is that right?

17 A. That's right.

18 Although, if you'll permit me, I want to back
19 up, the statement about the Pennsylvania Law Review not
20 being a peer-reviewed journal. As commonly understood,
21 if you say to a scientist is it a peer review journal
22 or not, they mean exactly what you meant. But they
23 would also understand that the notion of peer review is
24 not limited to having a couple of people read the
25 article to advise the editor on whether they thought it

1 was worthy of publication or not. It also applies to
2 the lifetime of the article after publication, so that
3 to that extent, law journals are also peer reviewed in
4 the sense that other scholars read, comment on, agree
5 with, disagree with them. So with that footnote, I
6 agree with you.

7 Q. Now, I want to try, if I can, I know it's a
8 long article, but to try and summarize, in some
9 respect, accurately, hopefully, what you accomplished
10 with your article.

11 One is that you set out to look for research,
12 as you've described in your direct testimony, that
13 would support the hypotheses that forensic document
14 examiners can do what they say they do?

15 A. That's right.

16 Q. And when you looked for that research, you
17 found, essentially, the Inbau publication as well as
18 the unpublished, what I'm going to refer to as FSF
19 studies or tests?

20 A. Correct.

21 Q. Those proficiency tests.

22 Now, at page 751 of your article -- And do
23 you have a copy of it available to you there, Professor
24 Saks?

25 A. I don't, unless counsel has brought one.

1 Q. Let me read the conclusion, at least one of
2 the conclusions reported at the end of page 750 and the
3 beginning of page 751 is that -- one of your
4 conclusions was that no available evidence demonstrates
5 the existence of handwriting identification expertise.

6 A. That does sound --

7 Q. Sound familiar?

8 A. -- familiar.

9 Q. So as -- And that conclusion follows your
10 recitation of the FSF studies that you've talked about
11 on direct, including, I guess, the 1975 test. Would
12 you call that among the FSF studies, or is that a
13 separate study?

14 A. Oh, I think you could -- Since the Forensic
15 Sciences Foundation was the organization whose
16 employees were doing the study, I would include it.
17 For shorthand, we can call it an FSF study.

18 Q. All right. And, of course, the Inbau
19 article?

20 A. Yes.

21 Q. Now, the conclusion in 1989 that you had
22 about the FSF studies was that "We cannot emphasize too
23 strongly that, from the viewpoint of the law, each of
24 these studies suffers from a major omission, the
25 absence of a control or comparison group of lay test

1 takers."

2 Is that familiar to you?

3 A. Yes. Yes.

4 Q. And you even -- In the footnote to that
5 statement, which is footnote 79, you reported, "Bear in
6 mind that these studies were never intended to answer
7 the question that courts need answered."

8 Do you recall that?

9 A. I do, as long as you and I both understand
10 that what we mean is that the law's test of expertise
11 includes that the expert has something -- some value
12 added to contribute to the fact finder, and that it's
13 that question.

14 Because even if these -- Suppose these
15 studies had shown that forensic document examiners
16 reached the correct answer 100 percent of the time and
17 make incorrect answers zero percent of the time. If it
18 were also the case that jurors could look at the
19 writing themselves and be correct 100 percent of the
20 time and incorrect zero percent of the time, then a
21 court would say there's no basis for allowing an expert
22 to testify, because they're not adding anything to what
23 the jury can do on its own.

24 That's what we're talking about there, this
25 need for comparison. If not in an empirical study,

1 then something that can inform the court's judgment
2 about that question.

3 Q. Certainly. And that's what you go on to say
4 in footnote 79, that studies with the design capable of
5 directly answering the central question, the
6 performance of handwriting identification experts
7 versus nonexperts, have never been undertaken as of
8 1989?

9 A. That is correct. And our belief, as of
10 writing that -- and I don't know if this is where you
11 are going. We did later learn of a German study
12 published in a German journal in German which did,
13 indeed, do that comparison.

14 Q. So that was an example of an article not
15 within the English language, as you qualified earlier
16 on your direct testimony, that you just didn't come
17 across?

18 A. Right.

19 Q. That's referred to as the Conrad article in
20 your affidavit?

21 A. That's correct.

22 Q. Okay. You also included in your 1989 article
23 that the FSF proficiency tests -- that the proficiency
24 advisory committee disavows these tests as
25 representative of the level of performance of any of

1 the fields being tested, correct?

2 A. Correct.

3 Q. And you see that disclaimer, as I'll describe
4 it, appears on all the FSF tests from the '80s and the
5 '90s?

6 A. To the best of my knowledge, it certainly
7 did; and to the best of my knowledge, it still does.

8 Q. You also include in that same footnote 47 the
9 view that because of the high level of anonymity
10 maintained and the limited amount of information
11 collected by the proficiency testing program, it is not
12 known who takes the test for any laboratory or what
13 techniques they used, is that correct?

14 A. That is correct.

15 And if I may add that I believe we explained
16 that that means -- and as I believe I discussed in my
17 direct testimony, that could mean that the results
18 overstate the performance abilities, it could mean they
19 understate them.

20 MR. KISH: Let me interrupt for a moment
21 here, Russell. Our videographer informs me that we are
22 about out of videotape, and she is going to have to
23 change tape. So I would suggest that we take, if you
24 have no objection, about a five-minute break to let
25 everyone stretch their legs a bit and to do the

1 technological changes. So we'll go off the record
2 right now and we'll resume in about five minutes, but
3 we'll leave the video teleconference hookup going,
4 okay?

5 MR. VINEYARD: Certainly. We'll resume in
6 five minutes.

7 MR. KISH: Fine.

8 (A recess was taken from 12:59 p.m. to
9 1:09 p.m.)

10 MR. KISH: And we're back on the record. And
11 Russell, go ahead.

12 MR. VINEYARD: All right. Thank you.

13 BY MR. VINEYARD:

14 Q. Professor Saks, at the break we were
15 discussing the FSF studies, and you have testified that
16 they really are, quote, not great evidence one way or
17 the other. Do you recall previously providing that
18 testimony and would that be your testimony today?

19 A. Yes. But I'll elaborate that they give us at
20 least some window on what it is we're trying to find
21 out as opposed to having no window or less window.
22 They are not utterly without value for the Forensic
23 Sciences Foundation, and now it's currently being --
24 these are being conducted by ASCLD, A-S-C-L-D, the
25 American Society of Crime Laboratory Directors. They

1 obviously believe they have some value.

2 It's just that around the margins it's going
3 to be hard to know, first, for the reasons I've already
4 given, you don't know who's taking -- You've got four
5 examiners with 60 years' experience and they get the
6 wrong answer. Well, what does that tell you about any
7 one of them? They get the right answer. What does
8 that tell you about them?

9 And they also do not tell you, in as much
10 detail as a researcher would really like to have, the
11 nature of the writing. So you don't know as much as
12 you want to know, but you know an awful lot more than
13 you would know without them.

14 Q. But you would agree with me that the relevant
15 test, as you and your coauthors suggested should be
16 undertaken, are those that Dr. Kam has undertaken to
17 compare experts to nonexperts as you suggested,
18 correct?

19 A. I think that is one necessary test. But
20 obviously another test -- Let me put it this way.
21 Suppose the only research we had were the FSF tests,
22 but they had been done in the following way.

23 One of these features is that they randomly
24 sampled document examiners throughout the country
25 working in crime laboratories, and whoever was reading

1 the study thought it was an adequate response rate.
2 And number two, the task presented to them was very
3 close to the task at issue in whatever case the debate
4 was going on around. And suppose the performance
5 accuracy was three percent. That would be quite enough
6 information for a court to conclude that they're not
7 ready to admit these folks. So in a situation like
8 that, you don't need the comparison group.

9 When the numbers start to get up there in the
10 middle or higher, then I would think that a court would
11 be in a far better position to exercise the judgment
12 that it is required to make by having some comparison
13 data, Professor Kam's efforts being -- certainly being
14 some of them.

15 Q. In terms of replicating the real-word
16 experience of forensic document examiners, that's one
17 of the problems -- one of many that the FSF studies
18 have from the 1980s. Would you agree with me?

19 A. I would say that that's true of all of these
20 tests. They do not -- In some ways they are better
21 than the practice situation, and in some ways they are
22 worse. But the difference between them does leave a
23 court knowing less than it wishes it could know,
24 because obviously it wants to know about the real
25 practice situation.

1 Q. And would you agree with me that in the real
2 practice situation, because the questioned documents
3 and known samples are equally available to, in a
4 criminal case, the prosecution and the defense, the
5 opinion rendered, say, by a forensic document examiner
6 testifying on behalf of the Government can be examined
7 by a private forensic document examiner?

8 MR. KISH: And just like with the last
9 witnesses, we're going to object to this testimony
10 because -- and just -- I'm assuming Judge Cole could
11 rule as she did before that this is irrelevant.
12 Because the question is can the Government fulfill its
13 burden under Daubert to show that the field of forensic
14 document examination is sufficient to satisfy the
15 standards of both Rule 702 and Daubert.

16 MR. VINEYARD: And my recollection of her
17 ruling, though I stand to be corrected, was that the
18 witness could answer the question because it went to
19 the issue of peer review.

20 BY MR. VINEYARD:

21 Q. So with those objections stated, Professor
22 Saks, please answer the question.

23 A. I don't think it helps us to know whether the
24 crime lab document examiner got the right answer. They
25 reached their conclusion, it is what it is, and maybe

1 it's right and maybe it's wrong.

2 Having someone else do it isn't peer review
3 in terms of what the Supreme Court means by peer review
4 or, you know, having some examiner look at your work or
5 do the same test. That isn't what peer review is about
6 in Daubert or what researchers mean by peer review.

7 But there is a point that I wanted to make
8 and have lost. So let's -- have I --

9 Q. Well, I don't think you've answered my
10 question --

11 A. Please ask again.

12 Q. -- if I understand your response.

13 The question is, we're just trying to
14 determine whether opinions that are rendered by
15 forensic document examiners are subject to testing by
16 other individuals in the profession. They are by
17 private practitioners of forensic document examination,
18 would you agree?

19 A. Subject to testing? No, I would not agree to
20 using the word testing in that context.

21 Let me give an example. One of the Forensic
22 Science Foundation studies -- I will point to the exact
23 one if I -- I believe it's the 1987 FSF test. But the
24 point about it that I want to make is, the document
25 examiners were in complete agreement -- No, that's not

1 the one. Let me find it. Because it goes directly to
2 your point about having other examiners look and what
3 is it that they find. Well, I'm not finding it at the
4 moment. But in one of these proficiency tests -- Oh,
5 here it is. I'm sorry.

6 The 1984 test. 100 percent of the -- not
7 just one document examiner, but 23 document examiners
8 -- 23 document examiners did the same problem, and all
9 23 document examiners reached the same conclusion. In
10 the research game we call that high reliability,
11 perfect reliability, reliability in the sense that each
12 agrees with the other. But the researches knew that
13 they all had the wrong answer, so they had zero percent
14 validity.

15 So just having someone else look at the same
16 problem and come up with the same answer doesn't
17 provide any assurance of anything except they've
18 reached the same answer. Does it tell us they've got
19 the right answer? No. That is the sense in which the
20 tests are better than the real word, you know the
21 answer.

22 The best of all worlds would be to do what's
23 called closed blind proficiency testing in working
24 crime labs, which means that every Nth -- and I'm
25 saying N-t-h -- could be the every 100th, every 50th.

1 Every Nth test, every 10th case that comes through the
2 lab is actually a test case. And then you can see
3 whether they get it right or wrong under conditions
4 where they are operating as they do in the laboratory,
5 not in a test situation where they are working
6 presumably -- certainly in Professor Kam's tests he has
7 said that they are working -- they are very nervous,
8 very concerned, care deeply that they get the right
9 answer. Maybe back in the lab, working on a
10 garden-variety case, they're not as intense about it.

11 So you could actually get the best of both
12 worlds. It's done in hospital laboratories. I am
13 confident that some day it will be done in crime
14 laboratories. Then we'll have a much better sense, at
15 least about the document examiner performance. It
16 still might -- Depending on the results, we still
17 might be curious about how unaided lay people would do.

18 Q. You're aware, I think you referenced it
19 either in your testimony or your affidavit, that there
20 is proficiency testing done of forensic document
21 examiners at crime labs in the United States?

22 A. I'm not familiar with the details of that,
23 except that it's my impression that -- well, it's quite
24 clear that some labs, numerous labs subscribe to what
25 we've been calling the FSF tests. Today we should call

1 them the ASCLD tests. And whether they have additional
2 internal testing, I think I've heard glimmerings that
3 they do that, but I know nothing about the details.

4 Q. What sort of testing a forensic document
5 examiner may go through in order to obtain a
6 certification from, say, the ABFDE?

7 A. Those apparently vary in quality quite
8 considerably. The court might find it very interesting
9 to read the Judge's opinion in U.S. against
10 Starzecpyzel where that very issue is gone into about
11 what the nature of the testing is. At least back then
12 it was not a pretty picture.

13 What they were doing was sending a problem --
14 In document examination, one becomes a document
15 examiner by apprenticing to an existing document
16 examiner. We don't have schools, we don't have
17 classes, we don't have curricula. And the mentor, when
18 it comes time to test -- at least the testimony given
19 in Starzecpyzel by the representative of the document
20 examination community was that a test would be sent for
21 the mentor to administer in any way they wanted. It
22 was the same test, year after year, to everyone who was
23 getting it. And when the mentor and the fledgling
24 document examiner were content with whatever they were
25 going to do with it, it got sent back. There were no

1 controls over it.

2 Q. But you're not familiar with how that's done
3 at this time?

4 A. I am not.

5 Q. And you're not familiar, for example, with
6 the credentials of Arthur Anthony, who is the forensic
7 document examiner whose testimony is at issue in this
8 case?

9 A. No more than having skimmed his resume which
10 was sent to me.

11 Q. I want to talk to you a little bit about the
12 studies that Dr. Kam has conducted. Those are the very
13 types of studies that you proposed needed to be
14 undertaken in footnote 79 of your 1989 article, is that
15 right?

16 A. In the sense of providing a control group of
17 nonexperts, yes.

18 Q. And, in fact, Dr. Kam, through these studies,
19 has found that forensic document examiners' performance
20 is superior to that of laypersons', hasn't he?

21 A. As I think I testified on direct, if one just
22 looks at the raw numbers, the answer is that with
23 respect to correct identifications they are the same.
24 With respect to avoiding erroneous identifications, the
25 document examiners have superior numbers. But that the

1 flaws in the research design leave one unsure about
2 whether that's really what happens -- whether that's
3 the real world answer or whether that is an artifact of
4 the nature of the research -- the confound in the
5 research.

6 Q. But those same results, as you have described
7 them, were reached by Galbraith -- the Galbraiths,
8 plural?

9 A. Yes.

10 Q. And by the Australian researchers, Found and
11 Rogers?

12 A. That's correct.

13 But again, in every instance the problem is
14 that the document examiners are very highly motivated
15 and the laypersons are given either zero incentive or
16 modest -- what I'll call modest incentives to perform
17 at their best.

18 Q. Okay. And I want to talk to you about that
19 issue of motivation. That issue really addresses the
20 performance of laypersons, not experts, in these
21 studies, correct?

22 A. Well, we're assuming that the experts in the
23 tests are highly motivated. In the lab we have,
24 perhaps, a whole other scenario.

25 Q. You've mentioned that a few times. Is there

1 something about forensic document examiners that leads
2 you to believe that they are not motivated in their
3 profession to reach the correct results?

4 A. I'm sure they are, but in this sense. If I
5 can illustrate without using document examiners as the
6 example, but it will be obvious how it connects.

7 A conversation was had among forensic
8 dentists as to whether they should withhold their own
9 reports until after they learned what the DNA testing
10 showed in any given case, because they thought that by
11 doing -- at least the proponents of that practice
12 thought that that would help them get the right answer.
13 Once they heard what the DNA testing showed, they'd
14 know what their answer was supposed to be. In their
15 wisdom, they said no, that's not how we should operate.

16 Forensic document examiners sometimes,
17 sometimes more and sometimes less, know other facts of
18 a case. Knowing those other facts of a case tells
19 them, they think, what the, quote, right answer is. So
20 that in the normal practice situation when an examiner
21 has what I will call extra domain information about the
22 answer, it's kind of like cheating on a test.

23 They're called upon because of their
24 expertise focused on document examination, handwriting
25 examination. They're not there to be -- to look at

1 other evidence and to use that other evidence to help
2 them resolve ambiguities in what they are looking at in
3 order to decide that it is or it is not a match.

4 And you haven't asked me about our
5 California Law Review article, but what it calls for --
6 and if there were one reform that crime labs could
7 adopt that would do more to help and make us more
8 confident that what is being heard in court is not an
9 echo of evidence from one source of evidence to another
10 from one expert to another, it would be to have truly
11 blind testing. Blind in the sense that the examiner is
12 not allowed to learn anything else about the case
13 except here's the writing.

14 And second, was presented a lineup -- a
15 writing lineup. For the very same reasons that we have
16 eyewitnesses pick out the person they believe to be the
17 perpetrator in the context of a lineup, we would have
18 the benefits of that in a crime lab. Because if I'm a
19 document examiner and I get one suspect's writing,
20 that's the known, and I get one questioned, I know that
21 there's a high probability that the investigators
22 believe that that is a very likely -- it is very likely
23 the perpetrator that they're looking for. So I have a
24 very high base rate which, by the way, affects where
25 the threshold is put.

1 So what I'm arguing is, the threshold I spoke
2 of earlier, in the actual laboratory situation, may get
3 pushed way down, which is the opposite of where it is
4 when the document examiners are in a test. So blind
5 testing and testing by a lineup where the document
6 examiner is asked who is -- can you match the
7 questioned to any of the knowns? And one of them --
8 and they are not always that of the suspect. Sometimes
9 you have a blank lineup. With eyewitnesses you can
10 have blank lineups here. So one, or perhaps none,
11 actually come from the suspect. That puts the examiner
12 in a very, very different state of mind.

13 Q. I'm just going to have to ask you, if we
14 could -- I think I've allowed you to go on for a long
15 time here. And I don't mean to interrupt you
16 unnecessarily, but we do have time constraints.

17 Professor Saks, isn't the concern with
18 erroneous identification -- wouldn't that be the
19 greatest injustice that would concern you as a
20 professor?

21 A. I would hope that it concerns all of us, and
22 I presume that numerous of the rules of legal decision
23 making are based on attempting to avoid that error.

24 Q. And from the studies that we have from
25 Dr. Kam as well as the Galbraiths and the Australian

1 studies, we know that forensic document examiners do
2 considerably better than laypersons in avoiding
3 misidentification, is that correct?

4 A. I'm willing to agree to that if you will --
5 if we can agree that we're talking about the findings
6 on their face and disregarding the apparent
7 methodological flaws.

8 Which, by the way, the Conrad study seems to
9 confirm that there is a serious motivational defect.
10 Because in his study laypersons -- actually, college
11 students who had taken a course in handwriting
12 outperformed the document examiners. That's the
13 Conrad, the German, 1975.

14 Q. That's referenced in paragraph 16 of your
15 affidavit, I believe.

16 A. So I'm --

17 Q. If I could, for a moment, just on that point
18 since you brought it up. On the Conrad, in this
19 affidavit that was prepared earlier this year, you
20 state that we don't know what motivational tools were
21 used, do we?

22 A. We do not. And my attempts to contact
23 Dr. Conrad have not yet borne fruit. I have e-mailed
24 him a number of times, and then got my translator to
25 take my letter, translate into German, and we sent it

1 to him via airmail. I don't even know if he's still
2 alive. That may be the problem. But I've attempted to
3 reach him, and my next efforts will be to obtain his
4 articles, have those translated, and see if we can find
5 out what he is referring to. But you're right, we
6 don't know.

7 Q. So at this point we don't know.

8 A. Although --

9 Q. So what we're left with, as you have pointed
10 out, is the consistency of findings that appear in
11 Dr. Kam, the Galbraiths', and the Australians' that
12 forensic document examiners are less likely than
13 laypersons to wrongly associate?

14 A. That's correct.

15 Q. So we have the irony of it, that if your
16 position that you've advocated in your 1989 article
17 were to prevail, is defendants would be left to jurors,
18 who are six times more likely than forensic document
19 examiners to wrongly identify them as the writer of
20 documents --

21 A. Now, the irony --

22 Q. -- under Dr. Kam's studies?

23 A. Well, as you point out, all of them which
24 have done comparisons.

25 The irony might be that counsel should be

1 trading positions. Because just as you are pointing
2 out, if one only takes a superficial look at the
3 situation, it is very odd that given that there is
4 equal likelihood of a correct identification but a
5 greater -- by a jury but a greater likelihood of an
6 erroneous identification, you would think the defense
7 would want the document examiner and the prosecution
8 would not.

9 But if we say that, we're ignoring how the
10 process works. Your document examiner in this case --
11 and you wouldn't be much of a lawyer if this were not
12 the case. You have determined that your examiner has
13 concluded that there is an identification. There is
14 now a 100 percent chance that the document examiner
15 will testify that there is an identification.

16 That's not the probability of a correct
17 decision, that is -- At this point in trial, the
18 Government's expert is committed to a position of
19 saying there's an identification. The jury is in the
20 position that the document examiner would have been in
21 initially if the document examiner -- when the document
22 examiner was asked, will you look at this writing and
23 see if you can determine if there is -- if you can
24 identify it or not. Then we're dealing with the
25 probabilities of error and the probabilities of

1 nonerror.

2 The way cases get sorted out, they go forward
3 to trial when the evidence builds to a point toward a
4 particular suspect who becomes the defendant. So at
5 this juncture, it probably --

6 If Professor Kam's data are correct -- two
7 assumptions. One is that his data is correct. And
8 assumption number two, we're dealing with an innocent
9 defendant. Under that circumstance, the probability of
10 an erroneous identification is now -- by the document
11 examiner is 100 percent and by the jury is whatever the
12 data would show for this particular type of
13 identification.

14 Q. That's because you've jumped to the
15 conclusion that the document examiner has reached an
16 erroneous result in your hypothesis there, haven't you?

17 A. Yes. And if we play the numbers the other
18 way around, we would be in a similar posture except we
19 wouldn't -- if your document examiner were testifying
20 that this is not -- that the defendant is not the
21 person who authored the writing, then he wouldn't be
22 coming to testify.

23 So we have kind of a funnel that is selecting
24 evidence in the same way we were talking earlier about
25 why the Courts of Appeals are only looking at appeals

1 by defendants of courts' decisions to admit the
2 evidence. We have some asymmetries that lead to some
3 funny results.

4 What you'd really prefer to do -- when I say
5 you, I mean people in general who are trying to get
6 correct answers. Imaging you were going to the doctor
7 and said I want you to do a test for a certain disease
8 that I might have, I might not have. And the doctor
9 does a test and the test has a certain error rate.

10 Would you then -- when the test -- let's say
11 it's sent out to a lab, the lab does the test and sends
12 your physician the results. We think it's cancer.
13 Would you rather that your doctor simply read the
14 report over again, or would you rather have a second
15 independent -- and I'll underscore independent --
16 evaluation? Because we don't bring experts into court
17 who haven't looked at the evidence first.

18 So if in this case, or any case, the jury --
19 a case which is in this posture, if the jury were
20 allowed to then make the second test and the jury
21 said yes, it looks to us like this is the correct
22 perpetrator, we could be far more sure that the right
23 answer was reached than if a document examiner, in
24 effect, shares his earlier conclusions with the jury
25 and the jury then is convinced that, well, an expert --

1 we're not going to look at it and override the expert.
2 An expert has looked at it. It's the fundamental
3 concern about experts who do not have a demonstrated
4 expertise, giving -- having too much weight.

5 Q. And I do want to -- I'm sorry. I try to let
6 you go on as long as I can.

7 I do want to discuss that point with you,
8 because in this case, based on the findings and the
9 observations you've made, laypersons are as equal as
10 experts at identifying correctly. So we really don't
11 have the concern that their abilities are overborne by
12 an expert's opinion, do we?

13 A. I thought I just said we did because they are
14 being presented -- The judge, as gatekeeper, has
15 approved an expert. The expert is presented to the
16 jury as an expert. I mean, it's the whole problem of
17 why we have filters on expertise. We are afraid that
18 if the expertise isn't really sound, the jury will give
19 it too much weight.

20 Q. Jurors are also given an instruction by the
21 court to consider the expert opinion carefully, are
22 they not?

23 MR. KISH: I'm going to object. This is far
24 beyond the direct testimony. It's far beyond this
25 witness' expertise. And it's far beyond the issue in

1 this case which deals with whether the Government can
2 bear its burden of proving that its witness can be
3 allowed to testify as an expert.

4 BY MR. VINEYARD:

5 Q. And subject to the objection, Dr. Saks, would
6 you -- I'm sorry. Would you answer the question?

7 A. Was it about the judge's instruction?
8 Apparently, Judge McKenna, in Starzecpyzel, did not
9 think that that would be nearly adequate since his
10 solution to the problem pre Kumho Tire was that since
11 document examination flunks Daubert, it should not be
12 admitted. But because it flunks, it's not science.
13 Because it's not science, it's not subject to Daubert
14 and, therefore, he will admit it.

15 But his solution to the problem that we are
16 discussing is that he gave a special instruction to the
17 jury advising them of how unscientific document
18 examiners were, that they clothed themselves in the
19 aura of science, but that the jury should understand
20 that it needs to be -- the weight of it needs to be
21 pushed way, way down compared to what they might
22 normally think based on the conventional instruction
23 that you are alluding to.

24 Q. And based, according to Dr. Kam's studies, on
25 their independent ability to render the same opinion,

1 if it is an opinion of identification, that the expert
2 is able to?

3 A. Is that a question?

4 Q. That is a question.

5 Would you agree with me that that's another
6 factor?

7 A. If the jury could be persuaded, convinced
8 that their judgment was every bit as good as that of
9 the expert on the question before them, then they might
10 very well exercise their independent judgment rather
11 than deferring to an expert who, by all indications, is
12 entirely plausible. Though if that were the case, the
13 judge would, in effect, be saying there is no purpose
14 to permitting expert testimony.

15 Q. But you would agree that a forensic document
16 examiner with, say, 20 years of experience has
17 something to offer to a jury to aid them in their
18 determination as to authorship through his testimony,
19 wouldn't you?

20 A. One of the interesting things about all of
21 this research, and in a very recent article by Found
22 and Rogers they emphasize it, is that experience -- in
23 not one single study when they've collected data on
24 experience, experience has not correlated at all
25 significantly with accuracy. This is exactly part of

1 the problem.

2 The examiner will testify to his extensive
3 experience. The average person, including the average
4 juror, would think, oh, well, that's very impressive,
5 and surely such a person knows better about these
6 things than I do. And yet the data do not seem to
7 support that at all. There are cases where rookies --
8 not cases -- tests where rookies got the right answer
9 and a group of highly-experienced, very senior document
10 examiners got the wrong answer. So that would be --

11 Q. Are those the FSF tests from the 1980s that
12 you were citing?

13 A. That and the Australians' tests.

14 Q. And we're not dealing with the Australian
15 document examiners in this case. You understand we're
16 dealing with an American examiner?

17 A. I do understand that.

18 Q. So you understand, I think as you testified
19 earlier, that the Australians -- you don't know how
20 their practices may differ from the American practices,
21 do you?

22 A. I know how they describe the research that
23 they conducted, which is much like the research that
24 has been conducted here. Although, if we went into the
25 details of it I would point out ways in which it is

1 better.

2 If one -- It's this simple. Tests are given
3 to document examiners, they do the problem, they do the
4 work, they tell you their answer. The researches,
5 whether it's FSF, whether it's the Australians, whether
6 it's Professor Kam, they know whether the answer is
7 right or wrong.

8 Those who have, in addition, collected data
9 on the years of experience of the document examiners,
10 in addition have collected data on the size of the
11 caseload -- the proportion of the caseload, which is
12 document work as opposed to other kinds of things --
13 because some labs they have sort of generalists who do
14 a bunch of different things in the lab and some of it
15 is handwriting. They have found that neither of those
16 experience variabilities has any relationship to
17 accuracy.

18 Q. I think we've gone over that point. You've
19 made that point a couple of times, I believe.

20 Let me ask you, though, your concerns about
21 motivation simply relate to the laypersons
22 participating Dr. Kam's tests, right?

23 A. Yes and no. Because one thing I've said is
24 that the document examiners, in the research setting --
25 the test setting are more highly motivated. Here's a

1 hypothesis --

2 Q. I understand that --

3 A. -- which we could test. Then they might be
4 in their ordinary casework where there are other
5 influences that lead them astray. Putting that aside,
6 then, yes, then we're talking about the motivations of
7 the laypersons.

8 Q. And you brought those concerns to Dr. Kam's
9 attention?

10 A. Right.

11 Q. And he had discussion with you about
12 suggestions for how he could improve his tests to take
13 into account your concerns for motivation, didn't he?

14 A. We did speak, in a general sense, about what
15 might be done to motivate -- to provide greater
16 motivation instead of no motivation for laypersons.

17 Q. Didn't he specifically solicit your
18 suggestion, as well as Professor Denbeaux's suggestion,
19 if you know -- if not with Professor Denbeaux, then
20 disregard that part in your answer. But didn't Dr. Kam
21 solicit suggestions from both you and Professor
22 Denbeaux about how he should structure the motivation
23 for a future test?

24 A. My recollection is our conversation was at a
25 very general level; which was, what can be done to add

1 motivation. And I suggested -- I don't recall exactly
2 what I said, but an obvious suggestion would have been
3 to offer financial incentives for accurate answers.

4 He did not run past me the reward structure
5 that he ended up using, which for reasons we could go
6 into if you want to, but we've written about them,
7 are -- I'm looking for a word less strong than
8 disastrous, but I think they were problematic. Let's
9 use that word.

10 And in any event, we recognize -- What I
11 really have been suggesting to him most recently is
12 that I accept his concern that he cannot put them in
13 the same position, he can't make the careers of the
14 laypersons hinge on how they perform in these.

15 So I suggested ways that one could at least
16 test the degree to which different motivating forces
17 could improve their performance, and then perhaps one
18 could mathematically extrapolate from that, sort of as
19 we often do in research on toxic torts or drugs, that,
20 well, we can't give them as big a dose as we'd like to
21 give them, you know, like a job and a career, but we
22 can give them something a lot heftier than the average
23 of, I think it was a little over \$100. If they got
24 everything right in one of his tests, they could walk
25 away with as much as a little over \$100, I think it

1 was. Something -- One could, without necessarily
2 spending a fortune, greatly increase the motivation.

3 And I'm not saying one would equalize them.
4 But let's say one did such a test and did something
5 that appeared to greatly increase the motivation, and
6 one saw an increase -- a statistically significant
7 increase compared to the existing studies. That would
8 certainly tell us something.

9 And I also suggested to him ways that it
10 could be done without financial motivations. I
11 mentioned earlier studies that show --

12 Q. Let me just ask you, because I think we're
13 going to get to this point. It may speed things along.

14 You made reference to the Hidalgo case which
15 was there in Arizona in which you and Dr. Kam
16 testified, is that correct?

17 A. That's correct.

18 Q. And you had an opportunity to hear Dr. Kam's
19 testimony in that case?

20 A. I did.

21 Q. Both of you, at some point in your testimony,
22 discussed this issue about motivation?

23 A. That's right.

24 Q. And in that testimony he testified that he
25 had contacted you about input on his next -- on the

1 issue of motivation for future testing. And you heard
2 that testimony, what he had to say there?

3 A. Depends on which time period we're talking
4 about. He and I have discussed it a couple of times.

5 Q. I'm just referring to -- I'm simply
6 referring to the testimony that he gave in court on
7 September 24th, 2002 in the United States of America
8 versus Julio Hidalgo Padroso and a codefendant.

9 A. If his reference is to a conversation we had
10 after the publication of Kam one, then what I have said
11 to you a few moments ago remains, which is that I
12 explained that, in general, when you have a group of
13 people who are highly motivated and another group that
14 have no particular motivation, you have a confound and
15 that you ought to find a way to increase their
16 motivation.

17 We did not get into a discussion of
18 specifics. Because if we had and if he -- if we were
19 working in a somewhat more collaborative fashion, what
20 he might have done would be to send me the research
21 protocols in advance, which he didn't do. He would
22 have sent me the payoff matrix in advance, which, as
23 I've written about and discussed and testified about,
24 actually push the laypeople toward making wrong answers
25 so that he --

1 Now, I know Professor Denbeaux has a
2 different explanation of why that's happening. But
3 these are rival hypotheses of what's going on. If you
4 look at the payoff matrix, the way to make more money
5 is to make more guesses. If you're in doubt, make a
6 guess that it's a match, you'll make more money.
7 That's for the lay people.

8 Q. Can I suggest a comparison analogy there, if
9 I may?

10 That if one were taking a true/false test and
11 decided I'm going to answer every question with true
12 because I'm motivated to do that, then all my true
13 answers would be -- all the true answers on the test
14 would be correct, but I would have a number of errors
15 for the answers that were false on a true/false test?

16 A. That's right. So if you are told --

17 Well, you mean if you had a true/false test
18 in which the correct answers were always true?

19 Q. No. In which there's a mix. In which
20 there's a mix. But I chose, as a test-taking strategy,
21 to simply answer true on every question, then my
22 correct identifications would be 100 percent, but I
23 would also have a high error rate for the answers that
24 should have been answered with a false instead of a
25 true?

1 A. That's roughly correct. And whether one
2 would follow such a -- We know that's not the strategy
3 that people followed, because they're not all saying
4 match, match, match, match, match.

5 They know they can make money by getting a
6 correct match. They know they can lose -- well, it
7 depends on which payoff matrix he's using. They can
8 make money by being correct either way. They can lose
9 money by being wrong one way, and one of the other ways
10 it was a wash. So it really comes down -- it's not
11 just a strategy, but it's a -- it's what is the reward
12 structure. The reason nobody would adopt the
13 test-taking strategy you described is because they
14 assume it's a mix.

15 But if they were told -- Let's see if we can
16 bring this even closer. If they were told -- well, one
17 obvious way that this works is people are told you will
18 -- whenever you give a wrong answer you will lose
19 points as opposed to gaining -- A right answer gains
20 you points; a wrong answer loses you points. Other
21 true/false tests, you say you will only -- you will get
22 points for correct answers, you will not lose points
23 for wrong answers. Those change people's test-taking
24 strategies.

25 So I agree with you that people will adopt

1 test-taking strategies, depending on what it takes to
2 maximize the outcomes for themselves.

3 Q. Okay. And let me just ask you, with regard
4 to the testimony in the Hidalgo case, Dr. Kam testified
5 while you were present that two of our incentives were
6 suggested by our critics, one of them by Professor
7 Denbeaux and one of them, interestingly enough, by
8 Professor Saks. And I'm reading from page 291 of his
9 testimony in Hidalgo, and we've been over this a little
10 bit. You heard that testimony?

11 A. It sounds familiar, but I must say I didn't
12 agree with everything I heard him say from the witness
13 stand.

14 Q. Interestingly, in that case you had an
15 opportunity to cross-examine Dr. Kam, didn't you?

16 A. I did have six minutes at the end of that
17 day.

18 Q. Well, actually, I believe it was 14 minutes.
19 Just so we'll be accurate, you had 14 minutes.

20 A. It seemed like six minutes.

21 Q. And you had the opportunity to ask Dr. Kam
22 any question you wanted to ask him within the scope of
23 his direct testimony, right?

24 A. I will tell you what my cross-examination
25 strategy was.

1 In the limited time available, I thought --
2 He said things that I thought were far more incorrect
3 and far more troubling. And I decided that in whatever
4 few minutes I had remaining, there was no way we were
5 going to get into that in any meaningful way,
6 especially when it's me asking questions, which I'm not
7 -- You guys are much better at asking questions; I'm
8 better at giving statements.

9 So all I wanted to do, since Professor Kam
10 was, I believe, the one and only witness that day -- I
11 could be wrong, but -- or, the Government's witnesses
12 were the only witnesses that day. But the Professor
13 Kam, with uncontradicted -- I'm going to say weakly
14 challenged on cross. All I wanted to do was establish,
15 in one or two clear ways, that he was not god, that
16 everything he said was not absolutely correct.

17 And I used my limited time to get him, A, to
18 concede a simple mathematical point which he had
19 insisted upon relentlessly against cross-examination.
20 And with one or two questions I was able to get him to
21 agree he was mistaken after all.

22 And the second one, I wanted him to agree to
23 a large proposition, that actually comes from a
24 statement by the Australian researchers, about the
25 nature of the document -- the document comparison and

1 judgment task and what researchers need to do when they
2 come to that task. And I thought if I could accomplish
3 that in my few minutes, that that would be at least
4 something for the judge to be thinking about in the
5 month that would intervene between hearing Professor
6 Kam and hearing me, when Professor Kam had really
7 gotten away without any real challenge before that.
8 And so I didn't ask him the question you would have
9 liked me to ask him.

10 Q. And the questions you asked him related to
11 the motivation issue that we've been discussing?

12 A. That, I don't recall. I may have.

13 Q. Well, I guess --

14 A. Oh, yeah. Yeah. Yeah. Yeah.

15 Q. -- the transcript will speak for itself.

16 MR. KISH: Well, the record should reflect
17 that the Government has never provided me a copy of the
18 Hidalgo transcript, as far as I'm aware, of Dr. Kam.

19 MR. VINEYARD: I'm talking about Dr. Saks'
20 testimony.

21 MR. KISH: But you've been referring to
22 Dr. Kam's testimony, and the record should be --

23 MR. VINEYARD: That's correct. I have.
24 You're correct, I have referred to his testimony as
25 part of the cross-examination of Professor Saks.

1 BY MR. VINEYARD:

2 Q. I wanted to ask you just a few more
3 questions, Professor Saks, regarding your affidavit in
4 this case. And you do have a copy of that available to
5 you?

6 A. I do.

7 Q. You make reference in paragraph 33, and
8 you've testified today, about the Harris study, the
9 study of voter registration signatures?

10 A. Yes.

11 Q. Are you familiar with the questioned
12 documents that are at issue in this case?

13 A. In that study, or you mean this present case?

14 Q. In the present case.

15 A. I did receive a copy of the document
16 examiner's report, and I guess a photocopy of the
17 exhibits.

18 Q. In paragraph 94 you state that your
19 understanding is that the critical evidence in the
20 present case is hand printing.

21 And I just wonder if, by reference to the
22 exhibits that I believe you have available to you there
23 in Arizona, if you could identify what is the critical
24 evidence as you identified in your --

25 A. Well, after recently reviewing it, it appears

1 to me to be mostly hand printing and some cursive.

2 Q. Okay. If you would -- I believe the
3 exhibits are available to you. If you could identify
4 for us what, in paragraph of 94 of your affidavit, you
5 were saying is the critical evidence?

6 MR. KISH: Again, we're going to object
7 to that. That obviously calls for a work product
8 communication, something that the defense may have
9 identified to an expert witness as to what might be
10 quote, critical, end quote. And so we are absolutely
11 not going to let this witness answer that question.
12 It's just not going to happen.

13 MR. VINEYARD: Well, I would like for him to
14 identify for me what, of the exhibits that have been
15 admitted, are hand printing.

16 MR. KISH: Again, we're going to object to
17 that. Because this is about the Government's attempts
18 to get its witness qualified under the rules and under
19 the Daubert opinion. This is not a hearing about this
20 witness' characterization of whether something is or is
21 not printing or cursive or anything. For example,
22 you've already established that he's not a forensic
23 document examiner.

24 MR. VINEYARD: And simply I'm responding to a
25 paragraph in his affidavit. And because the issue, as

1 framed by the defendant, has been to really challenge
2 the printing evidence in this case, I'd just like to
3 identify which exhibits we're talking about. And
4 perhaps counsel would stipulate with me what those
5 exhibits are.

6 MR. KISH: Russell, I don't have them in
7 front of -- Hold on. What do you think are the
8 printings?

9 MR. VINEYARD: I'm asking the question of the
10 witness --

11 MR. KISH: Well, again, this witness is --

12 MR. VINEYARD: -- in response to his -- in
13 response to paragraph 94 of his affidavit. I just
14 think it would be helpful to the Court for us to
15 identify what this witness believes is the shortcoming
16 of the testimony of the expert witness.

17 THE WITNESS: You know, perhaps I can be
18 helpful just by saying that, to the extent that counsel
19 and the Court work out or argue to the jury that hand
20 printing is at issue, my statement there, and whatever
21 you want to ask me about it, about hand printing and
22 the contradictory statements made in the forensic
23 document examination literature about the ability to
24 accurately identify hand printing are what they are.

25 As to me looking at writing and offering my

1 view of what is printing and what isn't, I'm no better
2 at it than anybody else.

3 BY MR. VINEYARD:

4 Q. Okay. So you're not able to point to which
5 exhibits in this case you contend our experts should
6 not be allowed to testify to as an expert on hand
7 printing, if I understood your answer correctly?

8 A. If there is hand printing at -- see, since I
9 operate at the level of the research and trying to fit
10 the research to the issues in the case, I'm at -- my
11 statements on that are only as good as what the
12 judgment is, I suppose, of the Judge or the jury about
13 what the evidence in the case is.

14 If I called this handwriting evidence and
15 someone else wanted to call it ballistics evidence,
16 then again I would say, to the extent that what I have
17 looked at is hand printing, then what I am saying about
18 hand printing applies. To the extent that it's
19 ballistics or something else and it doesn't --

20 Although, you do raise a very interesting
21 question as to the ability of the research to inform us
22 about the particular sort of expertise that is at
23 issue, which is what Kumho Tire seems to urge judges
24 do, to identify as carefully as possible what the task
25 at hand is. To the extent that a doctor identifying a

1 broken bone is very different from diagnosing the
2 consequences of a toxic tort injury, you're dealing
3 with very different skills. And to relate the tested
4 skills to the skills called for in this case is -- it
5 hadn't occurred to me until you started asking about
6 it -- but that may be an interesting complication.

7 MR. KISH: Russell, I'll stipulate with you.
8 It's fairly simple. Your Exhibits 2, 4, 5, and 6
9 contain printing, whereas your Exhibit No. 3, I would
10 have to concede, looks as if it's all cursive writing.
11 I mean, that's just obvious.

12 MR. VINEYARD: Well, it wasn't obvious to
13 Dr. Saks, that's why I wanted to ask the question.

14 MR. KISH: No. Actually, I just won't let
15 Dr. Saks tell you anything he and I have talked about.
16 I'm willing to stipulate to you, though, that those are
17 of that character.

18 MR. VINEYARD: I do not have the exhibits in
19 front of me, so I can't say that I'm necessarily
20 agreeing to your stipulation, but we have on the record
21 what your view is on that.

22 MR. KISH: Right.

23 BY MR. VINEYARD:

24 Q. Professor Saks, back to the Harris study.
25 You understand, then, that the exhibits that you have

1 in front of you, the questioned documents, are not a
2 single signature, correct?

3 A. Yes. It did not appear to me that I was
4 looking at signatures.

5 Q. All right. And then with regard to
6 Dr. Srihari's studies about the capabilities, I guess,
7 of computers to distinguish writing, you would agree
8 with me that computers are not yet as capable at
9 pattern recognition as humans are?

10 A. Oh, I don't know that that's true at all.
11 What happens with human beings -- It depends upon the
12 task. There are some tasks that the computers do far
13 better, and that is because the computer's function,
14 usually the programs are designed to be what would be
15 called algorithmic. I'll explain what that means in a
16 second. But humans are more heuristic,
17 h-e-u-r-i-s-t-i-c.

18 That is to say, if I have a computer that's
19 programmed to play chess, many of the computer programs
20 are designed to think through every conceivable move
21 that could be made from this point, and as opposed to
22 using shortcuts like focus on the pieces in the center
23 of the board, focus on the major players, the major
24 pieces in the game. So that computers, in many
25 contexts, are far superior to human decision makers.

1 What humans end up doing is they focus on a
2 few items. Even if they say my training is to look at
3 umpteen million different things, studies of
4 physicians, making diagnoses, studies of human decision
5 makers in a variety of contexts find that they quickly
6 reduce, to a very small amount, the information on
7 which they focus.

8 So that whether a human does better at a task
9 than a computer depends a lot on the task. There are
10 ridiculously simple tasks that the computers cannot do
11 as well as a child. But there are other tasks which
12 are quite complicated that computers routinely do
13 better than humans.

14 Q. Fair point. Fair point. I take your point.

15 But with regard to Dr. Srihari's study, his
16 conclusion was that in this field of forensic document
17 examination, that the computers that he's worked with
18 are just not at the point or level that humans are in
19 recognizing them, isn't that right?

20 A. He has not -- Understand that this is based
21 on a study in which he put pieces of paper in front of
22 his computer. There are no human document examiners in
23 his study.

24 He is speculating that because his computer
25 recognition program looked at a certain number of

1 features, let me just throw -- I don't remember what
2 the number is, but let's say 50 features. My computer
3 looks at 50 features, but there are many, many, many
4 more features available to be looked at. And that a
5 human document examiner is not constrained. The human
6 document examiner could look at more. And therefore,
7 he said the human document examiner is probably better,
8 at this point, than the computer. That is not
9 necessarily true at all, for the reasons I gave a
10 moment ago. The human --

11 Q. But that was the conclusion reached by
12 Dr. Srihari?

13 A. That was the speculation offered by him in
14 the discussion section of his paper.

15 Q. Professor Saks, I want to draw your attention
16 to paragraph 85 of your affidavit. This point relates
17 to -- under the heading the influence of extraneous
18 cues. And you cite Dines (phonetic) there. Do you see
19 the reference?

20 A. I do. I want to remind myself what Dines is.

21 Q. In your references, you have sited him as the
22 fourth item down, document examiner --

23 A. Oh, yes. Yes. Yes. Yes. Yes. Yes.

24 Q. He is a graphologist, isn't he?

25 A. I don't know what he claims his training to

1 be. This is a book about handwriting identification,
2 and it was reviewed by a handwriting examiner, not a
3 traditional American forensic document examiner. I
4 don't remember any reference to --

5 I guess I want to ask you the second question
6 I would ask you today. Where are you getting the
7 notion that he's a graphologist?

8 Just in case people are not clear, graphology
9 is where you look at writing and try to discern the
10 personality of the writer. That's not what the book
11 was about. That's not what it was about, identifying
12 the author of a writing.

13 Q. You understand that this was a self-published
14 textbook?

15 A. Yes.

16 Q. So it's not a peer-reviewed publication, I
17 think, as you were alluding to in your initial answer
18 to my question?

19 A. Well, I hate to say this, but most books are
20 not peer reviewed. Most books are reviewed by the
21 editors at the publisher. You're saying something even
22 more -- I suppose more troubling, which is he couldn't
23 find a commercial publisher.

24 Q. Would you agree with that?

25 A. Well, let me see if I put in who the

1 publisher was. I don't recall, but I'm happy to take
2 your word for it that it was, but let me see.

3 Well, unfortunately I've used the legal
4 citation style which doesn't give publishers.

5 Q. And you understand that Osborn has identified
6 this issue and instructs that experts -- forensic
7 document examiners should avoid the concern of being
8 influenced by extraneous cues, isn't that right?

9 A. I do indeed. And when I have asked document
10 examiners how they accomplished that, what I am
11 typically told is that they simply will themselves to
12 not take into account the extraneous information they
13 have learned about the case.

14 Q. And you don't know, in this particular case,
15 anything about the examination or information that the
16 forensic document examiner, Mr. Anthony, had, do you?

17 A. I do not.

18 Q. And, in fact, your affidavit, which consists
19 of 96 paragraphs, really doesn't address the individual
20 abilities of Mr. Anthony as a forensic document
21 examiner, do they?

22 A. Not at all.

23 Q. And you have -- Finally, you had drawn my
24 attention to an article that was published in the
25 California Law Review, that is the Daubert Kumho

1 implications?

2 A. Yes. Yes.

3 Q. Now, on your list of references, the last
4 page, we've already talked about the VanderHaar survey,
5 which is under review for publication.

6 The next entry you have is an article in the
7 Science and Justice. Is that a journal published in
8 Britain?

9 A. Yes, it is.

10 Q. And it says that it's in press, at the time
11 at least that you --

12 A. Uh-huh.

13 Q. -- listed this.

14 Is it in press now or publication now?

15 A. It has -- Sometime during the fall it
16 appeared in print.

17 Q. Have there been any issues raised about that
18 particular article by the publisher of Science and
19 Justice with you or your coauthors?

20 A. The editor of Science and Justice -- Well,
21 first of all, let me back up and say this is the
22 article that talks about the risks of having extraneous
23 information about a case.

24 We thought this was -- At the outset of our
25 work on this project, we thought that this was a matter

1 that should be brought to two audiences. One, a legal
2 audience which could think about its implication for
3 meeting the requirements of Daubert, which may be that
4 blind testing is necessary.

5 We also thought it needed to be brought to
6 the attention of the document -- not document
7 examination, but the forensic science community more
8 broadly. There are some forensic scientists who work
9 very hard to screen out evidence, mostly not in the
10 United States, to screen out extraneous evidence that a
11 DNA examiner or a bite mark examiner doesn't need. We
12 wanted to bring that to the attention of the forensic
13 science community so they could begin to think about
14 procedures in their laboratories to avoid that.

15 So we wanted there to be two audiences. And
16 what we did was to write two manuscripts. One which
17 was focused toward a legal audience and talked about
18 the concerns they would have. The other that was
19 focused toward a forensic science audience and was
20 addressed to concerns they would have, which are much
21 more the doing the examinations and how to set up
22 laboratory arrangements that could permit them to do
23 their examinations the way a lot of scientific research
24 is done.

25 When we submitted the two manuscripts,

1 which have a lot of overlap, but which are
2 differentially focused, as I have said, to the law
3 review editors and to Forensic Science Journal editors,
4 our cover letter explained to them that there were
5 these two manuscripts pointed to two different
6 audiences. With that knowledge, both the California
7 Law Review and Science and Justice published it.

8 But for reasons known only to them, forensic
9 document examiners contacted not only the editor of
10 Science and Justice, but the deans of our universities,
11 law schools, and in the case of one coauthor who's not
12 in a law school, a dean of some other unit, and
13 suggested to them that something terribly improper had
14 taken place and documented profusely what statements
15 were made in the two articles that were the same
16 statement.

17 And the editor of Science and Justice
18 contacted us and said, "What's the story here?" We had
19 a conversation with him about that, and that is now a
20 nonissue. We are -- what --

21 Oh, I should say, we did fail to comply with
22 an agreement. The California Law Review, because it
23 was the first one to be published, asked -- they were
24 quite aware we were going to be publishing a Forensic
25 Science Journal version. Their editors asked us if we

1 would give an acknowledgment to their article in a
2 footnote. Not that we're citing it the way you'd cite
3 something with a footnote, but in an author's note, I
4 thank my friends for reading the manuscript, and a
5 version of this appears in there.

6 We totally dropped the ball on that and did
7 not do so. So we are in the process of remedying that,
8 with respect to the California Law Review, by
9 publishing an erratum which cites it. And the editor
10 of Science and Justice asked us if we would write a
11 brief explanatory letter saying what I've just said to
12 you, which he would then publish, and that would be the
13 end of that.

14 Q. When was that request for a letter made by
15 the editor of Science and Justice?

16 A. Perhaps within the last month or two.

17 Q. Has that letter been provided to the journal
18 of Science and Justice?

19 A. Well, there are four authors. I might add
20 that we brought in another author who is the leading
21 researcher on these kinds of effects, and that's Robert
22 Rosenthal. So we have four authors. Rosenthal in a
23 Psychology Department, William Thompson at the
24 University of California Irvine in a Criminal Justice
25 Department, Risinger at Seton Hall, me at Arizona

1 State.

2 The four of us have to -- Since we will all
3 four have to sign the letter, we've been sending copies
4 around, do you like this? Do you like that? Do you
5 want anything changed? So that slows things down. But
6 we are in the process of putting the finishing touches
7 on that letter, and we will then provide it to the
8 editor of Science and Justice. And I presume --

9 Q. I'm sorry. Did you present this paper for
10 the forensic science community to any forensic science
11 journal in the United States for publication?

12 A. Yes. My first choice was to publish it in
13 the Journal of Forensic Sciences. And the editor of
14 that journal rejected it, after having it reviewed, on
15 the grounds -- on the following grounds.

16 That although it reviews research on the
17 harmful effects of researchers being exposed to
18 extraneous information leading them to biased results
19 in a wide array of scientific fields, from astronomy --
20 and I literally mean astronomy, which is really, in the
21 1800s it was astronomers who first discovered these
22 effects -- to zoology and everything in between. They
23 said there is no proof that forensic scientists have
24 this problem. It may be that every other field under
25 the sun suffers from this problem, but there is not one

1 study in here showing that forensic scientists suffer
2 from this problem. And until you can provide empirical
3 data of that, we're not interested.

4 And I will add, as a footnote, that -- which
5 is an interesting counterpoint to that -- I later was
6 talking with some forensic scientists who were in a
7 position to fund and conduct research. And one of them
8 became quite interested in this problem and said, "Why
9 don't you write me up a little proposal and I'll see if
10 my board will approve it, and we'll do some empirical
11 research to see if the effects that work on astronomers
12 and biologists and cardiologists, and go right through
13 the alphabet, also see if there's some research that
14 can show whether it happens to forensic scientists."

15 He took it to his board and his board, which
16 is all forensic scientists, said, "This may happen to
17 other fields, but it doesn't happen to us. We tell
18 ourselves not to be influenced by it. So we don't want
19 to fund or cooperate with any research on this."

20 These are just a couple of examples in the
21 years that I have been working sort of around and
22 occasionally in the forensic science community. There
23 seems to be a much greater need to not want to know
24 what's working, what isn't, and how to make it better
25 than a desire to know.

1 Q. And those comments you were just relating
2 relate to forensic sciences in general as opposed to
3 forensic document examiners in particular?

4 A. Well, I did state it generically. There are
5 certainly some exceptions. But it's not a bad
6 generalization.

7 Q. That's what I understood you to be making, is
8 a generalization about forensic sciences as opposed to
9 forensic document examiners specifically.

10 Give me just one moment and I may be
11 complete.

12 Let me just maybe conclude with one point.
13 You had brought this up earlier, according to my notes,
14 in terms of an x-ray. If you go to your physician for
15 an x-ray, the physician will frequently refer you to a
16 radiologist for x-ray?

17 A. Uh-huh.

18 Q. Correct?

19 A. Uh-huh.

20 Q. I don't know if the doctor has ever said that
21 you have a broken bone that required an x-ray?

22 A. Right. Well, I haven't, but I know they do
23 that.

24 Q. Okay. All right. I'm glad you haven't.

25 But you understand how it would work is that

1 the radiologist would conduct the x-ray and render an
2 opinion about what he saw on the film?

3 A. Uh-huh. That's right.

4 Q. And the physician would rely on the
5 radiologist's opinion, though he would look at it
6 himself or herself as well?

7 A. Correct.

8 Q. You wouldn't expect, as a patient, to go to
9 the doctor and have the doctor simply present the film
10 of the x-ray to you without any explanation, would you?

11 A. Well, not to me the patient. But, you know,
12 the scenario you're presenting is much like the one we
13 recommended as a model of forensic science.

14 The physician is the one who takes in, and at
15 the end of the day takes in all the relevant evidence.
16 We suggest that crime laboratories ought to have an
17 evidence manager of that sort who then sends out -- you
18 know, when the doctor sends the inquiry to the
19 radiologist, the doctor does not --

20 In fact, what I'll tell you is I've asked
21 radiologists how this works in their field, and I am
22 told there are two schools of thought and there are
23 radiologists that do things two different ways. One
24 group of radiologists wants to know everything they can
25 know about the case, thereby to help them interpret the

1 images. The other half of the radiology world says we
2 don't want to know a thing to bias us. We first want
3 to -- We want to see the films, we want to make our
4 judgment, then we'll give it back to the doctor, or
5 maybe you can then give us more information. But we
6 want to be blinded to that.

7 But we suggest that the forensic science
8 community, certainly document examiners among them, if
9 they received, from the evidence manager who was like
10 the primary care physician, that information and only
11 that information which they needed to do their part of
12 it and it was kind of a hub and spokes, and then it all
13 came back in to the person who knows it all, the
14 generalist, who will now -- or, some other specialist
15 who is kind of a sub hub. But that would really be a
16 good scenario for how to operate. And I would
17 underscore the recognition of many radiologists that
18 it's a bad idea to know things that you don't need to
19 know in reaching a conclusion.

20 Q. And again, you don't know, in this case, with
21 regard to Art Anthony, what he knew or didn't know --

22 A. I do not.

23 Q. -- do you?

24 A. I do not.

25 Q. And my point on the x-ray analogy is that you

1 would find it, as a patient, a layperson, find it
2 helpful to have the physician and/or the radiologist
3 point out to you the impressions from the x-ray film?
4 Wouldn't that be helpful to you as a lay person?

5 A. It would.

6 If I can add a footnote. You've named a
7 field that has done a -- really an astonishing quantity
8 of research and used that research to improve the
9 accuracy of what it does. So it would be an excellent
10 model for how things are done. And then when that
11 stage is reached, we might be able -- it might be safe
12 to do with persons who purport to be experts in
13 document examination, to do the same with them as we do
14 with radiologists.

15 Q. And that's what I want to conclude with.

16 You don't think there's anything helpful that
17 forensic document examiners can offer to jurors, that's
18 your opinion?

19 A. I don't -- The short of it is, I don't know.
20 Somebody could do some research to show convincingly --
21 well-designed research that convincingly shows there
22 are sub tasks in the panoply of things they do which
23 are head and shoulders above what -- or, even just
24 above what lay people can do. That would be fine with
25 me. At present, I'm saying I'm sort of monitoring the

1 progress of research. We've gone from nothing to next
2 to nothing to a little bit.

3 Q. But based on the status of the research to
4 date, you're not satisfied with what's been done?

5 A. Well, when you say satisfied with what's been
6 done, when you look at a field that is just beginning
7 to do serious research on itself, you don't expect them
8 to ring the gong the first time out. I mean, it's all
9 a process of evolution.

10 Medical research a century ago was -- medical
11 practice a century ago was -- which is the analogy we
12 make in the Penn Law Review article. It's a lot of
13 folklore and guessing. And some of those things are
14 good, sound ideas which will work -- which do work, and
15 others aren't. You don't know which is which.

16 And then when you get into the middle of the
17 20th century, some real research that may not look, in
18 its methodological form, too different from some of
19 what you are seeing Professor Kam do and the
20 Australians' experiments. It's not very sophisticated
21 work. And as time goes by, it gets better and you
22 learn a lot more.

23 I would much rather go to a doctor today who
24 is able to rely on -- if I had a disease that's been
25 well studied and the treatments for which have been

1 well studied, that's the task at hand issue. I'd much
2 rather go to a doctor today who can give me some
3 answers about those things than one even 50 years ago
4 who's relying on, well, you know, bleeding seems to
5 work for some people, they're still alive after we do
6 it, I know a lot of others are dead.

7 We can do better. And I would gladly see
8 Professor Kam and everyone else do much more research.
9 I'm definitely a proponent of doing the research. And
10 I am confident that every subsequent study will be a
11 little bit better, or at least groups of them will be
12 better than what came before.

13 MR. VINEYARD: No further questions. Thank
14 you.

15 MR. KISH: We have no questions on redirect,
16 so we will end this. We will go off the record right
17 now. Thank you very much.

18 (The deposition concluded at 2:26 p.m.)

19

20 (Signature not requested)

21 Michael J. Saks, Ph.D.

22

23

24

25

1 STATE OF ARIZONA)

2 COUNTY OR MARICOPA)

3 BE IT KNOWN that the foregoing deposition was
4 taken by me, Certified Court Reporter No. 50666 for the
5 State of Arizona; that the witness before testifying
6 was duly sworn by me to testify to the whole truth and
7 nothing but the truth; that deposition review and
8 signature was not requested; that the questions
9 propounded by counsel and the answers of the witness
10 thereto were taken down by me in shorthand and
11 thereafter transcribed into typewriting under my
12 direction, and that the foregoing pages of typewritten
13 matter contain a full, true, and accurate transcript of
14 all proceedings and testimony had and adduced upon the
15 taking of said deposition, all to the best of my skill
16 and ability.

17 I FURTHER CERTIFY that I am not related to nor
18 employed by any of the parties hereto, and have no
19 interest in the outcome.

20 DATED at Phoenix, Arizona, this ____ day of
21 _____ 2003.

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25

KATHRYN A. BLACKWELDER
Certified Court Reporter
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