IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF FLORIDA
TAMPA DIVISION

JEFFREY THELEN, Plaintiff, v. SOMATICS, LLC; AND ELEKTRIKA, INC., Defendant.	)	Case No.: 8:20-CV-1724

VOLUME II OF VII (pp. 1-266)
JURY TRIAL PROCEEDINGS
BEFORE THE HONORABLE THOMAS P. BARBER
June 1, 2023

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(Jury in at 9:05 a.m.)

THE COURT: Good morning, everybody. Welcome back. Have a seat.

So school's out, so the traffic is not quite as bad, right? Everybody is here on time. Thank you for that. Sometimes when you get a jury going, there's one juror who's always late, and that makes the other jurors mad, but you guys are all here on time. You're all getting along with each other. Sometimes the jurors, you know, have disputes amongst themselves over people showing up, but we're good now.

And we stopped yesterday at the end of the direct examination of Dr. Read, and now we're going to proceed with what's called the cross-examination. And you'll see that with each witness it goes like this, and then there's a third

round after cross-examination called redirect, which is generally very, very brief. So that's where we are.

And go ahead whenever you're ready.

MR. BENKNER: Thank you, Your Honor.

THE COURT: And, Dr. Read, you are still under oath from yesterday.

THE WITNESS: Yes, Your Honor.

THE COURT: All right. Go ahead.

JOHN READ,

a witness called on behalf of the Plaintiff, being first duly sworn, was examined and testified as follows:

CROSS-EXAMINATION

BY MR. BENKNER:

Q. All right. Good morning, Dr. Read. Can you hear me okay?

A. Yes, I can. Good morning.

Q. Good morning. So yesterday when you were testifying, you used the term "brain damage" a lot, and what I want to know is when you're using that term, "brain damage" in the context of ECT, you're using it to describe the effect of memory loss, correct?

A. No, not exactly, no.

Q. Okay. You did say that that's what you meant at your deposition though, correct? That when you used term "brain damage," it was the same thing as persistent and permanent memory loss, right?

9:07AM A. NO.
9:07AM Q. Okay. One second, if we could pull up your deposition.
9:07AM MR. BENKNER: Tim, can you do that for me?
9:07AM MR. ESFANDIARI: Jason, which one is this one?
9:07AM MR. BENKNER: This is his deposition in this case.
9:07AM BY MR. BENKNER:
9:07AM Q. Now, Doctor, you remember you gave deposition testimony in this case, correct?
9:07AM A. Yes.
9:07AM Q. And at that deposition, the court reporter swore you in?
9:07AM A. Correct.
9:07AM Q. And you understood that that was -- that you were to tell the truth and that you were under oath?
9:07AM A. Of course.
9:07AM Q. Okay. So I want to focus your attention specifically to page 37, line 19. Do you see that there at the top?
9:08AM A. Yeah.
9:08AM Q. And this is the questioning attorney asking you a question at your depo, right?
9:08AM A. Yes.
9:08AM Q. Okay. And he's asking you, "When you use those two terms, persistent/permanent memory loss and brain damage, are you using those interchangeably, or are those two different things?"
9:08AM Is that right?

9:08AM A. That's correct.
9:08AM Q. Okay. And your answer is that you are using them interchangeably to the extent that brain damage is a term which there is no consensus or agreement on. Is that what you said?
9:08AM A. Correct.
9:08AM Q. So you're saying that you're using them interchangeably. They're not two different things, right?
9:08AM A. Correct.
9:08AM Q. Okay. And you're also saying that there's no consensus on what the definition of brain damage also?
9:08AM A. Yes.
9:09AM Q. Okay. Great. You can take that down. Thanks.
9:09AM Now, one of the articles you discussed yesterday was the Sackeim article, correct?
9:09AM A. Yes.
9:09AM Q. And you cite that Sackeim article for the proposition that brain damage occurs in about 12.5 percent, at least 12.5 percent of people?
9:09AM A. Correct.
9:09AM Q. Okay. But that article doesn't mention the word "brain damage" once in it; does it?
9:09AM A. No.
9:09AM Q. It doesn't refer to what you were calling brain damage as brain damage, right?
9:09AM A. Refers to memory loss.

9:09AM 1 Q. Calls it memory loss, right?
9:09AM 2 A. Correct.
9:09AM 3 Q. Okay. And now the other article that you referenced
9:09AM 4 yesterday, the Rose article, that's the article where they
9:09AM 5 asked a bunch of people subjectively if they thought ECT caused
9:09AM 6 them memory loss, right?
9:09AM 7 A. Yes.
9:09AM 8 Q. And that's where you got 55 percent of people experience
9:09AM 9 brain damage, right?
9:09AM 10 A. 29 to 55 percent.
9:09AM 11 Q. That's the upper end of your range though. The 55 came
9:09AM 12 from the Rose article?
9:09AM 13 A. That's correct.
9:09AM 14 Q. Okay. And nowhere in that article did they discuss memory
9:10AM 15 loss as brain damage, correct?
9:10AM 16 A. Correct.
9:10AM 17 Q. Okay. So wouldn't it be better to describe the actual
9:10AM 18 effect that ECT is having as opposed to using a term like
9:10AM 19 "brain damage" which you've testified that it does not have
9:10AM 20 consensus on? Would you agree with that?
9:10AM 21 A. No.
9:10AM 22 Q. Would you agree that "brain damage" is an inflammatory
9:10AM 23 term?
9:10AM 24 A. No.
9:10AM 25 Q. You don't think that the term "brain damage" would invoke

9:10AM frightening or distressing feelings in anybody that heard it?
MR. ESFANDIARI: Objection, Your Honor. Speculation.
THE COURT: Overruled.
THE WITNESS: Yes, people might be frightened by the idea that something could cause brain damage, yes.
BY MR. BENKNER:
Q. So that's an inflammatory term then, right?
A. No.
Q. Now both of the Rose and the Sackeim articles, they both discuss retrograde amnesia, right?
A. Yes.
Q. We're not talking about anterograde?
A. Sackeim studies anterograde as well.
Q. But when you're taking that 12.5 percent, he's specifically talking about retrograde amnesia?
A. Yes.
Q. Okay. And retrograde amnesia, that is the loss of memories experienced prior to treatment, right?
A. Right.
Q. As opposed to anterograde amnesia which is the inability to hold new memories in your head?
A. Correct.
Q. Now you've reviewed the APA task force report on ECT, correct?
A. Yes.

9:11AM 1 Q. Okay. And this is that book, right?
9:11AM 2 A. Is that the 2001?
9:11AM 3 Q. That's correct.
9:11AM 4 A. Yes.
9:11AM 5 Q. Now, the APA, that's the American Psychiatric Association.
9:11AM 6 Are you familiar with them?
9:11AM 7 A. I am.
9:11AM 8 Q. Okay. And that's the premier psychiatric association here
9:11AM 9 in the United States, right?
9:11AM 10 A. Yes.
9:11AM 11 Q. Okay. One of their missions is to promote psychiatric
9:11AM 12 education and research, true?
9:11AM 13 A. Yes.
9:11AM 14 Q. Okay. And they -- and also to ensure high quality care
9:12AM 15 for people suffering from mental health disorders, right?
9:12AM 16 A. Yes.
9:12AM 17 Q. Now the APA, they've established a task force to provide
9:12AM 18 recommendations on the practice of ECT, right?
9:12AM 19 A. Yes.
9:12AM 20 Q. Okay. And that's what this book is. It's the conclusion
9:12AM 21 of the task force that the APA commissioned on their
9:12AM 22 recommendations for practice and procedures for ECT?
9:12AM 23 A. Yes.
9:12AM 24 Q. Okay. And in this book, there are over the 60 pages of
9:12AM 25 citations of authorities that they looked at in putting

9:12AM 1 together this report, right?
9:12AM 2 A. I -- that's correct. I don't have it in front of me.
9:12AM 3 Well, I do. Yes.
9:12AM 4 Q. Now, the book also discusses retrograde and anterograde
9:12AM 5 amnesia as risks of ECT, correct?
9:12AM 6 A. Yes.
9:12AM 7 Q. Okay. I want to put up some excerpts from the book.
9:13AM 8 MR. BENKNER: Can we pull that up, Tim? We're
9:13AM 9 looking at page 71.
9:13AM 10 BY MR. BENKNER:
9:13AM 11 Q. Do you see that on your screen there?
9:13AM 12 A. It helps when -- thank you for that. Yes, I can see it
9:13AM 13 now. Thank you.
9:13AM 14 Q. All right. And I want to draw your attention to the
9:13AM 15 section that discusses retrograde amnesia in the middle there.
9:13AM 16 MR. BENKNER: Can you call that out, Tim?
9:13AM 17 BY MR. BENKNER:
9:13AM 18 Q. Do you see that blown up there?
9:13AM 19 A. If you give me a minute, I'll -- I can see it, yes. I'm
9:13AM 20 just reading. Yep.
9:13AM 21 Q. So it says, "In some patients, the recovery from
9:13AM 22 retrograde amnesia will be incomplete, and the evidence has
9:13AM 23 shown that ECT can result in persistent or permanent memory
9:13AM 24 loss," right?
9:13AM 25 A. Yes.

9:13AM Q. Now that's the same words you used yesterday, persistent or permanent memory loss, right? Is that correct?
9:13AM A. Yes, yes.
9:14AM Q. Now, I want to look at a different section on page 72. And we're going to look towards the bottom of the page there at the paragraph that starts "a small minority."
9:14AM MR. BENKNER: Can we blow that up?
9:14AM THE WITNESS: Yep.
9:14AM BY MR. BENKNER:
9:14AM Q. Okay. Now this one says, "A small minority of patients treated with ECT later report devastating cognitive consequences." Do you see that there?
9:14AM A. Yes.
9:14AM Q. And then one of the citations for that conclusion is the Freeman and Kendell 1989 article.
9:14AM A. Yeah.
9:14AM Q. That's one of the articles that you relied on in your review, correct?
9:14AM A. Yes.
9:14AM Q. Okay. Now, if we go to the next sentence --
9:14AM MR. BENKNER: Can we blow up the next one?
9:14AM BY MR. BENKNER:
9:14AM Q. "Patients may indicate that they have dense amnesia extending far back into the past for events of personal significance or that broad aspects of cognitive function are so

impaired that the patients are no longer able to engage in former occupations." Did I read that right?

A. That's what I can see, yes.

Q. And you would agree with the APA task force on this point, correct?

A. I would, except for the "few" part, because the study that they refer to, the Freeman and Kendell study, have 29 percent people reporting persistent and permanent memory loss, and that's not a few.

MR. BENKNER: Objection. Motion to strike everything after he would agree as non-responsive.

THE COURT: Yeah, that's sustained. Members of the jury, occasionally I mentioned to you that I would give you certain instructions, and you're instructed to disregard the witness's last answer with the exception of the first word -- words, "I would agree," all right? Is that what he said? "I would agree"? Is that what you said, you would agree?

THE WITNESS: Yep, but only partially.

THE COURT: Okay. Well, that -- that's your answer. That can be revisited on redirect if appropriate, but that's your answer. Go ahead.

THE WITNESS: Thank you, Your Honor.

BY MR. BENKNER:

Q. Okay. So also in the report that you did for this case, you also cited to that Freeman article that we just talked

about, the Freeman and Kendell, correct?
A. Yes.
Q. And that was your citation number 20 in your report. Do you have that in front of you?
A. Yes, just a minute. Yes.
Q. That was an article authored by Freeman, Weeks, and Kendell, right?
A. Correct.
Q. And that was published in 1980?
A. Yes.
Q. In the *British Journal of Psychiatry;* is that right?
A. Yes.
Q. Is that a reputable journal?
A. Very much so.
Q. Okay. And then there's some pages, 17 to 25. Is that where you could find that article if you had the journal?
A. Do you want me to look up the article?
Q. Well, it says it in your citation, doesn't it, page 17 to 25? Citation number 20.
A. Oh, that's -- sorry. Those are the page numbers of the journal. Sorry, yes. I understand. Yes.
Q. Okay. And it was called "ECT: II: Patients Who Complain," right?
A. Yes.
Q. Okay. And you understood that "ECT: II:" meant that there

was -- that's one study as a part of a whole series of studies, right?

A. Of three, yes.

Q. Of three. Right. Okay. And there was a third study called "ECT: III: Enduring Cognitive Deficits;" wasn't there?

A. Yes, indeed.

MR. BENKNER: Can we pull that up, III?

BY MR. BENKNER:

Q. Is that the article, Doctor?

A. Yes, it is.

Q. Did you review this article?

A. For the report?

Q. Have you ever read it?

A. Yes.

Q. Okay. Now, "ECT: III:", this was a study that was specifically designed to investigate whether ECT was causing cognitive -- enduring cognitive effects, right?

A. Correct.

Q. Okay. And it included the same authors as "ECT: II:", right, Weeks, Freeman, and Kendell, right?

A. Yes.

Q. And the participants from this study, they were screened to move -- remove people with a history of alcohol and a history of head injury, right?

A. Yes.

9:18AM 1 Q. And that's important, correct?
9:18AM 2 A. That depends on your point of view. It has advantages and
9:18AM 3 disadvantages. I can explain if you wish.
9:18AM 4 Q. So by removing people who have a history of alcohol,
9:19AM 5 that's potentially removing another explanation for cognitive
9:19AM 6 effects that they're being tested for, correct?
9:19AM 7 A. That's the intent.
9:19AM 8 Q. Yes. Because with alcohol abuse can cause cognitive
9:19AM 9 impairments, including memory loss, true?
9:19AM 10 A. And ECT can exacerbate the effects of alcohol.
9:19AM 11 MR. BENKNER: Objection. Move to strike as
9:19AM 12 non-responsive.
9:19AM 13 THE COURT: No, that's his answer.
9:19AM 14 BY MR. BENKNER:
9:19AM 15 Q. And by that same token, Doctor, when you -- when somebody
9:19AM 16 sustains a head injury, a blow to the head, that can also cause
9:19AM 17 memory loss, true?
9:19AM 18 A. Yes.
9:19AM 19 Q. Okay. Now, if we could turn to page 33. Now, in this
9:19AM 20 study, Doctor --
9:19AM 21 MR. BENKNER: Can you blow up the chart above it?
9:19AM 22 BY MR. BENKNER:
9:19AM 23 Q. There were two groups that were examined, right, a group
9:19AM 24 that underwent ECT and then a group that did not?
9:20AM 25 A. Yes.

9:20AM Q. And both groups underwent memory and cognitive testing, correct?
A. They did.
Q. At set intervals throughout a seven-month period, correct?
A. Yes.
Q. The group that underwent ECT, they were tested immediately before they underwent the procedure, right? Is that true?
A. Yes.
Q. Okay. And then immediately after the procedure, they were tested again?
A. Yes.
Q. And then at four months?
A. Yes.
Q. And then at seven months?
A. Correct.
Q. Okay. And the non-ECT group, they had testing that closely mirrored it. They were tested at the same time the ECT group was before testing, correct?
A. Yes.
Q. At the four-month mark?
A. Yes.
Q. And at the seven-month mark?
A. Yes.
Q. Okay. And can we now turn to the text on page 33 that starts with "this study"? Do you see that there?

9:20AM **A.** Yes.
9:20AM **Q.** Okay. So this discussion section, this is talking about
9:21AM the findings of those investigators for the study, right?
9:21AM **A.** That's their interpretation of the findings.
9:21AM **Q.** That's their conclusions, right?
9:21AM **A.** That's their opinion of the findings.
9:21AM **Q.** Right. And it says, "This study supports the view that
9:21AM ECT, when used in everyday clinical circumstances to treat
9:21AM depression -- depressed patients, does not cause lasting
9:21AM cognitive impairments." That's what they found, right?
9:21AM **A.** Yes.
9:21AM **Q.** Okay. So when they tested people at the seven-month mark,
9:21AM they did not find that any of those patients who underwent ECT
9:21AM had lasting cognitive impairment, right?
9:21AM **A.** That's correct.
9:21AM **Q.** Okay. Then in the next part here, they talk about the
9:21AM methods they used in terms of putting together their tests,
9:21AM right?
9:21AM **A.** Yes.
9:21AM **Q.** Memory tests?
9:21AM **A.** Yes.
9:21AM **Q.** They used a very wide ranging battery of tests used to
9:21AM examine all relevant areas of cognitive function, showed
9:21AM lasting impairment in the ECT treatment group, that none of
9:22AM them did. The test battery used was more comprehensive than in

any other study to date. Memory functions tested included recall, relearning rate, recognition, both auditory-verbal and visual-spatial modalities. Tests of both immediate and delayed retrieval were used. Both short-term and long-term memory were assessed. Long-term or remote memory was tested for both personal and impersonal facts.

That last part there, the long-term or remote memory was tested for both personal and impersonal facts, that's a test for retrograde amnesia, correct?

A. Correct.

Q. I think you said you've read this article before, right? And you read this article before you were retained in this case, correct?

A. Yes.

Q. Okay. Yet I didn't hear your analysis mention this once.

A. No, because it's a very flawed study.

Q. Okay. And it was published in the same journal as the prior article, "ECT: II:" that you did include in your analysis, right?

A. Correct.

Q. The British Journal of Psychiatry. You consider that a reputable paper, right?

A. A reputable journal.

Q. Correct. And you would agree that this study, "ECT: III:", it contradicts the claims that you're making in

this case --
A. No.
Q. -- correct?
A. No. Would you like me to explain why?
Q. No, Your Honor. Or no, Dr. Read.
A. Okay.
Q. All right. Now I want to turn to another part of your testimony from yesterday where you were talking about placebo-controlled studies.
A. Uh-huh.
Q. And you describe them as the gold standard or best option for a research study, correct?
A. Yes.
Q. Okay. But those aren't the only types of studies that can yield useful information regarding safety and efficacy of a treatment, right?
A. Correct.
Q. Right. You can have non-blinded studies that track patients over a period of time following how they've responded to that treatment, correct?
A. Yes.
Q. There's also studies that compare ECT to other forms of treatment, such as medications or TMS, correct?
A. Yes.
Q. And there's also studies that compare different methods of

9:24AM 1 treatment within ECT; by way of example, bilateral treatment
9:24AM 2 versus unilateral treatment, right?
9:24AM 3 A. Yes, I talked about those yesterday, yes.
9:24AM 4 Q. And, in fact, there's hundreds of those studies in the
9:24AM 5 literature, right?
9:24AM 6 A. Yes, I reviewed them.
9:24AM 7 Q. Okay. And despite your criticisms of the state of the
9:24AM 8 knowledge on ECT, you haven't taken any kind of steps to do the
9:24AM 9 type of placebo controlled study that you're calling for,
9:24AM 10 right?
9:24AM 11 A. Sorry. Can you repeat the question?
9:24AM 12 Q. Yeah, yeah. So you're saying -- one of your opinions from
9:24AM 13 yesterday, that there's an insufficient amount of evidence
9:24AM 14 because there hasn't been placebo-controlled studies since the
9:24AM 15 1980s, right?
9:25AM 16 A. Correct.
9:25AM 17 Q. Right. And despite that criticism, you haven't taken any
9:25AM 18 steps on your part to put together any of those types of
9:25AM 19 studies, correct?
9:25AM 20 A. I haven't tried to conduct a randomized control trial?
9:25AM 21 Q. That's right.
9:25AM 22 A. That's correct.
9:25AM 23 Q. Now yesterday you talked about some of the papers you
9:25AM 24 authored on ECT, but none of those papers that you put together
9:25AM 25 on ECT have been meta-analyzes, correct?

9:25AM A. Correct.
9:25AM Q. And meta-analysis is a useful statistical tool, right?
9:25AM A. Indeed.
9:25AM Q. Because they not only compare similar studies published on a specific topic, but they also take a look at the actual data in each those studies, right?
9:25AM A. That's right, and the quality of the studies.
9:25AM Q. All right. And in literature reviews, which you've done here, the meta-analyses are considered the gold standard in reflecting the best evidence published on -- whatever they're looking at, right?
9:26AM A. Yes.
9:26AM Q. Okay. And there was also a meta-analysis published in 2010 that examined 24 objective cognitive variables related to ECT, correct?
9:26AM A. Which one was that? Sorry.
9:26AM Q. Semkovska.
9:26AM A. I don't think that was on depression; was it? Semkovska? I'm not sure.
9:26AM Q. So we put it on your screen here, highlighted the title for you. It says, "Objective Cognitive Performance Associated with Electroconvulsive Therapy for Depression, a Systematic Review and Meta-Analysis."
9:26AM A. I thought you were talking about efficacy. This is about -- yes, I'm aware of that.

9:26AM 1 Q. You've read this article?
9:26AM 2 A. Yes.
9:27AM 3 Q. And this article was published in Biological Psychiatry,
9:27AM 4 right?
9:27AM 5 A. Yes.
9:27AM 6 Q. And that's another peer-reviewed publication?
9:27AM 7 A. Yes.
9:27AM 8 Q. Okay. And in this article, they talk about examining 24
9:27AM 9 cognitive variables, correct?
9:27AM 10 A. Yes.
9:27AM 11 Q. Looking at 84 studies, true?
9:27AM 12 A. Sorry?
9:27AM 13 Q. Looking at 84 studies, true?
9:27AM 14 A. Yes.
9:27AM 15 Q. A total of 2,981 patients, true?
9:27AM 16 A. Yes.
9:27AM 17 Q. Okay. And if we could move to page 2, please. One of the
9:27AM 18 variables that they -- when they talk about their methodology
9:27AM 19 for how they went about searching for these articles, they
9:27AM 20 discuss only collecting studies that included testing that was
9:27AM 21 done both before ECT occurred and after ECT occurred, correct?
9:27AM 22 A. That's what they claim. It's not true.
9:28AM 23 Q. Okay. And the results of this study, of this
9:28AM 24 meta-analysis, showed that there was significant cognitive
9:28AM 25 impairment right around the time of treatment, within one to

9:28AM three days, right?
9:28AM A. Yeah.
9:28AM Q. And you would agree with that? That's reflected in the literature?
9:28AM A. On the variables that they studied, yes, but there was an important variable they completely ignored, which was retrograde amnesia.
9:28AM Q. Okay.
9:28AM A. Which is why this does not address the topic at hand. There's no -- they completely ignored the primary cognitive dysfunction caused by ECT, which was the long-term memory gaps.
9:28AM Q. Dr. Read, thank you. So the significant cognitive impairment, you do agree with that, that they found it within one to three days, and you would agree with that?
9:28AM A. On all those other measures, yes.
9:28AM Q. And then when they tested it for about -- or when they looked at the data and the studies two weeks out, they had found that all these deficits had resolved, right?
9:29AM A. Yes.
9:29AM Q. Okay. Not only that, but many of the cognitive domains examined actually showed improvement. That's what this study showed?
9:29AM A. At two weeks, yes.
9:29AM Q. At two weeks, right?
9:29AM A. At two weeks.

9:29AM Q. Now, meta-analysis would certainly be relevant to your --
9:29AM to your work in performing a literature review on the safety
9:29AM and efficacy of ECT, correct?
9:29AM A. Yes, indeed.
9:29AM Q. And yet your report didn't discuss this report at all,
9:29AM this article at all, right?
9:29AM A. That's correct. I can say why if you wish.
9:29AM Q. And your testimony yesterday, you didn't discuss this
9:29AM article at all, true?
9:29AM A. No, and I can say why if you wish.
9:29AM Q. Now, your literature reviews that you've done on ECT,
9:29AM they've been criticized by your peers in the research
9:30AM community, true?
9:30AM A. They were criticized by ECT proponents. Whether you
9:30AM describe those as my peers is debatable.
9:30AM Q. In the research community? They are researchers, true?
9:30AM A. In the ECT research community, yes.
9:30AM Q. And you're aware of at least four or five published
9:30AM articles that have disagreed with not only your conclusions,
9:30AM but the methodology that you employed in reaching those
9:30AM conclusions, true?
9:30AM A. Yes.
9:30AM Q. Now, you're familiar with Dr. Edward Coffey, correct?
9:30AM A. I have heard of him, yes.
9:30AM Q. And, in fact, you actually reviewed the report he drafted

for this case, true?
A. I've read it, yes.
Q. So you know that he's a board certified medical doctor in both neurology and psychiatry?
A. Yes.
Q. And you're not a medical doctor, correct?
A. Yes.
Q. Which means that you can't prescribe psychiatric medications?
A. Correct.
Q. And you'll also remember that Dr. Coffey has over 35 years of experience in administering ECT, true?
A. I'm willing to believe that's true, yeah.
Q. Do you have a copy of his report?
A. I don't think so, but I'll accept that as --
Q. We can put it up for you if you want.
A. I'll accept that as true.
Q. All right. And he's also performed thousands of procedures with Somatics' devices specifically, true?
A. I imagine he has, yes.
Q. And you've never administered ECT?
A. I've helped administer ECT, yes.
Q. But you yourself have never administered it as a physician?
A. I've helped administered ECT. If you mean by administer

9:31AM actually press the switch, no. I've been a nursing attendant
9:31AM assisting in the procedure.
9:31AM Q. And when you said you assisted this, this happened back in
9:31AM the 1970s, correct?
9:31AM A. Correct.
9:31AM Q. And that was the last time you did it?
9:31AM A. Yes.
9:31AM Q. And you haven't seen it performed on any patient since
9:31AM that time, correct?
9:31AM A. Correct.
9:31AM Q. And how many times in total did you see it?
9:31AM A. Four or five, and then sat with people recovering about
9:32AM 50, 60 times.
9:32AM Q. Okay. Now, Dr. Coffey has already conducted original
9:32AM scientific research on the field of ECT, correct?
9:32AM A. Yes.
9:32AM Q. And he's published over 200 papers on the topic?
9:32AM A. Yes.
9:32AM Q. Okay. But you haven't conducted any original studies on
9:32AM ECT, true?
9:32AM A. False.
9:32AM Q. Other than the literature reviews that we've done, you
9:32AM haven't actually conducted a study that measured how ECT is
9:32AM affecting patients in that clinical environment, true?
9:32AM A. I've conducted studies on how ECT is administered,

9:32AM monitored, and regulated in the UK, National Health Service.
9:32AM Q. Through the literature review, correct?
9:32AM A. No.
9:32AM Q. You've actually examined patients who have undergone ECT?
9:32AM A. No. I did independent audits of how ECT is administered,
9:32AM regulated, and monitored in the NHS, and then using freedom of
9:32AM information requests about what people were told, what they
9:32AM weren't told, who was given it against their will, those sorts
9:32AM of studies. But you're correct. I have not conducted a
9:33AM clinical study, if that's what you're --
9:33AM Q. That is what I'm saying.
9:33AM A. Okay. Yes, that's true.
9:33AM Q. Now, the APA task force, Dr. Coffey was a member of that
9:33AM task force, correct?
9:33AM A. He was.
9:33AM Q. And yesterday during your testimony, you didn't mention
9:33AM Dr. Coffey's name once; did you?
9:33AM A. No.
9:33AM Q. And now, Doctor, you advocate for an end to the practice
9:33AM of ECT entirely, correct?
9:33AM A. No.
9:33AM Q. Well, you've written commentary advocating for its
9:33AM discontinued use, correct?
9:33AM A. I advocate for its suspension until appropriate research
9:33AM on its safety and efficacy has been conducted.

9:34AM 1 Q. Doctor, I've just pulled up an article. The name of it
9:34AM 2 is, "Depression, Why Drugs and Electricity are Not the Answer"?
9:34AM 3 A. Yeah, I can see that. Thank you.
9:34AM 4 Q. And that's your name, correct?
9:34AM 5 A. Correct.
9:34AM 6 Q. You authored this?
9:34AM 7 A. I did.
9:34AM 8 Q. Okay. And electricity, you're referring to ECT, right?
9:34AM 9 A. Yes.
9:34AM 10 Q. And the drugs you're referring to is psychiatric
9:34AM 11 medication?
9:34AM 12 A. Yes.
9:34AM 13 Q. And in this article, I believe you refer to psychiatric
9:34AM 14 medication as providing nothing more than a placebo effect; is
9:34AM 15 that true?
9:34AM 16 A. Yes, that's what the studies show.
9:34AM 17 Q. And just to -- I know you talked about it yesterday, but a
9:34AM 18 placebo effect is a human response to essentially a fake
9:34AM 19 treatment, right?
9:34AM 20 A. And the tender loving care from clinicians. It's a
9:34AM 21 combination of.
9:34AM 22 Q. Of both of those. So it's your view that psychiatric
9:34AM 23 medication is nothing more than a fake treatment, right?
9:35AM 24 A. No, I'm not saying that.
9:35AM 25 Q. But you call it an active placebo in this study, correct?

9:35AM A. Those are your words, not mine.
9:35AM Q. Well, we can turn to page 2 of the study.
9:35AM A. I have not called psychiatric drugs fake treatments.
9:35AM Q. The antidepressant section, the subheading right below it
9:35AM in the middle there, "Are antidepressants active placebos?"
9:35AM Those are your words, right?
9:35AM A. I don't see the words "fake treatment," sir.
9:35AM Q. Well, placebo is a fake treatment, correct?
9:35AM A. That's your word. I would never call placebo a fake
9:35AM treatment, no.
9:35AM Q. So in this commentary then, Doctor, you also go on to
9:35AM describe ECT as a placebo effect as well, right?
9:35AM A. Primarily, yes. Not exclusively. Primarily.
9:35AM Q. Okay. Can we turn back to the first page? Now, in the
9:36AM abstract here -- we're going to pull that up for you. It says
9:36AM in the middle there -- actually we'll go to the start of the
9:36AM sentence. It says, "We propose an alternative understanding
9:36AM that recognizes depression as an emotional and meaningful
9:36AM response to unwanted life events and circumstances." Did I
9:36AM read that right?
9:36AM A. You did.
9:36AM Q. Okay. And so with this, you're challenging the accepted
9:36AM notion in the prevailing medical community that depression is a
9:36AM mental disorder, right?
9:36AM A. That's no longer the prevailing view of depression. It's

9:36AM 1 a chemical imbalance. That has been completely dismissed now
9:36AM 2 as having any evidence --
9:36AM 3 Q. Let me rephrase. It's your opinion, Doctor, that
9:36AM 4 depression is not a mental disorder, correct?
9:36AM 5 A. That's correct. It's an understandable response to
9:36AM 6 depressing things happening.
9:37AM 7 Q. Now, you agree that depression can manifest in episodes
9:37AM 8 that come and go across a person's life?
9:37AM 9 A. Indeed.
9:37AM 10 Q. And that some people can suffer from an episode that's so
9:37AM 11 severe, that traditional forms employed by psychiatrists such
9:37AM 12 as medication and talk therapy are no longer effective?
9:37AM 13 A. Sometimes temporarily for some people, yes.
9:37AM 14 Q. That's the prevailing psychiatric view, right?
9:37AM 15 A. Repeat what you think the prevailing view is. Sorry.
9:37AM 16 Q. That sometimes some people suffering from depression
9:37AM 17 become non-responsive to the traditional forms of treatment,
9:37AM 18 including talk therapy and medication?
9:37AM 19 A. Correct, yes.
9:37AM 20 Q. And that's referred to as treatment-resistant depression,
9:37AM 21 right?
9:37AM 22 A. That's the term used, yes. It's a misleading term, but
9:37AM 23 yes.
9:37AM 24 Q. And in those instances, psychiatrists sometimes turn to
9:37AM 25 ECT, right?

9:37AM A. Some psychiatrists. Remembering that only 2 percent of
9:37AM psychiatrists use ECT, so a very tiny proportion of
9:38AM psychiatrists will turn to ECT under those circumstances. 98
9:38AM percent will not.
9:38AM Q. Okay. So if we had it your way, Doctor, and we suspended
9:38AM ECT and you wouldn't give patients medication, you wouldn't
9:38AM give them ECT, what would you be advocating to help people who
9:38AM are treatment resistant?
9:38AM A. Why are you saying I wouldn't give them -- I can't give
9:38AM the medication, but I'm not saying no one should ever get
9:38AM medication. I'm not sure why you're saying that.
9:38AM Q. That's what you said in this article; wasn't it?
9:38AM A. What, that people should never get psychiatric medication?
9:38AM Q. Right.
9:38AM A. Of course not.
9:38AM Q. So in your view, if ECT is no longer used, if it's
9:38AM suspended as you say, how would you treat treatment-resistent
9:38AM depressed people?
9:38AM A. Well, the key to treating someone who's extremely
9:39AM depressed is establishing a relationship with them. That's the
9:39AM condition without which no improvement is going to happen. So
9:39AM you have to take a lot of time to establish a relationship with
9:39AM them in which they trust you enough to tell you what's going on
9:39AM in their life, why they are depressed, what might help them and
9:39AM so forth. That's the key ingredient to helping anybody who's

9:39AM 1 mildly, moderately, or severely depressed. It can be very
9:39AM 2 difficult to do that, of course, when someone is severely
9:39AM 3 depressed, but that's what has to happen with someone who is
9:39AM 4 depressed.
9:39AM 5 Q. Okay. So your prescription then in cases where talk
9:39AM 6 therapy has already been found to be ineffective is to
9:39AM 7 prescribe more talk therapy?
9:39AM 8 A. Just a second. You're assuming that the talk therapy
9:39AM 9 hasn't worked.
9:39AM 10 Q. That's right. It's treatment resistent --
9:39AM 11 A. ECT is often used without trying talk therapy. Most of
9:39AM 12 the time talk therapy is not tried. So in the circumstances
9:39AM 13 you're talking about, at which point 2 percent of psychiatrists
9:39AM 14 would refer to ECT, I would first establish whether or not talk
9:40AM 15 therapy had been tried and make sure that it was tried, because
9:40AM 16 it often isn't.
9:40AM 17 Q. Doctor, you understand that here in the United States, ECT
9:40AM 18 is -- for depression, must be tried after -- once it's been
9:40AM 19 found that their depression has been found to be treatment
9:40AM 20 resistent, correct?
9:40AM 21 A. To medication or to talk therapy?
9:40AM 22 Q. Both.
9:40AM 23 A. But it's not the case that that's the only time that ECT
9:40AM 24 is used.
9:40AM 25 Q. All right, Doctor.

9:40AM A. That's how it's supposed to be used.
9:40AM MR. BENKNER: I have no further questions. Thank you.
9:40AM THE COURT: All right. Redirect?
9:40AM MR. ESFANDIARI: Yes, Your Honor.
9:40AM REDIRECT EXAMINATION
9:40AM BY MR. ESFANDIARI:
9:41AM Q. Are we able to use -- hello, Dr. Read.
9:41AM A. Good morning.
9:41AM Q. I'm going to start you -- Mr. Benkner showed you a portion of your deposition in this case. Do you recall that, Dr. Read?
9:41AM A. Yeah.
9:41AM Q. I don't believe he showed the entirety of your answer though, and just for sake of completeness, I'd like to do that. And I believe this was -- started at page 37. You were asked starting at line 22 there, "When you used the terms 'persistent and permanent memory loss' and 'brain damage,' are you using those interchangeably? Are they -- are those two different things?"
9:41AM Do you see that, Dr. Read?
9:41AM A. I can see that.
9:42AM Q. The answer starts with, "I'm using them interchangeably to the extent" -- and why don't you -- can you read the remainder of your answer, Dr. Read, the one that --
9:42AM A. "To the extent that brain damage is a term for which there

9:42AM 1 is no consensus argument on what it -- what the actual
9:42AM 2 definition is. So I'm using it in the sense that if an organ,
9:42AM 3 any organ of the body, has encountered some sort of trauma or
9:42AM 4 incident or accident after which a function of that organ is no
9:42AM 5 longer working" -- you've moved it.
9:42AM 6 Q. Sorry about that.
9:42AM 7 A. "If it's no longer working, is damaged, if the function is
9:42AM 8 damaged, then I'm happy to call that brain damage. But I'm
9:42AM 9 well aware that ECT -- what's the right word? I'll call them
9:42AM 10 proponents, question the use of that term, and they don't like
9:42AM 11 it to be used."
9:42AM 12 Q. Continue.
9:42AM 13 A. "I'm using it in the sense that if something affects part
9:42AM 14 of their body and that part of the body no longer functions as
9:43AM 15 it's supposed to, it is damaged. And memory is clearly a brain
9:43AM 16 function. And so when memory no longer functions properly as a
9:43AM 17 result of anything, including ECT, then I call that brain
9:43AM 18 damage. So to that extent, yes, I'm using those terms
9:43AM 19 interchangeably."
9:43AM 20 Q. And when you talk about the proponents of ECT, who are you
9:43AM 21 referring to there?
9:43AM 22 A. Most of the people who do ECT research and use a lot of
9:43AM 23 ECT and advocate for it publicly and defend it when we critique
9:43AM 24 it. Those sorts of people.
9:43AM 25 Q. And those would include the manufacturer of ECT machines?

9:43AM A. Absolutely, yes.
9:43AM Q. And they don't like to use the word "brain damage," correct?
9:43AM A. Well, it seems they never do.
9:43AM Q. And do you think it's appropriate that they decide to hide the word "brain damage," the manufacturers of the ECT, that they hide the word "brain damage" from doctors and the public and patients?
9:43AM A. No, it's not appropriate.
9:44AM Q. You were asked about APA task force.
9:44AM A. Yes.
9:44AM Q. When did this come out, Doctor?
9:44AM A. 2001.
9:44AM Q. 2001, correct?
9:44AM A. I believe so, yes.
9:44AM Q. All right. Did we stop doing research and science after 2001?
9:44AM A. No.
9:44AM Q. The Sackeim study that you extensively talked about yesterday, that's the one that found 12.4 percent --
9:44AM A. Yes.
9:44AM Q. -- people had persistent memory loss after six months
9:44AM A. Yes.
9:44AM Q. When did that come out, Doctor?
9:44AM A. 2007.

9:44AM 1 Q. Six years after this book?
9:44AM 2 A. Correct.
9:44AM 3 Q. So if I'm a manufacturer and I tell somebody, "Go read
9:44AM 4 this book to learn about the risks of ECT," this book would not
9:44AM 5 contain the Sackeim study that came out six years afterwards?
9:44AM 6 A. That's correct.
9:44AM 7 Q. And is that true also with the Rose article that came out
9:45AM 8 in 2003 that found 29 to 55 percent memory loss?
9:45AM 9 A. That's correct.
9:45AM 10 Q. Mr. Benkner refused to allow you to answer and explain
9:45AM 11 some of your responses. I believe you were talking about the
9:45AM 12 Weeks paper. Do you recall that, Doctor?
9:45AM 13 A. Yes.
9:45AM 14 Q. And you mentioned that the article is flawed, but he
9:45AM 15 wouldn't let you explain why it's flawed. Can you please
9:45AM 16 explain to the jury with you believe it's flawed?
9:45AM 17 A. Yeah. That article was on people who received a very
9:45AM 18 small number of ECTs, a much lower number than is usually used,
9:45AM 19 so the average number, as we talked about yesterday, is between
9:45AM 20 8 and 12, the usual range. Most people in that particular
9:45AM 21 study only received 5 -- between 5 and 7, and one or two of
9:45AM 22 them received only 2 ECTs. So it was a completely flawed
9:45AM 23 study, which is why I did not include it in my report.
9:46AM 24 Also the assessments of the two groups -- remember
9:46AM 25 there was an ECT group and a non-ECT group -- were done by the

9:46AM 1 same person who almost definitely knew who was in each group,
9:46AM 2 so it really wasn't a blind study. So it really is a study
9:46AM 3 that can be discarded.
9:46AM 4 Q. Can you keep your voice up a little bit?
9:46AM 5 A. I'm sorry.
9:46AM 6 Q. Thank you. All right. And then I believe you were also
9:46AM 7 asked about the -- I know I'm going to mispronounce this,
9:46AM 8 Doctor -- Semkovska study?
9:46AM 9 A. Semkovska and McLoughlin, yes.
9:46AM 10 Q. Yes. Mr. Benkner asked you about that, and you also
9:46AM 11 wanted to have some further discussions about that, but he
9:46AM 12 wouldn't let you. Can you let us know what you were thinking?
9:46AM 13 A. Yes, a number of points. First of all, Dr. Declan
9:46AM 14 McLoughlin is an employee of MECTA. He's the second author on
9:46AM 15 this paper. He's an employee of MECTA, another manufacturer of
9:46AM 16 ECT machines. I don't recall whether or not he declared that
9:46AM 17 conflict of interest in this particular paper. Sometimes he
9:46AM 18 does. Sometimes he doesn't, but I think that's significant for
9:46AM 19 the jury to know that that particular review was -- one of the
9:47AM 20 two authors was in the pay of one of the ECT machine
9:47AM 21 manufacturers.
9:47AM 22 But much more importantly than that even was that
9:47AM 23 they completely ignored the primary cognitive damage done by
9:47AM 24 ECT, which was retrograde amnesia, the gaps in memory over
9:47AM 25 one's life. They just decided to ignore that, ignore the

Sackeim study, ignore Rose. I don't know why, but they did. So it's not a study that's measuring the cognitive effects of -- it's measuring some cognitive effects, but not the primary one, the one that all the discussion is about.

Q. Is -- the testimony that you've given in this case, Doctor, has it been to a reasonable degree of scientific and medical certainty?

A. Yes, it has.

MR. ESFANDIARI: Your Honor, may I consult with my team for one second?

THE COURT: Certainly.

(Pause.)

BY MR. ESFANDIARI:

Q. Dr. Read, your -- the papers you have published on ECT that you discussed previously, you published those before you entered -- were retained by our office to provide expert testimony in this case, correct?

A. Yes.

Q. You've been doing research on ECT long before there was litigation involving it, correct?

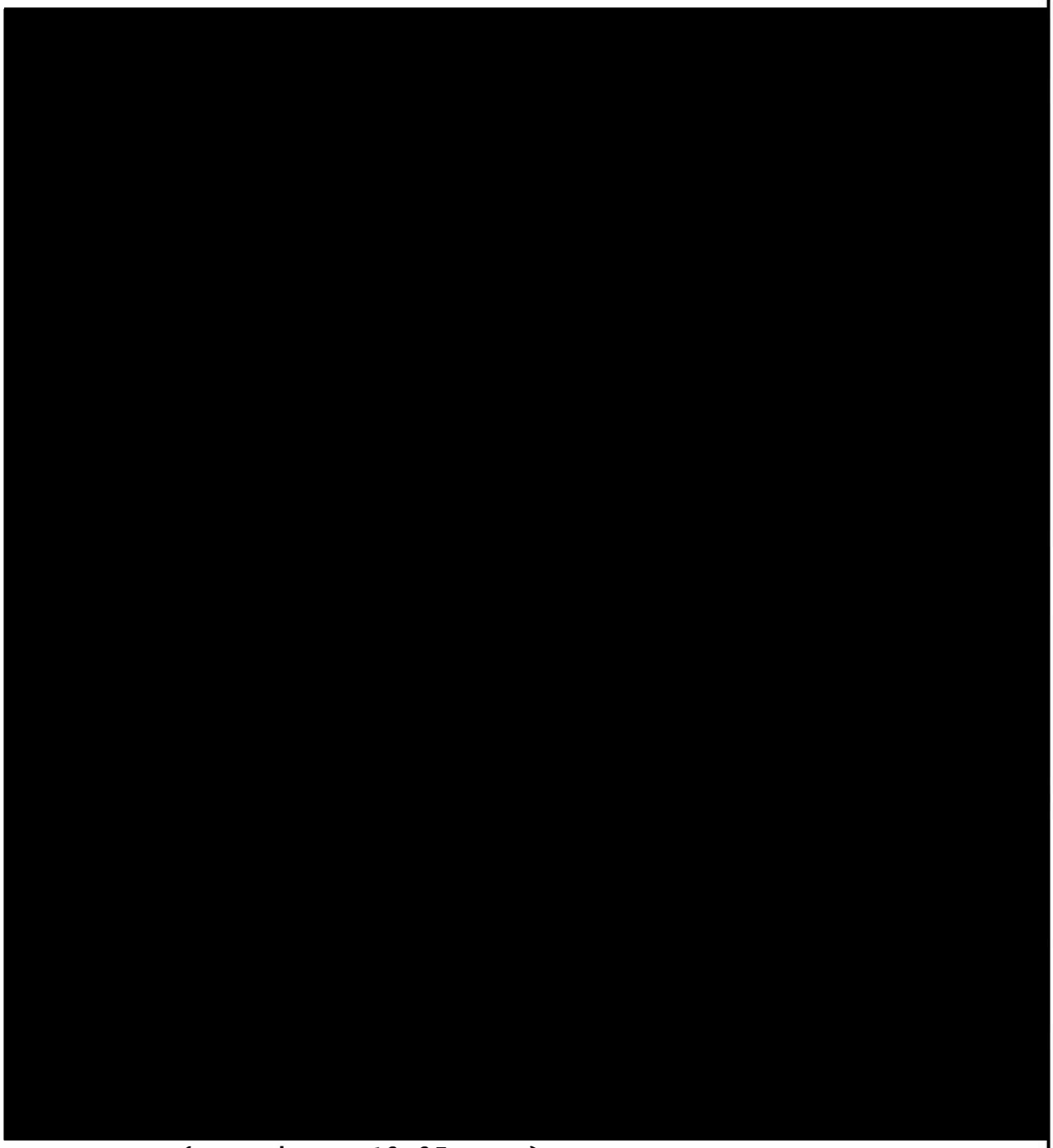
A. Yes. I have published some since, but the papers we've been discussing here were all done before you retained me. The ones I've published since were all rebuttals to those critiques of our article. I rebutted every single one, but those were done recently.

9:48AM MR. ESFANDIARI: I have no further questions, Dr. Read. Thank you very much.

9:49AM THE COURT: All right. Members of the jury, I indicated we'd take breaks every hour. Sometimes it's longer than an hour. Sometimes it's shorter than an hour. So we're going to take a short break here while we get the next witness ready to go. All right? We'll see you in just five minutes. Thank you.

(Jury out at 9:49 a.m.)

[redacted]



(Jury in at 10:05 a.m.)

THE COURT: It's okay to have a seat once you get to your spots. Thank you. We're standing in honor of you, so you can sit down.

10:05AM 1 All right. Have a seat, please.
10:05AM 2 All right. Members of the jury, you heard
10:05AM 3 reference earlier in that witness's testimony to a deposition.
10:05AM 4 A deposition is a witness's sworn testimony that is taken
10:05AM 5 before the trial. During a deposition, the witness is under
10:05AM 6 oath and swears to tell the truth, and the lawyers for each
10:05AM 7 party may ask questions. A court reporter is present and
10:05AM 8 records the questions and answers.
10:05AM 9 A deposition taken in this case is about to be
10:05AM 10 presented to you by video. Deposition testimony is entitled to
10:05AM 11 the same consideration as live testimony, and you must judge it
10:05AM 12 in the same way as if the witness was here sitting in the
10:06AM 13 witness box testifying in court.
10:06AM 14 How long this particular one going to be?
10:06AM 15 AV TECHNICIAN: 57 minutes, Your Honor.
10:06AM 16 THE COURT: 57 minutes. So we will be hearing this
10:06AM 17 witness's testimony by deposition video for the next 57
10:06AM 18 minutes.
10:06AM 19 MR. ESFANDIARI: There will be two parts. The first
10:06AM 20 part is 57 minutes, Your Honor, and I think the second part is
10:06AM 21 24 minutes approximately.
10:06AM 22 THE COURT: Maybe we'll take a break after the
10:06AM 23 57-minute piece and then hear the 24-minute piece, all right?
10:06AM 24 Go ahead.
10:06AM 25 (The following is the video deposition of Richard

Abrams:)

RICHARD ABRAMS,

a witness called on behalf of the Plaintiff, being first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KAREN:

Q. Good morning. Would you state your full name for us for the record?

A. Richard Abrams, A-b-r-a-m-s.

Q. And I understand it's Dr. Abrams, correct?

A. Yes, M.D.

Q. When did you graduate med school?

A. '62 perhaps. Now you're going back. I'm 81 years old.

Q. All right. And what was the next evolution in your career?

A. And then I entered the residency program of New York Medical College, Flower and Fifth Avenue Hospitals.

Q. And approximately what year was that?

A. Approximately 1964.

Q. And for how long did you maintain that capacity?

A. I was drafted out of my residency at the end of the first year and was sent to the Air Force for two years, 1965 through 1967, where I was in charge of a psychiatric ward and in charge of administering ECT for that hospital.

Q. Was that the first approximate time frame of exposure to

10:08AM 1 ECT?
10:08AM 2 A. No, not at all.
10:08AM 3 Q. So you had been exposed in school prior?
10:08AM 4 A. Yes.
10:08AM 5 Q. All right. Had you participated at the New York Medical
10:08AM 6 Hospital --
10:08AM 7 A. New York Medical College.
10:08AM 8 Q. Sorry, College. Had you participated in the New York
10:08AM 9 Medical College with ECT in that era?
10:08AM 10 A. Yes. In my first year, let's say 1964 to 1965, that's
10:08AM 11 when I was first introduced to ECT by the man who brought ECT
10:08AM 12 to the U.S. in 1939, Lothar Kalinowsky, and he was one of my
10:08AM 13 teachers and was a primary influence on me to go into the field
10:08AM 14 of ECT.
10:08AM 15 Q. Up to this point in time, had you reached any conclusions
10:08AM 16 as to how ECT was working in terms of its effectiveness?
10:09AM 17 A. No.
10:09AM 18 Q. And to the present, do you have any understanding as to
10:09AM 19 the mechanics of how ECT works?
10:09AM 20 A. I do not.
10:09AM 21 Q. All right. Would you agree that that's the general state
10:09AM 22 of the industry still today, that the practitioners of ECT
10:09AM 23 don't have an understanding of how it works?
10:09AM 24 A. That's correct.
10:09AM 25 Q. Is it fair to say that you would attribute the amount of

10:09AM 1 electricity as the most variable cause of significance in
10:09AM 2 potential risks and side effects associated with ECT?
10:09AM 3 A. Well, it is the amount and type of the electrical
10:09AM 4 stimulus, because as you will recall, the sign wave stimulus --
10:10AM 5 which produced much more memory disturbance than the brief
10:10AM 6 pulse stimulus which replaced it -- but the amount and type of
10:10AM 7 stimulation, and then a third factor is the laterality or
10:10AM 8 bilaterality of the placement of the stimulus; that is, either
10:10AM 9 bilateral ECT on both sides of the head or unilateral ECT
10:10AM 10 administered to one side of the head.
10:10AM 11 So, if I may just summarize, the first thing was sign
10:10AM 12 wave versus brief pulse. Brief pulse caused less memory loss.
10:10AM 13 Then the next thing was unilateral versus bilateral.
10:10AM 14 Unilateral caused less memory loss. And then finally,
10:11AM 15 ultrabrief pulse versus standard brief pulse in which the
10:11AM 16 ultrabrief caused less memory loss.
10:11AM 17 And I'd have to say those differences were equally
10:11AM 18 important.
10:11AM 19 Q. In terms of this evolution in time, I believe you
10:11AM 20 identified the ultrabrief pulse became available in the '80s to
10:11AM 21 '90s; did I get that right?
10:11AM 22 A. Correct, correct.
10:11AM 23 Q. Approximately when did you first recognize a difference in
10:11AM 24 the potential side effects and risks associated with ECT with
10:11AM 25 regard to the positioning of the electrodes?

10:12AM A. That was when I -- that same year that I returned to New
10:12AM York Medical College residency after leaving the Air Force, and
10:12AM at that time I came back especially to work with the other
10:12AM leading expert in ECT, who was also at New York Medical
10:12AM College, and that was Dr. Max Fink. And --
10:12AM Q. And I'm sorry to interrupt. Approximately what year was
10:12AM your first involvement with Dr. Fink?
10:12AM A. That would have been -- let me think.
10:12AM Q. Was that also --
10:12AM A. It was '68 when I returned to New York Medical College
10:12AM after the Air Force, immediately afterwards, and I became aware
10:12AM of Dr. Fink's work while I was in the Air Force, inasmuch as I
10:12AM subscribed to a number of journals, and I read his research,
10:12AM and I came back especially to do research with him, which I did
10:13AM for many years.
10:13AM And the first study we did together had to do with
10:13AM unilateral versus bilateral ECT, primarily the effects, the
10:13AM clinical effects -- that is, improvement in let's say
10:13AM depression -- and then also the side effects, the memory and
10:13AM other cognitive functions.
10:13AM Q. Had you reached any understanding of the reason why there
10:13AM was a difference in those side effects between the electrode
10:13AM placement of bilateral versus unilateral at that point in time?
10:13AM A. That was a question that we never resolved in a definitive
10:13AM research fashion. We looked at various aspects, but could not

10:14AM 1 reach a definitive conclusion as to the differential effects of
10:14AM 2 unilateral versus bilateral ECT, the differential clinical
10:14AM 3 effects.
10:14AM 4 Q. And how about to the present? Do you -- had you ever
10:14AM 5 reached any conclusion as to why unilateral caused less
10:14AM 6 potential side effects following ECT than bilateral?
10:14AM 7 A. Other than the fact that the two hemispheres have
10:14AM 8 different functions. When you apply the electrical stimulus
10:14AM 9 only to one hemisphere, you are avoiding, let's say, impairing
10:14AM 10 functions of the other hemisphere. However, in any case, a
10:14AM 11 convulsion is produced, a brain seizure, and that also by
10:15AM 12 itself has generalized effects, and we were never able to
10:15AM 13 separate out in our minds -- I was never able to separate out
10:15AM 14 in our mind -- my mind, the -- why there ended up being a
10:15AM 15 difference; in other words, why stimulating one side of the
10:15AM 16 head, even though a convulsion was produced, had less memory
10:15AM 17 loss than stimulating both sides of the head with presumably
10:15AM 18 the same convulsion. That was -- we never resolved that in a
10:15AM 19 research setting.
10:15AM 20 Q. And does that stand true in terms of your perspective of
10:15AM 21 the industry today?
10:15AM 22 A. Correct.
10:15AM 23 Q. In terms of your perspective of the effectiveness of the
10:15AM 24 seizure induced by ECT when comparing a unilateral placement
10:16AM 25 verse as bilateral placement, have you formed a conclusion if

10:16AM 1 there's a difference?
10:16AM 2 A. That is something that I have studied with several
10:16AM 3 different individuals from several different perspectives,
10:16AM 4 including electroencephalographic and other aspects, but we
10:16AM 5 never reached a definitive conclusion, and I do not even today
10:16AM 6 have a definitive understanding of that.
10:16AM 7 Q. How would you describe the difference, if at all, between
10:16AM 8 the seizure that's induced unilaterally by electrode placement
10:16AM 9 versus the seizure that's induced bilaterally?
10:17AM 10 A. That was one of the items that was studied but could not
10:17AM 11 come to a definitive conclusion. There's obviously -- there
10:17AM 12 seemed to be something different about them. There might have
10:17AM 13 been different electroencephalographic features as shown on
10:17AM 14 computer analysis, which we did, but we could not come up with
10:17AM 15 a final definitive statement as to exactly what was the
10:17AM 16 difference.
10:17AM 17 Q. In terms of any understanding that you've reached over
10:17AM 18 time as to the potential side effects associated with ECT, in
10:18AM 19 comparing seizure efficacy, have you reached any conclusions?
10:18AM 20 A. Well, the main conclusion is that you really must have a
10:18AM 21 seizure in order to have efficacy.
10:18AM 22 Q. All right. So how about a duration of seizure? Was there
10:18AM 23 ever a period of time over your exposure to ECT that the
10:18AM 24 duration of the seizure measurement became a factor to control
10:18AM 25 as to potential side effects or risks associated with ECT?

10:18AM A. We could never link seizure duration to any specific side effect of ECT. However, if -- the question about controlling the duration, if the seizure is very short, you do not get a therapeutic effect, and you do not get also any memory disturbance or confusion.
10:19AM Q. In terms of your first exposure to ECT, was there a measurement of time associated with inducing seizure that you had adopted as necessary to promote the therapeutic effects you were seeking with ECT?
10:19AM A. It was a rule of thumb that was not based on any specific evidence in the literature, and that was it should last at least 30 seconds.
10:19AM Q. All right. Why don't we --
10:19AM A. But that we never published or anything like that. It was just a clinical rule of thumb.
10:19AM Q. And do you know where that rule of thumb came from?
10:19AM A. Plucked it out of the air, as far as I know. I did -- there was no research data that I was like aware of at that time.
10:20AM Q. Thank you. Inducing seizure from ECT. Other than the rule of thumb of at least 30 seconds, when did you first form an opinion, if you ever did, that there might be a seizure that could last too long as a risk associated with potentially causing more side effects from ECT?
10:20AM A. Very early in my exposure to ECT, we -- I became away that

10:20AM a prolonged seizure, which had really not been specifically
10:20AM defined yet, could be associated with significantly more memory
10:20AM loss, and over time the -- a seizure duration of two minutes
10:20AM was deemed the maximum that would be useful and had become the
10:21AM practice of many ECT doctors in the -- let us say the '70s,
10:21AM late '60s, '70s, to terminate a seizure artificially if it went
10:21AM more than two or three minutes.
10:21AM Q. And generally, how would you describe your ECT practice in
10:21AM that window of time, 1976 to 1996? Had it stayed relatively
10:21AM the same in terms of the variables that we've already
10:21AM discussed, or had there been any evolution in your mind in how
10:21AM ECT was practiced in that window?
10:21AM A. Well, I'll tell you what the most significant thing that
10:21AM happened in my mind during that period was -- you'll have to
10:21AM decide how it refers to your question. After -- soon after I
10:22AM got to Chicago Medical School in 1976, it entered my mind that
10:22AM it would be possible to construct a more efficient or a more
10:22AM advantaged, more advantageous ECT device than the MECTA, which
10:22AM is what we were using when I first got to the hospital. And
10:22AM that was -- at that time, we were recruiting physicians,
10:22AM psychiatrists for the department at the professorial level. I
10:22AM was in charge of recruitment at that time, and the chairman of
10:22AM the department at the University of Iowa Medical School
10:22AM recommended Dr. Conrad Swartz as somebody to join our
10:23AM department and -- which he did, as a professor.

10:23AM 1 And shortly after he got there, it became obvious
10:23AM 2 that he had an extensive knowledge of electricity and
10:23AM 3 electronics because of his Ph.D. in engineering that he had in
10:23AM 4 addition to his MD, and so we decided to collaborate on the
10:23AM 5 development of what became the Thymatron, which we actually
10:23AM 6 introduced into commercial production in 1984, as I recall.
10:23AM 7 Q. And when did Dr. Swartz join you in Chicago?
10:23AM 8 A. I would say '81, '82.
10:24AM 9 Q. Fair to say that other than yourself and Dr. Swartz, there
10:24AM 10 were no other principal contributors to the creation of the
10:24AM 11 Thymatron?
10:24AM 12 A. There were none, other than the individual that we chose
10:24AM 13 to manufacture or to -- let me -- first of all, to help in the
10:24AM 14 design and the construction and the production of the
10:24AM 15 Thymatron. That was somebody I had known from New York Medical
10:24AM 16 College, John Pavel, P-a-v-e-l. He worked for Dr. Max Fink as
10:24AM 17 an electronics expert, and I knew him well. He had actually
10:24AM 18 made some equipment for me for one of my ECT studies at
10:25AM 19 Metropolitan Hospital, and so the three of us -- Dr. Swartz,
10:25AM 20 myself, and John Pavel -- collaborated in the design and plan
10:25AM 21 of the very first Thymatron.
10:25AM 22 Q. All right. As I understand it, the Thymatron was first
10:25AM 23 produced by the company Somatics LLC; is that correct?
10:25AM 24 A. Correct. Dr. Swartz and I formed that company in 1983, I
10:25AM 25 think was the year we formed it.

10:25AM Q. And was the purpose of forming Somatics expressly to market the Thymatron --
10:25AM A. Correct.
10:25AM Q. -- as opposed any other purpose?
10:25AM A. That is correct.
10:25AM Q. And that remains its purpose today?
10:25AM A. That is correct.
10:25AM Q. Any other business other than ECT devices of Somatics today?
10:25AM A. There are not.
10:25AM Q. When did you first form an opinion that that was something that some patients complained of from ECT?
10:26AM A. There were some studies done by Dr. Richard Weiner, W-e-i-n-e-r, of Duke University, which he presented at an American Academy of Sciences' meeting in which he reported that some patients had very long-term memory effects.
10:26AM Q. Approximately when was that that you first became aware of Dr. Weiner's perspective of a long-term memory effect from ECT?
10:26AM MR. POOLE: Well, I'm not sure that accurately states his statement. I don't know what Dr. Weiner said.
10:26AM THE WITNESS: He published in a book.
10:26AM MR. POOLE: Let me finish my statement. I don't know whether he said these are what the patients reported or I have determined that, but --
10:27AM THE WITNESS: He studied that, and he said he

10:27AM 1 determined that.
10:27AM 2 MR. POOLE: Okay.
10:27AM 3 THE WITNESS: He did a study.
10:27AM 4 BY MR. KAREN:
10:27AM 5 Q. And approximately when was that?
10:27AM 6 A. And the year of that study, let me say late '80s; very
10:27AM 7 rough.
10:27AM 8 Q. My question was the point in time where you first became
10:27AM 9 aware that Dr. Weiner determined that patients had complained
10:27AM 10 of long-term memory effects associated as a side effect of ECT.
10:27AM 11 Late '80s, after Somatics was formed?
10:27AM 12 A. But that's not an exact representation of what -- of
10:27AM 13 the -- what happened with Dr. Weiner. Dr. Weiner did a study
10:27AM 14 that showed that some patients had long-term difficulty with
10:28AM 15 personal memory, what he called autobiographical memory, and
10:28AM 16 that there was a long-term effect that he actually found and
10:28AM 17 reported at this meeting, which I attended, and I believe that
10:28AM 18 would have been late '80s. I just don't know.
10:28AM 19 Q. Let me see if I can phrase it a little differently. Other
10:28AM 20 than how you've defined Dr. Weiner's determination --
10:28AM 21 A. Right.
10:28AM 22 Q. -- that he made in that time frame of the late '80s as to
10:28AM 23 the long-term memory effects associated with ECT, had you heard
10:28AM 24 of that perspective before that point in time?
10:28AM 25 A. No.

10:28AM 1 Q. By this point in time, Somatics had already begun
10:28AM 2 marketing its Thymatron devices?
10:29AM 3 A. Device.
10:29AM 4 Q. Device. Thank you. Are you aware of any changes that
10:29AM 5 Somatics undertook with regard to its marketing or disclosures
10:29AM 6 associated with the purchases of its device that addressed
10:29AM 7 Dr. Weiner's perspective that you had learned in the late '80s?
10:29AM 8 A. No.
10:29AM 9 Q. Any reason why not?
10:29AM 10 A. I didn't agree with his study, and it was -- one of the
10:29AM 11 reasons was that it was only published in the proceedings of
10:29AM 12 the American Academy of Science in the proceedings, which is a
10:29AM 13 little book form, and it was never published in a peer-reviewed
10:29AM 14 journal. And even years afterwards, it never appeared in a
10:29AM 15 peer-reviewed journal, which led me to believe that the results
10:29AM 16 could not be confirmed.
10:29AM 17 Q. At any time to the present, has Somatics initiated any
10:30AM 18 studies or tests with regard to this issue of long-term side
10:30AM 19 effects associated with ECT?
10:30AM 20 A. No.
10:30AM 21 Q. Any reason why not?
10:30AM 22 A. That's not our business.
10:30AM 23 Q. Whose business do you believe it is?
10:30AM 24 A. Can you rephrase that? Could you repeat that question to
10:30AM 25 me?

10:30AM 1 Q. I'll rephrase.
10:30AM 2 A. Okay.
10:30AM 3 Q. I believe I asked whether or not Somatics initiated any
10:30AM 4 studies or tests to the present to assess the long-term side
10:30AM 5 effects associated with ECT? I believe your answer was
10:30AM 6 Somatics has not, correct?
10:30AM 7 A. Correct.
10:30AM 8 Q. And my follow-up question was why not? And I believe you
10:30AM 9 said because it's not your business?
10:31AM 10 A. Correct.
10:31AM 11 Q. And then my question is who do you believe that business
10:31AM 12 responsibility falls upon?
10:31AM 13 A. Academic psychiatrists.
10:31AM 14 Q. Is there any reason that you're aware of that Somatics has
10:31AM 15 not enlisted the academic psychiatrists to perform such
10:31AM 16 studies?
10:31AM 17 A. Somatics doesn't enlist anyone to do studies.
10:31AM 18 Q. Any reason?
10:31AM 19 A. That's not our business.
10:31AM 20 Q. So other than -- let me rephrase.
10:31AM 21 Was there a period of time between Dr. Weiner's
10:31AM 22 findings or conclusions about long-term effects associated with
10:32AM 23 ECT and the present where your perspective has ever changed
10:32AM 24 that long-term side effects are associated with ECT?
10:32AM 25 A. No, that has -- my perspective on that has never changed.

10:32AM Q. Are you aware of any others in the field of ECT, besides
10:32AM Dr. Weiner, that have ever reached a conclusion that long-term
10:32AM side effects are associated with ECT?
10:32AM A. Yes, Dr. Harold Sackeim, S-a-c-k-e-i-m, when he was at
10:32AM Columbia University published one or two articles or studies --
10:33AM I'm not sure if they were formal research studies or if they
10:33AM were opinion pieces. I don't recall, but he did reach the
10:33AM conclusion that long-term or permanent memory loss could occur
10:33AM in some rare patients who received ECT.
10:33AM Q. And do you recall approximately when that was?
10:33AM A. That could well have been in the early '90s.
10:33AM Q. And what, if anything, do you recall as to the variables,
10:33AM if any, that were identified by Dr. Sackeim as attributing the
10:33AM long-term or permanent side effects associated with ECT in the
10:33AM early '90s?
10:33AM A. I -- as I said, I'm unclear as to whether he reached his
10:34AM conclusion because of a formal study of patients assessed
10:34AM before and long -- and years after ECT or if he just based it
10:34AM on discussions that he had with patients who had ECT. I'm not
10:34AM sure, but I did object in writing to his conclusions, and my
10:34AM objection was published in the *Journal of ECT*, and I cannot
10:34AM give you the year. It would have been in the '90s.
10:34AM Q. And your objection was because you disagreed with his
10:34AM conclusions?
10:34AM A. Correct.

10:34AM 1 Q. All right. Fair to say that after Dr. Sackeim's
10:34AM 2 publications in the approximate early '90s, Somatics did not
10:34AM 3 change its marketings or disclosures in any way with regard to
10:35AM 4 identifying any potential long-term or permanent side effects
10:35AM 5 with ECT?
10:35AM 6 A. That's correct.
10:35AM 7 Q. Was there ever a time that Somatics initiated any inquiry
10:35AM 8 or effort anywhere to further any investigation as to whether
10:35AM 9 long-term side effects were caused by ECT?
10:35AM 10 A. No, no, Somatics did not do so.
10:35AM 11 Q. Shifting gears a little bit, over the course of the years
10:35AM 12 that Somatics has sold its Thymatron ECT devices, do you have
10:35AM 13 an understanding of how many different owner's manual editions
10:35AM 14 have been generated?
10:36AM 15 A. From the very beginning? Oh, let me see if I can come up
10:36AM 16 with --
10:36AM 17 Q. I don't want you to guess, but if you have some awareness.
10:36AM 18 A. No, I'm going to give you my best estimate. I never
10:36AM 19 guess. At least 12 to 15.
10:36AM 20 Q. And what, if anything, is the triggering event that would
10:36AM 21 cause a new edition of the owner's manual to be generated?
10:36AM 22 A. Almost always the introduction of some new special
10:36AM 23 feature.
10:36AM 24 Q. And any aspect, as far as you're aware, of the updating of
10:36AM 25 an owner's manual intended to address any new or different

10:36AM awareness of risks or long-term side effects associated with ECT?
A. No.
Q. Are you aware of any practice within Somatics that anyone at Somatics affirmatively accomplishes to advise past purchasers of any new awareness of any permanent or long-term risks associated with ECT?
A. No, I am not.
Q. At some point in time, I think on the web page of Somatics, a disclosure was -- or a disclaimer, I think, was adopted by Somatics. Are you familiar with what I'm referring to?
A. Not yet.
Q. This was on your web page as of -- excuse me, July of this year. "Disclaimer. Please note that nothing in this website constitutes or should be construed as a claim by Somatics, LLC that confusion, cognitive impairment, or memory loss (short-term, long-term, recent, remote, transient, or persistent) cannot occur as a result of ECT."
Are you familiar with that disclaimer?
A. I wrote it.
Q. All right. When did you first write that disclaimer?
A. I do not recall. Within the last decade certainly.
Q. And what in your mind was the purpose of you including this disclaimer on your web page?

10:38AM A. My recollection is that it was at the suggestion of
10:38AM Dr. Swartz, who at some time decided that that would be an
10:39AM appropriate statement to include in the manual. We had never
10:39AM discussed it before. He suggested it. I agreed and wrote it,
10:39AM and it thereafter appeared in the manual.
10:39AM Q. Do you have any reason to believe that this disclaimer
10:39AM would have been retrogradely distributed to prior purchasers of
10:39AM the Somatics ECT devices?
10:39AM A. I do not believe it was.
10:39AM Q. No reason to believe it would have been?
10:39AM A. No.
10:39AM Q. No efforts that you're aware of that were undertaken by
10:39AM anyone at Somatics to share this new disclaimer with old
10:39AM purchasers of Somatics devices?
10:39AM A. I'm not aware of any such effort.
10:39AM Q. The way that this disclaimer was drafted is in a negative
10:39AM in that it says, "Nothing in this website constitutes or should
10:40AM be construed that these listed long-term effects cannot occur
10:40AM as a result of ECT." That's drafted in the negative. Okay.
10:40AM Do you agree?
10:40AM A. I agree it is.
10:40AM Q. Would you agree that that's a different statement than one
10:40AM that would have said, more or less, "Please be advised that
10:40AM long-term permanent memory losses can result as side effect of
10:40AM ECT"?

10:40AM A. Are you asking me if that's a different statement?
10:40AM Q. Correct.
10:40AM A. It is a different statement.
10:40AM Q. All right. Was there any conversations that you had with
10:40AM Dr. Swartz about drafting this disclaimer in the negative
10:40AM versus drafting a disclaimer more in the affirmative that,
10:40AM "Hey, world, these are long-term side effects"?
10:40AM A. We had no such discussion. Dr. Swartz has his own way of
10:40AM writing.
10:41AM Q. As you sit here today, do you have any reason to believe
10:41AM that anyone at Somatics had ever affirmatively generated
10:41AM anything to its purchasers at any time that permanent long-term
10:41AM memory loss is a risk associated with ECT?
10:41AM A. I don't recall any such statement.
10:41AM Q. Had you ever heard -- other than what you've already
10:41AM testified to this morning, which I think were two published
10:41AM perspectives from Drs. Weiner and Sackeim.
10:41AM A. Correct.
10:41AM Q. Separating from published writings now to any shared
10:41AM perspective that you had ever been privy to that long-term or
10:41AM permanent memory loss is a risk associated with EDT. Have you
10:41AM ever heard that before?
10:42AM A. We're not talking about scientific publications, correct?
10:42AM Q. Correct.
10:42AM A. Well, yes, of course. I read all the comments from the

10:42AM 1 public in response to the 1995 and later 2011 requests for
10:42AM 2 commentary on their down classification from Class III to
10:42AM 3 Class II, and I read many, many, many dozens of ECT recipients'
10:42AM 4 claims of their experiences with ECT.
10:42AM 5 Q. So would those be the original sources of information
10:42AM 6 where you first learned that others were claiming that
10:42AM 7 permanent long-term memory loss was a risk associated with ECT?
10:42AM 8 A. Oh, no. Probably at the very first American Psychiatric
10:43AM 9 meeting, American Psychiatric Association meeting I attended
10:43AM 10 back in 1967, that there were groups picketing against ECT, and
10:43AM 11 they were allowed to present some of their opinions at some
10:43AM 12 aspect of the meeting, as I recall. I don't remember the
10:43AM 13 details, but I certainly remember the fact that there were a
10:43AM 14 number of people complaining about ECT, lay people.
10:43AM 15 Q. And my question is a little more focused.
10:43AM 16 A. Okay.
10:43AM 17 Q. I appreciate that, but it's the approximate first point in
10:43AM 18 time -- and maybe that's still it -- where you first heard of a
10:43AM 19 perspective of anybody complaining that long-term or permanent
10:43AM 20 memory loss was a risk associated with ECT. Would that have
10:43AM 21 been the '67 --
10:43AM 22 A. That would have been.
10:43AM 23 Q. -- first meeting?
10:43AM 24 A. That would have been.
10:43AM 25 Q. All right. So fair to say from that point in time to the

10:44AM 1 present, there has always been -- that you're aware of --
10:44AM 2 complaints that permanent long-term memory loss is a risk
10:44AM 3 associated with ECT?
10:44AM 4 A. Correct.
10:44AM 5 Q. Fair to say you just disagree with it?
10:44AM 6 A. I do.
10:44AM 7 Q. I had a question about seizure activity. One of the notes
10:44AM 8 in the owner's manual says, "It is possible for seizure
10:44AM 9 activity to continue in the brain after any or all the computer
10:44AM 10 reports indicate seizure termination." Did you write that?
10:44AM 11 A. I did.
10:44AM 12 Q. How is that possible?
10:44AM 13 A. It's the nature of the brain.
10:44AM 14 Q. Meaning?
10:44AM 15 A. Meaning that there can be localized seizure activity in
10:44AM 16 the brain that is not detectable from surface electrodes.
10:44AM 17 Q. If it's not detectable on surface electrodes, how do you
10:45AM 18 conclude whether the seizure has concluded?
10:45AM 19 A. You're only left with the visible muscle activity, or you
10:45AM 20 could -- I should add, or with an accelerated heart rate if it
10:45AM 21 did occur.
10:45AM 22 Q. Compared to baseline?
10:45AM 23 A. Correct.
10:45AM 24 Q. Do you have an opinion as to whether or not seizure
10:45AM 25 activity can continue that is not visible to the naked eye

10:45AM 1 regarding muscle activity?
10:45AM 2 A. Seizure activity in the brain?
10:45AM 3 Q. Correct.
10:45AM 4 A. Yes, I'm certain it can.
10:45AM 5 Q. Have you ever formed a conclusion as to what the possible
10:45AM 6 causes for memory loss associated with ECT are?
10:45AM 7 A. I have never actually studied that point, but I have
10:45AM 8 formed the opinion that the memory losses that can be observed
10:46AM 9 in some patients who receive ECT are the result of hippocampal
10:46AM 10 malfunction or dysfunction temporarily, the hippocampus
10:46AM 11 essentially being a primary site of memory storage.
10:46AM 12 Q. And what is it that has led you to reach that conclusion?
10:46AM 13 A. All of the many, many studies of hippocampal function in
10:46AM 14 many different patients by many different authors, including --
10:46AM 15 let's say Brenda Milner was one of the famous authors. Many
10:46AM 16 people, way too many to cite, have determined to their
10:47AM 17 satisfaction and to the Journal's satisfaction that memory
10:47AM 18 dysfunction is very often related to hippocampal dysfunction or
10:47AM 19 damage.
10:47AM 20 Q. And are you aware or have you reached an understanding as
10:47AM 21 to how that hippocampal malfunction or dysfunction or damage
10:47AM 22 occurs as a result of ECT?
10:47AM 23 A. No, I do -- that's something I have never studied, and I'm
10:47AM 24 not aware of any definitive studies of that question.
10:47AM 25 Q. As you sit here today, are you aware of any pending ECT

10:47AM studies at all?
10:47AM A. None.
10:47AM Q. All right. What is it about the seizure that you've learned that is the most likely source for the malfunction or dysfunction to the hippocampus following ECT as the likely source of memory loss that occurs?
10:48AM A. In none of my studies or my review of the literature have I ever been able to come up with an explanation that satisfied me.
10:48AM Q. Other than seizure as the source?
10:48AM A. Well, seizure or the passage of electric current. If you remember, I mentioned the difference between unilateral and bilateral ECT. Bilateral ECT, you're passing electric current through both hippocampi, but with unilateral ECT, you're only passing it through one hippocampus. So there is certainly a difference, partially obscured by the fact that after the electrical stimulus, then you have the seizure which affects the whole brain. So that might muddy the waters a little bit in being able to tell the difference, but certainly the electrical stimulus itself plays a role in the hippocampal dysfunction.
10:49AM Q. And other than the hippocampal dysfunction, do you have any reason to believe there's any other cause of the memory loss associated with ECT?
10:49AM A. No.

10:49AM Q. Do you have a recollection of the longest seizure that you
10:49AM were ever able to document that continued after it no longer
10:49AM was evident on EEG and no longer visible by muscle activity?
10:49AM A. No, there would be no way I could tell.
10:49AM Q. Because it would be a guess?
10:49AM A. It wouldn't even be a guess. There would be no way to
10:49AM even estimate. I mean -- go ahead. That's my answer.
10:50AM Q. All right. How was it evolved in terms of the conclusion
10:50AM that a maximum duration of seizure was adopted by Somatics as
10:50AM its recommendation?
10:50AM A. It was -- it was the -- a statement unsubstantiated by any
10:50AM research by Dr. Max Fink, an authoritarian statement, an
10:50AM authority statement. That was it, and that became the
10:50AM standard.
10:50AM Q. And is still the standard today?
10:50AM A. I don't know what the standard is today, but I don't
10:50AM imagine it's changed.
10:50AM Q. Would you say that it's the electricity that causes the
10:50AM desired effect or the seizure that causes the desired effect
10:50AM with ECT?
10:50AM A. That is definitely a question that has never been
10:51AM perfectly resolved.
10:51AM Q. Can't have a seizure without electricity, can't --
10:51AM A. Well, you can in the original days. In the original
10:51AM introduction of -- let's call it convulsive therapy, a compound

10:51AM 1 called -- a chemical called Metrazole was injected in the vein,
10:51AM 2 and it caused the seizure. And those seizures were effective,
10:51AM 3 but nobody ever compared them with the electrical stimulus that
10:51AM 4 just -- it just wasn't done. So we don't know. Soon
10:51AM 5 thereafter, an Italian introduced electroconvulsive therapy,
10:51AM 6 and the world adopted it within a year or two.
10:51AM 7 Q. What's your understanding, if any, as to what the effect
10:51AM 8 of the electricity is upon the brain cells?
10:51AM 9 A. It lowers dramatically and instantly the seizure
10:52AM 10 threshold, and that induces widespread synchronous discharge of
10:52AM 11 virtually all of the neurons in the brain, and that is the
10:52AM 12 definition of a seizure.
10:52AM 13 Q. What's your understanding, if any, as to the path that the
10:52AM 14 electricity takes through the brain during ECT?
10:52AM 15 A. It is primarily a reflection of where the treatment
10:52AM 16 electrodes are applied. Generally the path is between,
10:52AM 17 primarily, the treatment electrodes. So if it's bilateral ECT,
10:52AM 18 then it goes transversely through the head, or if it's
10:53AM 19 unilateral ECT, the path will be primarily between the two
10:53AM 20 electrodes.
10:53AM 21 Q. Do you have an understanding as to whether or not it
10:53AM 22 travels any other location within the brain other than between
10:53AM 23 the placement of the electrodes?
10:53AM 24 A. Well, the brain is what is called volume conductor. So
10:53AM 25 yes, it concentrates a large part between the two electrodes,

10:53AM 1 but it spreads out like ripples of a pebble thrown in a pond.
10:53AM 2 So at some point, some amount of electricity will always reach
10:53AM 3 other distant parts of the brain, although it may be very
10:53AM 4 small.
10:53AM 5 Q. Are you aware of any way to control within the brain the
10:53AM 6 other portions of the brain being touched by the electricity
10:53AM 7 induced by ECT?
10:53AM 8 A. I am not.
10:53AM 9 Q. Are you aware of the amount of energy that's used in the
10:53AM 10 brain outside of ECT?
10:54AM 11 A. That's used in the brain. I'm not sure what you mean.
10:54AM 12 Q. Any measure of electrical energy within the brain not
10:54AM 13 including ECT application in its natural state?
10:54AM 14 A. Oh, well, certainly. I can't give you a figure, but there
10:54AM 15 are numerous studies, electroencephalographic computer studies,
10:54AM 16 that measure -- that have measured in great detail the
10:54AM 17 electrical output of the resting brain.
10:54AM 18 Q. And how does that compare to the electrical energy used by
10:54AM 19 ECT?
10:54AM 20 A. The electrical energy used by ECT?
10:54AM 21 Q. Correct.
10:54AM 22 A. Well, there's no comparison in the sense that the
10:54AM 23 electrical energy used by ECT is many, many multiples of the
10:55AM 24 spontaneous electrical energy of the resting brain.
10:55AM 25 Q. And what is the maximum energy that the ECT Somatic

devices utilize?
A. 99.4 joules.
Q. And how does that compare to the energy of the resting brain?
A. I don't know.
Q. It's --
A. I have no idea.
Q. It's not even 1 percent of that; is it?
A. I have no idea what the energy of the resting brain is. That is not my field.
Q. Has -- do you have any understanding that anyone at Somatics has ever incorporated studies of traumatic brain injury with ECT in any way?
A. Certainly not.
Q. Do you know why?
A. There would be no reason to.
Q. Is that because you don't believe that there could be a correlation between TBI, traumatic brain injury, and ECT?
A. Well, we're not in the business of doing studies of traumatic brain injury. We sell Thymatrons.
Q. Right. I'm referring to the 2011 executive summary.
A. Correct, correct.
Q. In that there were that many reports of memory loss, permanent, associated with ECT, how do you explain that as not being a potential risk associated with ECT?

10:56AM 1 MR. POOLE: Can I ask a clarifying question, David?
10:56AM 2 MR. KAREN: Sure.
10:56AM 3 MR. POOLE: Did all 529 reports identify it as
10:56AM 4 quote-unquote "permanent memory loss?" Because that's implied
10:56AM 5 in the question.
10:56AM 6 MR. KAREN: It was, and let's just take out the word
10:56AM 7 "permanent."
10:56AM 8 **BY MR. KAREN:**
10:56AM 9 Q. How do you explain the 529 reports of memory loss?
10:57AM 10 A. I can't explain them since they were not objectively
10:57AM 11 validated.
10:57AM 12 Q. And how did you reach that conclusion that they were not
10:57AM 13 objectively validated?
10:57AM 14 A. There were no objective evidence accompanying those
10:57AM 15 reports in terms of neuropsychological testing,
10:57AM 16 electroencephalograms, behavioral analysis, and so forth. It
10:57AM 17 was -- they were what exactly they were, individuals stating
10:57AM 18 that something had happened to them for which no evidence was
10:57AM 19 presented.
10:57AM 20 Q. Fair to say that Somatics took no steps to evaluate any of
10:57AM 21 those reports?
10:57AM 22 A. Correct.
10:57AM 23 Q. In that same report, there were -- excuse me, in that same
10:57AM 24 executive summary of 2011, there was 298 reports of brain
10:57AM 25 damage. How do you explain that?

10:57AM A. Those are, again, unsubstantiated claims.
10:58AM Q. And --
10:58AM A. And I have no idea of their validity.
10:58AM Q. What steps, if any, did Somatics take to assess the
10:58AM validity of those complaints?
10:58AM A. No steps.
10:58AM Q. Okay. The executive summary identified 103 reports of
10:58AM death following ECT. How do you explain that?
10:58AM A. I have no way of explaining that.
10:58AM Q. Do you have any reason to believe Somatics took any steps
10:58AM to investigate or evaluate any of the deaths that were
10:58AM identified in the 2011 executive summary?
10:58AM A. No.
10:58AM Q. Are you aware of whether or not Somatics has any practice
10:58AM of investigating verbal complaints that it's received as to
10:58AM adverse events associated from ECT?
10:58AM A. From whom?
10:58AM Q. Anybody.
10:58AM A. No, I'm not aware of anything like that.
10:59AM Q. Has Somatics ever conducted any studies to determine
10:59AM whether any brain injury could be caused by ECT?
10:59AM A. Somatics has never conducted any studies of any kind.
10:59AM Q. What's the maximum voltage, if you're aware, that can be
10:59AM utilized by a Thymatron?
10:59AM A. The voltage is not controlled. The -- it's a constant

10:59AM 1 current machine. I believe -- we don't adjust voltage, but I
10:59AM 2 believe that it doesn't go over 220 volts, but that's just a
10:59AM 3 recollection.
10:59AM 4 Q. And then how about the maximum amperage that can be
10:59AM 5 delivered by a Thymatron?
10:59AM 6 A. Slightly less than one amp, perhaps .9 something.
10:59AM 7 Q. Has Somatics ever conducted any studies that compared the
10:59AM 8 potential side effects associated with single dose versus
10:59AM 9 double dose?
10:59AM 10 A. Somatics has never conducted any studies.
11:00AM 11 Q. Of any kind?
11:00AM 12 A. We're in the business of selling Thymatrons.
11:00AM 13 Q. Do you recall when Dr. Fink published that as a result of
11:00AM 14 ECT, side effects such as disorientation, amnesia, ad nausea,
11:00AM 15 confabulation, aphasia, apraxia, and delirium were potential
11:00AM 16 risks associated?
11:00AM 17 A. Do I recall the year?
11:00AM 18 Q. Do you recall that conclusion that he reached, or is that
11:00AM 19 news to you?
11:00AM 20 A. It's not news to me. I don't know that I saw him write
11:00AM 21 that. I know that he -- several of those words were used to me
11:01AM 22 on many occasions in my conversations with Dr. Fink. I don't
11:01AM 23 know where they were written. He wrote many papers before I
11:01AM 24 became involved -- before I became a psychiatrist, and he and
11:01AM 25 I -- he was my mentor.

11:01AM 1 Q. Do you disagree with his conclusions?
11:01AM 2 A. Say that again.
11:01AM 3 Q. That as a result of ECT, side effects could include
11:01AM 4 disorientation, amnesia, ad nausea, confabulation, aphasia,
11:01AM 5 apraxia, and delirium?
11:01AM 6 A. Yes, I agree that all those could occur as side effects of
11:01AM 7 ECT, but we're not here talking about permanent side effects,
11:01AM 8 correct?
11:01AM 9 Q. Well, I'm asking -- the next question is do you contend
11:01AM 10 that none of those side effects could be lingering as long-term
11:02AM 11 or permanent?
11:02AM 12 A. I do so contend.
11:02AM 13 Q. In '78, Dr. Fink wrote for the Psychopathological
11:02AM 14 Association that, "The principal complications of ECT are
11:02AM 15 death, brain damage, memory impairment, and spontaneous
11:02AM 16 seizures. These complications are similar to head trauma to
11:02AM 17 which EST has been compared." Had you ever heard that
11:02AM 18 statement before?
11:02AM 19 A. No.
11:02AM 20 Q. Do you disagree with it?
11:02AM 21 A. That is such a broad statement. Would you mind reading
11:02AM 22 that once more?
11:02AM 23 Q. Not at all. It's from a 1978 article that Dr. Fink
11:02AM 24 wrote --
11:02AM 25 A. Right.

11:02AM Q. -- from the *Journal of Psychopathological Association*.
11:02AM A. Right.
11:02AM Q. Quote, "The principal complications of EST, or ECT, are
11:02AM death, brain damage, memory impairment, and spontaneous
11:03AM seizures. These complications are similar to head trauma to
11:03AM which EST has been compared."
11:03AM A. I disagree.
11:03AM Q. All right. But you heard this -- that phrase -- that
11:03AM statement before, correct?
11:03AM A. That sounds like Max.
11:03AM Q. All right.
11:03AM A. That's all I can say.
11:03AM Q. Was there ever a period of time that Dr. Fink no longer
11:03AM was seen as a mentor for you to rely upon or trust?
11:03AM MR. POOLE: Objection. Vague and ambiguous. You can
11:03AM answer.
11:03AM THE WITNESS: Well, after I had become an authority
11:03AM in my own right, we had many discussions, but after I published
11:03AM my first textbook on ECT, I no longer had the need to ask him
11:03AM questions from his experience or research because I already
11:04AM knew all that. But we had many discussions.
11:04AM **BY MR. KAREN:**
11:04AM Q. So it's fair to say that you just disagree with his
11:04AM conclusion?
11:04AM A. Yeah, especially the part about brain damage.

11:04AM Q. All right. But you'd agree he is an authority in the field?
11:04AM A. He is an authority in the field.
11:04AM Q. Has anyone advised you that Somatics has ever provided adequate warnings of risks of ECT to its customers?
11:04AM A. No.
11:04AM THE COURT: Is that the breaking point?
11:04AM AV TECHNICIAN: I think so.
11:04AM THE COURT: Okay. We'll take a break now. And then -- how much more of this? You said another 30 minutes or so?
11:04AM MR. ESFANDIARI: Less than 30 minutes, Your Honor.
11:04AM THE COURT: Less than 30 minutes. All right. We'll see you in five minutes. Thank you.
(Jury out at 11:05 a.m.)
11:05AM [redacted]

(Jury in at 11:23 a.m.)

11:23AM THE COURT: You may have seat, everybody. How long is the next piece?

11:23AM AV TECHNICIAN: 26 minutes.

11:23AM MR. ESFANDIARI: 24 minutes of Dr. Abrams -- 26 minutes of Dr. Abrams left, Your Honor.

11:23AM THE COURT: Thank you. Go ahead.

11:23AM CROSS-EXAMINATION

11:23AM BY MS. ESFANDIARI:

11:23AM Q. Doctor, drawing your attention to what we are going to mark as exhibit -- Exhibit 20, this is a November 15, 2006 email exchange between you and Dr. Swartz. Do you recall seeing this email prior to your deposition today?

11:23AM A. I believe this is one of the things I reviewed. I'd have to -- have to see -- go to the other end, which would be the part that I -- where I talked. Can you go all the way to the end so I can make sure this is something I absolutely saw? Okay. And now go back to Conrad. Okay.

11:24AM Yes. Yes, I recall reviewing this document.

11:24AM Q. All right. This appears to be in 2006, in November of 2006, you and Dr. Swartz were contemplating adding additional -- or adding a warning to the ECT machine, correct?

11:24AM A. That is correct.

11:24AM Q. Okay. And what event led you in 2006 to contemplate adding an additional warning?

11:25AM 1 A. I don't recall.
11:25AM 2 Q. And it looked like -- it appears, just reading from the
11:25AM 3 email here that we are seeing, that there were issues of loss
11:25AM 4 of memory and so forth that were of concern. Do you recall
11:25AM 5 what had triggered either you or Dr. Swartz wanting to add
11:25AM 6 additional information to the Somatics label for memory loss?
11:25AM 7 A. 2006, I simply do not recall.
11:25AM 8 Q. And here Dr. Swartz writes, "Dick." Is that -- he's
11:25AM 9 referring to you, correct, Doctor?
11:25AM 10 A. That's me.
11:25AM 11 Q. That's you. And he says, "The goals of the warning
11:25AM 12 statement we need to make are one, to prevent lawsuits; and
11:25AM 13 two, not alienate psychiatrists." Do you see that, Doctor?
11:25AM 14 A. Yes.
11:25AM 15 Q. Do you agree with the statements made by Dr. Swartz?
11:26AM 16 MR. POOLE: Referring to those two specific ones,
11:26AM 17 right?
11:26AM 18 MR. ESFANDIARI: Yes, what I just read.
11:26AM 19 THE WITNESS: I think those are two goals of a
11:26AM 20 warning statement and --
11:26AM 21 BY MR. ESFANDIARI:
11:26AM 22 Q. What did you understand --
11:26AM 23 A. -- I would say those are accurate. I would agree with
11:26AM 24 those.
11:26AM 25 Q. Okay. And what was your understanding of not alienating

11:26AM psychiatrists?
11:26AM A. Well, actually I have no understanding of that. That was
11:26AM Dr. Swartz's term.
11:26AM Q. But you just told me you agreed with it.
11:26AM A. I agreed that those could be goals of a warning statement,
11:26AM but I never said that I agreed that it's necessary not to
11:26AM alienate psychiatrists. I was agreeing with his statement.
11:26AM Q. Right. I mean, if his statement -- and my question is --
11:26AM you said you agreed with his statement, which includes that we
11:26AM don't alienate psychiatrists, and what is your understanding of
11:26AM not alienating psychiatrists? Do you have an understanding of
11:27AM what he meant by that?
11:27AM A. I misspoke. I do not agree with that statement.
11:27AM (Video stops.)
11:27AM MS. COLE: Did it freeze?
11:27AM THE COURT: Members of the jury, now is the time that
11:27AM I tell the jury what I tell the jury at every trial.
11:27AM Technology is not a perfect thing. The people who use
11:27AM technology rehearse it and re-rehearse it, and they think it's
11:27AM going to work, and as soon as you walk in the room, you have
11:27AM this magic power. When there's a jury in the room, all of a
11:28AM sudden the technology goes wrong, and I even make bet with the
11:28AM technology people. If somebody -- you know, I'll buy their
11:28AM lunch if they can do it a whole trial without something going
11:28AM wrong. I've never bought anybody lunch, all right? So just

11:28AM bear with them. It's just the way it is. In the old days --
11:28AM (Video resumes)
11:28AM MR. ESFANDIARI: Yes, I actually had the wrong page.
11:28AM It's this page, page 12.
11:28AM THE COURT: Just a second. Do you need rewind that
11:28AM or something back to where it left off? In the old days we
11:28AM used these boards over here.
11:28AM (Video resumes.)
11:28AM BY MR. ESFANDIARI:
11:28AM Q. What we are going to do is mark this document as
11:28AM Exhibit 5, and hopefully it will pop up.
11:28AM Doctor, are you able to see my screen?
11:28AM A. I see a -- yes.
11:28AM Q. Okay.
11:28AM A. I see a logo and then electroconvulsive therapy.
11:28AM Q. Yes. All right.
11:28AM A. And then it says, "Task force report number 14."
11:28AM Q. Yes. Are you familiar with the APA task force from 1978,
11:29AM Doctor, on ECT?
11:29AM A. I am.
11:29AM Q. Okay. And did you read this report at some point during
11:29AM your career, Doctor?
11:29AM A. I read it and reviewed at the request of one of its
11:29AM editors.
11:29AM Q. All right. And would that have been Max Fink who's

11:29AM actually listed here?
11:29AM A. Yes.
11:29AM Q. Yes. Okay. And from what I understand, you are not only professionally friends with Mr. Fink, but also personally friends with him?
11:29AM A. Yes.
11:29AM Q. Yeah, I actually had the wrong page. It's this page, page 12. And so the APA had asked users of ECT about their experience with the devices and what adverse events that they were seeing in their patients, and this is the results of the survey. So the survey came back that permanent memory loss -- permanent loss of memory for a period of ECT course, there was 27 percent of patients experienced that; that there was permanent loss of memory for period immediately prior to ECT, 15 percent of patients experience that; and that there was a permanent loss of distant memories, 1 percent of patients experienced that.

Were you familiar with those -- that data, Doctor?

A. I'm not going to call it data because this was not an experiment. This was just polling, like a political poll. But I'm familiar with this chart.

Q. Okay. And you certainly would have been familiar with this long before the year 2000, for example, correct?

A. I was familiar in 1978 when it came out. No, this is the 1990 one.

11:31AM 1 Q. This is the '78 one. You were correct.
11:31AM 2 A. Let me just see the top.
11:31AM 3 Q. Sure. I will go -- September of 1978. Do you see that,
11:31AM 4 Doctor?
11:31AM 5 A. Yes.
11:31AM 6 Q. And we are going to mark this as Exhibit 6 to your
11:31AM 7 deposition. And, Doctor, this is -- in 1985, the National
11:31AM 8 Institute of Health had a -- I guess a seminar or a conference
11:31AM 9 on ECT that you, I believe, participated in. Do you recall
11:31AM 10 that?
11:31AM 11 A. I recall attending it. I can't recall whether I actually
11:31AM 12 presented any information, but I was there.
11:31AM 13 Q. Okay. And these were a publication that was prepared
11:31AM 14 after -- after the conference, and I want to draw your
11:31AM 15 attention to a few pages here. In the interest of time, I'm
11:32AM 16 just going to go down here. I'm going to read this first
11:32AM 17 sentence, Doctor, where I have kind of --
11:32AM 18 A. Yes.
11:32AM 19 Q. -- highlighted with my mouse. It states, "It is, however,
11:32AM 20 well established that ECT produces memory deficits."
11:32AM 21 Did I read that correctly, Doctor?
11:32AM 22 A. You certainly did.
11:32AM 23 Q. And, Doctor, this appears to be the cover of a book
11:32AM 24 written by Dr. Coffey, the *Clinical Science of*
11:32AM 25 *Electroconvulsive Therapy.*

11:32AM A. Yes.
11:32AM Q. Do you see this book, Doctor?
11:32AM A. It was edited by him. He didn't write it.
11:32AM Q. Edited by him. And you actually contributed to a chapter in this book; is that correct?
11:32AM A. I did.
11:32AM Q. All right. Do you know when that was, Doctor?
11:32AM A. I really do not know.
11:32AM Q. Okay. Would it have been before 2000 or after 2000?
11:33AM A. I'm quite sure it would have been before 2000.
11:33AM Q. Before 2000. And do you know -- is Dr. Coffey also a friend of yours, Doctor?
11:33AM A. Sorry. We're friendly enemies. No. We have had our disagreements. I consider him a professional friend, yes.
11:33AM Q. Okay. How long have you known him?
11:33AM A. At least 30 years.
11:33AM Q. All right. I am now going to draw your attention to Chapter 2 of the book that Dr. Coffey edited --
11:33AM A. Yes.
11:33AM Q. -- entitled "ECT Technique: Electrode Placement, Stimulus Type, and Treatment Frequency," and it has your name, Richard Abrams, MD.
11:33AM Do you see that, Doctor?
11:33AM A. Yes.
11:33AM Q. Is this the chapter that you drafted in Dr. Coffey's book?

11:34AM A. I wrote it, yes.
11:34AM Q. Yes? Okay. All right. Can you read for me, please, this
11:34AM last -- one of the last paragraphs here that you wrote in this
11:34AM book, and I've highlighted it, Doctor.
11:34AM A. Yes. "It is clear, however, that MMECT is excessively
11:34AM neurotoxic, frequently producing severe confusional states,
11:34AM Abrams and Fink '72, Bidder and Strain '70; prolonged seizures,
11:34AM Bridenbaugh, et al. '72, Malevsky (phonetic) '78, '81, Strain
11:34AM and Bidder '71; and at least one instance of apparently
11:34AM irreversible brain damage, Strain and Bidder, '71."
11:34AM Q. And those were your words, correct, Doctor?
11:34AM A. Correct.
11:34AM Q. Okay. And MMECT is what, Doctor?
11:35AM A. It's an abbreviation for multiple monitored ECT, a method
11:35AM of administering ECT from about '85 or '86 onwards in which
11:35AM instead of giving a course of ECT, let us say, for example, six
11:35AM treatments administered over two weeks time, the practitioner
11:35AM of MMECT would give all the treatments usually spaced over two
11:35AM weeks in one -- in a single setting; let's say six in a row,
11:35AM one right after the other.
11:35AM Q. And it's your understanding that when you do that, there
11:35AM have been instances, or at least one instance, of irreversible
11:36AM brain damage, correct?
11:36AM A. So it was reported by Strain and Bidder.
11:36AM Q. Thank you, Doctor. Yeah, I'm just going to identify the

11:36AM document here. This is going to be Exhibit 9, and it is a page
11:36AM from the magazine -- the journal *Nature*, Volume 403, dated
11:36AM January 20th, 2000. Are you familiar with this publication,
11:36AM Doctor, *Nature*?
11:36AM A. Of course.
11:36AM Q. Okay. And in this edition, Dr. Sterling, or Peter
11:36AM Sterling, from the Department of Neuroscience at the University
11:36AM of Pennsylvania, discusses ECT, and I'm going to read you what
11:36AM he states here. "One can be sympathetic to psychiatry as I am
11:36AM and still imagine that passing 150 volts between the temples to
11:36AM evoke a grand mal seizure might cause brain damage, especially
11:36AM when you realize that this 'cure' for depression -- cure in
11:37AM quotes -- "requires this procedure to be repeated 10 to 20
11:37AM times over a week or so. And when you talk to a friend who has
11:37AM been so treated and discover that a year later, she is still
11:37AM experiencing huge gaps in recall of major life events, you
11:37AM begin to worry. Finally, you discover that ECT's benefit is
11:37AM only temporary, so that many psychiatrists administer it
11:37AM chronically."
11:37AM Now, did I read that correctly, Doctor?
11:37AM A. You did.
11:37AM Q. Okay. And you -- you had read this when it came out,
11:37AM correct, Doctor?
11:37AM A. I had not.
11:37AM Q. You had not?

11:37AM 1 A. No.
11:37AM 2 Q. Let me see if I can refresh your recollection, Doctor.
11:37AM 3 Doctor, I'm going to draw your attention to what we're going to
11:37AM 4 mark as Exhibit 10 to your deposition, and just to identify it,
11:37AM 5 do you see this is a page from the *Nature* publication dated
11:38AM 6 February 24th, 2000? Do you see that, Doctor?
11:38AM 7 A. Yes.
11:38AM 8 Q. Okay. And do you see at the bottom here, it's a page from
11:38AM 9 the *Nature* publication dated February 20th, 2000?
11:38AM 10 A. I do.
11:38AM 11 Q. Okay. So this is a month after what we had just looked at
11:38AM 12 in Exhibit 9, and I want to draw your attention to -- it says
11:38AM 13 "And There's No Proof of Lasting Brain Damage," title.
11:38AM 14 A. Oh, yes, I --
11:38AM 15 Q. And this is written by you, correct, Doctor?
11:38AM 16 A. Yes.
11:38AM 17 Q. Richard Abrams, and you're saying sir, "Peter Sterling,
11:38AM 18 asserts," so you are responding to the comment that
11:38AM 19 Dr. Sterling had made the previous month that we just looked at
11:38AM 20 in Exhibit 9, correct?
11:38AM 21 A. Yes.
11:38AM 22 Q. Okay. Does this refresh your recollection --
11:38AM 23 A. Yes, it does.
11:38AM 24 Q. That you did indeed -- just let me finish. That you had
11:38AM 25 indeed read Dr. Sterling's publication when it came out?

11:39AM 1 A. Correct.
11:39AM 2 Q. Okay.
11:39AM 3 A. I don't know if I read it when it came out, but I read it.
11:39AM 4 I suppose I must have, yes.
11:39AM 5 Q. Certainly a month later, you are responding to it in your
11:39AM 6 own publication, correct?
11:39AM 7 A. Correct.
11:39AM 8 Q. All right. And you -- fair to say you disagreed with
11:39AM 9 Dr. Sterling's comments, true?
11:39AM 10 A. I did, and I do.
11:39AM 11 Q. All right. But is it also true that Dr. Sterling is not
11:39AM 12 alone in his comments and opinions that ECT can cause brain
11:39AM 13 injury and permanent memory loss?
11:39AM 14 A. He is not alone.
11:39AM 15 Q. Drawing your attention to what we're marking as Exhibit 11
11:39AM 16 to your deposition, this is a page from a publication called
11:39AM 17 *Current Psychiatry*. Are you familiar with that publication,
11:39AM 18 Doctor?
11:39AM 19 A. I recall it. I haven't seen it for many years.
11:39AM 20 Q. Okay. And this is dated October 2006. Do you see this at
11:40AM 21 the bottom right here, the date, Doctor?
11:40AM 22 A. Yes.
11:40AM 23 Q. All right. And this, Doctor, in the interest of time,
11:40AM 24 I'll represent to you appears to be kind of a dialogue in
11:40AM 25 written form between you and a Doctor -- excuse me, and a

11:40AM 1 Dr. Grant.
11:40AM 2 A. All right.
11:40AM 3 Q. Do you see it, Doctor? And I'll allow you to maybe
11:40AM 4 refresh your recollection.
11:40AM 5 A. I don't know if it's a dialogue, but these are two
11:40AM 6 letters.
11:40AM 7 Q. Two letters. Okay. So it looked like -- well, it
11:40AM 8 appeared from my reading of it that the -- one of the editions
11:40AM 9 of this publication, *Current Psychiatry*, had identified a
11:40AM 10 patient that had lost about 30 years of her memory -- his or
11:40AM 11 her memory, and you were responding to the publication?
11:40AM 12 A. It looks that way.
11:40AM 13 Q. Okay. And you found it hard to believe that the ECT had
11:41AM 14 caused that prolonged of a memory loss, correct?
11:41AM 15 A. Correct.
11:41AM 16 Q. Did you do any investigation in terms of contacting the
11:41AM 17 patient or contacting the patient's doctor to further find out
11:41AM 18 about the patient's symptoms?
11:41AM 19 A. Which patient are you talking about?
11:41AM 20 Q. The patient that is the subject of this *Current Psychiatry*
11:41AM 21 publication.
11:41AM 22 A. Well, there are two parts to my answer. One, I did not;
11:41AM 23 and two, no information is available for contacting the
11:41AM 24 patient.
11:41AM 25 Q. You write in this 2006 paper that, "The claim that 'the

patient suffered severe brain damage and lost all her memories for the past 30 years' also is unsupported. In fact, there is no published evidence that any form of ECT can cause brain damage or permanent memory loss, a subject I have reviewed in considerable detail."

Did I read that correctly, Doctor?

A. You did.

Q. And those are your words, correct, Doctor?

A. They were.

Q. Okay. Now, where you say, "There is no published evidence that any form of ECT can cause brain damage or permanent memory loss," we just looked at two publications, the 1978 APA task force as well as the 1985 NIH consensus that you participated in, and both of those discussed the issue of permanent memory loss; did they not?

A. That does not constitute published evidence. That is just conversational. No data were provided. No study was performed, and that does not constitute in my view published evidence.

Q. Let me ask you, as the manufacturer of the Somatics machine, have you or your company taken any efforts to conduct a clinical trial that you believe in your mind would answer the question of whether ECT causes either brain damage or permanent memory loss?

A. No.

11:43AM Q. And Somatics has, likewise, never conducted any clinical trials to determine the safety and efficacy of its ECT machines, correct?
11:43AM A. It has not. Correct.
11:43AM Q. Okay. I'm drawing your attention back to what we had marked as Exhibit 6 to your deposition. This is the 1985 NIH consensus. Do you recall looking at this document previously today?
11:44AM A. I do.
11:44AM Q. Okay. I want to draw your attention to another page here. This is -- I guess at the bottom is a page number. This is page number 2107 here. Do you see that?
11:44AM A. I do.
11:44AM Q. Right there. Okay. And this is the -- in this portion, the NIH consensus was addressing what further research should be conducted. Do you see here --
11:44AM A. I do.
11:44AM Q. -- what are the directions for future research?
11:44AM A. I do.
11:44AM Q. In 1985, you were already a manufacturer -- you were already -- had already formed Somatics, correct?
11:44AM A. Correct.
11:44AM Q. And Somatics had already put out its initial Thymatron machine into the market, correct?
11:44AM A. Correct.

11:44AM 1 Q. All right. And here are -- some of the recommendations
11:45AM 2 for research we see is, "Initiation of a national survey to
11:45AM 3 assemble the basic facts about the manner and extent of ECT use
11:45AM 4 as well as studies of patient attitudes and responses to ECT.
11:45AM 5 Better understanding of negative, positive, and indifferent
11:45AM 6 responses -- and indifferent responses should result in
11:45AM 7 improved treatment practices."
11:45AM 8 Did Somatics undertake that type of research, Doctor?
11:45AM 9 A. Somatics has undertaken no type of research.
11:45AM 10 Q. All right. So then if I were to ask with regards to all
11:45AM 11 of the various recommendations outlined here about research to
11:45AM 12 be undertaken concerning ECT, your response will be that you
11:45AM 13 have not undertaken any of those research?
11:45AM 14 A. Might I read this? Somatics has undertaken no such
11:46AM 15 research.
11:46AM 16 Q. Doctor, we're back on the record. You remain under oath.
11:46AM 17 I am going to draw your attention to what we're identifying as
11:46AM 18 Exhibit 12 to your deposition. Can you see my screen, Doctor?
11:46AM 19 A. I can.
11:46AM 20 Q. All right. Doctor, are you familiar with the *Journal of*
11:46AM 21 *ECT*?
11:46AM 22 A. I am an editor of it.
11:46AM 23 Q. All right. And are you familiar with a Dr. Sackeim?
11:46AM 24 A. Yes.
11:46AM 25 Q. Yes. All right. So this -- in the year 2000, Dr. Sackeim

11:46AM 1 wrote this editorial, "Memory and ECT, From Polarization to
11:46AM 2 Reconciliation."
11:46AM 3 Do you see that, Doctor?
11:46AM 4 A. Yes.
11:46AM 5 Q. And were you an editor of this journal in 2000?
11:46AM 6 A. I was, but I didn't edit this article.
11:46AM 7 Q. Right. But you certainly would have seen it, correct,
11:46AM 8 Doctor? You're familiar with this article?
11:46AM 9 A. Yes, I am familiar with it.
11:46AM 10 Q. Okay, Doctor. And in addition, in that same publication,
11:47AM 11 I believe, there was also publication by a patient, an Anne
11:47AM 12 Donahue, regarding her experience with ECT?
11:47AM 13 A. Yes.
11:47AM 14 Q. Which I'm marking as Exhibit 13. Do you see that, Doctor?
11:47AM 15 A. I do.
11:47AM 16 Q. All right. And do you recall reading this article when it
11:47AM 17 was published, Doctor?
11:47AM 18 A. I do.
11:47AM 19 Q. Okay. And do you recall --
11:47AM 20 MR. POOLE: I just want to make sure, so you're
11:47AM 21 making this as a separate exhibit, even though they're the
11:47AM 22 same?
11:47AM 23 MR. ESFANDIARI: Correct.
11:47AM 24 MR. POOLE: Okay.
11:47AM 25 MR. ESFANDIARI: This is Exhibit 13 Donahue?

11:47AM MR. POOLE: Yep. That's great.
11:47AM BY MR. ESFANDIARI:
11:47AM Q. And in this article, she mentions that she sustained
11:47AM certain memory losses, including permanent memory loss; is that
11:47AM correct, Doctor?
11:47AM A. Yes.
11:47AM Q. Did you ever speak with Ms. Donahue, Doctor?
11:47AM A. I did not.
11:47AM Q. Did you ever contact her to find out about the complaints
11:48AM she was having?
11:48AM A. I did not.
11:48AM Q. Did you ever instruct anyone at Somatics to contact
11:48AM Ms. Donahue to find out about her problems?
11:48AM A. I did not.
11:48AM Q. Did you undertake any effort to find out what type of ECT
11:48AM machine was used in her procedure?
11:48AM A. I did not.
11:48AM Q. All right. Doctor, this is an article written by
11:48AM Dr. Sackeim, again from 2007, in the publication
11:48AM *Neuropsychopharmacology* entitled, "The Cognitive Effects of
11:48AM Electroconvulsive Therapy in Community Settings."
11:48AM Do you see this, Doctor?
11:48AM A. I do.
11:48AM Q. And did you read this publication at some point after it
11:48AM came out?

11:48AM A. I did.
11:48AM Q. All right.
11:48AM A. And I may even have commented on it --
11:48AM Q. All right.
11:48AM A. -- somewhere in press.
11:48AM Q. And in this publication, the authors reviewed the patients
11:48AM of the various hospitals within their community and found that
11:49AM certain ECT patients suffered from memory deficit issues; is
11:49AM that correct, Doctor?
11:49AM A. As -- to the best of my recollection, yes.
11:49AM Q. Doctor, do you agree with me that pharmaceutical
11:49AM manufacturers conduct clinical studies on their drugs; true or
11:49AM false?
11:49AM A. I do not. I believe they pay for a psychiatrist to
11:49AM conduct such studies, and the studies are designed by
11:49AM psychiatrists, never by the drug manufacturer.
11:49AM Q. Okay. So your testimony is that a pharmaceutical
11:49AM manufacturer that makes psychiatric medication pays other
11:49AM psychiatrists to conduct clinical trials to determine the
11:49AM safety and efficacy of their drug, true?
11:49AM A. That's correct.
11:49AM Q. All right.
11:49AM A. That's the standard.
11:49AM Q. All right. Did Somatics ever do that with respect to ECT?
11:49AM MR. POOLE: Objection. Asked and answered.

11:50AM 1 Dr. Abrams, you can give a yes or no to that?
11:50AM 2 THE WITNESS: As I said before several times, no.
11:50AM 3 BY MR. ESFANDIARI:
11:50AM 4 Q. Doctor, we -- drawing your attention to what we're going
11:50AM 5 to mark as Exhibit 20, this is a November 15, 2006 email
11:50AM 6 exchange between you and Dr. Swartz. Do you recall seeing this
11:50AM 7 email prior to your deposition today?
11:50AM 8 A. I believe this is one of the things I reviewed. I'd have
11:50AM 9 to -- I have to see -- go to the other end, which would be the
11:50AM 10 part that I -- where I talk. Can you go all the way to the end
11:50AM 11 so I can make sure this is something that I absolutely saw?
11:50AM 12 MS. COLE: Your Honor, I think this is repetitious of
11:50AM 13 something that's already been done.
11:50AM 14 THE COURT: Yeah, I agree. Stop. Is that the end of
11:50AM 15 it?
11:51AM 16 AV TECHNICIAN: That is the end.
11:51AM 17 MR. ESFANDIARI: I think that was the last clip, Your
11:51AM 18 Honor. We can stop there.
11:51AM 19 THE COURT: Sounds good. All right. Good break time
11:51AM 20 for lunch, 10 minutes of 12:00. Let's be back right at 1:00.
11:51AM 21 So you get an hour and 10 minutes, and we'll get the ball
11:51AM 22 rolling right at 1:00.
11:51AM 23 Remember don't talk about the case with each
11:51AM 24 other, don't do any independent research, and have a good
11:51AM 25 lunch.

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UNITED STATES DISTRICT COURT

MIDDLE DISTRICT OF FLORIDA

REPORTER TRANSCRIPT CERTIFICATE

I, Tana J. Hess, Official Court Reporter for the United States District Court, Middle District of Florida, certify, pursuant to Section 753, Title 28, United States Code, that the foregoing is a true and correct transcription of the stenographic notes taken by the undersigned in the above-entitled matter (Pages 1 through 266 inclusive) and that the transcript page format is in conformance with the regulations of the Judicial Conference of the United States of America.

Tana J. Hess, CRR, RMR, FCRR
Official Court Reporter
United States District Court
Middle District of Florida
Tampa Division
Date: June 12, 2023