

VOLUME FIVE OF EIGHT

STATE OF SOUTH CAROLINA
In The Supreme Court

APPEAL FROM HORRY COUNTY
Steven H John, Circuit Court Judge

THE STATE,

RESPONDENT,

V

STEPHEN CHRISTOPHER STANKO,

APPELLANT

RECORD ON APPEAL

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**** DEFENDANT'S EXIBITS 2-19 (NORMAL BRAIN/STANKO BRAIN)
HAVE BEEN TRANSPORTED TO THIS COURT****

1 Q And (N) to you means normal?

2 A Yes

3 Q Now, your prior testimony was that you interpreted zero
4 to mean a problem, or does that mean negative?

5 A That means a problem

6 Q Now, let's look at these in context Everything where
7 there is an (N), meaning normal, would be like the ears, the
8 heart, the genitals, the reflexes, the moro function, normal

9 A Yes

10 Q Joints normal Everything is normal, but when it comes
11 to paralysis you wouldn't describe paralysis as normal
12 Paralysis is a condition It would either be positive or
13 negative, would it not?

14 A Well, it's either there or it's not

15 Q Correct Right If it was there would we put a plus
16 sign?

17 A Would I?

18 Q That would be one way to designate it, would it not?

19 A It would be another way to do it, yes

20 Q That would be a way to do it, or you could put a zero
21 if it was negative

22 A Right

23 Q Much the same way the zero was used on this same form,
24 a few lines above, to indicate negative

25 A I suppose you could interpret it that way, if you ---

1 Q Certainly I mean, whoever filled this form out used
2 zero up here to describe negative, but it's your
3 interpretation that they described -- that these conditions
4 down here -- that they used zero to describe a positive Is
5 that what you are telling this jury?

6 A No They put an "O" there for cyanosis, and an "O" for
7 pallor, icterus and paralysis

8 Q Let me ask you this, Doctor Let's just say that the
9 person that used zero to describe negative in the upper part
10 of this form used zero to describe negative in the lower part
11 of the form, just hypothetically, what would that mean to you?
12 If it said cyanosis, and zero meant negative, what would that
13 mean to you?

14 A It would mean there was absolutely nothing wrong

15 Q Right And if -- paralysis would be what? Nothing
16 wrong

17 A Well, if you interpret it that way it would mean there
18 is no paralysis

19 Q Right And pallor, zero, icterus, zero, murmurs, zero
20 So if you interpret it that way that means there are no
21 problems, correct?

22 A In that line of interpretation, yes

23 Q All right Now, let me draw your attention to the line
24 right above this grid It says, "Initial physical
25 examination"

1 A Uh huh (indicating positive)

2 Q And if you will take a look the last sentence -- you
3 see those instructions there, "to be completed within twenty-
4 four hours of birth" You see those?

5 A Yes

6 Q And the last sentence of that paragraph says what?

7 A "Use progress sheet for abnormalities, description and
8 elaboration"

9 Q All right "Use progress sheet for abnormalities,
10 description and elaboration" Doctor, please refer to the
11 progress sheets that indicate a problem with cyanosis,
12 paralysis, pallor, icterus, or murmurs

13 A Which ones, pallor, icterus, which ones?

14 Q Those are the items that are indicated with a zero

15 A With an "O", yes

16 Q The ones that you have testified to this jury that, in
17 your opinion, mean that they were positive, that there was a
18 problem, and the instructions on the sheet saying, if there is
19 a problem use a progress sheet to elaborate, to further
20 describe

21 A Yes Yes

22 Q I want you to -- you have the full report I want you
23 to pull the progress sheet that indicates any one of these
24 problems Take your time

25 A Well, all I have are the nursing notes, and the order

1 sheet If you have a progress note sheet somewhere ---

2 Q No sir, I don't There are no progress notes
3 indicating any of these problems in the report I have

4 A Yes There is nothing called a progress note here

5 Q So wouldn't it -- Doctor, wouldn't it indicate to you
6 that these were not problems that existed, that these were
7 negative findings because there were no progress sheets filled
8 out on any of these problems that could have been potentially
9 very serious?

10 A Unless there is a progress note that's missing from
11 here, yes

12 Q And you have no reason to believe there are any
13 progress notes missing, do you, Doctor?

14 A Well, you mentioned you -- to look on the progress note
15 sheet, and I don't find one here

16 Q And I don't believe there are any there, Doctor
17 That's what I'm saying

18 A Very well

19 Q Okay Now, they did find a problem with the baby,
20 excessive mucous and vomiting, clear fluid They drew some
21 fluid out of the baby's tummy, and that was the extent --
22 appears the extend of the treatment for the vomiting Is that
23 fair to say?

24 A They did those things, yes

25 Q I want to take you to the sheet -- the next page of

JAMES W THRASHER, M D - CROSS BY HEMBREE

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1 this that, at the top of the page says "Condition on
2 Discharge", in small print, and it has a date of 1/17/68

3 A Just a minute

4 Q If you can find that for me

5 A Is that the one that begins with "Diagnostic Summary"?

6 Q No sir It has at the top -- it says "Condition on
7 Discharge", and it's a very small -- it's in very small print
8 Let me show you the page

9 A Here you go

10 Q Let's take a look at the bottom of that page, and it
11 says 1/15, 6 00 P M Do you see that?

12 A Yes

13 Q What does it say about the baby at this point?

14 A Looks better now, with spontaneous movements, all --
15 all fairly good No vomiting today except for minimal
16 regurgitation

17 Q Okay

18 A Will start formula

19 Q All right So whatever -- the vomiting appears to have
20 subsided and now they are moving the baby on to regular --
21 it's regular diet

22 A Yes

23 Q Very good And then on the 16th what does it tell us?

24 A Moderate jaundice

25 Q Okay

1 A Taking P D s without difficulty, no vomiting, bilirubin
2 drawn, neurological okay

3 Q Neurological okay That's good news, isn't it, Doctor?

4 A Sure is

5 Q Sure is But it -- that's the first time that the
6 jaundice appeared, was a couple of days after birth Is that
7 fair to say?

8 A Apparently

9 Q Uh huh And then let's see, on the 17th, tell us what
10 that says

11 A At the top?

12 Q Yes sir

13 A "Clinically doing well, bilirubin one -- sorry --
14 bilirubin 19 1 milligrams percent total

15 Q That's a little bit high, isn't it?

16 A Just a bit

17 Q Just a tiny -- yes, but a little bit Now let's look
18 at the 18th, and tell me what that says?

19 A The first line is "Bilirubin down to 17 8 milligrams
20 percent today No abnormalities on physical examination
21 except resolving jaundice Will get a repeat bilirubin in the
22 outpatient clinic tomorrow "

23 Q All right So based on those records is it fair to say
24 that the baby vomited a little bit, it gave them some concern,
25 the vomiting subsided within about a day, the day after that

1 the baby developed a very mild case of jaundice, bilirubin was
2 up just slightly, a mild case of jaundice The day he was
3 released the bilirubin was dropping into a more normal level,
4 and they were going to do a follow-up just to check on the
5 bilirubin, so he's slightly jaundiced when he was released?

6 A Yes

7 Q And no other -- no other conditions whatsoever were
8 noted?

9 A No

10 MR HEMBREE Thank, Dr Thrasher

11 THE COURT Redirect

12 MR DIGGS Just a couple of questions

13 REDIRECT-EXAMINATION BY MR DIGGS

14 Q With respect to the entry of different codes we are
15 talking about entries that were made by two different
16 physicians, correct? If you will look in those records

17 A Yes, apparently, yes

18 Q All right So when the Solicitor points to the -- one
19 code, and then another code, he's talking about entries that
20 were made by two different people

21 A Well, I don't know that as a fact

22 Q You can look at the ---

23 A I don't know who signed what

24 Q All right But the records are in evidence and we can
25 look at that later if we choose to, correct?

1 A Yes

2 Q All right But there is no question that this baby was
3 being monitored closely, the doctor -- correct? Do you agree?

4 A Yes

5 Q ---To closely monitor Call me at home, the doctor
6 said, in the event that you feel the need Is that normal?

7 A Call me at home if the vomiting continues

8 Q Yes Is that normal?

9 A Under the circumstances I would say yes

10 Q Oh yes, but how normal are these circumstances?

11 A Well, any time a child is vomiting and it's of concern
12 it's -- that would be appropriate for a physician to request
13 that he be called if it continues

14 Q And so that demonstrates there was a problem,
15 potentially, in this physician's mind

16 A Yes, it does

17 Q All right And no doubt he had a poor Moro reflex

18 A It was stated that

19 Q It was stated And again, what does that mean?

20 A It's an abnormal reflex finding

21 Q With relation to what? Meaning what?

22 A Means the -- it's an indicator that there may be
23 something wrong in the central nervous system

24 Q There you go All right And the central nervous
25 system is also referred to as what?

1 A The brain and the spinal cord

2 MR DIGGS All right Thank you very much, Doctor

3 THE COURT Anything else, Solicitor?

4 MR HEMBREE Just one question, Your Honor

5 RECROSS-EXAMINATION BY MR HEMBREE

6 Q Dr Thrasher, the -- there was a follow-up though check
7 -- there was a follow-up check on the moro reflexes, and the
8 doctor reported that the reflexes were fairly good

9 A Yes

10 MR HEMBREE Thank you, Doctor

11 THE COURT Do you wish the witness to be excused?

12 MR DIGGS Yes sir

13 THE COURT Any objection?

14 MR HEMBREE No objection, Your Honor

15 THE COURT All right, sir, you are released from your
16 Subpoena You may go back to your regular duties

17 A Thank you

18 MR DIGGS Your Honor, could we approach for a second?

19 THE COURT Sure

20 (BENCH CONFERENCE TAKES PLACE OFF THE RECORD)

21 THE COURT All right, ladies and gentlemen of the
22 jury, we are going to recess for the evening

23 Leave your pens and pad in your seats As -- we will
24 follow the procedure as we did yesterday The agents will
25 have you here by 8 30, and hopefully we will start right at

1 nine o'clock

2 Thank you very much

3 (THE FOLLOWING TAKES PLACE OUTSIDE THE PRESENCE OF THE
4 JURY)

5 THE COURT All right, counsel, I'll see you tomorrow
6 morning We will start at nine o'clock Thank you

7 MR HUMPHRIES Thank you, Judge

8 (THE FOLLOWING TAKES PLACE ON THE NEXT DAY, NOVEMBER 15,
9 2009, OUTSIDE THE PRESENCE OF THE JURY)

10 THE COURT Is the State ready to proceed?

11 MR HEMBREE Yes, Your Honor

12 THE COURT Defense?

13 MS WILLIAMS Yes sir, we are, except I ---

14 THE COURT Gentlemen, can you find Mr Diggs, please

15 MS WILLIAMS Your Honor, while we are looking for Mr
16 Diggs there's a matter of making sure we've got the record
17 protected

18 Mr Humphries and I discussed yesterday the slide show
19 that Brent Turvey presented

20 THE COURT Yes Ma'am

21 MS WILLIAMS I have that on a diskette, and I've
22 printed a hard copy for the record I need to move that into
23 evidence as ---

24 THE COURT Any objection to that?

25 MR HUMPHRIES No sir, Your Honor

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1 THE COURT All right Get the Court Reporter to mark
2 it, please

3 (HARD COPY OF BRENT TURVEY'S POWERPOINT PRESENTATION
4 ADMITTED INTO EVIDENCE AS DEFENDANT'S EXHIBIT NUMBER 38)

5 (D V D OF BRENT TURVEY'S POWERPOINT PRESENTATION
6 ADMITTED INTO EVIDENCE AS DEFENDANT'S EXHIBIT NUMBER 39)

7 MS WILLIAMS Thank you, Your Honor

8 THE COURT All right Now, is it your intention that
9 the disk and the hard copy go back to the jury?

10 MR HUMPHRIES It's in evidence I mean ---

11 THE COURT All right Okay

12 MR HUMPHRIES And Your Honor, they have -- I believe
13 their first witness, Dr Gur, has a PowerPoint presentation
14 which I saw this morning

15 THE COURT Okay

16 MR HUMPHRIES I don't have any objection to it, but
17 they will -- obviously they will have to -- need to supplement
18 the record in that regard too I don't think they are
19 prepared to do that right now, but before the end of the case

20 THE COURT All right Very good

21 All right So those are exhibits -- Defendant's 38 and
22 39 are in evidence without objection

23 Ask the jury to come in, please

24 (THE FOLLOWING TAKES PLACE WITHIN THE PRESENCE OF THE
25 JURY)

JURY IN
RUBEN GUR - DIRECT BY WILLIAMS

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1 **THE COURT** All right, Mr Diggs, your next witness,
2 please, or Ms Williams

3 **MS WILLIAMS** Thank you, Your Honor The Defense
4 calls Dr Ruben Gur to the stand

5 **THE COURT** All right

6 All right, sir Please come around to be sworn

7 **RUBEN GUR, ,** being first duly
8 sworn, testifies as follows

9 **DIRECT-EXAMINATION BY MS WILLIAMS**

10 Q Dr Gur, will you tell us where you are currently
11 employed?

12 A I'm currently employed at the University of
13 Pennsylvania in Philadelphia

14 Q And can you tell us, please, what is your position
15 there, and what is it that you do that

16 A I'm a professor with tenure at the medical school My
17 primary appointment is in Psychiatry I have secondary
18 appointments in Neurology and in Radiology, and I also work at
19 the Philadelphia V A Hospital in the Behavioral Services
20 section I direct the Brain Behavior laboratory at the
21 University of Pennsylvania, and head the Center for
22 Neuroimaging in Psychiatry

23 Q Okay Dr Gur, can you please give us the benefit of
24 your formal education?

25 A Yes I received my Bachelors Degree in Psychology and

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1 Philosophy at the Hebrew University of Jerusalem in Israel,
2 received my Masters and Ph D in Clinical Psychology at
3 Michigan State University in East Lansing, Michigan, and did
4 Post-doctoral Fellowships at Stanford University at Stanford,
5 California, and at the University of Pennsylvania Then
6 that's where I stayed since 19 -- I got my Ph D in 1973, my
7 Post-doctoral training was '74 through '76, and I was
8 assistant professor -- I'm sorry -- Post-doctoral training '73
9 through '76 My Assistant Professorship started at Penn in
10 1974, and that's -- and I was promoted and received tenure
11 over the years

12 Q Can you please tell us if you are a member of any
13 professional associations, professional affiliations?

14 A Yes I am a member with a Fellow Status at the
15 American Psychological Association, in the International
16 Neuropsychological Society, in the American College of
17 Neuropsychopharmacology -- it's a mouthful of a name, but
18 that's how the college is called, and I am a Fellow -- I have
19 a Fellow status in that college, and in the American
20 Association for Psychological Science, where I also have a
21 fellow status

22 Q Dr Gur, can you please tell us if you've had any
23 articles published, any written materials, things of that
24 nature, and while you are doing that will you explain to us if
25 they were peer-reviewed or refereed, or non-refereed, and in

1 that context?

2 A Yes It's an important distinction A peer-reviewed
3 or a refereed manuscript has been reviewed by peers, as the
4 name implies, and was published in a peer-reviewed journal,
5 and what it means is that when you submit an article it is
6 sent out to experts in the field and they read it and tear it
7 to shreds and send their comments back, and you will have to
8 respond to those concerns and comments and re-do the analysis,
9 if necessary, but by the time it comes out there is some
10 credibility to it that it has been read by experts and
11 considered worthy of publication in that it advances knowledge
12 in the field This is the criterion that is being used by the
13 University to decide about hiring and promotion I now
14 believe I have a bit over three hundred articles in peer-
15 reviewed journals

16 Q Okay Let me ask you, do you -- I think you mentioned
17 research Can you tell us about if you participate in
18 research, and what kind, and give us the benefit of that
19 information, please

20 A Yes Research is what I do most of my time I was
21 fortunate to be at a place in time where neuroimaging really
22 was born and developed, and within that effort I was part of a
23 team that developed both the P E T imaging, M R I , the
24 variety of methods for being able to look at the brain while
25 an individual is still alive We used to have to wait until

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1 someone died before we could open up the skull and look at the
2 brain

3 And this research is expensive, the procedures are
4 expensive, so you have to get grants in order to do that work,
5 and the grants also work similarly through the peer-review
6 system You have an idea for a project You have to explain
7 the idea, how it relates to what work that was done, in what
8 way it is novel, and then you explain in detail how you are
9 going to do the research, and how much money you need in order
10 to do it, and these applications go to the National Institute
11 of Health The National Institute of Health has panels of
12 experts from around the Country and the world who will review
13 all those grant applications and decide whether they are solid
14 science enough to be funded, and then they give a priority,
15 and then N I H goes through it's coffers and sees how many of
16 those that were approved can be funded, and usually it's
17 something about ten percent of those grants that get approved
18 actually get funded

19 Q So only ten percent of the ones that submit for funding
20 usually actually get the money Is that what you are saying?

21 A Well, it's actually worse About a third of the grants
22 that get submitted get approved, probably even less than that,
23 and out of those that get approved there is only enough money
24 to fund anywhere -- right now as we sit here it's about ten
25 percent of those that get approved get actually funded Our

1 work has been funded continuously since 1975

2 Q And how much, typically, do you have in grant money,
3 normally?

4 A Well, this year is a bit unusual We got a large grant
5 from N I H It is called an Grand Opportunity Grant, and
6 it's part of the stimulus package, so we got -- together with
7 Children's Hospital we got Twenty Million Dollars to spend in
8 the next two years doing a landmark study

9 Our usual budget is about Three Million to Three and a
10 Half Million Dollars a year

11 Q And this landmark study -- you said normally it's about
12 Three to Three and a Half Million a year, but this year is the
13 unique year Is that right?

14 A Well, this year, yes It's now another -- for our unit
15 it's another Five Million

16 Q And this landmark study that you are going to be
17 participating in is -- would -- can you tell us about that?

18 A Yes We have -- the Children's Hospital has a big
19 genetics -- genomics unit that has been taking blood -- some
20 extra blood from all the children who come to the hospital for
21 genomic analysis, and they are -- they, based on that, have
22 collected about forty thousand samples of genetic material,
23 and they have been discovering new genes almost every week
24 related to all sorts of diseases such as asthma, heart
25 disease, but there is not much they discovered about behavior

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1 because that information is not in the medical record, and our
2 project is to go and interview ten thousand children in the
3 next two years, in their homes, or if it's impossible they can
4 come to the University, and collect data on their behavior and
5 their development It doesn't say in the medical record
6 whether the child is shy or aggressive, or has difficulties
7 with attention or with memory, so we will collect that
8 information and administer to them computerized
9 neuropsychological battery that will scan the different
10 functions that can be related to regional brain function, and
11 that way we will have information that will allow us to link
12 the genetic material to information about how the brain works

13 Q Okay So you are -- okay, which leads me to my next
14 question Have you -- I mean, I -- have you -- can you tell
15 us about your evaluations, if any, that you've performed in
16 M R I -- with the M R I processing, if that is part of your
17 research

18 A Yes Analyzing M R I is a very major part of our
19 research In this goal -- grant, we are going to bring in a
20 thousand of those children Out of the ten thousand we will
21 bring in a thousand for M R I It will be a very extensive
22 M R I that will include both structural and functional
23 M R I , and over the years we were among the first to present
24 methods for quantitative analysis of the M R I That work
25 was done in the late eighties, early nineties Now it's

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1 become wide-spread, and we use those methods routinely, both
2 in research and in our clinical work It become -- became
3 especially relevant recently with veterans returning from Iraq
4 and Afghanistan who have head injuries that -- that are not
5 easily documented by traditional procedures, so they have this
6 problem where they suffered the head injury and they get an
7 M R I and the M R I comes back normal, and so there is
8 nothing that can be done, but with the quantitative methods we
9 can document where the abnormality is that is not seen by a
10 neuroradiologist, and thereby design methods for intervention,
11 to teach them how to overcome the abnormalities that are
12 produced by loss of brain tissue due to the head injuries

13 Q Dr Gur, as part of your research -- I don't mean to be
14 repetitive, but I think -- have -- as part of what you've done
15 have you participated in any type of studies that develop the
16 relationship, based on what you saw in an M R I , connected to
17 behavior?

18 A This is the bulk of our work, linking what we see with
19 M R I to behavior that can be measured with procedures such
20 as neuropsychological testing, or functional M R I where you
21 obtain information on how the brain responds to different
22 tasks and situations

23 Q Is it -- what -- the common name -- you say an M R I
24 plus a functioning M R I What is the com -- are there two
25 different tests?

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1 A They use the same scanner, the same device, but the
2 procedure is very different The structural M R I gets
3 information about the anatomy of the brain, the structure of
4 the brain

5 With functional M R I we get information about changes
6 that occur when blood flow comes into the brain, so the
7 procedure is quite different I think maybe it will help
8 understand that better if I can explain a little bit about how
9 the brain works

10 Q Absolutely, and I will get -- come to that

11 MS WILLIAMS Your Honor, at this point we would
12 submit Dr Gur as an expert in Neuropsychology and
13 Neuroimaging

14 THE COURT Do you wish to question the witness?

15 MR HUMPHRIES I don't, Judge Thank you

16 THE COURT He is qualified to give his opinion

17 MS WILLIAMS Thank you

18 Q Well then, Dr Gur, I'm going to ask you if you can do
19 that Can you please tell -- well, can you do exactly that,
20 give us an idea of the principles that you've been studying
21 about how the brain works?

22 A Yes If you can open the lid of my laptop, and take
23 the lid off the projector you should be able to see -- you may
24 have to count to five

25 So what you see on the top, where it says neuron, is a

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1 cartoon of ---

2 Q I'm sorry, Dr Gur, if I may, I -- if this would ---

3 A Oh, that will be great

4 Q The little yellow button is the red pointer

5 A So the brain consists of neurons Neurons are the
6 cells that are in the brain, and this is a cartoon of a
7 neuron, and it's a cartoon in the sense that there is no
8 neuron in the brain that looks like that, but all neurons have
9 all these parts in them

10 So what's important to know about a neuron, it has cell
11 body that's the -- that's what you see here, and what is
12 different in a neuron compared to any other -- any other cell
13 in your body, is that it has a lot of these little protrusions
14 on the side, and these protrusions are called dendrites
15 These protrusions are important because they allow -- they
16 increase the surface of the nerve cells and allow a lot of
17 chemicals that are surrounding the nerve cells to get attached
18 to them Now these chemicals that surround the cell are
19 called neurotransmitters, and when enough of them get attached
20 to the skin, to the outside of the cell body, they change the
21 electrical polarity between what is outside the cell and what
22 is inside the cell, and that produces a short At some point
23 the electrical polarity builds up and produces a short that
24 produces an electrical signal that travels down the membrane,
25 or the skin of the cell, and shoots down a long fiber that is

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1 called an axon, that you see here When it shoots down that
2 axon it comes to the axon terminals and here it releases new
3 chemicals, and those new chemicals travel -- and now if here
4 you have another neuron they will travel and attach themselves
5 to the new neuron and produce another short, another
6 electrical signal, and that's how neurons communicate with
7 each other inside the brain

8 Now eventually they will reach a muscle, and if this --
9 these chemicals get attached to the muscle the muscle will
10 contract, so basically this is how the brain controls
11 behavior It will generate electrical im -- pulses that will
12 travel, eventually getting to a muscle, and when they get to
13 the muscle the muscle will contract

14 Now, depending on which muscle they get to, and how the
15 muscle contracts, will determine whether you are moving your
16 arm up or down, or sideways, or whatever you do, or if you
17 speak the mouth muscles will be activated, but this is, in
18 principle, the way the brain works It has billions of those
19 neurons that communicate with each other

20 Now here I have a view of the brain, and it's a side
21 view of the brain, and you can see the major brain regions
22 The main regions of the brain are the frontal lobe here, the
23 temporal lobe in green, the parietal lobe here in blue, and
24 the occipital lob here in violet, and down here you see this
25 stem coming up -- it's called the brain stem -- and back here

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1 you see a structure called the cerebellum, and that is the
2 part that controls fine movement

3 Now the way the brain works is that information is
4 coming to the brain constantly, both from outside and from
5 inside When it comes from outside it can be visual
6 information Visual information is transmit -- all the
7 sensory information that comes in meets at the structure
8 called the thalamus, so visual information goes there from the
9 eyes, the auditory information, the sound, comes from the
10 ears, sensation comes from the skin, smell from the nose, and
11 that -- all this is external information They go, in very
12 raw form, and then they get transmitted by the thalamus to the
13 different parts of the brain that handle them

14 So visual information goes straight to the back of the
15 brain, the occipital cortex, and the first job of the
16 occipital cortex really is to reverse what we see, because the
17 way our -- the lens of our eyes are structured, actually
18 everything we see comes to the brain upside down, so the brain
19 has to reverse it, make it right side up, and then it -- the
20 occipital part of the brain only processes very raw stuff It
21 can see lines, it can see light and dark, it can see movement,
22 but it has no concept of what it sees It just -- as it moves
23 information forward four lines will form a square, emotion
24 will form like a vision of the hand moving as opposed to
25 something else, and so as it moves forward to the parietal

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1615 ,

1 lobe that information gets more abstracted, and by the time it
2 reaches the parietal lobe we get the concept of a door or a
3 window, or a hand moving

4 Parietal lobe and superior temporal area, which is where
5 the auditory information comes, processes the auditory
6 information in exactly the same way It doesn't immediately
7 understand words or emotional expression, it only -- it only
8 hears pitch, voice, it makes a dif -- it distinguishes, is
9 this a human voice, or is this a dog, or is this a bird
10 chirping, or is this the -- my car engine, so it begins to
11 differentiate that, and puts it together in the parietal lob
12 with the visual information that comes in So this is how the
13 brain works The raw stuff gets processed first in the --
14 what is called the primary sensory areas, primary visual area,
15 primary auditory area, and then it moves forward and becomes
16 articulated into concepts, into words, into images, into
17 pictures that have meaning

18 Now, the border between the frontal and the parietal
19 area -- let's -- here, here, it's -- I see it Yes In this
20 border here there is the so-called sensory motor strip, and
21 that was discovered during brain surgery of people with
22 seizure disorders who had to have their brain operated on If
23 you put an electrical signal in one spot there on the right,
24 the left hand will go up If you put next to it -- spot next
25 to it the left hand will go down If you move further the

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1 finger will move, so you can actually have the whole human
2 being represented in this strip that goes right on the side of
3 your head One region in it will make your eye close up and
4 down Another region there would get you to start talking
5 Another region, if you stipulate, will stop you, even if you
6 are in the middle of the sentence, you will stop talking So
7 this is the sensory motor strip, and when you ask the
8 patient -- because these patients can be fully awake
9 throughout the surgery -- the brain itself does not have any
10 pain receptors, so once you get through the skin of the -- of
11 your head there is no pain You can open up the brain and the
12 brain won't feel pain, so in these surgeries the patient can
13 stay alive -- I'm sorry -- hopefully -- can stay awake under
14 local anesthesia, so you ask them, why did you move your arm
15 up and they will say, because I felt like it The brain has a
16 need to conceive of itself as being in control of your
17 actions

18 Another illusion that we have is really that we only
19 have one brain If you push the button again, or if you give
20 me your skull that you have there I can explain that If --
21 just put ---

22 MS WILLIAMS Your Honor, may I approach him?

23 A Yes

24 So this is a model of a skull and the brain inside
25 It's ---

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1 MS WILLIAMS I'm sorry Your Honor, could Dr Gur
2 come down and come in front of this microphone?

3 THE COURT Just as long as he stands right in front of
4 the microphone

5 MS WILLIAMS If you will come, Dr Gur, down here, it
6 might be easier for the jury to see the brain

7 This is the microphone This is just where we have to
8 stay

9 A So this is the -- a skull, and I opened it and took out
10 the brain, in this case made of plastic What -- another
11 illusion is that we only have one brain, or one mind As a
12 matter of fact we have two brains that are like totally
13 separate from each other There are no nerves that are
14 present in both sides of the brain, so each one is a fully-
15 contained unit, and the way those two parts communicate is
16 through this structure here in the middle that is called the
17 corpus callosum, c a l l o s u m The corpus callosum is
18 fibers, is only fibers, it has no cells in it, only those long
19 fibers, the axons

20 Now, one thing I need to point out is, you see the red
21 blotches on the axon These blotches are, in reality, white,
22 not red, because they are made of fat What happens is that
23 when you are born there is almost no fat in your brain The
24 fat is needed because it surrounds these axons and prevents
25 the electrical signal from just dissipating, in the same way

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1 that the electrical company puts rubber around electrical
2 wire, otherwise the electricity will just go everywhere The
3 brain doesn't have rubber, the brain uses fat, and that fat is
4 called Myelin, M y e l i n When you are born you have
5 almost no fat in the brain That's why a baby, you can tickle
6 the left foot and they will throw both arms They cannot
7 really direct where they want the action to go And as -- and
8 the first place where the myelin develops, where the axons
9 become layered with this fat, is in the sensory motor area,
10 and as the sensory motor area becomes what we called
11 myelinated, being layered with fat, the kid can eventually
12 move only one arm, and start grasping things, and as we know,
13 eventually gets their act together and sits up and begins to
14 move around And that's totally dependent on how much of that
15 fat gets layered on the axons

16 So these axons also communicate between the two sides of
17 the brain, and they give us the illusion that we have one mind
18 when, in fact, each side of the brain processes information
19 differently If we look at it here, this is the right
20 hemisphere, this is the left hemisphere If you get damage in
21 this region here, around the third frontal convolution of the
22 left hemisphere you will stop talking, you will have deficits
23 in being -- in expressing yourself It is called aphasia,
24 a p h a s i a And people with damage in this area have very
25 difficult time communicating, their speech is slurred, slow,

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1 their vocabulary drops, the ability to come up with words to
2 describe what -- the grammar goes -- is shattered, they have a
3 very difficult time speaking

4 Now if the same lesion is in the -- is further back ---

5 Q Lesion means?

6 A Lesion means that there is damage, like when you make a
7 stroke in that area, or if you had a gunshot wound in this
8 area, or anything that damages that area

9 If the damage is further back these people talk fine, in
10 fact, they talk too much, but they don't understand They
11 have deficits in understanding language, so you may ask them
12 about one thing and they will blurt out a whole story about
13 something unrelated to your question So damage in the front
14 produces deficit in speech expression, more in the back the
15 deficit is in comprehension But you can have the same damage
16 on the right side, your speech will be fine, so speech is
17 mostly on the left hemisphere

18 The right hemisphere controls more spacial processing
19 If you try to imagine how a house will look like if you look -
20 - entered from the back, or how an object would look like if
21 you have to rotate it in three dimensions, or what is the
22 angle that you should use in the pool table in order to get
23 the ball in This is not with words This is done with
24 pictures, and that's done in the right hemisphere People
25 with damage in the right hemisphere will get lost on the way

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1 to the bathroom They can't read maps They lose direction
2 Also, is important for face recognition People with right
3 hemisphere damage will have deficits in recognizing faces
4 They may have a dear relative coming to visit them and they
5 won't recognize them by the face, only after they start
6 talking they may recognize them by the voice, but not by the
7 face

8 It also -- the right hemisphere also puts the emotional
9 tone on your language, so people with right hemisphere
10 damage -- one of the first cases -- there's well-known case,
11 was a teacher whose complaint was that she lost control of her
12 class, all of a sudden the kids started behaving strange, and
13 it turns out she had the damage exactly in the front, in the
14 third frontal convolution of the right hemisphere Her speech
15 was fine, but she couldn't put emotional intonation into it,
16 so imagine a teacher saying to the kids, please be quiet now,
17 you know, there is no emotional intonation in it So the
18 emotional intonation on your voice, what is called prosody,
19 comes from the right hemisphere So those hemispheres are
20 very, very different

21 Now, the other thing you can notice here is that in the
22 middle it's empty, right here, right in the middle of the
23 brain It looks empty Well, it's not empty in reality In
24 reality it is full of fluid Your brain actually floats in
25 fluid That fluid is called cerebral spinal fluid, and it

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1 runs from your brain -- your whole brain is in it, your whole
2 spinal cord contains that fluid, so all your nerves are
3 surrounded by fluid, and that fluid provides nourishment in
4 addition to the blood Most of the nourishment of the nerves
5 comes from the blood, but some of it also comes from that
6 fluid, but very importantly for the brain, it also cushions
7 the brain, otherwise you can get brain damage every time you
8 sneeze Your brain actually floats in that fluid, and if you
9 can look at the skull you can see that the back of the head,
10 right here, is very nice and smooth It's very smooth, the
11 bone You can actually feel how smooth it is But the front
12 of the head has a lot of nasty bones They are called the
13 orbital areas, right above the eyes here, and above the nose,
14 so -- and the brain sits right on top of this, the front of
15 the brain, sits right on top of these areas, so every time if
16 you sneeze and your brain went up and down it would hit those
17 bony areas, but the fluid prevents that from happening, so
18 your brain just maybe floats up and down

19 Unfortunately, if you have a head injury like in a car
20 accident, or being hit with a club, or one of those things,
21 then two things happen One is that the head (sic) falls on
22 those bones and can get crushed, especially in the frontal
23 area, which is right over these bones, and the second thing is
24 that the brain gets twisted if the injury is -- unless the
25 injury is straight head on If the injury is a bit on the

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1 side, which is usually what happens, then in addition to the
2 blow the brain gets twisted Now, what happens when the brain
3 gets twisted, you may have heard about a torque, when you try
4 to move something around the closer you are to the center of
5 what you are trying to move the stronger the force That's
6 why we don't open the door by holding the pivot and moving the
7 pivot like this It will be impossible Even the strongest
8 man in this room would not be able to open the normal door
9 just holding the pivot That's why we have a door handle It
10 gives us a bigger distance, you can use a lot less force and
11 open the door

12 Now what happens in the brain is the reverse of that
13 You can imagine how much force there is in the center of the
14 pivot when you move the door handle, so in the brain the whole
15 brain is like the handle and the center of the brain is like
16 the pivot, so when the brain twists most of the force of the
17 twist comes in the mid-line of the brain, which has several
18 very important structures, and what happens when it twists is
19 that the nerve cells sheer, they stretch, and when they
20 stretch they get damaged After it they try to get back and
21 repair themselves, and some of them do, but a lot of them
22 don't, and when a brain cell doesn't fire it dies So a brain
23 cell needs to continue to fire or otherwise it will die, and
24 when brain cell dies it's place is taken up by fluid So one
25 way we can know that regions in the middle of the brain were

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1 destroyed is we can see that there is a lot of fluid in the
2 center of the brain

3 Q Dr Gur, I hate to interrupt you but let me ask you
4 this Is there any way for us to know if -- how or if that
5 damage happened? I mean, you know, if we don't know for sure,
6 I mean, do we have any way to test that?

7 A Well, the only way to find out is with doing an atomic
8 study of the brain, like M R I , and measure the volume of the
9 different parts of the brain, and importantly, measure the
10 volume of the fluid, and to see how normal it is relative to
11 healthy brains

12 Q Let me ask you this Can you explain to us -- you were
13 talking about as a child, and I would say -- I'm going to call
14 it the fatty cover on the thing because I would say the word
15 wrong -- but the fat covers our neurons as we develop Can
16 you explain that a little bit more to us, because you said
17 when we are born we have no fat in the brain, virtually

18 A Right

19 Q And kind of what that means as we develop

20 A Okay The first -- as I mentioned, the first part of
21 the brain that gets that fat is the part that controls
22 movement Then it spreads to the parts that control speech,
23 and by age about one and a half that part will be -- will be
24 connected Basically the layering of the fat on the fibers
25 means that they can communicate more easily, the electrical

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1 pulses work faster, and don't get dissipated, and they reach
2 their destination Then as we continue to grow, by about age
3 thirteen, fourteen, the entire temporal lobe that you can see
4 here, and you can see here in the dum -- this entire temporal
5 lobe gets myelinated and the frontal lobe begins to myelinate

6 Q So -- let me pause you for a second So what you are
7 saying is, because of how the fat develops that that explains
8 why children can walk before they can talk

9 A Exactly That's why -- because -- exactly, because
10 that's -- the motor part gets myelinated before the language
11 part gets myelinated

12 Q Okay So -- and as they myelinate those things that
13 that brain controls begins to function

14 A Begins to function closer and closer to the way adults
15 function So a teenager can do arithmetic as well as an
16 adult, and sometimes better They can do almost anything
17 adults can do The only part of their brain that is not
18 myelinated yet is the frontal lobe, and that produces some of
19 the strange behaviors that we see in adolescence They can be
20 very smart They can do arithmetic great They can fix our
21 computers when we can't do anything about it, and then they do
22 something that leaves us aghast, saying what were you
23 thinking, and that's the frontal lobe They are not onboard
24 yet They don't become fully onboard actually until the early
25 twenties They continue to myelinate until around age twenty-

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1 two or twenty-three So you can get adolescent behavior from
2 college students quite often

3 One thing that also happens during adolescence is that -
4 - as I mentioned, if a brain cell doesn't fire it dies So
5 during adolescence you have a mass bath of neurons The brain
6 figures, what I haven't used for thirteen years I don't need,
7 so there is a process called pruning where you lose a lot of
8 brain cells between around age twelve and around age nineteen
9 or twenty, and this is also why, if you didn't learn to play
10 the violin before pubescence you will never become a concert
11 violinist You can learn later on, and you can become pretty
12 decent, but you will never -- that part of the brain that is
13 needed in order to be good enough to play in concerts, that
14 part shriveled off and died Similarly for skiing If you
15 didn't ski before you became a teenager you can learn how to
16 ski later in life, but you can see the difference on the slope
17 between those who skied since they were kids and those who
18 picked it up later on

19 Same for accents, you know, this strange accent that I
20 have I speak English fluently I spoke -- I have been
21 speaking it for years I learned it -- I started learning it
22 in sixth grade Too late I will always have an accent
23 Languages that I learned before that I can speak, not as well,
24 but, you know, locals would not think that I am a foreigner
25 I speak with a native accent

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1 Q And so the frontal lobe, I think you just said -- I
2 want to clarify -- when -- when -- when do you anticipate -- when
3 do we think the brain actually finally finishes development?

4 A If you include the frontal lobe it's early twenties

5 Q Okay

6 A And the frontal lobe, as you notice, as kids grow older
7 their perspective on the world changes Babies are totally
8 just concerned about themselves As you grow older children
9 begin to notice that there are other creatures around them,
10 both parents and then friends, and then they start thinking
11 about society, and that develops with myelination, and the
12 frontal lobe all the information from your body comes through
13 this part in the middle of the brain It's called the brain
14 stem The brain stem is connected to your spinal cord Your
15 spinal cord feels if you are hungry, if you are thirsty, if
16 you are warm, uncomfortable, itchy, all those things, and
17 communicates to the brain, and that gets integrated with
18 everything from the outside, and everything is sent to the
19 frontal lobe, and the frontal lobe is like the chief
20 executive It gets all the information from the rest of the
21 brain and decides what to do about it So you can forget now
22 that you are little warm, that you are uncomfortable, that you
23 are a little worried about various things and focus on my
24 strange accent talking to you because your frontal lobe says
25 this is my job now, this is what I have to do, I have to shut

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1 out everything else and listen to this guy from Philadelphia

2 Q All right Let me ask you while you are standing
3 there You have cause to do some research, or do some type of
4 testing involving Mr Stanko Is that correct?

5 A Yes

6 Q Can you please tell us about that?

7 A Yes What I received was the results ---

8 THE COURT Could the witness go back to the witness
9 chair now?

10 A I can go back to ---

11 MS WILLIAMS I'm sorry Yes Would that make it
12 easier for the moment, and you will go back and then if you
13 need your chart we will show it

14 A Okay

15 So I received -- our lab received the results of a
16 P E T scan done on Mr Stanko, and I was asked to analyze the
17 scan in the same way that we analyze all the scans that we
18 work on, and these are hundreds of scans, from healthy people
19 as well as people with various brain disorders

20 Q Did you perform a functional analysis or a ---

21 A Structural

22 Q ---Structural analysis?

23 A The M R I data we got were from a structural study, so
24 all -- this is the first bread and butter simple procedure
25 It's all relative, of course, but this is the procedure that

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1 will give you good data on the integrity, the structural
2 integrity of the brain

3 Q And based on your review of that information did you
4 reach any conclusions?

5 A Yes

6 Q And can you please share those with us?

7 A Yes If I may explain

8 Q If you may come down and may -- do you need your chart?

9 A Well, we can -- we -- we have it here, a little -- the
10 same chart, just a little clearer

11 Q Okay

12 A Yes, if you go back for a second that shows an M R I ,
13 and what we do with the M R I , so you can see -- with the M -
14 - the way M R I works is that you put your head in a very
15 strong magnet, so all the molecules in your brain get aligned
16 with that big force It's a magnet several times stronger
17 than the pull of the magnetic -- the magnetic pull of our
18 planet, so it's a very, very strong magnet that has to be
19 constantly cooled with helium So all your molecules in the
20 brain will align themselves with that force, and then you pass
21 force that is at an angle to that force, so when you do that
22 all the molecules try to align themselves with a new force,
23 but the new force is there for a bling, for twenty
24 milliseconds, not enough time for you to even blink your eyes
25 Blinking your eyes takes a hundred milliseconds, so this is

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1 twenty milliseconds, very brief, so when it's gone the
2 molecules have to realign themselves with the first force, and
3 when they do that they rattle, in the same way if you bend a
4 pencil and you let it go it will not just go back to it's
5 original position, it will rattle a little bit Now that
6 rattle is called resonance, and that's what resonance means
7 when you says magnetic resonance imaging

8 Now there is a big principle in biology that big bodies
9 move slowly, small bodies move fast, and the smallest molecule
10 in the brain, also happens to be the most abundant molecule,
11 is water So most of your brain consists of water molecules
12 They are very small, and they rattle to position first, so
13 what we do is listen, we listen to the resonance, this
14 rattling, using radio antennae basically, the same idea as
15 listening to the radio, and the first rattling that we will
16 hear are from water molecules, then come the proteins, and
17 last come the big fat molecules, so depending on when you
18 record your rattling you get an image that is composed mostly
19 of specific types of tissue, so the brain cells themselves
20 have water and proteins The fat comes from -- now you know --
21 - from those myelinated fibers, so based on recording how much
22 signal came from each part of the brain -- and these pictures
23 are literally painted by the computer dot by dot You know,
24 like if you take a photograph, you blow it up, you blow it up,
25 eventually you will see the dots that make it, and those dots

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1 are called pixels, and M R I is a reverse process First of
2 all, these dots are three-dimensional Each dot has a known
3 length, width and depth The depth is the thickness of the
4 slice We do the M R I in slices So basically what these
5 dots are, they represent how much signal came from this cube,
6 cube of tissue, and that -- and the M R I , the image, the
7 picture, just translates those intensities into a gray scale,
8 so if a lot came it will be white, if little came it will be
9 dark, and this is how you actually get that image of the
10 brain It's painted dot by dot by the computer, given the
11 numbers that come from that region

12 Q And Dr Gur, may I ask you, so basically an M R I is a
13 still image, in effect, I mean, it's a point in time?

14 A Exactly And it shows here, now to me, at that point
15 in time, and what we do is, we go back to the numbers and we
16 ask the computer, give us -- I mean, because these pixels are
17 three-dimensional they are called voxel, v o x e l , and so we
18 ask the computer to tell us, what are the numbers from each
19 voxel that fall within what we get from gray matter Gray
20 matter are the cells themselves, and the surrounding
21 dendrites, how much comes from white matter, and now you know
22 white matter are the myelinated fiber -- they are called white
23 matter because they are made of fat and they are white, and
24 how much comes from the fluid in which the brain flows, the
25 cerebral spinal fluid, and these are the three what we call

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1 compartments in the brain, and we can -- now, because we know
2 exactly the size of each voxel we can calculate from that what
3 is the volume of gray matter, white matter, and cerebral
4 spinal fluid in the brain, and this is what you see in the
5 right most image This is what the computer comes back with
6 Each voxel tells us, this is gray matter, white matter or
7 fluid It used to take overnight to get this Now it takes
8 literally a couple of minutes for the computer to do that
9 But this is what our -- this is called Quantitative Volumetric
10 Analyses, and this is how you can find out, really, how much
11 tissue is missing in the brain, and this is important -- you
12 can see on the next slide, I believe

13 Yes Then we have -- we used to have to do it by hand,
14 to divide each brain of every individual into the different
15 parts Now, with the help of some very smart geeks in the --
16 in the Computer Science Department we can do that in an
17 automated fashion, so the method that Chen and Davatzikos have
18 developed -- D a v a t z i k o s -- it takes a brain that we
19 use as a template, a normal brain, and for ever new brain that
20 comes in it warps the template into the new brain The
21 template has been studied extensively We know each voxel in
22 that template, which region it comes from, and what it is, is
23 it gray matter, white matter, or fluid

24 Now when you warp the template into a particular brain
25 we record, for every voxel, how much we had to stretch it or

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1 to squeeze it in order to fit, and when we are done we can
2 know exactly how different our brain is from the template, and
3 we do that for every healthy person who comes through, and
4 that's how we know what is normal, what is normal and how much
5 variation you have around normal

6 All the brains have the same parts, but no two brains
7 are exactly the same Very much like faces, each one here in
8 this room has a nose, ears, mouth, eyes, and yet no two people
9 could be mixed up with each other We each have our
10 distinguished features with just really only seven elements
11 There is so much variability The brain has more elements,
12 and so there is more potential for variability, but yet all
13 those parts are there, so in principle you can warp my brain
14 into the brain of any one of you, and vice-versa, and we can
15 record the difference, and that difference -- and this method
16 now takes a new brain and finds out all the regions in that
17 brain and tells us whether the volume is normal or abnormal
18 relative to a healthy person

19 Q Okay

20 A Now the next slide explains why this is important So
21 you imagine a person who had the head injury, the brain hit
22 the front, got twisted, and then tissue died If you do a
23 regular M R I your chances of seeing any abnormality are
24 slim, and it's not because you haven't seen a lot of M R I s
25 even Top expert neuroradiologists would not be able to see

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1 it unless all the cells died in one spot

2 Q I was going to say, can you give us an example of that,
3 like a ---

4 A Well, I mean, is the same as -- you may have heard that
5 it was discovered that the Black Forest in Germany is ill, is
6 dying It's a huge forest You can walk in it, you won't
7 notice anything You take a satellite photograph you won't
8 notice anything, but when they took satellite photographs over
9 the years, and they superimposed one on the other, they saw
10 that some very diffused, sporadic areas the trees are
11 shrinking, trees are dying They are just not all dying in
12 one spot, and that's why it's so hard to see even if you walk
13 in the forest, they are dying sporadically, and so you need
14 quantitative analysis in order to discover that

15 In the same way, if you have a stroke and one artery was
16 blocked that supplies one area, and so all the cells in that
17 area died, it will be easy to see that if you just look at the
18 picture coming from the M R I , but if you had the head injury
19 and cells died sporadically -- this is what we simulated here
20 in this slide on the left -- you can see a slice of M R I
21 optimized to detect cell loss

22 Then we took thirty percent of the voxels from that area
23 that you can see circled in red A third of the tissue we
24 took out, but we took it out randomly, and you can stare on
25 both of those, and you can have an expert radiologist stare in

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1 both of those until the cows come home, you won't notice a
2 difference, it's invisible But if you did a quantitative
3 analysis you will be able to see, of course, that a third of
4 the voxels are missing

5 Q And Dr Gur, did you perform a quantitative analysis of
6 the information that was provided to you on Mr Stanko?

7 A Yes What we did, we took the numbers that we got from
8 the M R I and performed exactly this quantitative analysis
9 that I illustrated here Yes And the results are shown on
10 the next slide No, up

11 Q Sorry

12 A Okay Yes, that ---

13 Q The next slide

14 A Right, next slide

15 So what you can see here, each dot on this slide, and --
16 is represented by an arrow, and if the arrow points left it
17 means that it was taken from the left hemisphere, and if the
18 arrow points right it was taken from the right hemisphere

19 What we did is, we took each of these regions and
20 compared them to a sample of healthy people that came to our
21 lab to be studied as volunteers for bio-medical research, and
22 they were carefully screened psychiatrically and
23 neurologically They are all healthy

24 Now, what we do is, we calculate what is called a "Z"
25 score A "Z" score means you take the volume of Mr Stanko,

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1 you subtract it from the average volume of a healthy person,
2 and you divide it by the standard deviation of healthy people
3 Standard deviation is roughly the average differences from the
4 mean of your sample So if I measured the height of everybody
5 in this courtroom I will get an average, say five seven, or
6 five nine It doesn't describe any individual here A lot of
7 people are above that, lot of people below that I need
8 another number to tell me how wide the distribution is, so I
9 will take each observation, each height from each one of you,
10 subtract it from the average, and that will give me the
11 difference from the average Now, because some of you would
12 be below and some of you will be above, I square that
13 difference, and then I divide it by how many people there are
14 here, and then I take the square root of that, because you
15 remember I had to square it, and that gives me -- on average,
16 it can be, say two, which will mean that two-thirds of you, or
17 sixty-eight percent of you will be between five -- if --
18 suppose the average, say, is five eight, and I find that the
19 standard deviation is two, it would mean that sixty-eight
20 percent of you will be between five six and six And it means
21 also that ninety-nine percent of you will be within two
22 standard deviations from that average, so ninety-nine percent
23 of you will be between five four and six two, okay, so that's
24 the purpose of standard deviation And we do the same with
25 the brain, and we get a number that tells us how many standard

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1 deviations away from normal someone is, and in general, as a
2 rule, if a brain region is more than one standard deviation
3 below normal we call it clinically significant It's
4 something we have to look at If it's more than two standard
5 deviations different from normal then we call it highly
6 significant, pathological This is -- this shouldn't happen
7 This means that that brain is damaged

8 Now here in this graph you see that overall Mr Stanko
9 has a big brain, definitely a normal brain Zero is average,
10 and some of the brain regions in his case are above average in
11 volume, but there is one lobe, the frontal lobe, on the left,
12 that is more than two standard deviation lower in volume than
13 normal

14 Q Dr Gur, may I -- can I get you to show me, on our
15 brain, where that area is?

16 MS WILLIAMS May I approach

17 A The frontal lobe is this entire area right -- this part
18 of the brain, right here, and as you recall, it's the part
19 that sits right on top of the orbital bones

20 Q Please continue

21 A Now, the reason, I believe, that there was -- that it
22 could be some head injury that produces that is because we see
23 that for the occipital lobe and the medial gray matter the
24 abnormality is even worse, and is in the other hemisphere
25 It's not in the left, it's on the right So something like



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1 ventricles So all these regions here are tissue, are brain
2 tissue This -- the ventricles is fluid, not tissue So
3 unlike the brain tissue that is down in volume, the fluid in
4 the middle of the brain, in the ventricles, is almost two and
5 a half standard deviation larger than normal, and what that
6 tells us is that the structure in the middle of the brain,
7 what we call the limbic system, which are right in the middle
8 of the brain, those structures lost tissue, and that's why all
9 -- that's why we have more fluid For all the cells that died
10 in that area their place was taken up by fluid, and that's why
11 the ventricles are so abnormally large

12 This kind of large ventricles you see in disorders such
13 as schizophrenia This is one of the main signs of
14 schizophrenia, and that's considered a neural development or
15 disorder, something you were born with that most likely is
16 genetic Well, we know part of it is genetic and part of it
17 is something that happens usually during the second trimester
18 of pregnancy that causes those medial structure not to
19 develop, and that's why we see large volume It can happen
20 later in life if you have head injury that affected those
21 structures in the middle They die and the place is taken up
22 by fluid

23 Q Let me ask you something while you -- because you just
24 mentioned schizophrenia We've heard the terms anti-social
25 and psychopathy Can you tell us the different between those?

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1 A Yes They are quite different They don't exclude
2 each other You can have, you know, more than one disorder
3 There are very few disordered that if you have one you can't
4 have another

5 Psychopathy is -- disorder is a diagnosable disorder
6 that involves a history of growing up with an anti-social
7 attitude, and you develop into someone who has very little
8 regard for others, has limited ability to understand other
9 people's feelings, tends to treat people like instruments,
10 would not take the need into consideration They can be very
11 charming interpersonally, but really have no feeling behind
12 their external demeanor

13 Schizophrenia is quite different The main signs ---

14 Q No I'm sorry The different -- anti-social versus
15 psychopathy

16 A So anti-social -- anti-social versus psychopathy
17 Okay Anti-social is a feature, psychopathy is -- anti-social
18 personality disorder is not a disease It's a personality
19 defect It's not considered an actual illness It's part of
20 your make-up, and some people have that anti-social attitude
21 When it comes in combination with other features you can
22 qualify for a diagnosis of psychopathy

23 Q Let me ask you, based on your results that you found on
24 the M R I that you analyzed of Mr Stanko can you tell us
25 what that means, if all, with regard to what you would

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1 anticipate of behavior?

2 A Well, the damage in the frontal lobe is the most
3 worrisome, and in combination with damage in the medial gray
4 matter it produces a brain that can malfunction in a very
5 serious way The frontal lobes are the chief executive They
6 integrate all the information and decide what you do If I
7 had to use one word to describe the function of the frontal
8 lobe that word would be context It puts your action in -- it
9 makes you act relevant to the context Right now you are all
10 sitting quietly because you are jurors in a courtroom, and
11 this is the right behavior for a juror in the courtroom If
12 you started jumping up and down you will get strange looks,
13 and you may even get punished for that, so you know not to do
14 that, and that's your frontal lobe that tells you not to do
15 that, even if you feel an urge all of a sudden to commence to
16 stand up and scream So the frontal lobe are what put your
17 action in context They are your chief executive

18 And you know, drugs that affect the frontal lobe will
19 show it right away Alcohol, for example, numbs the frontal
20 lobe, puts it almost to sleep, so you may still be smart in a
21 lot of other parts of your brain but you will do some crazy
22 stuff You will do stuff that -- out of context You may
23 laugh You may tell off-color jokes, you make do things that
24 when you are sober again you will say to yourself, who was I,
25 what was I, how -- how could I behave that way, and that's

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1 because your frontal lobe are being numbed Most drug abuse
2 affect the frontal lobe So the medial gray matter is a very
3 important structure in that context because it contains two
4 important structures One is called the amygdala,
5 a m y g d a l a , and the other is called the hippocampus,
6 h i p p o c a m p u s These are very primitive structures

7 Q I'm sorry Would it assist you to come down and be in
8 front to show them that?

9 A Yes I can show it to you

10 They are small, they are primitive So, as you see,
11 this is a brain stem coming from the spinal cord That part,
12 up to here, we share with words, so words have all that part,
13 and the spinal cord They can wiggle They know when they
14 are hungry They know how to drink They know how to move
15 left, right, so -- and they know if they are hot or cold, so
16 this is the part of the brain we share with -- with words

17 Now, this part here we already share with crocodiles,
18 crocodiles Evolution doesn't throw anything away It takes
19 the brain of the worm, puts on top of it the brain of the
20 reptile, puts on top of that the brain of a mammal, puts on
21 top of that the brain of a primate, and on top of that our
22 brain, which is this layer up here that is more unique to
23 humans

24 So the amygdala ---

25 Q That layer -- the last layer you just described which

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1 was ---

2 A Right Right here, the outer part of the brain

3 The amygdala and hippocampus are small structures here
4 that we share with crocodiles, literally They look exactly
5 the same in a crocodile as we do in us And they -- they
6 don't understand language, really They don't speak There
7 are -- you can think of them as being a crocodile inside you
8 Those parts ask very simple questions The hippocampus asks,
9 have I seen that before, have I experienced this before,
10 constantly, all the time That's the one question they ask,
11 what I just heard, which I've just saw, did this happen
12 before And in order to do that it keeps comparing what you
13 hear or what you see with the template of your memories If
14 it doesn't find it there then it says it's new, and it sends a
15 signal to the brain, here is something new, should I remember
16 it, or is it not important enough Okay So that's what the
17 hippocampus does If you scoop out the hippocampus, for
18 example, to prevent uncontrollable seizures, in some cases,
19 these people remember everything that happened to them before
20 the surgery, but nothing of what happened to them after the
21 surgery One of them who recently died -- it was written up
22 in the New York Times, his initials were H M -- he described
23 it, every minute is like I am waking from a dream His wife
24 will visit him every day and every time she came -- like after
25 twenty years he will say, gee, you got old, because he

JURY IN
RUBEN GUR - DIRECT BY WILLIAMS

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1 remembered her the way she was before he had the surgery So
2 if you take out the hippocampus then that question is not
3 being asked, so you can't learn anything new

4 Next we -- is the amygdala, another tiny structure, and
5 the amygdala asks another question The amygdala asks, is
6 this a threat That's the one question it keeps asking, am I
7 being threatened, is there something that can happen to me
8 And if there is a threat it sends an alarm

9 Q Can the amygdala -- I'm sorry to interrupt, but can the
10 amygdala distinguish between -- I mean, does it process? Is
11 it a perceived threat, a real threat? Does it know?

12 A Amygdala will react to the perceived threat, regardless
13 of whether it's -- whether it's real or not, that's the job of
14 the frontal lobe Fortunately the amygdala is intimately
15 connected to the frontal lobe Most of the fibers from the
16 amygdala go to a region called orbital frontal, which is right
17 here at the bottom of the frontal lobe, and that orbital
18 frontal decides what to do with that alarm signal So you may
19 be in a cocktail party and somebody gives you a nasty comment,
20 the amygdala doesn't understand -- it just understands
21 somebody is threatening me, and he shouts, kill the bastard,
22 and it goes, unfortunately, to the orbital frontal lobe that
23 says -- tells you, now wait a minute, this is a party, there
24 are people around, maybe I -- instead of attacking that person
25 physically I'll just say something nasty back So that's what

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1 the orbital frontal lobe does So the amygdala and the
2 orbital frontal lobe are constantly communicating The
3 amygdala can see danger everywhere, and the orbital frontal
4 tells you -- like you may be in a movie, you see a snake in
5 the movie The amygdala doesn't understand movies, it thinks
6 still that you are in the savannah, a hunter and gatherer,
7 because that's where our brains were put together We are
8 doing wonderful things now, play computers, fly planes, but
9 really our brains were put together when we were hunters and
10 gatherers in the savannah, and this is what our brains can do
11 So when you see a snake in a movie your amygdala shrieks,
12 there is a snake, and it's the orbital frontal that tells you,
13 no, no, you are safe, you are in a seat, it's a movie, nothing
14 is going to happen, that snake is not going to bite you, so
15 it's the orbital frontal part that will differentiate a
16 perceived threat of the snake in the movie from a real threat
17 of a snake down on the ground when you are walking out in the
18 swamp So the amygdala does not distinguish those situation,
19 it just issues an alarm

20 MS WILLIAMS Would you like to return

21 Q Okay Now, can you tell me if, based on your results,
22 if you find any connection between what you found in Mr
23 Stanko's brain and what you just described with us regarding
24 the amygdala and the frontal lobe?

25 A Well, in this brain we see reduced volume in the entire

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1 limbic system, which includes amygdala and hippocampus, and at
2 the same time we see a reduced volume in the frontal lobe, so
3 if the amygdala sends -- damaging the amygdala causes what is
4 known as the Kluver-Bucy, K l u v e r hyphen B u c y , after
5 the people who described it first Actually it was first
6 described in animals, in mice Mice, if you take out the
7 amygdala, become very placid They don't interact They just
8 move about super cool They don't do anything They don't
9 show any emotion, and then all of a sudden they may go into a
10 rage attack, and they will attack all the other mice around
11 them, and then they go back to being placid And the same
12 thing happens to people who have damage in the -- in the
13 medial gray matter area, in the amygdala They behave super
14 cool They don't respond emotionally, and then for some
15 unknown reason they can explode and attack, and that's
16 especially the case if there is also frontal lobe damage
17 because people who don't have -- who only have amygdala
18 damage, no frontal lobe damage, their frontal lobe serves as a
19 break, and keeps telling them, no, you don't do that, stop,
20 you may feel like that, but don't act on it

21 Q Dr Gur, can you explain to me why it is, if you have
22 small amygdala and a small frontal lobe you wouldn't always be
23 acting out, for lack of a better term?

24 A Well, what happens in people who have small amygdala is
25 that it's less active by and large It just -- more dormant

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1 But if it gets triggered then the whole structure -- what --
2 every time a nerve cell fires it educes firing in the
3 neighbors firing in the neighbors, and the amygdala has very
4 large cells in it, so if there's a small number of them it's
5 much more easy for all of them to get active together, and
6 that's why the amygdala is the source of seizures Most
7 seizures in epilepsy come from amygdala hippocampus area for
8 that reason And you can have very complex behavior in
9 seizures It's not what you think that you always would see
10 on the -- the seizure most people think about is somebody
11 writhing on the floor, moving back and forth, is only one type
12 of seizures Seizures can be starting to run without reason
13 Some seizures can be complicated as looking for something I
14 had one patient who kept looking for something, and then
15 whenever he would see a woman he would say -- smile and say,
16 hi babe That was part of his seizures He would come out of
17 it not remembering anything of what happened, and that was
18 right temporal lobe focus that was acting

19 So, the behaviorals can be -- can be quite complex

20 Q Let me ask you this for a second Do you know if, in
21 the brain, where we can test intelligence?

22 A Intelligence is a concept that came before really we
23 understood how the brain works It was developed in order to
24 predict school performance, was developed in the turn of the
25 previous century by a French psychologist, Benet, whose job

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1 was to try to decide who should go to regular school and who
2 should go to special education And so he put together
3 measures that predicted school performance And if we look at
4 it now from an angle of understanding brain and behavior it
5 mostly looks at superior, temporal and parietal area, and to
6 some extent superior frontal area

7 Q Which is where?

8 A Which is really -- it looks at those -- those aspects
9 of behavior that are most uniquely human It looks at the
10 cortex It looks at the outside layer, and really doesn't
11 have good measures either of emotional intelligence, and now
12 we have the whole new genre of tests for looking at emotional
13 intelligence You can be intellectually very smart You can
14 do great arithmetic, but you are a total dud when it comes to
15 trying to strike a conversation with somebody, and I think we
16 all knew those -- those people So emotional intelligence it
17 doesn't cover It doesn't cover impulse control It doesn't
18 cover the ability to modulate -- to modulate your emotions, to
19 modulate your impulses

20 Q Can you show me physically on this little brain where
21 Mr Stanko's results were that you found?

22 A Yes These are the left -- this is the left
23 hemisphere This area is where we find missing tissue, this
24 whole orbital frontal area It doesn't affect the superior
25 frontal, it doesn't affect the outer layers of the temporal

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1 lobe, so his memory is okay It affects inside the amygdala
2 and hippocampus, the structures in the middle of the brain,
3 and it affects the -- especially on the left, it affects the
4 frontal lobe, and you have some damage in the right occipital
5 which would produce some visual abnormalities, visual
6 deficits, and visual processing that basically would have no
7 effect on intelligence

8 Q Okay Let me ask you this Do you -- are you familiar
9 with the term hypergraphia, excessive ---

10 A Hypergraphia?

11 Q Yes sir Sorry It's compulsive writing

12 A Yes That's one of -- one feature that has been
13 associated by Gershwin and others with temporal lobe disorder
14 People with some form of temporal lobe disorder like seizure
15 disorders tend to write excessively They will write volumes,
16 and sometimes won't be able to control how much they write
17 It's one of the -- one of the signs of seizure disorders that
18 were very helpful before we could do imaging and establish the
19 presence of a seizure disorder more precisely

20 Q Okay Let me ask you this As part of your analysis
21 in this, and with what you do with behavior, would you -- can
22 you tell me where, if it's any, is formed in the brain?

23 A Yes There have been quite a bit of work on empathy
24 We did some of it but a lot of it was done by a Professor
25 Baron Cohen from Oxford The -- that's a frontal lobe

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1 function, so empathy is being able to know what another person
2 is feeling, so it's -- children have very limited capacity to
3 imagine how somebody else will feel You all may have
4 experienced the -- kids will come -- you give them a ride in
5 your car and somebody says, I want to sit next to Johnny, I
6 don't want to sit next to Bill, and they may blurt it out
7 right in front of Bill and not thinking that Bill's feelings
8 can be hurt, so it just doesn't occur to them to put
9 themselves in somebody else's shoes And part of what happens
10 with frontal lobe myelination is, we get the ability to put
11 ourselves in somebody else's shoes and know from their
12 expression or their reaction to what we do how we must have
13 made them feel, or how they must be feeling at the moment
14 Q Is part of what you do, look at people's ability to
15 distinguish moral right from moral wrong?
16 A Okay That -- that -- that is a fairly recent set of
17 studies A lot of them were carried out by Dr Gold from
18 Princeton, but they are now -- they have now been, I would
19 imagine, close to thirty or forty studies on that where you do
20 functional M R I rather than structural M R I You can look
21 at the activity of the brain, so if you remember our brain in
22 a magnet, and we pass one current to get a good picture of the
23 anatomy, with functional M R I we don't care about how good
24 the picture is, but we want to acquire it fast So you
25 acquire a picture of the whole brain in two seconds Those

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1 pictures are crappy, but you get a lot of them, and then you
2 ask people to do something while you acquire those images So
3 you get a picture of the whole brain every two seconds, so for
4 twenty seconds you ask the person to move the finger of the
5 right hand like that, and then stop -- I'm sorry

6 MR HUMPHRIES Your Honor, I'm going to have to object
7 at this time if this Psychologist is going to render an
8 opinion regarding this Defendant's status as to his
9 understanding moral wrong and moral and legal right He is
10 not qualified

11 THE COURT Are you going to be asking him that
12 question?

13 MS WILLIAMS No sir I am not going to be that about
14 this ---

15 THE COURT Well, let's move along then

16 A Well, I'm almost done, so ---

17 THE COURT Sir Thank you Move along with your next
18 question, please

19 Q Well, let me ask you this So you are describing --
20 and that functional test that you are talking -- I think
21 that's what is commonly called a P E T scan

22 A Right No, that's functional M R I , or F M R I

23 Q Okay

24 A With those studies you can look at the changes that
25 occur when blood flows in a particular part of the brain in

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1 order to allow it to function Every time a brain cell fires
2 it is exhausted, it needs energy, and it gets it's energy by
3 burning sugar, or glucose, using oxygen, and it gets that from
4 the blood that comes through the brain, so when a brain region
5 begins to work you can see an influx of blood into that
6 region, and blood gives a stronger signal on the M R , so in
7 our case when we ask them for twenty seconds to move the right
8 hand, and then twenty seconds not do anything, and then
9 another twenty seconds move the right hand, twenty seconds not
10 do anything, when we average all the images that we took when
11 they were moving their finger, and we subtract from them all
12 the images we took when they were not, we will see the finger
13 area in the sensory motor part of the brain -- well, if the
14 right hand it will be on the left -- the left brain controls
15 the right side of the body -- you will see it show a hand
16 signal, and that will tell us that that part is working

17 So using exactly the same principle they had people make
18 moral decisions in the scanner They were presented with
19 moral dilemmas and had to decide what they would do Like you
20 were in a party, you were looking at the vase, the vase
21 dropped, you broke it, nobody saw, you could quickly put it
22 together and you know, move on, wasn't me, or are you going to
23 say, oops, I'm sorry, you know So those kinds of decisions
24 involve the frontal lobe, very clear, it's the frontal lobe
25 that gets really revved up for those kinds of decisions

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RUBEN GUR - DIRECT BY WILLIAMS

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1 Q And Dr Gur, are you familiar with some studies done by
2 Phineas Gage?

3 A Well, the -- Phineas Gage was a gentleman who lived in
4 the Nineteen -- toward the end of the Nineteenth Century, and
5 he was a railroad worker, an upright citizen, married, with
6 children, a churchgoer, just a normal guy, and then
7 unfortunately a spoke from the rail went right through his eye
8 into his brain, and pierced his brain Miraculously he didn't
9 die from it He was -- he survived, and he, for all
10 appearances, went back to normal, but then something else
11 happened He started gambling, philandering, got into bar
12 brawls, and really ended up in skidrow He just could not
13 control his impulses any more because of that frontal lobe
14 damage The study -- what happened was that his skull was
15 reconstructed with M R I by a husband/wife team, Ahana and
16 John Demazio -- I am having a senior moment -- the Demazios,
17 and they published it in Science, in one of the major -- the
18 major journal, to illustrate how the frontal lobe -- it's a
19 classical case study of how frontal lobe damage can make
20 someone who was a totally normal person deteriorate in that
21 particular capacity of being able to take the long-term
22 consequences of his action into account to control his
23 impulses, and to behave like -- in accordance with the social
24 norms

25 Q Okay And there is no doubt -- just one moment If we

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RUBEN GUR - DIRECT BY WILLIAMS

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1 can put this back together

2 Based on your studies that Mr Stanko, with what you
3 found has ---

4 A Toli Demazio I'm sorry

5 Q ---Has two types of problems, correct?

6 A Yes

7 Q And they are, again?

8 A The frontal lobe problem, and the medial gray matter,
9 limbic system, problem

10 Q And will you show us on that half of, and tell us
11 exactly what it is?

12 A Okay This is the right hemisphere In the right
13 hemisphere he has damage in the medial gray matter structure,
14 right here They include hippocampus and amygdala This is
15 the left hemisphere

16 Q I'm sorry May I get you to come -- and I want to make
17 sure the jury can see exactly what you are doing, please

18 A Well, here is -- we have the left hemisphere and in the
19 left hemisphere ---

20 Q Put it back together

21 A So, this is the right hemisphere, and in the right
22 hemisphere the main problem is inside, both in the occipital
23 area, the visual cortex, and in the medial gray matter area

24 Q And with regard to that problem, what percentage of the
25 population, based on your studies, would have that type of

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RUBEN GUR - DIRECT BY WILLIAMS

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1 problem?

2 A The -- the damage in the medial gray matter, and
3 especially at four standard deviation below normal, we don't
4 see it in normal people It just doesn't happen We see it
5 in -- to that extent it's almost like you have to have
6 temporal lobe epilepsy, and some form of temporal lobe
7 epilepsy won't even have that much tissue loss

8 Q So it's extreme?

9 A It's extreme

10 Q Okay And the second type of damage -- or your --
11 defect or your term

12 A That's in the frontal lobe, this region here, on the
13 left, and that -- that is still less than one percent, or
14 maybe about a quarter of a percent of healthy people may have
15 those kinds of values

16 But mind you, these are -- these people would have lower
17 values in other regions too, so it's unusual to have just this
18 -- these regions showing the low volume when the rest of the
19 brain is normal volume

20 MS WILLIAMS I believe that is all the questions I
21 have of Dr Gur

22 Please answer any ---

23 THE COURT I'm sorry Ladies and gentlemen, we are
24 going to take a break Go to your jury room for a while and
25 just leave your pads and pens Thank you

RUBEN GUR - CROSS BY HUMPHRIES

1655

1 (THE FOLLOWING TAKES PLACE OUTSIDE THE PRESENCE OF THE
2 JURY)

3 THE COURT All right We'll take a short break for
4 about five, ten minutes, and Ms Williams, on the break if you
5 can collect your demonstrative aid, please

6 Thank you

7 (THE FOLLOWING TAKES PLACE AFTER A BREAK, AND WITHIN THE
8 PRESENCE OF THE JURY)

9 THE COURT All right, Solicitor

10 MR HUMPHRIES Thank you, Your Honor

11 THE COURT Yes sir

12 CROSS-EXAMINATION BY MR HUMPHRIES

13 Q I was interested in your testimony regarding that sort
14 of synergy between the frontal lobe and the amygdala, and in
15 this case you've indicated to this jury that there were --
16 there was some tissue loss, is it fair to say, in the frontal
17 lobe and the amygdala of Defendant, Stanko?

18 A Yes

19 Q Okay And I think you testified that in the amygdala,
20 with this tissue loss, he would be less active ---

21 A Yes

22 Q ---But that when it -- well, when it was reacted the
23 reaction would be stronger

24 A Yes

25 Q You -- I think you have been talking about a kind of

1 acting out In terms of the behavioral context you talked in
2 terms of a rage attack

3 A That's one of the ways it can happen

4 Q Now, -- and because of the tissue loss in the frontal
5 lobe, or the executive function, or the context, as you
6 described it, there would be -- well, there wouldn't be a
7 filter, or an adequate filter

8 A Yes

9 Q Is that fair to say?

10 A I think you can call it filter or breaks

11 Q Or breaks

12 A Yes

13 Q The frontal lobe is primarily concerned with some
14 higher level function Is that fair to say?

15 A Yes

16 Q Planning would be something that would occur in the
17 frontal lobe?

18 A Yes I mean, the frontal lobe is a big chunk of real
19 estate It has different parts that do different things, so
20 in general, the superior frontal lobe is more related to
21 intellectual planning, more -- more related to sensory, motor
22 integration and planning The lower part of the frontal lobe
23 relates more to emotional aspects of planning And of course,
24 there is the dorsal lateral prefrontal that doesn't do much in
25 terms of planning, but it's like the -- a scratch pad that

1 keeps refreshing It basically is the part of your brain that
2 tells you, what have I just done, what am I doing right now,
3 and what am I about to do a split second from now, and it
4 keeps changing

5 Q Now, a rage attack, that would be diametrically opposed
6 to, say an attack that were -- that was planned, that took
7 advantage of natural opportunities, which would make it less
8 confrontational, wouldn't you say?

9 A I'm not sure I understand your question

10 Q I can be more specific I apologize, Doctor

11 If -- if an attack took advantage of -- well, first of
12 all let's say this If it was unprovoked by the -- the target
13 of the attack, some other stimulus provoked the rage attack,
14 and that attack took advantage of time to seek out a weapon,
15 and to perpetrate the attack when the target was not a direct
16 threat, that is, when his back was turned, and took steps to -
17 - in this case there has been testimony he took steps to
18 muffle the gunshot wounds That -- that's not consistent with
19 a rage attack, is it?

20 A Well, that indicates that some of the frontal lobe is
21 still intact, probably the superior part of the frontal lobe

22 Q If there -- there -- if -- that indicates some level of
23 control, and some level of a filter or break, does it not?

24 A Well, yes I mean Mr Phineas Gage, from the example
25 that we talked about, his philandering, his gambling, and so

1 on, they all required planning and, in fact, even hiding We
2 see that with Parkinsonian patients, for example Parkinson's
3 disease also affects the frontal lobe, and these old -- most -
4 - usually older people who were, all their lives, model
5 citizens, begin to take the bus to Atlantic City and -- or to
6 some casino and lose all their money gambling, and yet there
7 is a lot of planning there, not just to go there and get the
8 ticket, and get the chips and all that, but to hide it from
9 the family It takes a while till they are being discovered
10 So even though it is clearly a sign of deteriorating frontal
11 lobe function it does still include the ability to plan

12 Q Sure Now that's a far cry from shooting somebody in
13 the back though, is it not, or maybe that's not your
14 testimony Maybe it's not a far cry

15 A Well, it's -- of course they don't usually go and --
16 people with -- elderly people with Parkinson's disease don't
17 show an increased propensity to attack people, so a lot of
18 what happens has to do with a bunch of other factors, age,
19 circumstances, social history, all these shape our behavior as
20 well

21 Q I agree with you Now, you did testify about seizure
22 activity, and how that somehow is situated in the amygdala or
23 the limbic system There has been no -- correct me if I'm
24 wrong There has been no indications of seizure activity as
25 it relates to Defendant Stanko

RUBEN GUR - CROSS BY HUMPHRIES

1659

1 A I'm not familiar with any information on that

2 Q That was just in -- that was just in general, just the
3 scope ---

4 A Yes

5 Q ---Describing it to the jury

6 A Yes Yes Yes, absolutely

7 Q I just wanted to make sure we hadn't hear that And
8 finally, in -- I assume -- well, let me ask you, without
9 assuming Is it your opinion that a statistical analysis is
10 appropriate and effective in diagnosing in individuals?

11 A Yes, of course

12 Q And in this case -- we've got your chart here You --
13 we've had it up on the screen Your sample group is forty-
14 one, I believe

15 A Yes

16 Q And to that group of forty-one you compare, not just
17 Defendant Stanko's brain, or the imaging of his brain, but
18 various other -- many other images of other brains

19 A Yes

20 Q And in fact, in numerous capital cases you have
21 performed that function for defense?

22 A I wouldn't say numerous, but ---

23 Q How many?

24 A Maybe twenty or so

25 Q Okay We are not going to fuss about whether twenty is

1 numerous

2 It is fair to say, however, though, that experts,
3 qualified experts in this field disagree as to the efficacy
4 or appropriateness of the size of your sample group Is that
5 fair to say?

6 A I don't think so Our -- we published that sample in a
7 leading, very careful peer-reviewed journal and nobody, to my
8 knowledge, has raised any problems with it in terms of it's
9 adequacies It's large relative to what most people use

10 Q And what -- I mean, it's not your testimony today --
11 experts have not testified in contradiction to your results n
12 other capital cases as it specifically relates to your sample
13 group of forty-one?

14 A Well, I thought you were talking about any peer-
15 reviewed objections to our sample No Yes, of course When
16 I testified -- and usually there is an expert who tries to
17 rebut it

18 Q It's statistics?

19 A I don't think it's statistics I don't remember
20 anybody ---

21 Q I don't want you to -- don't misunderstand my question

22 A Okay

23 Q The basis of your analysis is statistics

24 A Yes

25 MR HUMPHRIES I don't have any further questions

RUBEN GUR - REDIRECT BY WILLIAMS

1661

1 Thank you, Doctor

2 THE COURT Any redirect?

3 MS WILLIAMS Briefly, Your Honor

4 REDIRECT-EXAMINATION BY MS WILLIAMS

5 Q Dr Gur, where do you mainly derive your income from?

6 Is it testifying, or something else?

7 A Oh no I have -- I derive my income from my salary as
8 a Professor at the University of Pennsylvania

9 Q And have you ever actually testified in a court ---

10 A Yes

11 Q ---As an expert Can you give us an approximate number
12 of times?

13 A Number of times?

14 Q Yes sir

15 A I think about twenty I don't have -- I can look at
16 the exact count

17 Q Okay The Solicitor was asking you about pre-planning
18 versus an attack, okay, and a proposed attack with a decreased
19 amygdala If I understood you right you said, in the results
20 in this Defendant Stanko's brain has -- it has increased fluid
21 inside the brain ---

22 A Yes

23 Q ---Which would be where the amygdala is located

24 A Yes

25 Q And he also has a decreased physical matter of the

1 brain, which is where processing ---

2 MR HUMPHRIES Your Honor, I'm going to object as to
3 whether or not this is in response to the State's cross

4 MS WILLIAMS Your Honor, I will get there Let me go
5 ahead and do it

6 THE COURT Well, all right You are going a long way
7 to get there though

8 MS WILLIAMS I'm sorry

9 Q Based on your results, with the results that you found
10 in Defendant Stanko's brain, do you think the -- is it
11 consistent to say, or can you say that you think that it would
12 be natural that he would pre-plan things, or be very active?

13 A It's a difficult question to answer The reduced
14 volume in the amygdala will increase his vulnerability to
15 react to perceived threat The frontal lobe reduction will
16 reduce his ability to control it, but there are -- most of the
17 damage is in the inferior orbital frontal part, so the more
18 intellectual part of planning is still intact

19 Q Okay And with the perceived threat, the frontal lobe
20 being more damaged, would that -- does that mean that it can't
21 do as good a job to determine whether perceived threat is or
22 is not?

23 A Yes It would ---

24 Q If it's real or if it's not That's what I mean to
25 say

RUBEN GUR - REDIRECT BY WILLIAMS

1663

1 A Yes If the frontal lobe is damaged it will diminish
2 it's ability to distinguish real from perceived threat that is
3 really not real

4 MS WILLIAMS One moment, please One moment, Your
5 Honor I'm sorry

6 Could I have this marked as -- for identification only,
7 please

8 (HANDWRITTEN NOTES ON YELLOW PAPER MARKED DEFENDANT'S
9 EXHIBIT NUMBER 40, FOR IDENTIFICATION ONLY)

10 THE COURT Show it to the State, please Ma'am

11 MR HUMPHRIES From whom -- you can't just -- you
12 can't show it ---

13 THE COURT Gentlemen

14 MR HUMPHRIES May we approach, Your Honor?

15 THE COURT Yes

16 (BENCH CONFERENCE TAKES PLACE OFF THE RECORD)

17 THE COURT Ladies and gentlemen, you go to the jury
18 room, please

19 (THE FOLLOWING TAKES PLACE OUTSIDE THE PRESENCE OF THE
20 JURY)

21 THE COURT Ma'am, when was the document produced?

22 MS WILLIAMS During the trial

23 THE COURT And who produced it?

24 MS WILLIAMS Defendant Stanko

25 THE COURT And you have not given it to the State to

1 review?

2 MR DIGGS Your Honor, could I respond to that?

3 THE COURT My question is, you have not given it to
4 the State to review yet, have you?

5 MS WILLIAMS No sir

6 THE COURT Very good What -- do you have any
7 objection, Solicitor?

8 MR HUMPHRIES Yes, Your Honor We have an objection

9 THE COURT What might that be?

10 MR HUMPHRIES It has not been produced in discovery
11 We have not had an opportunity to review it, certainly, before
12 it's presented to this witness and testified to At the very
13 least we should have an opportunity to review it in full, and
14 have a copy of it

15 THE COURT And then you would like -- and then I'm
16 assuming you would like the opportunity to question the author
17 about what is contained therein, and what it means?

18 MR HUMPHRIES Your Honor, we don't have any -- there
19 is absolutely no basis to establish what that document is,
20 other than counsel's representation to this witness It's
21 without foundation, and I -- and yes, Your Honor, it's ---

22 THE COURT So obviously you would like to question the
23 author who produced the document before it is shown to this
24 particular witness to explore what it is and what is contained
25 therein?

1 MR HUMPHRIES Yes sir, Your Honor

2 THE COURT All right

3 MR DIGGS Your Honor, it's something that I suggested
4 Ms Williams do, but at this point I don't think it -- the
5 perceived benefit from the Defense's perspective, I don't
6 think it's going to be worth the difficulties, and so we
7 withdraw that, and we would ask the Court to just move on, and
8 I withdraw any effort to examine the witness, Dr Gur, about
9 this particular document

10 THE COURT All right Do you have any further
11 questions of this witness, Ma'am?

12 MS WILLIAMS I think I was done I need just to make
13 sure No sir

14 THE COURT Are you going to have any questions that
15 you are going to ask ---

16 MR HUMPHRIES I have one

17 THE COURT. All right Very good Ask the jury to
18 come in, please

19 The document has been withdrawn

20 (HANDWRITTEN NOTES ON YELLOW PAPER PREVIOUSLY MARKED
21 DEFENDANT'S EXHIBIT NUMBER 40 FOR IDENTIFICATION NOW WITHDRAWN
22 FROM THE RECORD)

23 MS WILLIAMS Your Honor ---

24 THE COURT Yes Ma'am

25 MS WILLIAMS ---When they come back in do you want me

1 to say, Your Honor, I don't -- I will ---

2 THE COURT No Ma'am I will -- I will ask you No
3 Ma'am, I will Thank you, Ma'am Thank you

4 (THE FOLLOWING TAKES PLACE WITHIN THE PRESENCE OF THE
5 JURY)

6 THE COURT All right, Ms Williams, any further
7 questions, Ma'am?

8 MS WILLIAMS No sir, no further questions from the
9 Defense

10 THE COURT Anything from the State?

11 MR HUMPHRIES One question, Your Honor

12 THE COURT Yes sir

13 RECROSS-EXAMINATION BY MR HUMPHRIES

14 Q Dr Gur, you have testified that you've been qualified
15 to testify as an expert in excess of twenty case Is that
16 correct?

17 A Yes

18 Q Do you recall the case of United States versus Lisa
19 Montgomery?

20 A Yes

21 Q Was your opinion rejected as a matter of law by that
22 Judge in that case?

23 A There was a pre-hearing where -- it had nothing to do
24 with the M R I I had to do with the P E T , which I al --
25 we also did for that, and the prosecution asked for the raw

1 data of a study that we did in -- that we published more than
2 fifteen years ago, which required to thaw old computers to get
3 the raw data out, and we were not able to do it by the
4 deadline that the Court set, and so the Court ruled that I
5 could not present my testimony

6 MR HUMPHRIES Thank you

7 THE COURT Anything else, Ma'am?

8 MS WILLIAMS No sir We would ask that Dr Gur be
9 released from his Subpoena, so that he could return to
10 Philadelphia

11 THE COURT Any reason for -- the witness cannot be
12 excused? Solicitor?

13 MR HUMPHRIES No sir

14 THE COURT All right Very good

15 All right, Doctor, you are released from your Subpoena
16 You may go back to your regular duties, sir

17 THE COURT All right Who is your next witness?

18 MR DIGGS Your Honor, Dr Marc Einhorn

19 MARC P EINHORN, being first duly
20 sworn, testifies as follows

21 THE COURT All right, Mr Diggs

22 MR DIGGS Thank you And may it please the Court

23 DIRECT-EXAMINATION BY MR DIGGS

24 Q Dr Einhorn, would you tell us where you currently
25 reside, please sir?

1 A Roswell, Georgia

2 Q Okay And what kind of work do you do?

3 A Primarily Neuropsychology

4 Q All right Would you give us the benefit of your
5 educational background, please sir?

6 A A Bachelors Degree of the University of Florida,
7 Masters in Clinical Psychology from Loyola University
8 Maryland, and Doctorate from Nova Southeastern University in
9 Ft Lauderdale

10 Q Okay And what have you done by way of work, and
11 employment, and career subsequent to your graduation or
12 completion of your Masters and/or Doctorate?

13 A It's been primarily Neuropsychology Of course there
14 have been other things along the way, including things
15 directly or indirectly related to Neuropsychology, and also
16 Forensic Psychology

17 Q All right What is Neuropsychology?

18 A It's a hybrid of Psychology and Neurology It's ---

19 Q Kind of explain that Break that down for me, if you
20 would

21 A Yes It's the study of the relationship of behavior to
22 brain function

23 Q All right And is that something you study in -- I
24 mean, what do you do in your practice?

25 A The kinds of cases I see would be victims of accidents,

MARC P EINHORN - DIRECT BY DIGGS

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1 chiefly this is people that go through the windshield, or in
2 other ways injure their brains often -- or primarily the
3 frontal -- front part of their brains This would be victims
4 of stroke, people with Alzheimer's disease, people with other
5 forms of dementia My job is to scrutinize the localization
6 and the severity of these disorders

7 Q And how do you go about doing that?

8 A It's done in a systematic approach which includes the
9 systematic challenging of the various areas of the brain

10 Q Okay In terms of practical, lay approach, how --
11 explain for me what that means, how you would do it

12 A There are various tests that we use to write
13 information that we know is connected to certain brain areas
14 The test results, whether positive, negative, or somewhere in
15 between, then tell us the level of function for a particular
16 brain area For example, the front -- the front is one brain
17 area that we have certain tests for There are certain tests
18 for the side of the brain where memory is There are tests
19 for the side of the brain where another form of memory is, the
20 part of the brain where vision is, in the back there are other
21 tests for

22 Q All right Do you have occasion -- I assume that when
23 patients -- do you call them patients ---

24 A Yes

25 Q ---To you -- and they are seeking some kind of

1 professional assistance with a diagnosis, I assume

2 A Yes

3 Q They are seeking , Do you investigate or inquire into
4 all kinds of brain injuries, or all kinds of trauma, or is it
5 localized to one particular area of the brain?

6 A Over the years I think it would be fair to say that
7 I've looked at most types of trauma, in all areas of the
8 brain

9 Q Okay And has any percentage of that focused on
10 frontal lobe areas?

11 A Yes

12 Q Now, if someone comes to you, or they are referred to
13 you, and it's determined -- or you are asked to look into a
14 possible frontal lobe injury or deficit, or defect, how do you
15 go about making that determination with respect to that area?

16 A There are tests that we use that we know are -- they
17 clearly involve the frontal lobes, or a test that we use that,
18 in secondary form involve the frontal lobes, for example, some
19 forms of memory involve the frontal lobes

20 MR HEMBREE Your Honor, these questions seem to be
21 more appropriate after the witness has been qualified I
22 don't believe he has been qualified yet, and I would object --
23 -

24 MR DIGGS Yes You know ---

25 MR HEMBREE ---To this line of questioning until Dr

MARC P EINHORN - CROSS BY HEMBREE

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1 Einhorn is qualified

2 THE COURT All right Very good

3 MR DIGGS Well at -- at this point we would offer Dr
4 Einhorn as an expert in Clinical Psychology

5 THE COURT All right In the field of Clinical
6 Psychology Do you wish to ---

7 MR DIGGS Clinical and Neuro

8 THE COURT I'm sorry

9 MR DIGGS Clinical and Neuropsychology

10 THE COURT Clinical and Neuropsychology

11 MR DIGGS Yes sir

12 THE COURT All right Do you wish to question the
13 witness?

14 MR. HEMBREE Just a few, Your Honor

15 THE COURT Very good

16 CROSS-EXAMINATION BY MR HEMBREE

17 Q Dr Einhorn, have you -- have you testified in other
18 criminal cases?

19 A Yes

20 Q On how many occasions?

21 A Well, I don't track criminal as opposed to civil, but
22 it's -- in criminal cases probably in the range of about fifty
23 or seventy-five

24 Q And on how many occasions have you testified in
25 criminal' murder trials?

1 A I have worked both sides of the fence I don't track
2 the percentages, I mean, the last prosecution case I did was
3 for the Attorney General in Georgia

4 Q How long ago was that?

5 A I think it was in 2004 I did three of those

6 Q All right Have you worked for the prosecution since
7 2004, on any case?

8 A I don't think so

9 Q Do you -- can you tell this jury roughly -- and I know
10 it's -- and I'm not going throw any specific number, just your
11 best estimate of how many -- how many criminal cases have you
12 testified in since 2004?

13 A Criminal since '04?

14 Q Best guess

15 A I don't know that there has been any

16 Q Oh, you haven't testified in any criminal cases since
17 '04?

18 A Not criminal It's been primarily civil since then

19 Q All right Are you licensed in South Carolina?

20 A No

21 Q You are licensed in Georgia?

22 A Yes

23 MR HEMBREE Your Honor, we don't have any objections
24 to Dr Einhorn's qualifications as a Clinical Psychologist or
25 Neuropsychologist

MARC P EINHORN - DIRECT BY DIGGS CONTINUED

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1 THE COURT Very good

2 MR DIGGS Thank you

3 THE COURT He's qualified to give his opinion

4 MR DIGGS Thank you, Your Honor

5 DIRECT-EXAMINATION BY MR DIGGS CONTINUED

6 Q And Dr Einhorn, if someone came in and -- or they were
7 referred to you with a question concerning brain injury in the
8 frontal lobe area tell us what you would do in order to begin
9 to evaluate that case and what you would do to undertake
10 efforts to -- to do what you are hired to do

11 A The first thing I would want to know would be the
12 specific questions that the referral physician or other party
13 had, I mean, they don't always want to know everything
14 Sometimes they just want to know focal questions If they
15 don't have focal questions then we do an exhaustive battery,
16 to take a look at all function, and look at what surfaces as
17 being impaired, and what looks to be level and normal

18 And then from that we look for patterns of impairment,
19 and then we make a diagnosis based on a battery of tests which
20 takes a considerable amount of time It's not like going to
21 the doctor for an hour It could take the better part of two
22 days

23 Q All right Now, what kinds of technologies, if any,
24 are available to professionals in your area of expertise to
25 assist you in making diagnoses?

1 A Well, the technology comes from chiefly film studies

2 Q And what do you mean by ---

3 A I do not do that Others provide that

4 Q Okay What do you mean by film studies though?

5 A C A T scans, M R I s and sometimes P E T scans

6 Q All right And in this particular case were you ever
7 approached to provide any psychological assistant services to
8 assist in the Stanko case?

9 A My mission was two-fold I was asked to do, one, an
10 exhaustive neuropsychological examination, which I did, in the
11 jail, and two was to perform a -- or administer a test at the
12 Medical University that was specific for stimulating the
13 frontal lobes just before he went into the P E T scan

14 Q All right Now I know you were asked to administer
15 this test Do you know why it was to be administered, or how
16 it was to be used?

17 A The test had been used -- and there is literature to
18 support the fact that this specific test stimulates the
19 frontal lobes -- so I simply administered the same test, which
20 is known to do what needed to be done in this case, stimulate
21 the frontal lobes

22 Q All right Okay And what test was administered?

23 A It is the Continuance Performance Test

24 Q Can you tell us what that is? What does it entail?

25 A Well, I can't give you excruciating detail due to

1 ethics and test security, but I'll give you the -- I'll
2 describe it in the broadest sense

3 Q All right

4 A And that is, it is a test that is most often used to
5 diagnose A D H D , and it is a test that throws at the
6 participant both visual and verbal, or auditory stimuli, and
7 the person taking the test must respond in certain ways to
8 that stimulus, or stimuli, based upon instructions that come
9 from the test It's a computer-administered test I don't do
10 the actual administration I just set it up, and the computer
11 provides all of the instructions, what to do, and it is a
12 fairly demanding test

13 Q Okay Why is the test given?

14 A The test is given because it -- well, for a couple of
15 reasons One, as I said a minute ago, it is done to stimulate
16 the frontal lobes, and secondly, it is done to provide a more
17 consistent set of information than the other way of just
18 having a person in a resting state before he goes into the
19 P E T scan

20 For example, if you are lying in a resting state you can
21 be thinking about all kinds of things, your last vacation,
22 your girlfriend, the argument with your wife, or stress at
23 work That does not insure that your brain is at rest You
24 can be lying there at rest, but you may not be at rest When
25 we use this test what it does is ensure that the brain is

1 doing something specific, it's engaged in a task, it's engaged
2 in a task that is continuous, and it provides -- it provides
3 a, what we call a base-line for knowing what the brain
4 activity is There is no margin of error

5 Q Okay So the purpose -- when I say why do you give
6 it -- the purpose of the administering of the test is to
7 accomplish what?

8 A To stimulate the frontal lobes

9 Q All right And would -- at -- did you do that in this
10 case, when you ---

11 A Yes

12 Q You said you engaged in an exhaustive neuroexamination
13 of the Defendant ---

14 A Yes

15 Q ---And you administered this particular test Tell us
16 what you did in an effort to do that, where you went, how it
17 was conducted

18 A Let me just pour some water first

19 Q Sure

20 A Mr Stanko was taken by law enforcement to the Medical
21 University

22 Q Okay Where?

23 A In Charleston

24 Q Okay M U S C ?

25 A Yes

MARC P EINHORN - DIRECT BY DIGGS CONTINUED

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1 Q All right

2 A I met them there, and when I got there we were in a --
3 a little room, and they set up the test with -- they put an
4 I V in his arm, which was the radio-tracer, and what I did,
5 according to the procedure that had been written up in an
6 article back in 1998, I started -- well, first I gave him a
7 little warm-up, and then I started the Continuanace Performance
8 Test for thirty seconds before they injected -- or before they
9 let the tracer flow, and then what I did was have him perform
10 the Continuanace Performance Test for thirty minutes, including
11 eight minutes of warm-up, so it was a total of thirty-eight
12 minutes

13 Q Now, what was the purpose of that? You've got this
14 fluid going into his body ---

15 A Yes

16 Q ---Through an I V ?

17 A Yes

18 Q And that is to do what? What's the purpose of that
19 fluid?

20 A That is to be able to track the brain activity

21 Q All right That fluid goes all throughout the body and
22 into the brain?

23 A Yes

24 Q And you did that for how long?

25 A Thirty-eight minutes

1 Q All right Why thirty-eight minutes?

2 A That was the length of the procedure, the test
3 procedure

4 Q Okay And during that thirty-eight minutes you were
5 doing what, in a general way, and I'm not going to ask you ---

6 A Just stepped aside and watched him, and there were
7 others there watching me with him

8 Q Okay When was actually the Continuance Performance
9 Test itself done? At that time?

10 A Yes

11 Q Okay So when you say you watched him, what was Mr
12 Stanko doing?

13 A He was responding to the Continuance Performance Test,
14 and the instructions being given from that test

15 Q Okay Was he reading a book, or was he looking at a
16 computer, or a television screen or what?

17 A I had brought my laptop The test is on the laptop

18 Q All right

19 A The test is -- he was sitting with my laptop ---

20 Q Okay

21 A ---And the instructions come from the voice in the
22 program

23 Q All right Now, what is the theory behind the
24 introduction of the liquid, you know, into the body from the
25 I V , and to go out through the brain?

MARC P EINHORN - DIRECT BY DIGGS CONTINUED

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1 A That it would provide a way of seeing which brain areas
2 were being used

3 Q Okay All right So it would be disbursed out through
4 the brain in accordance with the way the brain was functioning
5 at that time?

6 A Yes

7 Q All right And how long does that material stay
8 dispersed in that particular fashion, if you know?

9 A I do not know I'm not a P E T scan expert so I don't
10 want to speculate

11 Q Okay

12 A Others would know that

13 Q Now, after you did that was there a time, ever, when
14 Mr Stanko was put into a P E T scan device?

15 A After he finished my test that's what he did

16 Q Now, were you actually present when he was put into the
17 P E T scan machine?

18 A I was not I was not

19 Q All right And was it necessary for you to be there at
20 that moment?

21 A No My mission ---

22 Q Oh -- Okay

23 A ---Was to administer the test, stimulate his frontal
24 lobes, and that's what I did

25 Q Now, did you administer the test in accordance with the

1 proper procedure that is required for the administration of
2 that test?

3 A Yes I followed the procedure that was -- had been
4 first written up in that 1998 article

5 Q All right And thereafter did you receive any results
6 back from the test?

7 A Well, it -- we get a set of results that are, you know,
8 in the computer

9 Q All right Now, you got -- did you receive back the
10 results of your neuropsychological exam?

11 A Yes

12 Q And that exam occurred over the matter of how many
13 days?

14 A It was the better part of two full days

15 Q All right And when you got those results back what
16 did you do with them?

17 A What did I do with them?

18 Q Yes

19 A I wrote them up and submitted them

20 Q And who did you submit them to?

21 A I believe I sent them to you

22 Q All right Could it have -- and I don't want to -- if
23 you don't remember or ---

24 A And Dr Sachy

25 Q Okay So you had sent them to Dr Sachy?

MARC P EINHORN - DIRECT BY DIGGS CONTINUED

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1 A Yes

2 Q All right And now with respect to the Continuance
3 Performance examination, did you receive results from that
4 test, that P E T scan?

5 A I'm not sure what you are asking me

6 Q All right Let me ask you this -- did you receive the
7 results from, or the data, from the Continuance Performance
8 Test?

9 A Yes

10 Q And what did you do with that, if anything, that data?

11 A Well, there's nothing for me to do with it I mean, I
12 wasn't collecting that data for a research project The data
13 was there My concern was to administer the test ---

14 Q Okay

15 A ---And ensure that those -- that frontal lobe area was
16 stimulated, which I did, and then as far as the results, those
17 results were not used for anything else

18 Q Okay And the P E T scan was then performed Is that
19 your testimony?

20 A Yes

21 Q As far as you know?

22 A Yes

23 Q And thereafter did you learn that it had been
24 performed?

25 A Yes

1 Q Okay And do you know, if anything, what was done with
2 the P E T scan results?

3 A Well, they have been scrutinized by Dr Sachy at ---

4 Q Okay And are you aware of anyone else that might have
5 received those results?

6 A Dr Wu, Dr Joseph Wu

7 Q All right Wu and Sachy All right, now, were you
8 ever involved in an M R I that was done of Mr Stanko?

9 A I had no direct involvement with that

10 MR DIGGS All right Dr Einhorn, I appreciate your
11 time, but I think that gets to the area that I needed to
12 discuss with you, and I appreciate it

13 Answer any questions that the Solicitor may have

14 THE COURT Yes sir

15 CROSS-EXAMINATION BY MR HEMBREE

16 Q Good morning, Dr Einhorn

17 A Hi

18 Q Dr Einhorn, you -- you've worked with Drs Sachy and
19 Wu on other cases, have you not?

20 A I've worked a few with -- a few others with Dr Sachy
21 and one other with Dr Wu

22 Q In those cases you were called upon, essentially, to
23 conduct the same test, and essentially the same function?

24 A Yes

25 Q Let's talk a little bit about the -- the

1 neuropsychological testing that you did on Defendant Stanko

2 A Okay

3 Q And you indicated that that was a very thorough
4 neuropsychological exam

5 A Yes

6 Q That it took you approximately two days to conduct that
7 neuropsychological exam

8 A Not quite two full days, but it was lengthy

9 Q As much time as you needed, would that be fair to say -
10 --

11 A Yes

12 Q ---To do a thorough testing And let me walk through
13 your findings with you

14 A Let me -- if I could just grab that report

15 Q Absolutely

16 A Okay

17 Q Let's talk first about the -- this overall -- the
18 neuropsychological test results were uniformly negative
19 Isn't that true?

20 A Yes

21 Q And when you say uniformly negative, I take that to
22 mean that there was nothing unusual, that they were negative
23 in the sense that that's a good thing

24 A Yes Negative means they were clean, healthy and
25 negative sounds negative, but it's positive

1 Q Understood

2 A Negative means good results

3 Q And isn't it true, Dr Einhorn, that often, not always,
4 but often when there is a brain defect there are
5 neuropsychological problems?

6 A Yes

7 Q But no neuropsychological problems detected in this
8 Defendant?

9 A Correct

10 Q Now, you administered, as part of that testing
11 process -- I'll shift gears just a bit here -- the Continuance
12 Performance Test, and this was provided to you by Dr Wu?

13 A No, not at all

14 Q Okay Who provided the Continuance Performance Test to
15 you?

16 A It's my test No one provided it to me

17 Q Your test, and where did you obtain this test?

18 A I purchased it

19 Q Okay It's -- is it F D A approved?

20 A Tested, not F D A approved

21 Q Is it -- and I mean, is this the same test -- why did
22 you purchase this particular test?

23 A Well, I did not purchase it just for this case That's
24 first

25 Q Sure

1 A Secondly, it is a test that I use every now and then,
2 for various reasons, in my office, but for this case it was
3 used because that was the test that was used in the procedure
4 where this research study was conducted, so to be consistent
5 with the procedure and the research study I used the test that
6 they used

7 Q I note you said a research study

8 A Yes

9 Q That's -- when it's a research study that's something
10 that is not yet been generally accepted in the scientific
11 community Isn't that typically correct? It's sort of an
12 early stage or a middle stage of that process, is that fair to
13 say?

14 A Yes

15 Q And that was the test -- I understand that this was the
16 test you used because that's the one they used in the research
17 project

18 A Uh huh (**indicating positive**)

19 Q You weren't there when they did the P E T scan?

20 A I was not

21 Q All right When you -- were you in the -- what sort of
22 facility was this test administered -- the P E T scan
23 administered in? I mean, I'm sure it was a P E T scan
24 machine, but I mean, what -- was it a hospital, was it a ---

25 A It was at the Medical University at Charleston

1 Q Okay That's right That's right And do you know
2 how long -- how much time elapsed from the time you completed
3 the Continuing Performance Test until Mr Stanko was actually
4 put into the P E T scan and the scan was taken?

5 A I do not know that

6 Q Would that be significant to you in knowing -- I mean,
7 would that be important to you, because it seems to me that if
8 you are doing a Continuance Performance Test to stimulate the
9 frontal lobes at some point that stimulus is going to fade
10 Isn't that fair to say?

11 A It is, but those are questions that other experts can
12 answer, and I'm not a P E T scan expert

13 Q I've got you I've got you So you couldn't say --
14 you wouldn't be able to say that -- how much that stimulus
15 would fade over how much time?

16 A I could not say that

17 Q What questions are asked during the test?

18 A The Continuance Performance Test?

19 Q Yes sir

20 A An example would be this The instruction would be, I
21 want you to respond every time you see the number one
22 Respond means click the mouse So then he would -- the
23 subject would either hear or see various stimulus, so we've
24 got verbal, visual, verbal, visual, going back and forth, and
25 then every once in a while then the number one would be

1 slipped in, and that person at the computer needs to be able
2 to respond to seeing that one That's one variation

3 The other would be, again, if the person is told, I want
4 you to click the mouse when you see the number one, then
5 various numbers, sounds and everything will be going off,
6 including a verbal number one, and then there is the impulse
7 to click the mouse when you hear number one, but it's verbal
8 It's the wrong sense modality, so you look to see if, you
9 know, that discrimination is taking place

10 Another example would be, in the test the person might
11 be asked, I want you to click the mouse every time you see a
12 letter show up, or hear a letter, and then they are clicking,
13 clicking, and then suddenly they see a number, and you want to
14 see if they continue clicking when they see a number rather
15 than the letter It's -- it requires you to be on your toes

16 Q And you use it for an entirely different -- well, you
17 use it to -- I think you said you use it -- or a common use
18 for it is to diagnose A D H T

19 A Yes It's for attention and concentration

20 Q And that's -- is that another -- I take it that's what
21 you use it for in your practice?

22 A Yes

23 Q Then -- got you Now, Mr Diggs asked you about some
24 results from the P E T scan Did you receive from the
25 Medical University of South Carolina the results of the P E T

1 scan?

2 A No, I did not

3 Q Okay Did you -- what did you do after the P E T --
4 after you concluded the test? Did you just pack up and head
5 on down the road?

6 A Well, no I -- I was -- I was there with a -- with two
7 women, one was a technician, one, I assume, was a nurse, There
8 was the police officer and then the physician came a little
9 bit later, and we stayed there and chatted for a few minutes
10 The police officer was getting a kick out of telling some law
11 enforcement stories so I laughed with them, and I was there
12 probably for another ten minutes, and then I left

13 Q Got you You weren't there when Mr Stanko had
14 finished the test You were gone before they brought him out,
15 is that -- is that right?

16 A What do you mean, finish the test ---

17 Q I'm sorry The P E T scan The P E T scan I
18 apologize Had you -- did you depart before Mr Stanko was
19 finished with the P E T scan?

20 A Yes

21 Q I'm going to take you back to your -- to your
22 neuropsychological examination of Defendant Stanko

23 A Okay

24 Q You already indicated the neuropsychological tests were
25 negative, which was positive, which is a good thing You have

1 testified -- let's see, you did the Louri Nebraska
2 Neuropsychological Battery

3 A Yes

4 Q And I'll just go through these motor functions -- tell
5 me your findings when I go through these topics Motor
6 functions

7 A Normal

8 Q Concentration

9 A Within normal limits

10 Q Task or functions

11 A Within normal limits

12 Q Visual functions

13 A Within normal limits

14 Q Receptive speech

15 A Within normal limits

16 Q Expressive speech

17 A Within normal limits

18 Q Writing

19 A Normal

20 Q Reading

21 A Normal

22 Q Arithmetic

23 A Normal

24 Q Memory

25 A Normal

1 Q Intellectual processes?
2 A Normal
3 Q Tower of London
4 A Within normal limits
5 Q Wisconsin Card-Sorting Test
6 A Normal
7 Q Trails (A)
8 A Normal
9 Q Trails (B)
10 A Normal
11 Q Finger-tapping
12 A Also normal
13 Q Bender-Gestalt
14 A Normal
15 Q The Rey 15 - Item Memory Test
16 A Within normal limits
17 Q Immediate recall of a story
18 A Normal
19 Q Well, actually he was above average on that, or is that
20 ---
21 A Yes
22 Q And then delayed recall of the story
23 A Normal
24 Q Immediate Rey ---
25 A Osterith

MARC P EINHORN - CROSS BY HEMBREE

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- 1 Q Osterith How did he do on that?
- 2 A Normal
- 3 Q Actually he was above average True?
- 4 A Above average, yes
- 5 Q And then Delay Ray Osterith Complex figure
- 6 A Above average
- 7 Q All right And then he had a reading standard score of
- 8 one fifteen Is that significant -- what's the significant of
- 9 that score?
- 10 A It's above average
- 11 Q Okay Then you gave him an intelligence test, the
- 12 Wechsler Adult Intelligence Scale, Third Revision
- 13 A Yes
- 14 Q And this is essentially an I Q test
- 15 A Yes It's an individually administered standardized
- 16 I Q test
- 17 Q And he was -- Mr Stanko has what I Q ?
- 18 A In your report it says, I think, one forty-three,
- 19 however, after I turned this in I found I had made an
- 20 arithmetic error, and it is one -- it should be one forty
- 21 Q One forty Okay And how would you characterize an
- 22 I Q of a hundred and forty?
- 23 A That is three standard deviations above normal, which
- 24 doesn't mean much, but it is gifted level
- 25 Q Gifted When you say that it's three standard

1 deviations above normal but that doesn't mean very much Tell
2 me what that means, and why is that -- why is that? Tell me
3 what you mean by three standard deviations Explain that to
4 me

5 A With each standard deviation above average the score
6 enters a new ranking, and the -- at three -- in the third
7 standard deviation above average, you know, we get into the
8 gifted level

9 Q All right But you indicated that -- I mean, it's not
10 really significant, it's just -- it is what it is Is that
11 essentially what you are saying?

12 A Yes

13 Q Okay And there's a -- I guess the population, if you
14 were to do a statistical study there's a -- there are fewer
15 people in that three standards above deviation

16 A Yes

17 Q All right But there are people that are in that --
18 that are in that standard, true?

19 A Yes

20 Q Let me talk to you about the review of his system
21 Attention and arousal orientation

22 A All normal

23 Q Verbal functioning

24 A Normal

25 Q Visual special functioning

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1 A Normal

2 Q Sensory motor functioning

3 A Normal

4 Q Memory

5 A Normal

6 Q Higher order executive functions

7 A Normal

8 Q Now were those the functions that you would expect to
9 be controlled by the frontal lobes?

10 A No, not all of those, no

11 Q Okay

12 A Those are system, and the different systems are
13 connected to different brain systems in different parts of the
14 brain

15 Q It's not really that simple, is it? I mean you can't
16 just pick one spot, these things are more complicated than
17 that, aren't they?

18 A Yes Uh huh (**indicating positive**)

19 Q Personality and emotional, I think you found the
20 thought processes and communications are clear and efficient

21 A Yes

22 Q No evidence of any psychotic distortion or thinking or
23 perception

24 A Yes

25 Q You gave him the Minnesota Multi-phasic Personality

1 Inventory II

2 A Yes

3 Q And this indicated, if I understand your report
4 correctly, that he -- it was positive indications for Anti-
5 social Personality Disorder with a well-socialized veneer

6 A Yes

7 Q Now, isn't -- is it fair to say that an Anti-social
8 Personality Disorder, to put it in maybe layman's terms,
9 really means somebody that doesn't either get along with
10 others well, or play by the rules of society very well, they
11 don't follow those rules ---

12 A Yes

13 Q ---Of a civilized society

14 A Yes

15 Q Now, with a well-socialized veneer, am I understanding
16 that to mean that he is -- that underneath he's -- he likes to
17 break the rules, or has difficulty playing by the rules, but
18 on the outside he's well socialized, he can behave in a way
19 that appears that he is ---

20 A Yes

21 Q ---Is fine ---

22 A Yes

23 Q ---That he's not going to break the rules, that he's
24 not going to lie, he's not going to steal, he's not going to
25 cheat ---

1 A Yes

2 Q ---And apparently can follow the rules of a civilized
3 society

4 A Yes

5 Q Now, is it fair to say that the anti-social personality
6 disorder is -- really manifests itself by repeated criminal
7 conduct and anti-social acts

8 A Is that how you make the diagnosis?

9 Q Yes Would that be -- yes, would that be -- would that
10 be a -- a -- a ---

11 A Yes

12 Q Would that sort of conduct -- would that type of
13 conduct lead you to this diagnosis?

14 A Yes

15 Q What other factors would lead you to this diagnosis?

16 A Well, for one, the actuarial profile that came from the
17 tests ---

18 Q Okay

19 A ---So there would be history gathered

20 Q All right

21 A A collateral source information that I would typically
22 get in a criminal case, not in this one, because my mission
23 was neuropsychology, not really personality assessment, and
24 any medical problems

25 Q But from a standpoint of conduct, when you are

1 assessing history, to make a determination -- I appreciate
2 there -- a large part of this diagnosis came from the test
3 itself ---

4 A Yes

5 Q ---But when you are evaluating conduct, or past conduct
6 as a method of reaching a diagnosis you are really looking for
7 -- if you see a repeated pattern of criminal behavior or anti-
8 social behavior that leads you to this diagnosis?

9 A Yes

10 MR HEMBREE Dr Einhorn, I don't have any further
11 questions for you I appreciate your being here today, and
12 may have some questions from Defense

13 THE COURT All right Redirect

14 MR DIGGS Your Honor, we don't have any redirect

15 THE COURT Do you wish the witness to be excused?

16 MR DIGGS Yes sir

17 THE COURT Any objection?

18 MR HEMBREE Without objection, Your Honor

19 THE COURT All right, Mr Einhorn, you are released
20 from your Subpoena You may go back to your regular duties,
21 sir

22 Y'all come up and talk to me for a second, please

23 (BENCH CONFERENCE TAKES PLACE OFF THE RECORD)

24 THE COURT Ladies and gentlemen, if you would go to
25 your jury room for about five minutes, please, and we will

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1 come back and resume

2 Thank you

3 (THE FOLLOWING TAKES PLACE OUTSIDE THE PRESENCE OF THE
4 JURY)

5 THE COURT All right We'll take a break for about
6 five minutes Thank you

7 (THE FOLLOWING TAKES PLACE AFTER A BREAK AND WITHIN THE
8 PRESENCE OF THE JURY)

9 THE COURT All right, Mr Diggs, are you ready for
10 your next witness?

11 MR DIGGS Yes sir, Your Honor The Defense would
12 call Dr Joseph Wu

13 THE COURT All right, sir, if you would come around to
14 be sworn, sir, please

15 JOSEPH CHON-SANG WU, , being first
16 duly sworn, testifies as follows

17 DIRECT-EXAMINATION BY MR DIGGS

18 Q Dr Wu, how are you this afternoon?

19 A I'm doing fine

20 Q Good Let me ask you if you would, please sir, give us
21 the benefit of your educational background and training

22 A I did my pre-medical education at Stanford University
23 I graduated from there with honors in 1978 After that I did
24 my medical school training at the University of California
25 Irvine I graduated from there with honors with my M D in

1 1982 After that I did a residency in Psychiatry, which I
2 completed with honors in 1986, also at the University of
3 California at Irvine, College of Medicine And then after
4 that I did a two-year Fellowship in P E T scan imaging of the
5 brain, which I completed in 1988, also at the University of
6 California Irvine

7 Q Well, now, after your training, can I ask you what you
8 do now Do you currently -- how do you use your training and
9 expertise at this point?

10 A Currently I am a Associate Professor in the Department
11 of Psychiatry and Human Behavior I am also the Clinical
12 Director of the University of California Irvine Brain Imaging
13 Center

14 Q All right Now, what does the Brain Imaging Center do,
15 just generally?

16 A The Brain Imaging Center is involved with the use of a
17 brain imaging technology called P E T scans P E T is short
18 for Positron Imaging Tomography scans, and it's a kind of
19 imaging of the brain that looks at brain function as opposed
20 to brain structure, and so we use this kind of functional
21 brain imaging to look at a variety of neuropsychiatric
22 patients with various disorders, such as Alzheimer's Disease,
23 Epilepsy, Schizophrenia, traumatic brain injury, carbon
24 monoxide poisoning, things -- Parkinson's Disease, and we look
25 at these kinds of brains, and look at the brain functioning

1 for both research and clinical purposes

2 Q Now as part of your responsibilities do you have to
3 have knowledge and understanding of how to interpret, how to
4 administer and interpret P E T scan data?

5 A Yes That's part of my responsibility I have the
6 responsibility to understand how to both acquire the images
7 and interpret them, both from a clinical and research
8 perspective, for various disorders such as brain injury,
9 Alzheimer's Disease, Epilepsy, Schizophrenia, etcetera

10 Q All right And what particular area of specialty are
11 we referring to when you exercise that kind of special
12 knowledge?

13 A Well, it's -- it's a P E T imaging of neuropsychiatric
14 disorders, so that kind of my specialty, is looking at P E T
15 scans to help evaluate neuropsychiatric disorders, and
16 neuropsychiatric disorders are disorders that can either be
17 neurological or psychiatric, things like Parkinson's Disease
18 or Alzheimer's are more classically neurological Things like
19 Schizophrenia or depression are more psychiatric, and then
20 things like brain injury can fall in either Neurology or
21 Psychiatry

22 MR DIGGS All right Your Honor, we would offer Dr
23 Wu as an expert in the area of P E T scan imaging and
24 diagnosis, or interpretation of results ---

25 And as to the exact term, Dr Wu, would you repeat that

1 for me

2 A I would say a P E T scan imaging of neuropsychiatric
3 disorders

4 MR DIGGS All right An expert in that field, P E T
5 scan imaging and Neuropsychiatric Disorder

6 THE COURT All right Do you wish to question the
7 witness?

8 MR HUMPHRIES No sir

9 THE COURT All right Very good I'll qualify him to
10 give his opinion in that area

11 Q All right, Dr Wu, can you take just a couple of
12 minutes Did you bring some materials with you that would
13 help explain what you do?

14 A Yes I have a PowerPoint that can help explain what is
15 a P E T scan, how it's used, what's the finding for Mr
16 Stanko, and what the implications are

17 Q All right I would like -- can you come down -- can
18 you operate it from there, or do you need to come down here to
19 the computer?

20 A I don't have a remote control to operate my laptop, so
21 I would have to come down to operate the PowerPoint

22 MR DIGGS Your Honor, may he do that?

23 THE COURT All right You can, sir

24 MR DIGGS And Dr Wu, when you come here what I would
25 ask you to do is, maybe if you could speak into this

1 microphone so that the Court Reporter can hear you, this one,
2 and then when I have questions, Your Honor, I could kind of
3 share that microphone with him

4 THE COURT You will have to come right -- yes sir

5 MR DIGGS Thank you

6 A Okay So this is just a title slide of my position,
7 and a little bit of background on some of my scientific
8 productivity, and some of the work that I have done has been
9 covered by various media outlets such as the Discovery
10 Channel, Scientific American, the New York Times, and also the
11 fact I have received over a Million Dollars worth of funding
12 from the National Institute of Health to use P E T scans to
13 study psychiatric disorders, and this is just a little bit of
14 background about ---

15 Q Okay Now this -- U C I Brain Imaging Center, again,
16 explain to us -- I know we are not from around there, or vice-
17 versa Explain to us what we are talking about there

18 A This is the center that I am the Clinical Director at,
19 and we are one of the centers in the Country that is a leading
20 center for the evaluation of neurological and psychiatric
21 disorders, but P E T scans we have published a number of
22 articles, we have processed a number of grants, and so we have
23 much more expertise in the use of P E T scanning to evaluate
24 psychiatric or neurological disorders than most centers I
25 would say we are one of the leading centers in the Country to

1 evaluate neurological and psychiatric disorders

2 Q All right What are we being shown on this particular
3 shot, this diagram?

4 A Now on this shot here, this is basically an
5 introduction slide that talks -- that illustrates some of the
6 differences between functional imaging, like P E T scans,
7 versus a conventional structural imaging, like M R I scans
8 Structural imaging like M R I scan basically shows the shape
9 of the brain, but it doesn't tell you whether the brain is
10 turned on, turned off in different areas So, for example,
11 you could have a M R I of a cadaver's brain, and the shape of
12 the cadaver's brain might be perfectly normal, and it might be
13 read a perfectly normal, even though there is obviously no
14 functioning inside a cadavers's brain, but if you were to try
15 to get a P E T scan of a cadaver's brain, because the brain
16 shape, even though it may be perfectly normal, has no function
17 the P E T scan would be basically a blank screen, and so we
18 can go from the extreme of a normal M R I and zero
19 functioning in the cadaver to a -- with someone with some type
20 of brain injury where you can see areas of the brain that are
21 turned on or turned off

22 The way P E T scans work, and -- is that P E T scans
23 rely on something called a positron P E T is short for
24 Positron Imaging Tomography A positron is short for a

1 positive electron As you may recall from basic physics,
2 electrons normally have a negative charge Now we can create
3 what we call an anti-matter version of an electron, which is
4 identical, except that it has a positive charge

5 Now anti-matter doesn't normally exist in our universe,
6 and so you have to create it, and when it does -- when it is
7 created it doesn't last very long, because anti-matter will be
8 attracted to matter, so a positive electron will be attracted
9 to a negative electron Now what happens when you combine
10 matter and anti-matter is that you get a process called
11 annihilation decay Using Einstein's famous equation, "E"
12 equals "MC" square, well, "E" equals energy, and "M" equals a
13 mass, and it's either positron or the electron And so when a
14 positron and an electron combine you get a tremendous amount
15 of energy that's created by that combination, and for those of
16 you who are science fiction fans you may remember the show
17 Star Trek, in which the U S S Enterprise was powered by a
18 matter, anti-matter engine While that show is science
19 fiction the basic physics principal that's a combination of
20 matter and anti-matter creates tremendous energy is, in fact,
21 a well-established and valid physics principal, and it's the
22 physics principal that underlies P E T scanning

23 Q Now, can you show us -- I was just going to say, can
24 you show us a little bit about the imaging center where you
25 work, and how it operates?

1 A Yes So in order to create the anti-matter version of
2 electron, the positron, we need this device here called a
3 cyclotron Now a cyclotron is a twenty-two ton instrument
4 which can take particles smaller than the atom, and can
5 accelerate it to near speed of light velocity Light travels
6 at approximately a hundred and eighty-six thousand miles per
7 second, and so we are able to use this cyclotron, and we are
8 able to speed up particles smaller than an atom to almost a
9 hundred and eighty-six thousand miles per second, and we are
10 bombarding a target, and that bombardment of a target by these
11 sub-atomic particles traveling at ninety-nine point nine nine
12 percent or speed of light creates the anti-matter version of
13 electron, called a positron

14 Now, if you lift the hood of the cyclotron and look at
15 the engine underneath the hood this is what you would see
16 You would see these two triangular magnets Now in this
17 schematic the two triangular magnets alternately either
18 attract or repel charged sub-atomic particles, so that with
19 each revolution it goes faster and faster It's kind of like
20 if you have a merry-go-round, and every time the merry-go-
21 round you slap it so that you can get the merry-go-round to go
22 faster and faster While this is true metaphorically speaking
23 on a sub-atomic level the cyclotron is essentially slapping
24 that merry-go-round faster and faster with each revolution, so
25 that by the time the particle emerges from the cyclotron it's

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1 traveling at ninety-nine point nine nine percent to speed of
2 light, almost a hundred and eighty-six thousand miles per
3 second, and you need this kind of velocity to accelerate a
4 sub-atomic particle, that by the time it strikes your target
5 you can create something which doesn't normally exist in our
6 universe, the anti-matter version of electron to positron

7 Once we have created that positron with a cyclotron, the
8 positron emitter, we attach it to a sugar molecule Now sugar
9 is the main fuel for the brain's function, so if your brain is
10 thinking very hard in a particular area it will burn up a lot
11 of sugar, and if it's not burning, and if it's not functioning
12 very well in a particular area it will burn up less sugar, and
13 so we attach the positron emitter to the sugar molecule, and
14 then -- and the way we attach that positron emitter that we
15 created in the cyclotron to a sugar molecule is that we have
16 this hot cell Now this hot cell has a radial chemist in
17 front of a two-inch thick leaded glass window You need the
18 two inches of leaded glass to shield the radial chemist from
19 the radiation from the positron emitter, and he's using
20 robotic manipulators to run a chemical synthetic reaction to
21 attach the positron emitter to a sugar molecule After he has
22 attached the positron emitter created by the cyclotron to a
23 sugar molecule it is then introduced into a patient through a
24 small plastic tube called an intravenous slide

25 Like here is a model who is being demonstrated -- who is

1 demonstrating the placement of a small plastic slide into his
2 arm, and here the model is receiving the radial traces of the
3 positron emitting sugar molecule being injected into his blood
4 stream Now, once it is injected into the patient's
5 bloodstream you have about thirty minutes for that positron
6 emitted sugar molecule to settle into the brain, and what we
7 do during that thirty minutes that we do what we call a
8 vigilance task, or C P T , the Continuance Performance Test,
9 and so the Continuance Performance Test basically is a very
10 simple computer test where you ask the subject to press a
11 button when a specific stimuli comes on a screen, and we do
12 this for about thirty minutes

13 Now there are two basic ways of doing a P E T scans
14 One of them is what we call a rest P E T scan, and the other
15 is to do this kind of activated P E T scan using a C P T
16 Now the -- there are pros and cons for each approaches The
17 pros of doing this type of scan that this type of testing,
18 where you have the subject doing this computer testing during
19 the P E T scan results in a higher accuracy and sensitivity
20 in detecting brain injuries than doing a rest scan, but it
21 does require some expertise in the administration of a C P T
22 to be present during this scan

23 Q Some extra what?

24 A Expertise

25 Q Okay

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1 A Yes So most community centers generally don't do this
2 type of testing They don't have the expertise to run a
3 C P T scan during the procedure, and this is generally done
4 only at -- by facilities and people who have a special
5 expertise in the use of P E T scans to evaluate neurological
6 or psychiatric disorders

7 Q Is that an accepted method of doing a P E T scan, Dr
8 Wu, in the medical community?

9 A It is an accepted method for doing P E T scans by
10 people who specialize in P E T scans of neurological or
11 psychiatric conditions, and so the average community center
12 doesn't do this because the average community center doesn't
13 have special expertise

14 Q All right, now, does South Carolina have such a center?
15 Are you aware?

16 A Well, South Carolina has a P E T center, but the
17 P E T center does not have this kind of specialty expertise
18 inhouse to run this type of higher sensitivity P E T scan

19 Q All right So as a matter of -- well, let me just
20 hush Go ahead and continue on if you would

21 A So we do this kind of computerized testing after we
22 inject the patient with a positron emitted sugar molecule into
23 the blood stream, and we have been doing this for about thirty
24 minutes It takes about thirty minutes for the sugar molecule
25 to settle into the brain, and during this entire thirty

1 minutes they are doing this task It's kind of like one of
2 those old-fashioned Civil War photographs where you have to
3 have someone sitting in front of a camera for like thirty
4 minutes, very still, and then it takes a while for the
5 negative to develop Well, after the negative is exposed you
6 can then take the subject to a scanner Now this is just a
7 little bit about the fact that the C P T test has better --
8 has lower variability, and better test, retest reliability
9 than the rest scan

10 Q Okay I was going to ask you, lower variability, what
11 does that mean, but I think you answered that

12 A Well, variability means noise, so that, for example,
13 when a typical community P E T center does a typical scan
14 with -- once the subject is resting -- the brain is never
15 completely at rest If you ask ten different people to lie in
16 a room resting you would have ten different things that people
17 would think about, and so depending upon what you are thinking
18 about different areas of the brain will be activated That's
19 why you have what we call more variability in a resting scan
20 than we have all ten subjects being asked to focus on the same
21 thing, which is the computerized task where they are asked to
22 press a button That's why you have less variability when you
23 do this computerized test

24 Now if you have a lot of variability we can also call
25 more variability noise It's like static, and so if you are

1 trying to see a difference between a brain injury scan and a
2 normal scan, and you have more static or noise variability
3 it's harder to detect a difference, and so you can miss a
4 difference that's present when you have more variability or
5 noise than if you have a better scan which has less
6 variability, less noise, less static

7 Q All right What are we saying here -- what are you
8 saying here on this screen image, Smitt, et al, 1996, what is
9 that?

10 A Well, so this is a scientific peer-reviewed publication
11 which has documented the fact that this kind of C P T task is
12 superior to a resting scan in terms of having less
13 variability, less noise, less static

14 Q All right Now, the latter type of scan -- and if you
15 know this, and if you don't just say you don't know -- is
16 typically what is used in South Carolina, or at M U S C , the
17 Medical University of South Carolina

18 A My understanding is that M U S C typically does a
19 resting scan, which is the lower resolution, noisier, more
20 static type of scan

21 Q And how do they -- are you familiar with the software
22 at all that's used in that kind of P E T scan?

23 A Well, my understanding is that M U S C is using -- has
24 used a software Hermes Brass, and it's a brain registration
25 software, and this software has a comparison group, and the

1 comparison group that they use is composed of patients, or
2 normals, who are doing rest scan, which is a noisier scan than
3 one that has more static

4 Q All right Would that be appropriate for use in a
5 P E T scan that was done with a Continuance Performance Test
6 being administered?

7 A No It would be inappropriate to use the Hermes Brass
8 software with a resting scan nomen of data base to compare a
9 patient who has been done using an activation scan like the
10 C P T It's like comparing apples and oranges, so you
11 can't -- it's not something that's scientifically appropriate
12 or valid

13 Q All right Go ahead and continue with your PowerPoint,
14 please sir

15 A Well, so I have also added some additional citations,
16 scientific citations which indicate that the activation scan
17 is superior to the resting scan in terms of greater
18 reliability, and it's more sensitive at detecting brain
19 abnormalities because, again, this is another scientific peer-
20 reviewed publication which shows, if you have a group of brain
21 injured subjects compared to normal controls, and you have
22 them doing two scans, one scan where they are doing a resting
23 scan, which is noisier, you can't detect a difference with a
24 brain-injured subject compared to the normal subjects during a
25 resting scan, but if you were to take the same brain-injured

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1 subject, and the same normal control, and have him doing this
2 high resolution cognitive activation scan you can see
3 significant differences, so this is, again, a scientific peer-
4 reviewed publication which shows that the activated scan is
5 superior to the resting scan at detecting differences, and
6 that you can have cases of brain injury which is missed when
7 you are doing a resting scan, which is detected when you are
8 doing an activation scan, so again, this is something that has
9 been scientifically established in peer-reviewed literature

10 Q Okay Now Mr Stanko had a P E T scan done at
11 M U S C , correct?

12 A Yes

13 Q But it was done with a Continuance Performance Test
14 accompanying it Would that be correct?

15 A Yes, that's correct

16 Q And so therefore are you -- is it your testimony that
17 it was not the typical P E T scan that would be done at
18 M U S C ?

19 A That's correct Mr Stanko had the better type of
20 P E T scan done at M U S C because an outside expert, Dr
21 Einhorn, came in especially to administer the C P T during
22 the scan This is not something at M U S C normally does
23 M U S C normally just does a resting scan which is fine if
24 you are looking for things like brain tumors If you are
25 looking for things like brain tumors it doesn't make a

1 difference, but if you are looking for things like brain
2 injury it does make a difference

3 Q Or brain function

4 A Or brain function If you are trying to see if there's
5 any kind of problem with neuropsychiatric disorders So, for
6 things like tumors, which is what the average P E T center
7 looks for, it doesn't make a difference, but if you are
8 interested in neurological or psychiatric detection of
9 abnormalities the C P T scan is a better way to go

10 Q All right What's next on your PowerPoint, the next
11 point?

12 A Well, so this is just some scientific citations to show
13 that this method has been scientifically established, it has
14 been subjected to peer-review, there are a number of articles
15 have been published showing that the C P T P E T scans
16 detect injuries, that the -- compared to normal controls

17 Q Let me ask you, you say need experience with P E T
18 scan interpretation with activation, you mean with
19 interpreting the type of P E T scan that was done on Mr
20 Stanko during the Continuance Performance Test

21 A Yes So that -- so generally speaking doctors rely on
22 their experience to be able to tell whether accurate
23 diagnosis, so if you have a doctor who has no experience, who
24 is looking at P E T scans with a C P T they are going to be
25 less accurate at assessing what problems there are on that

1 scan because they just don't have the familiarity with that
2 type of procedure ---

3 Q And would you expect that of a medical doctor who
4 read -- or an individual who read Mr Stanko's P E T scan but
5 had not ever heard of a C P T , or a Continuanace Performance
6 Test?

7 A Yes So that if a doctor is unfamiliar with this type
8 of procedure they are generally going to be less accurate at
9 detecting abnormality, and this is true in general, I mean,
10 just based common sense If you have a lot of experience with
11 a technique you are going to be better with that technique
12 If you have no experience with that technique you are not
13 going to be as good, and this is just human nature

14 Q Okay So your word activation mean -- you really mean
15 the C P T , the Continuanace Performance Test

16 A Yes That's correct So in this case what I'm talking
17 about here is that the activation scan is the C P T

18 Q Okay Go ahead The next point

19 A And in some ways this activation scan, or C P T scan
20 is kind of like a treadmill stress test If you have someone
21 who has a suspected cardiac abnormality you can either get a
22 resting E K G , or you can get a treadmill stress test Now
23 if the resting E K G may or may not detect a problem with
24 someone with cardiac problems it's not as sensitive or as
25 accurate as a treadmill stress test, and a treadmill stress

1 test is much more accurate at catching people who have cardiac
2 problems than a resting E K G , and so this P E T scan with
3 the C P T activation is analogous to trying to look at, for a
4 cardiac problem, with a treadmill stress test You are going
5 to have a greater sensitivity in accuracy at detecting brain
6 abnormalities than you would if you were trying to detect a
7 problem with a resting test, and again, this is something that
8 has been shown in scientific peer-reviewed studies

9 Q Okay Now do you believe that's a fair analogy, the --
10 -

11 A Yes

12 Q ---Continuance Performance Test equating with the
13 treadmill, and the rest -- at rest P E T scan with the at
14 rest human being and -- or an E K G ?

15 A Yes, a resting E K G Yes sir So just like the
16 resting E K G is not as accurate at detecting cardiac
17 problems as a treadmill stress test a resting brain scan is
18 not as accurate at detecting brain problems as a C P T
19 activation scan

20 Q Okay Go ahead, go forward

21 A And so this is a example of a model who, once he has
22 received that F D G , and has done that activation for thirty
23 minutes, the C P T , then his head is placed in a scanner and
24 what happens is that the sugar molecule has the positron
25 emitters attached to it, and the positron -- and the sugar

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1 molecules go to areas of the brain that are more active, and
2 so more of the positron emitters that are attached to that
3 sugar molecule will accumulate in that part of the brain, and
4 what happens is that the positron emitter is characterized by
5 the E-plus, the E-plus meaning positive electrons, and it will
6 combine with the E-minus, the minus being a regular electron
7 in the brain, and what happens, that when the E-plus, the
8 positron, is combined with the E-minus, the electron, you have
9 what we call the annihilation decay where the mass in the
10 positron and electron are transformed into pure energy using
11 Einstein's famous equation, "E" equals "MC" squared So you
12 have basically a matter, anti-matter energy conversion process
13 undergoing in the brain, and the energy that's created by this
14 process are two energy waves that come off at a hundred and
15 eighty degree angles, so that the energy waves come off at a
16 hundred eighty-three angles as can be seen here in the slide

17 Now the way the P E T scanner works is that it has
18 special crystal detectors that are specifically tuned to
19 detect the energy created by the matter, anti-matter energy
20 transmission process Now these crystal detectors -- there
21 are thousands of them -- have what we call a coincidence
22 circuitability into it, so that when two energy rays strike
23 the crystal detectors that are on opposite sides of the brain,
24 at the same time, coincidentally, the coincidence circuit
25 says, ah hah, I have to draw a line between the two crystals

1 that detected simultaneously the energy rays coming off from
2 the subject's head and it stores that line in it's computer
3 bank And then when another positron electron anti-matter, or
4 matter energy transmission process occurs and it creates two
5 more energy rays that is also picked up by the next pair of
6 crystal detectors What happens is that you have millions of
7 such events that take place You have millions of lines that
8 the computer stores up

9 Now areas of the brain that have more sugar are going to
10 have more lines coming from that part of the brain There
11 will be more intersecting lines at that part of the brain than
12 in areas of the brain that have lower amounts of sugar, and so
13 basically what we are looking at is the intersection of all
14 these lines created by the matter and anti-matter energy
15 transformation process to determine what parts of the brain
16 are consuming more sugar, or what parts of the brain are
17 consuming less sugar

18 Q And more sugar means more activity?

19 A Yes, more sugar means more activity

20 Q All right Go ahead

21 A Now P E T scans are generally accepted in the
22 scientific community for the evaluation of brain function, and
23 there have been literally thousands of articles that have been
24 published using P E T scans to detect brain abnormalities and
25 conditions such as brain injury, Schizophrenia, Alzheimer's

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1 Disease, Parkinson's Disease, etcetera, etcetera

2 And so these are some of the clinical uses of brain
3 P E T scans, and these include the evaluation of things such
4 as Epilepsy, lesions, or stroke, or memory disorders such as
5 Alzheimer's Disease, brain tumors, neuropsychiatric
6 assessment And I'll just run through some examples of brain
7 P E T scan and how it's used in searching clinical disorders
8 And so for example -- in this example here we have an
9 Alzheimer's Disease P E T scan on the left side, and a age
10 match normal control on the right side, and what you see at
11 the sign -- the arrows at 5(A), that those areas are less hot
12 color They -- areas of high metabolism are colored hot
13 colors like red, and areas of low metabolism are colored cool
14 colors like blue, and it goes on a continuum, like red,
15 yellow, green, blue So red is hotter than yellow, and yellow
16 is hotter than green, and green is hotter than blue It's
17 called a rainbow spectrum, basically And so you can see from
18 the colors how hot it is, how much sugar is being burned up in
19 that area of the brain

20 Q Now Dr Wu, can you manipulate those colors?

21 A Pardon?

22 Q Can you manipulate those colors in order to fudge the
23 results?

24 A Well, if you want you can dial down the scan, so if you
25 want you can adjust -- if the area has a certain amount of

1 activity, saying as the brain is at fifty percent activity you
2 can dial down the scanner so that area of the brain can be a
3 hot color, or you can dial it up, but that level of activity
4 will always remain the same, fifty percent, and so -- and so
5 generally what we do with them we have certain set parameters
6 which we use, or we adjust the color so the top or the maximum
7 of the brain, and we say that the hottest brain area set to
8 red, and the coolest brain area is set to blue, so you can, if
9 you want to, monkey around with the scale to change it, but we
10 generally don't do that in this case We generally just set
11 it so that the hottest area of the brain is red, and the
12 coldest area of the brain is blue

13 Q All right And what would happen to you and your
14 Institution, or your client if you were to, quote, monkey
15 around with those results?

16 A Well, it would be considered unprofessional and
17 unethical to monkey around with the results and try and present
18 a false picture of the brain, and so this would not be
19 accepted

20 Q And it wouldn't have a very positive practical effects
21 for you and your center, would it?

22 A No I -- I -- I -- you know, our center relies on a
23 scientific and medical integrity and professionalism, and so
24 we strive to maintain the highest standards in terms of
25 integrity and professionalism, so we wouldn't monkey around

1 and distort a scan that would compromise our reputation and
2 standard

3 Q All right And are we discussing a technology that is
4 comparable to some -- something you would see in a carnival
5 side show?

6 A No This is a well-accepted scientific and medical
7 technology which has been the subject of thousands of
8 scientific publications as used by a variety of doctors to
9 help them look at problems like I'm working with neurosurgeons
10 who are operating on epilepsy patients, I work with
11 geriatricians who deal with Alzheimer patients with memory
12 problems, I deal with all kinds of neurologists,
13 neuropsychologists, and so this is something that is very
14 useful publicly

15 Q Okay All right, let's go to the next point You
16 would ---

17 A So this is a ---

18 Q I'm sorry Go ahead

19 A This is a three-dimensionally rendered view of the
20 Alzheimer's Disease brain The view that I showed you earlier
21 is a two-dimensional slice Now if you want you can take all
22 the two-dimensional slices, you can stack them up, and you can
23 digitally create a three-dimensionally rendered view of the
24 brain, so you can see it as if you were sort of looking at the
25 side of a patient's brain, and in this case we are looking at

1 the right side of the patient's brain here, and so the area
2 that's circled would be right in this area here, the temporal
3 parietal area here, and you can see that on this right side
4 view of the brain that the Alzheimer's Disease patient's brain
5 shows decreased activity in that area compared to an age
6 matched normal control

7 Q Could we go back to that previous slide there I want
8 you to address, specifically, that color scale that's
9 contained there What's represented by that scale?

10 A Well, the color scale at the bottom indicates the
11 relative level of sugar metabolism, so that the far end of the
12 color scale is a red end, indicates high levels of sugar
13 metabolism, and the opposite end, the blue end, indicates low
14 levels of sugar metabolism

15 Q Okay How does that translate into brain activity?

16 A So the areas that are blue will be very low sugar
17 metab, or low brain activity, and there is a red, or a high
18 sugar metab, there's a high brain activity, and so -- and then
19 it goes red, yellow, green, blue, so that yellow is less
20 active than red, but more active than green, green is less
21 active than yellow but more active than blue So depending
22 upon where you are on the continuum you can see how active, or
23 how much sugar that particular part of the brain is burning

24 Q Okay Let's go to the next here

25 A And so this kind of scan can be helpful in helping, for

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1 example, a gerontologist, or a neurologist who works with
2 senior citizens who are having memory problems, you have
3 confirm diagnosis of Alzheimer's Disease, and in fact Medicare
4 now is paying for P E T scans to help with determining
5 whether someone's senior moments are something that is a
6 harbinger of potential Alzheimer's Disease, or that it's
7 something that is less serious, and it makes a big difference,
8 because now with Alzheimer's Disease there are at least five
9 F D A approved medications that can help improve the memory
10 of senior citizens who are starting to have the early stages
11 of Alzheimer's Disease, and it can actually probably help to
12 slow down the progression of the disease, so that if you have
13 someone with Alzheimer's Disease, in the early stages, it
14 prevents them from having to end up in a nursing home maybe by
15 several years if you start them with the appropriate diagnosis
16 and treatment, and so P E T scans can help with that kind of
17 early diagnosis and treatment decision-making

18 Q Okay What do we see here?

19 A And so we work sometimes with neurosurgeons, or
20 oncologists In some cases you have tumors of the brain, and
21 tumors of the brain are characterized by a very hot
22 metabolism, and tumors are very aggressive in terms of their
23 metabolism They grab and consume a lot of sugar because they
24 are growing so rapidly out of control, and so on a P E T scan
25 these are considered very hot areas of the brain

1 Q That's why it shows up red there in that circle?

2 A Yes That's why it shows up red in that circle there,
3 and this is helpful because sometimes with some forms of
4 tumors you can treat them with something called radiation
5 therapy, where you try to kill the tumorous cells by
6 irradiating that area of the brain Now sometimes you can
7 kill every tumor cell, but if you leave just one tumor cell
8 alive sometimes that one tumor cell can re-multiply again
9 several months down the line, it can present as a new tumor,
10 and so P E T scans can help you determine whether or not the
11 tumor has grown back again, and can help an oncologist decide
12 whether or not they need to re-treat someone with say
13 radiation therapy or some other treatment

14 Q All right And you also are showing us now that the
15 same technology can assist a physician in treating Parkin --
16 identifying and treating Parkinson's?

17 A Yes So with P E T scans you can also look at a
18 different kind of function in the brain You can look at the
19 concentration of dopamine, and so here, this is an example of
20 dopamine function, and then Parkinson's Disease, like Michael
21 J Fox or Pope John Paul II The both these individuals -- or
22 Mohammed Ali -- they all have Parkinson's Disease If you
23 were to get their brain scan you see hardly any dopamine
24 function in the brain compared to say a normal control

25 Q Doctor, do you have this technology available, along

1 with the Continuance Performance Test, that can assist in
2 determining presence or absence of frontal lobe defect or
3 injury?

4 A Yes And so P E T scans can be used to look at
5 frontal lobe abnormalities, including whether or not the
6 frontal lobe function is defective

7 Q All right I don't want to go -- how much more of your
8 presentation ---

9 A Oh, let's see I've got Epilepsy, and then head
10 injury

11 Q All right Let's look at that closed head injury
12 What are we looking at here?

13 A Well, so a closed head injury -- there are some cases
14 of head trauma, or head injury, you can have a perfectly
15 normal C A T scan or M R I scan but the sugar metabolism in
16 that part of the brain is defective It's functioning at a
17 very low level compared to say, a normal control, and so this
18 is a way of detecting brain injury that might be undetectable
19 where to most radiologist they do things like M R I or C T
20 scans

21 Q All right Right here -- what are we looking at here,
22 at 1(A), as compared to 1(B)?

23 A Well, this is the part of the brain called the frontal
24 lobe, and so what we are seeing at the area of 1(A) is that we
25 are seeing decreased sugar activity in the frontal lobe of

1 this closed-head injury example compared to say a normal
2 control's frontal lobe

3 Q All right And does it take special expertise to read
4 that and detect that?

5 A If it's really obvious anyone can see it, but if it's
6 more subtle then, again, experience helps, and so the more
7 experience you have the better you are at picking up things
8 that aren't super-obvious

9 Q Okay Continue on Let's see what else you have
10 there

11 A Well, so these are just a -- talk a little bit about
12 traumatic brain injury ---

13 Q Okay

14 A ---And as to that P E T scans are more sensitive at
15 detecting injuries, and some of the patterns seen here, and
16 then also in some forms of psychiatric disorders, like
17 Schizophrenia, some forms of Schizophrenia have abnormalities
18 in their brain functions They show a decrease in the frontal
19 lobe, and you can see that it was green compared to the red,
20 that Schizophrenic brains show decreased frontal lobe
21 activities as well, and this is also seen in some forms of
22 bipolar or mental, or manic-depressive disorders And then
23 these are just some of the scientific articles behind this

24 Q Okay Showing that it has been peer-reviewed?

25 A Yes Right

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1 Q All right Does that basically conclude the
2 presentation of the PowerPoint?

3 A I ---

4 Q Well, let's go back there What are we looking at
5 here?

6 A Well, this is an example of someone who was in a motor
7 vehicle accident and they had normal M R I and normal C A T
8 scan, but they had a significant decrease of activity in the
9 base of the frontal lobe, called the orbital frontal lobe of
10 the brain, compared to say a normal control subject

11 Q And that's what I'm pointing at with the laser?

12 A Yes So that area that's blue This is someone who
13 suffered a closed-head trauma in a motor vehicle accident

14 Q Again, how do you know that this is reliable? You've
15 got this one individual here versus the normal control
16 Again, what if they are thinking about different things, or if
17 somebody is at rest and -- how do you know that? How do you
18 know it's going to be a reliable comparison?

19 A Well, again, there's multiple peer-reviewed articles
20 which show that this is a -- especially when you are using the
21 C P T technique -- there's a highly reliable technique This
22 is something that has been scientifically established in
23 multiple peer-reviewed articles

24 Q Okay So this person on the left is undergoing a
25 Continuanace Performance Test ---

1 A Yes

2 Q ---Just as were the people in the normal control?

3 A Yes, that's correct

4 Q All right And that's how you get this reliable
5 comparison?

6 A Yes You get a more accurate more reliable detection
7 of brain abnormalities

8 Q All right, now, if you were at risk -- if this person
9 on the left was at rest, and the normal control was a control
10 group at rest, would you expect to see any difference between
11 the two scans?

12 A It would be more difficult to detect a difference
13 because of the fact that there is more static or noise in the
14 resting condition, so both the patient as well as the control
15 subject, if they are both at rest, would have more static
16 noise variability and it will be harder to detect a
17 difference

18 Q Okay Let's see what else you have? Yes, what does
19 this mean, Correlation Report?

20 A Well, Correlation Report means that one has to look at
21 a patient's history and other testing, yes, other kinds of
22 imaging testing, other things, to try to come up with a -- a
23 big picture view of the patient

24 Q All right And what else do we have?

25 A It's the -- oh, just that these are issues about the

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1 fact that P E T scans have been accepted in multiple
2 jurisdictions over time

3 Q All right Now, you have -- let me ask you this,
4 you've put up on the screen Stanko P E T images

5 A Yes

6 Q Tell us specifically, what do we have here, how did you
7 get them, and explain to us what they are, and we will go from
8 there

9 A Okay So these are Stanko's P E T images, and I also
10 have a three-dimensionally rendered view of Stanko's brain
11 compared to that of a normal control

12 Q Okay And is that something that you used in reaching
13 any kind of expert opinion with respect to Mr Stanko?

14 A Yes

15 Q Yes Do you have that with you so that we can look at
16 it?

17 A Yes I can show that now if you would like or I can --
18 -

19 Q Yes Can we do that?

20 A Sure

21 Q How long would it take you to ---

22 A It would take me a minute or two to get it set up

23 Q All right If we -- we have it on a disk Would that
24 be faster?

25 A No, I don't think it would be faster

1 Q Okay Go ahead

2 A Okay

3 Q Play that for us if you would, please sir

4 MR DIGGS And Your Honor, we would like to introduce
5 Defendant's Exhibit 23 at this time It is the -- it's a hard
6 copy of the images that we are going to view

7 THE COURT Any objection?

8 MR HUMPHRIES No, Your Honor Thank you

9 THE COURT Defendant's 23 is in evidence, without
10 objection

11 (P E T SCAN VIDEO ADMITTED INTO EVIDENCE AS DEFENDANT'S
12 EXHIBIT NUMBER 23)

13 Q All right Can we go back, start this over?

14 A Sure

15 Q All the way back to the beginning

16 A Yes

17 Q And what I would like you to do, once -- Dr Wu, is
18 just play this, and then I may have you look at some
19 individual points within the video

20 A Yes

21 Q Okay Play that for us, please sir

22 A Do you want me to comment on it, or just play it?

23 Q Well, you could go ahead and comment at this point
24 That would be actually a good idea

25 A Okay So what we are seeing here is a three-

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1 dimensionally rendered view of Mr Stanko's brain on the left-
2 hand side, revolving, compared to that of a normal control
3 average on the right-hand side, and we are looking at it from
4 different angles here, and we can see that there are some
5 differences between Stephen Stanko's brain and that of a
6 normal control, and more -- I'll pause it here, but basically
7 the differences that we are seeing here is that we are seeing
8 that there is a decrease in the base of the frontal lobe area,
9 right where the arrow is You will see that where the arrow
10 is, that's at the floor of his frontal lobe, and this floor --
11 and you can see it on both sides -- is on the -- both right
12 and left sides -- and we will actually tilt the brain up to
13 let you see better -- is less active compared to the rest of
14 his brain You see that the rest of his brain above the floor
15 or the frontal lobe looks fairly similar to that of the normal
16 control, so it's really just one area of the brain, which is
17 the floor, or base of the frontal lobe which is specifically
18 abnormal, and you can see it on both the left hemisphere and
19 the right hemisphere view

20 And so what we will do now is, we will lift the brain up
21 here in just a minute and you can see the floor better -- and
22 it only takes just a few seconds for the video to get to that
23 spot there, but -- okay, here we go

24 Q Okay Stop that Comment on that, if you would

25 A So what we have done here is that we have this so that

1 the brain is facing forward Now what we've done is, we've
2 tilted the brain back like this, so that you are looking at
3 the floor of the frontal lobe of the brain

4 Q Dr Wu, we have a head, model, down there in the lower
5 left

6 A Yes

7 Q Is that -- what is that showing us?

8 A The head, or floor there, is showing the orientation of
9 the scan so that you can kind of see what orientation the scan
10 is at this point in time You can see that the head is tilted
11 back, so that we can better see the floor of the frontal lobe
12 of the brain And what we are seeing here, that we are seeing
13 where the arrows that there is a significant decrease in
14 activity in the floor or base of his frontal lobe compared to
15 that of a normal control average, so that you are seeing that
16 there is more blue, and if you will in the color scale bar
17 here you will see that there is more blue compared to the
18 yellow-red in the floor of the normal control average, and
19 this is the primary lesion or injury that Mr Stanko's brain
20 shows, the floor of the frontal lobe defect or injury

21 Q Okay What kind of role does that area of the brain
22 play in one's decision making or conduct?

23 A Well this part of the frontal lobe is a very important
24 part of the frontal lobe which involves things such as impulse
25 control and judgment There's a very famous case in Neurology

1 called the Phineas Gage case, and the Phineas Gage case is the
2 case in which a railroad worker was tamping explosives down
3 and the tamping inadvertently set off the explosive
4 prematurely, sending the tamping rod through the orbital
5 frontal lobe of his brain, and although he survived he showed
6 a marked change in his personality, someone who had been an
7 upright citizen became foul-mouthed, aggressive, irresponsible
8 individual, and this is one of the first cases that helped
9 scientists and doctors realize that different parts of brain
10 seem to control functions such as responsibility, impulse
11 control, judgment, maturity, irritability ---

12 Q Judgment How about empathy?

13 A And empathy as well, so all these ---

14 Q That area?

15 A Yes These are all functions that the frontal lobe
16 seems to play an especially important role in compared to
17 other parts of the brain

18 Q In making judgments about right versus wrong ---

19 A Yes, that's ---

20 Q ---Moral -- moral assessments

21 A Yes

22 Q Does that occur at this area of the brain?

23 A This is a key part of the circuitry of the brain for
24 helping people to properly make moral choices

25 Q All right So if the brain is in the blue area ---

1 A Yes

2 Q ---Where there is less or no activity ---

3 A Yes

4 Q ---Then there would be no -- am I right in assessing
5 this? There would be no ability to determine the rightness or
6 correctness ---

7 MR HUMPHRIES I'm going to object to the leading
8 nature of the question, Your Honor

9 THE COURT Mr Diggs, again ---

10 MR DIGGS Yes sir

11 THE COURT ---You are supplying the answers in your
12 questions

13 Q Well, what effect would that have on one's ability to
14 make that decision?

15 A Well, if there were a lesion in this area this area of
16 brain ---

17 Q And a lesion meaning ---

18 A It's an injury, an abnormally low function

19 Q Okay

20 A This abnormally low function or abnormality or injury
21 would significantly compromise and impair an individual's
22 ability to exercise judgment, impulse control, control of
23 aggression, so that it's kind of like having a car with --
24 it's kind of like -- I'm sure you've heard the story of these
25 Toyotos where the car will suddenly accelerate out of control,

1 and then crash, and I think there was a case in California of
2 a Lexus where the Lexus suddenly accelerated out of control
3 and a C H P officer, California Highway Patrol officer, his
4 wife and their two kids were in the car, and he was calling
5 911 saying that the car was accelerating out of control, he
6 couldn't stop it, and the car ended up crashing, killing all
7 four of the occupants, and this has happened several -- a
8 number of times, and so it's kind of like driving a car, like
9 one of these cars where the chip is defective, and then it
10 goes -- and then it goes haywire, and then you have an out-of-
11 control brain, the way this Lexus went out of control and
12 ended up killing the C H P , the California Highway Patrol
13 officer and his family

14 Q All right, now, the ability to make judgments, to
15 exercise analytical judgment capabilities, could that be done
16 in some other area of the brain right now that is, on Mr
17 Stanko, for example, that's showing up red?

18 A Well, the other parts of the brain which are intact are
19 areas that are -- involve other types of things, like problem
20 solving, that doesn't involve moral judgment or aggressive
21 impulse controls These are areas of the brain that are
22 involved with what we call working memory or other things, so
23 that the rest of his brain actually looks pretty good It's
24 just that this one key area of the brain seems to be
25 significantly compromised

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1 active, or an area that is not active in Mr Stanko's brain?

2 A Well, the ability to regulate aggressive impulse, like
3 shooting, would be an area of the brain that is significantly
4 controlled by the or -- base of the frontal lobe, the orbital
5 frontal lobe

6 Q All right But the ability to hit the target might be
7 controlled by that same area, or some other area?

8 A The ability to spatially localize a target would not
9 involve the frontal lobe It would involve areas of the brain
10 like parietal areas, spatial localization

11 Q And that area of Mr Stanko's brain is working fairly
12 normally?

13 A It's working fine Yes Uh huh (**indicating positive**)

14 Q Okay If you could, go ahead and re-start -- or
15 continue on with that video

16 A Okay So let's see -- the video is progressing It's
17 just frozen there for a few seconds to allow time to talk
18 about it, so now we will show the front of the brain and the
19 back of the brain, and the back of his brain looks relatively
20 normal It's really more the front floor of the brain that is
21 abnormal here

22 And here you can see both the front view at the top row,
23 and the back view at the bottom row, and as you can see it's
24 the floor which you can't see as well from a straight head-on
25 view, which is the area that is most abnormal

1 Now, what we do here is that we will reslicebrate it
2 through three different angles, what we call axial slicing,
3 and so axial slicing involves taking a slice that goes from
4 top of the head to the bottom of the head, and then we will
5 rotate our views and we are going from the left side of the
6 brain to the right side, and then we will go from the front to
7 the back

8 And so what we are seeing here is that toward the higher
9 parts of his brain, the top half of his brain, it looks very
10 similar to that of a normal control, and so at the top of his
11 brain it looks fairly intact and normal, and so this is still
12 the top half of his brain And it's only if we get down
13 toward the very base of the brain here

14 Now here we are getting down toward the bottom third of
15 the brain, and here we are trying to see this difference in
16 the frontal lobe areas near the base of the brain, near the
17 floor or the frontal lobe of the brain

18 And here is near the bottom of the brain that we see the
19 defect, or the abnormality, or the lesion, which is that there
20 is much less activity in this part of the brain, so again, the
21 top two-thirds of his brain looks perfectly fine It's really
22 this bottom part of the frontal lobe which is especially
23 defective

24 Q Can you stop that? Can you back up just a couple of
25 seconds?

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1 A Oh sure Can you advance it -- stop All right Can
2 you comment on that?

3 A Yes

4 Q What do we see happening there?

5 A So what we are seeing happening here is that this is
6 toward the floor of the frontal lobe area of the brain, and
7 the floor of the frontal lobe of the brain shows that Ms
8 Stanko has a lesion in this part of the brain, so it shows
9 much less activity than that of an age matched normal control
10 subject doing a C P T task

11 Q Dr Wu, let me ask you this, in the normal control we
12 see heavy red in the center, and then we've got red areas on
13 each side of that center red, and we see almost no red in Mr
14 Stanko

15 A That's correct

16 Q So what does that indicate?

17 A Well, this indicates that he has abnormally low
18 function in that part of the orbital frontal lobe of his
19 brain

20 Q So -- but he has no red at all in his ---

21 A Yes Right, so ---

22 Q ---Anywhere in the entire brain

23 A That's correct It's abnormally low in that entire area
24 of the brain

25 Q Okay Outside of the frontal lobe

1 A No This is all part of the base of the frontal lobe
2 here

3 Q Okay All right Continue on

4 A And then we will switch views here in just a second
5 Now this is a sagittal slicing, so with the first slicing we
6 were going from the top to bottom It's called axial slicing
7 Then we rotate our plain of view, so that instead of looking
8 from top to bottom we are going from the left ear to the right
9 ear and vice-versa It's called sagittal slicing It would
10 also be the same as a profile view, a side profile view

11 And so here we are going actually from the right side of
12 his brain, and you can see from the model underneath where we
13 are in the orientation of the sagittal slicing

14 And again, here we are seeing that toward the floor of
15 the brain we see less red compared to the top two-thirds of
16 his brain

17 And again, we are seeing less red -- do you have that
18 laser -- could I ---

19 Okay So we are seeing less red in this area of the
20 brain here compared the here, and we are seeing that the top
21 part is relatively intact And we are seeing a relatively low
22 activity in the frontal lobe area of the brain here Higher
23 up we are seeing that there is more activity there

24 And then the last view will be a facial profile view,
25 from the face to the back of the head, and so that will be

1 called a coronal view And so here, again, you can see that
2 the top two-thirds of his brain show function here that's
3 really this base -- this bottom part here, which is less
4 active Then again, we see that the top part is showing
5 activity, but the bottom part is showing less activity Now
6 this is not a result of what we call a change in the
7 windowing Windowing is ---

8 Q What do you mean -- yes, explain that, please sir

9 A Okay Windowing is a technical term -- you used to say
10 that if you wanted to monkey around with the color scale you
11 could deliberately dial down the color scale, but if you dial
12 down the color scale it wouldn't affect just the bottom third
13 of the brain, it would affect the entire brain, so the entire
14 brain will be dialed down, and so if you want to dial down the
15 entire brain you could make the entire brain yellow or green,
16 but what we are seeing here, that it's selective, so it's not
17 a result of what we call windowing This is because the top
18 part of the brain is relatively intact It really the bottom
19 third of the brain which is selectively reduced

20 And again, you can see it's really the bottom third of
21 the brain which is selectively reduced here, and that the top
22 part of the brain is relatively intact

23 And so that concludes the video of showing the plains

24 Q All right Can you -- do you have any ---

25 A Oh then I can go back to the PowerPoint Yes, okay, so

1 let me go back to the PowerPoint here

2 So this is -- yes ---

3 Q Go ahead and let's -- all right, I want you to address
4 this Now we've looked at what -- the data you have on Mr
5 Stanko appears to be -- how does that translate into a
6 practical sense? What does that mean with respect to him, his
7 conduct, ability to make decisions, those kinds of activities?

8 A Well, the frontal lobe of the brain is an important
9 area scientifically in terms of it's ability to regulate the
10 functions such as aggression, and there have been a number of
11 good review papers and scientific journals which have
12 documented the fact that the frontal lobe is an important part
13 of the brain It's kind of like having brakes of a car -- if
14 you -- so that if -- or having a properly functioning
15 accelerator chip in a Lexus or a Toyota, it helps to regular
16 the proper function and speed of -- of impulses, but if you
17 have a faulty, like a regulator chip or faulty brake in a car
18 you can have a car that can suddenly accelerate out of control
19 or fail to brake properly

20 Q Let me ask you, where does the ability to understand
21 the difference between right and wrong take place in the
22 brain?

23 A The frontal lobe is probably the most important part of
24 the brain for the ability to be able to detect the difference
25 between moral right and moral wrong

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1 Q And what would we characterize an individual as -- how
2 would you describe an individual -- and I'm not looking for a
3 legal opinion here, or a legal, you know, a diagnosis, I'm --
4 just -- general characteristics I'm trying to elicit here
5 What do we know about, or what could we expect from an
6 individual who experiences or has that kind of frontal lobe
7 deficit?

8 A Well, in an individual with kind of deficit is going to
9 have a significant impairment

10 Q Okay And with respect to the ability to understand
11 right from wrong

12 A It would have a significant impairment in their ability
13 to be able to accurately judge and behave and appoint to right
14 and wrong precepts They would have a significant failure of
15 that ability

16 Q Okay Would they have the -- okay, a failure of that
17 ability?

18 A Yes Again, they would have significant difficulty

19 Q All right Could I get you to -- anything else we want
20 to go to here, Dr Wu?

21 A Well, let's see here These are just other studies
22 that I have talked about, how the frontal lobe is involved
23 with things like regulation of aggression, so for example,
24 there's a famous Vietnam head injury study where a large
25 series of Vietnam Vets who were studied with brain injuries,

1 and only the Vets who had frontal lobe injuries were the ones
2 who were more aggressive and impulsive The ones who had the
3 same size injury in other parts of the brain did not have
4 disproportionate amount of aggression, and the study shows that
5 anywhere from two to six times more violent with frontal lobe
6 injury as compared to say, an injury in other parts of the
7 brain

8 And this is also true with stroke patients Stroke
9 patients who end up having a frontal lobe lesion are much more
10 likely to be irritable, violent or aggressive than stroke
11 patients that have a similar size lesions in other parts of
12 the brain, and this is something that's been documented in
13 other P E T studies that have shown people with -- on P E T
14 scans who have difficulty with regulating aggression, and of
15 committing murders, have problems with their frontal lobe of
16 the brain

17 And let's see -- and other studies showing, for example,
18 adolescents who have problems with aggression also showing
19 problems with their frontal lobe of the brain, and other
20 studies So that, again, there's a number of scientific
21 studies have been published which have shown that people with
22 impairments and the ability to regulate violent behavior, the
23 ability to regulate impulsivity and aggression have lesions or
24 abnormalities on imaging studies in the frontal lobe areas of
25 the brain, indicating that the frontal lobe of the brain is a

1 key component, or the circuitry for regulating violence and
2 aggression

3 Q All right Let me ask you to take the stand, the
4 witness stand again, and I want you to look at what has been
5 marked as a defense exhibit Defense Exhibit 31 Have you
6 seen this diagram before?

7 A Yes, I have

8 Q And can you tell us what this diagram tells you about
9 Mr Stanko, against the backdrop of what you've already shown
10 us on the P E T scan First of all, tell us what this is,
11 Dr Wu, if you can

12 A This is a graph that shows the differences in the
13 volume, or size of different lobes of the brain in Mr Stanko,
14 on both the left side of his brain and the right side of his
15 brain compared to that of a normal control group, and this
16 is -- and the first line, or the first set of dots shows a
17 difference in the frontal lobe, and specifically the -- let's
18 see, can I point to the graph?

19 Q Yes sir In fact, would it help you to come down here?

20 A Yes It will be easier if I could point

21 Q You will need, if you would ---

22 THE COURT If you would then, I want you to go right
23 up to the rail in front of the microphone

24 MR DIGGS And Your Honor, let me run over there and
25 get the tripod

1 **THE COURT** Right Hold on a second

2 Q Okay Where did this -- do you know where this graph
3 came from?

4 A Yes This came from Dr Ruben Gur's measurements of
5 the M R I scan on Mr Stanko

6 Q Okay And go ahead and tell us, if you would, Dr Wu,
7 what you see in this diagram

8 A Well, what I see in this diagram is that Mr Stanko
9 shows a significant reduction in the size of his left frontal
10 lobe of his brain F R O is referring to the frontal lobe
11 area of the brain And this solid blue line, as opposed to
12 the red line, is the left side of his -- showing left versus a
13 right And the right side of his frontal lobe is not smaller,
14 but the left side is significantly smaller When you have
15 this two, this two means that it is a statistically
16 significant difference from the normal control population, so
17 he's got a reduction, an abnormal reduction in the left side
18 of his frontal lobe volume

19 Q All right And what does that mean in conjunction --
20 if anything, in conjunction with -- we are looking at
21 structure here, correct?

22 A Yes So that this is different, because what I've been
23 presenting has been the function of the frontal lobe This is
24 actually measuring the size, so this is the size or shape of
25 the frontal lobe, so this shows that Mr Stanko has two

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1 different kinds of abnormalities in the frontal lobe There's
2 a functional abnormality, that is, he's burning less sugar in
3 both the right and left sides of his frontal lobe, near the
4 base, but this is showing that not only is there less
5 function, but it's actually shrunken It's actually smaller
6 in size or volume, and so it's a second kind of abnormality of
7 Mr Stanko's brain

8 Q All right Do you have an opinion of what percentage
9 of the population would fall into this category?

10 A Yes This is two standard deviations, which would mean
11 that five percent or less of the general population would have
12 a -- so that means ninety-five percent of the norm population
13 would have left frontal lobe that would be larger than Mr
14 Stanko's

15 Q All right And how about -- what are we looking at
16 over here that's over four deviations?

17 A Well, this is what we call the medial part of the --
18 the remedial part is the inner part of the brain It includes
19 areas like the amygdala or other parts, and so this is -- so
20 the brain has basically two shells It's kind of like there's
21 an outer shell, and then there's kind of like an inner shell,
22 and this is referring more to the inner shell of the brain
23 This inner shell of the brain is more than four standard
24 deviations below norm, which is probably less than one in --
25 so that means nine hundred ninety-nine out of a thousand

1 people, maybe even more, would have a brain bigger than Mr
2 Stanko's in this part of his brain

3 Q And we have a -- when does -- is there any significance
4 in the collection of these two deviations in the frontal lobe
5 and the medial, frontal lobe being processing of information,
6 I think, according to your ---

7 A Yes, especially including moral judgment and
8 impulsivity and aggression

9 Q Okay And what happens in the amygdala?

10 A The amygdala is also involved with things such as
11 regulation of aggression, so there's two key areas of the
12 brain involved with regulation of aggression One of them is
13 the frontal lobe, the other is part of the temporal lobe

14 Q All right Have you ever heard of the Kluver-Bucy
15 syndrome?

16 A Yes It's a famous syndrome that neuroscience is aware
17 of If you lesion the temporal lobe by removing it in
18 monkeys, and you cut it out, you get a abnormality in the
19 regulation of aggression and abnormalities in social behavior,
20 and so this is a well-recognized syndrome that human beings
21 can develop as well as monkeys

22 THE COURT All right, Mr Diggs, if we are asking
23 those questions y'all come and talk to me for a second,
24 please

25 (BENCH CONFERENCE TAKES PLACE OFF THE RECORD)

1 **THE COURT** All right, ladies and gentlemen, it took
2 longer than I expected, but your lunch is here, so we are
3 going to stop at this point in time

4 If you would put your pens down and just go to lunch
5 Thank you

6 **(THE FOLLOWING TAKES PLACE AFTER THE LUNCH BREAK AND**
7 **OUTSIDE THE PRESENCE OF THE JURY)**

8 **THE COURT** All right, Dr Wu, let me explain one thing
9 to you You have taken the stand and you are under oath At
10 this point in time you are still in your testimony You may
11 not discuss this case with the defense counsel at all ---

12 A Yes, Your Honor

13 **THE COURT** ---While we are in the break Okay

14 A Yes

15 **THE COURT** Thank you very much We will be at ease
16 till the jury finishes lunch

17 Thank you

18 **(THE FOLLOWING TAKES PLACE AFTER THE LUNCH BREAK AND**
19 **OUTSIDE THE PRESENCE OF THE JURY)**

20 **THE COURT** Is the State ready for the jury to come in?

21 **MR HUMPHRIES** The State is ready, Your Honor

22 **THE COURT** All right Mr Diggs

23 Ask the jury to come in, please

24 **(THE FOLLOWING TAKES PLACE WITHIN THE PRESENCE OF THE**
25 **JURY)**

1 **THE COURT** All right, Mr Diggs, you may continue,
2 sir

3 **MR DIGGS** Thank you, Your Honor

4 **DIRECT CONTINUED BY DIGGS**

5 Q Dr Wu, I want to ask you to look at these ---

6 **MR HUMPHRIES** No objection to the introduction of
7 those exhibits I don't know the numbers, but I don't have
8 any objection

9 **MR DIGGS** Your Honor, they are Defendant's Exhibits 2
10 through 19

11 **THE COURT** Two through nineteen are in evidence
12 without objection

13 **(DEFENDANT'S EXHIBITS 2 THROUGH 19 ADMITTED INTO**
14 **EVIDENCE SEE INDEX FOR DESCRIPTION)**

15 Q Now, Dr Wu, I'm going to have you look at these and
16 just -- you don't have to go through every one of those
17 individually with the jury, but just tell us what these are
18 Do you recognize those?

19 A Yes

20 Q Okay What are they?

21 A These are prints of the sagittal, coronal and trans-
22 axial views of Mr Stanko's brain compared to that of the
23 normal control, as well as there's three dimensionally
24 rendered view

25 Q Okay Are they taken from the video that we just saw?

1 A Yes

2 Q Okay So -- thank you You had indicated that a
3 certain percentage of the population would have the same
4 degree of diminished function in the frontal lobe area,
5 correct?

6 A Or the same -- a certain percentage of the population
7 would have a two standard deviation difference in the
8 volumetric size of the left frontal lobe ---

9 Q Okay

10 A ---Which is equal to five percent

11 Q Five percent?

12 A Yes

13 Q All right And how about with respect to the area of
14 the amygdala, four standard deviations?

15 A I believe that would be somewhere between one and a
16 thousand to one and five thousand

17 Q All right What -- what percentage of the population
18 would have both of those conditions?

19 A Well, it would be multiplicative, so that you would
20 take, oh, one out of twenty times one out of a thousand, and
21 it would be like roughly one out of twenty thousand

22 Q All right One out of twenty thousand that would have
23 both of those situations ---

24 A Yes Yes

25 Q ---To the extent that Mr Stanko does?

1 A Yes

2 Q All right Now, with respect to Mr Stanko's brain,
3 P E T scan, can you give us an opinion as to what percentage
4 of reduction he has in the frontal lobe function?

5 A My estimation would be approximately half ---

6 Q Okay

7 A ---In the ventral frontal area, so his -- yes, around
8 half the glucose metabolism

9 Q All right And would that be in the frontal lobe area
10 here?

11 A Yes In the base of the frontal lobe, right there

12 Q All right Now we went through some of the projects
13 that you've worked on Have you done any work for the
14 government, government?

15 A Yes Yes, I've been a grant reviewer for the National
16 Institute of Health, which is a Federal arm for research
17 funding I have also been a grant reviewer for the
18 Congressionally Directed Defense Research Program, which is a
19 program that Congress has approved to provide additional
20 funding for brain-injured Veterans returning from Afghanistan
21 and Iraq, and so ---

22 Q Go ahead

23 A And so I've been asked to review grants to look at
24 diagnostic and treatment measures to treat brain-injured Vets

25 Q What is a grant reviewer?

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1 A A grant reviewer is asked by the government to review a
2 number of grant applications by different universities who are
3 proposing to test better diagnostic and treatment methods, to
4 diagnose and treat brain injury

5 Q And how do you -- what do you do to make those
6 decisions or recommendations?

7 A Well, I sit down with a group of other grant reviewers
8 and we read through the grants and we score them on a number
9 of different parameters or dimensions, and then we discuss our
10 final scores, then we vote

11 Q And then the U S Government depends on your
12 recommendation in order to make it's decision?

13 A Yes The U S Government uses my input to help them
14 decide which, you know, grants to fund

15 Q How long has that been the case?

16 A Well, I've been involved in a number of grant review
17 processes, both for N I H and the Defense Department

18 Q And the N I H is what?

19 A Oh, the National Institute of Health, and the Defense
20 Department, so I would say at least ten years

21 Q All right Now, if one were to undertake a battery of
22 neurological psychological exams, or tests for Mr Stanko,
23 would they necessarily show any anomalies psychologically?

24 A It depends on what you are looking for If you are
25 looking for -- I mean, you can have people with brain injury

1 who have high intact I Q s, but who have impairment in things
2 that I Q tests don't test for

3 Q All right And would you -- are there -- what kinds of
4 psychological battery tests would likely, if any, show a
5 problem with an individual who has the type of brain deficit
6 that Mr Stanko has?

7 A There are very few psychological tests that
8 specifically test for abnormalities in the floor of the
9 frontal lobe of the brain, which is where more judgment takes
10 place Most ---

11 Q By the floor you mean ---

12 A At the base of the frontal lobe

13 Q That area where Mr Stanko was deficit?

14 A Yes, that's correct

15 Q All right

16 A Most of the tests that are currently available look at
17 other parts of the brain

18 Q All right So it may be that a psychologist could come
19 in and perform battery tests on Mr Stanko, or a psychiatrist,
20 the standard type tests, and by the way, can you give us an
21 idea of what those tests would be?

22 A Well, tests like the Wisconsin Card Sort Test, a test
23 such as Standard Intelligence Test, a test such as, you know,
24 Stroop or a Symbol Digit Substitution, C P T

25 Q All right And you would not be surprised if Mr

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1 Stanko were to do quite well on those types of tests?

2 A No The rest of his brain looks pretty intact

3 Q Okay

4 MR DIGGS Dr Wu, that's all I have at this time

5 Thank you very much, and answer any questions that the

6 Solicitor may have

7 THE COURT Cross-examination

8 MR HUMPHRIES Thank you, Your Honor

9 Good afternoon, Dr Wu

10 A Good afternoon

11 CROSS-EXAMINATION BY MR HUMPHRIES

12 Q You -- you use a compute program in order to analyze
13 these scans that you talked about There's a computer program
14 obviously involved

15 A Well, there's a computer program involved in created
16 three-dimensionally rendered views, and just to reconstruct
17 the images we use a computer to capture the data from the
18 positron, electron and annihilation decay, and we construct
19 the images

20 So computers are used at many different steps

21 Q Well, I'm sorry, I should be more specific There's a
22 computer program used to compare C P T scans with the data
23 base computer program that's used to make that comparison Is
24 that correct?

25 A Well, you can do quantitative statistical comparison --

1 -

2 Q And I'm sorry I'm not talking about quantitative
3 statistical analysis We have heard from Dr Gur I'm
4 talking about what you do Tell me how computer programs are
5 used in what you do, what you've told this jury today

6 A Well, computer programs are used to create the images
7 from the positron, electron and annihilation decay than which
8 are captured by the crystal detectors using the coincident
9 circuits, so you need a computer for them to generate the
10 images in the first place, and then computer programs are used
11 to take the two-dimensional series of images and create a
12 three-dimensionally rendered view, so the computer is used at
13 that stage

14 Q Is F D A approval an important thing?

15 A F D S approval -- it depends on what it is you are
16 asking approval for I mean ---

17 Q Let me ask you this If it is traditional to have
18 F D A approval for something and it does not have it, is that
19 significant?

20 A Well, again, I need to know the specifics of what you
21 are asking for I mean, you can ask for F D A approval for
22 lots of things, and it depends -- like for drugs, if you want
23 to sell a prescription medication you need F D A approval for
24 prescription medication

25 Q Okay So you don't have an answer I mean that -- I

1 thought the question was fairly straight-forward

2 A Well, I'm trying to answer as best I can

3 Q All right If there is something, in this case say a
4 computer program, that traditionally is subject to F D A
5 approval and does not have it, would that be important? Would
6 that be significant?

7 A Well, so you are asking, if there is a computer program
8 that is normally subject to an F D A approval, and -- and can
9 you be more specific? Again, I think it would help me if you
10 could give me a concrete example of what it is you are talking
11 about, because you ---

12 Q We'll come back -- we'll come back to that

13 A Okay

14 Q Let me talk a bit about -- I understand that you've
15 done work for the Government?

16 A Yes

17 Q Appreciate that But in terms of your provided expert
18 testimony in courts of record, with whom do you primarily
19 work?

20 A I've worked in criminal cases primarily with public
21 defenders

22 Q And, in fact, you've done a significant amount of work
23 with capital defendants, have you not?

24 A Yes

25 Q Do you know how much, how many times?

1 A I would say, over the last, I don't know, five to ten
2 years probably twenty or thirty cases at a minimum

3 Q About twenty -- twenty or thirty Often in conjunction
4 with Dr Gur

5 A I've worked with Dr Gur on probably two or three other
6 cases

7 Q And Dr Sachy?

8 A I have worked with Dr Sachy maybe one or two other
9 cases

10 Q Your data base -- let's talk about your data base
11 Let's get back with what we were talking about, your data
12 base That -- what was the data base that was used in -- at
13 M U S C , to your knowledge?

14 A My understanding is that they use the Hermes Brass data
15 base, and I believe that that is composed of twelve at-rest
16 control subjects

17 Q That data base is F D A approved

18 A Yes

19 Q The data base you employed regarding the C P T scans
20 is not F D A approved

21 A Well, to be more precise, what's approved at M U S C
22 is the Brass software that ---

23 Q Well, I'll tell you what, let me -- and I'll let you
24 explain your answer, but could you answer my question first
25 Is your computer data base F D A approved, the one which you

1 employ?

2 A No

3 Q Okay Now, empathy -- you testified about empathy,
4 that being something that is governed by the floor, or the
5 base of the occipital frontal lobes?

6 A The frontal lobe

7 Q Frontal lobe Okay And empathy would be impaired if
8 there was a significant loss of function in the frontal lobe?

9 A That is a key neural substate

10 Q Now, that doesn't necessarily mean that the person with
11 -- with the type of abnormality that you've testified to about
12 Mr Stanko wouldn't understand the difference between right
13 and wrong, just means he doesn't care

14 A Well, ---

15 MR DIGGS Your Honor, may we approach on that
16 question?

17 THE COURT Yes sir

18 (BENCH CONFERENCE TAKES PLACE OFF THE RECORD)

19 THE COURT Do you want me to send the jury out, Mr
20 Diggs?

21 MR DIGGS Your Honor, not at this time Let's ---

22 THE COURT All right

23 MR DIGGS I'm okay at this point

24 THE COURT Continue on then

25 Q There is a distinction, would you agree, between

1 knowing morally what's right and wrong and just not caring
2 about what's right and wrong?

3 A I -- yes, I -- you can draw distinction between those
4 two

5 Q There is a -- there is another thing that is curious to
6 me You testified that there is, in your opinion, a fifty
7 percent reduction of function in Defendant Stanko's brain by
8 virtue of your test Is that correct?

9 A In this area, yes

10 Q Correct Right And that's all we are going to talk
11 about is the frontal lobe and secondarily about the amygdala,
12 correct?

13 A Yes

14 Q That -- that's not a subtle departure from the norm, is
15 it, fifty percent?

16 A I would say it's a substantial change

17 Q Substantial And I agree The question then becomes,
18 in my mind, how one is selective, given that substantial
19 departure from the norm, the ability to be selective regarding
20 how they respond to aggressive impulses from the amygdala
21 Do you understand my question?

22 A Can you repeat it I ---

23 Q Sure I'll be glad to If, according to your
24 testimony, there is a fifty percent reduction in function --
25 and let's just assume that to be true for purposes of our

1 discussion right now -- how then is it possible that one with
2 a fifty percent reduction in the function of their frontal
3 lobe, in the areas you've discussed, would have the ability to
4 be selective as relates to stimuli from the amygdala?

5 A So you are asking about the ability to be selective
6 in ---

7 Q I'm sorry Let me complete -- I'm -- let me make the
8 question more complete Selective in terms of either
9 exhibiting or not exhibiting an aggressive response, in
10 response to stimuli from the amygdala

11 A So you are asking how does the frontal lobe selectively
12 discriminate between stimuli from the amygdala with regards to
13 expressing aggression?

14 Q Yes Yes With a fifty percent reduction in
15 performance of the frontal lobe

16 A So with a fifty percent reduction in sugar metabolism
17 in that area

18 Q That's the way you can explain it, yes sir

19 A Yes And so how does -- I mean, I think the exact
20 intricacy of the mechanism is not well established

21 Q Excuse me

22 A The exact mechanism by which, you know, certain
23 criteria or certain stimuli are selected or not selected, I
24 don't think that specific mechanism is well-established

25 Q Let me ask you, selectivity -- and I may not be using a

1 term that's appropriate in this context -- you help me out
2 If an individual with, as you have testified, operating with a
3 fifty percent reduction of functioning, or sugar metabolism in
4 the frontal lobe, does that person have the ability, when
5 stimulated by the amygdala, or the amygdala is stimulated, and
6 especially in a case where it's substantially reduced, four
7 standard deviations below normal, where then is the ability to
8 be selective in terms of responding to that -- to the amygdala
9 being stimulated in that circumstance? I mean, where is that
10 ability situation in the brain if it's not in the frontal
11 lobe? Isn't that what the frontal lobe does, assist you in
12 selecting what stimuli you respond to and what you don't?

13 A See, the frontal lobe is like a -- it's a factor It's
14 kind of like a risk factor for having heart disease You
15 know, if you have someone who has smoked twenty years they are
16 going to be at high risk for developing cancer or heart
17 disease, but not everyone who smokes twenty years is going to
18 develop heart disease or cancer, and so it's risk factor, but
19 you know, why some people who smoke twenty years get heart
20 disease or cancer and others don't, you know, it's not well
21 understood We know it's a risk factor The same thing is
22 true for the frontal lobe with regard to these issues you are
23 raising We know that it's a risk factor, but the exact
24 method by which which factor translates into specific outcomes
25 is not well understood

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1 Q No, that's great That's very helpful, because it is
2 true that there are people who have these substantial risk
3 factors who have, you know, the physiological effects of, for
4 instance, smoking for twenty years and don't develop heart
5 disease or lung cancer It doesn't necessarily follow then
6 that the reduction in functioning, or sugar metabolism in the
7 frontal lobe as you described in Defendant Stanko would
8 necessarily explain his conduct

9 A I would say it's -- when it increases probability for
10 having a manifestation of this problem, but I won't say, you
11 know, that -- yes, I would say it would increase the
12 probability

13 Q But it wouldn't necessarily explain his conduct, not to
14 a scientific degree of medical certainty, it would not explain
15 -- necessarily explain his conduct Is that true?

16 A I would say to a scientific degree of certainty it
17 would significantly increase the probability, but if you are
18 saying does that mean that -- this would mean that he is a
19 hundred percent going to do this I can't say a hundred
20 percent I would say a significant increase in probability

21 Q And I appreciate that I would like you to answer my
22 question Do you recall my question?

23 A Can you repeat it or rephrase it?

24 Q The fact, as you have testified, that Defendant Stanko
25 has a fifty percent reduction in the functioning or sugar

1 metabolism in his frontal lobe, that, in and of itself, does
2 not necessarily explain his conduct, specifically in this
3 case Is that true or not?

4 A Okay So you are asking does the fact that he has a
5 significant reduction in sugar metabolism does not neces --
6 you are asking does it necessarily explain his behavior?

7 Q To a reasonable degree of medical certainty, does the
8 fact, as you've testified, that he's got a fifty percent
9 reduction in the frontal lobe functioning or sugar metabolism,
10 does that necessarily explain this Defendant's conduct?

11 A I believe that it's a significant risk factor ---

12 Q Doctor, it's okay If you are not going to answer the
13 question it's all right, but you have not answered my question
14 three times

15 A I'm trying to understand the question, paraphrased in a
16 way that makes sense to me

17 Q Can you fix what's wrong with the Defendant Stanko's
18 brain?

19 A I mean, that's outside of my domain

20 Q Do the brain cells reproduce?

21 A Brain cells can reproduce under certain circumstances,
22 yes There's research that's -- under certain circumstances
23 brain cells can reproduce That is possible under certain
24 circumstances

25 Q In the frontal lobe?

1 A That is possible under certain circumstances It used
2 to be thought that brain cells never reproduce That was what
3 people were taught

4 Q I think we heard that earlier in this case

5 A But there has been some recent research that suggests
6 that under certain circumstances you can see some regrowth of
7 brain, but it would require a very particular set of
8 circumstances

9 Q Circumstances that perhaps could exist for this
10 Defendant, in his present condition?

11 A I mean, it would have to be medically induced, I mean -
12 - I mean, there are what they call neurotrophic factors that
13 people are using to try to regrow brain stems, and you know,
14 develop stem cells from, you know -- I mean, there's all kinds
15 of new research ideas about how to regrow brain cells

16 Q There is no -- there is no medically recognized method
17 that's accepted by the general medical community that would
18 recognize an ability to regrow brain cells at this point, is
19 there?

20 A No, none that are currently -- there are no current
21 methods that are generally accepted There are a lot of
22 research ideas that people are trying

23 Q The P E T scan -- the P E T scan, Doctor, does have
24 some generally medically accepted uses, many of which you have
25 talked about, Alzheimer's There's a significant history of

1 use, P E T scans, in terms of diagnosing and tracking
2 Alzheimer's Is that fair to say?

3 A Yes

4 Q Tumors

5 A Yes

6 Q The truth of the matter is, Doctor, the purpose for
7 which you employ it, at least in relation to your testimony
8 here today, it's not one of those, is it?

9 A Well, it's not Alzheimer's or tumor

10 Q No sir It's not -- the use of a P E T scan is not
11 generally accepted by the medical community as a tool by which
12 you can do the things you say you've done with this Defendant,
13 is it?

14 A I would disagree with that

15 Q Haven't you previously called it emerging technology or
16 emerging science, something that has been developing very
17 recently?

18 A Have I used those terms?

19 Q Uh huh (**indicating positive**)

20 A I mean, it is a emerging field or growing field, but in
21 my view it is generally accepted in the medical community to
22 use P E T scans to evaluate for brain injuries

23 Q You used the analogy of a vehicle with an accelerator
24 stuck in talking about the amygdala, the frontal lobe Is
25 that a comparison that you are comfortable with as it relates

1 to Defendant Stanko, and the condition that you diagnosed him
2 with?

3 A Yes I think it's a metaphor for -- as a metaphor,
4 that you have certain conditions where certain vehicles,
5 certain Toyotas or Lexuses appear to have some inexplicable
6 sudden acceleration which cannot be stopped, and his -- you
7 know, and I think that it's a metaphor for what I think is
8 going on in Mr Stanko

9 Q There wouldn't -- there, of course, is no selective
10 process for diffusing or filtering the process involved in
11 that analogy, right? If it happens it happens, and then
12 you've got a fastly accelerating vehicle Is that what you
13 are saying Defendant Stanko is, that he is absolutely subject,
14 without any kind of filter, to react to these -- to the
15 stimuli to the amygdala?

16 A I think that the areas of the brain that regulate
17 impulse and aggressive control are impaired, and I think his
18 ability, under certain circumstances, may be significantly
19 compromised

20 MR HUMPHRIES Beg the Court's indulgence

21 THE COURT Yes sir

22 MR HUMPHRIES Thank you, Dr Wu

23 THE COURT Redirect

24 REDIRECT-EXAMINATION BY MR DIGGS

25 Q Dr Wu, the Solicitor asked you if the Hermes Brass

1 software was F D A approved

2 A Yes

3 Q Is it F D A approved ---

4 A Yes

5 Q ---For C P T scans?

6 A Oh, it's not F D A approved for use with the C P T
7 scan That's correct

8 Q Thank you So if it were so used it's in a manner
9 that's not consistent with F D A approval

10 A That's correct

11 MR DIGGS All right Now -- actually I believe
12 that's all I have

13 Thank you very much

14 THE COURT Do you wish the witness to be excused?

15 MR DIGGS Yes sir

16 MR HUMPHRIES Beg the Court's indulgence, Your Honor

17 THE COURT Yes sir

18 **RECROSS-EXAMINATION BY MR HUMPHRIES**

19 Q Is there any software that's approved with the C P T
20 scans, for comparison with the C P T scans? Is there any
21 software approved by the F D A ?

22 A There's no statistical software

23 Q Honestly, Doctor, I -- please, is there any software
24 approved, such as the one used by M U S C , for use with
25 C P T scans, yes or no?

1 A There's no statistical software I mean, the one that
2 M U S C uses is a statistical software for use, and there's
3 no comparable statistical software for the C P T

4 MR HUMPHRIES Thank you, Doctor

5 RE-REDIRECT-EXAMINATION BY MR DIGGS

6 MR DIGGS I'm sorry I didn't understand Would you
7 repeat the answer

8 A So the M U S C uses the Hermes Brass software which is
9 a statistical quantitative software, which is trying to
10 determine statistically whether there's a difference, as is
11 software that's used where subjects are at rest There is no
12 statistical software that was used in the C P T comparison
13 This was not a statistical comparison that was used with the
14 C P T , and we didn't use a statistical software There is no
15 F D A approved statistical software for a statistical
16 quantitative comparison The comparison that was used was a
17 clinical judgment based on visual inspection, which is the way
18 most clinicians do P E T scan analysis

19 Q The way it was done in this case is peer-review?

20 A Yes It was a peer-reviewed visual inspection

21 MR DIGGS All right Thank you

22 THE COURT Do you wish the witness to be excused?

23 MR DIGGS Yes sir

24 THE COURT Any objection?

25 MR HUMPHRIES No sir

1 THE COURT All right, sir You are released from your
2 Subpoena You may go back to your regular duties, sir

3 A Thank you, Your Honor

4 THE COURT Your next witness

5 MR DIGGS Thomas Sachy

6 THE COURT Come around to be sworn, sir

7 MR DIGGS He's not in the courtroom, Your Honor
8 We've gone to get him

9 THE COURT All right

10 THOMAS SACHY, being first duly
11 sworn, testifies as follows

12 DIRECT-EXAMINATION BY MR DIGGS

13 MR DIGGS Your Honor, can we approach?

14 THE COURT Yes sir

15 (BENCH CONFERENCE TAKES PLACE OFF THE RECORD)

16 THE COURT Go ahead, Mr Diggs

17 Q Dr Sachy, how are you this afternoon?

18 A Good

19 Q Tell us how you are employed, please sir

20 A I'm self-employed I'm a Neuropsychiatrist in private
21 practice in Georgia

22 Q All right Would you give us the benefit of your
23 education and training

24 A I have two undergraduate degrees from the University of
25 Calgary in Canada, one a Bachelor of Science in General

THOMAS SACHY - DIRECT BY DIGGS

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1 Studies, one in Electrical Engineering I have a Masters of
2 Degree -- Masters of Science Degree in Biology from Georgia
3 State University I also have a medical degree from the
4 Medical College of Georgia in Augusta

5 Q Now, after you completed your educational training can
6 you give us an idea of what you did in terms of preparation
7 for your present practice?

8 A I completed a Neurology -- I'm sorry, a Psychiatry
9 residency Fellowship at the Medical University of South
10 Carolina I also completed a Behavioral Neurology Fellowship
11 there as well I then completed a Fellowship in Forensic
12 Psychiatry at Emory University

13 Q Now, tell us what you do in your current practice, Dr
14 Sachy

15 A I'm a Neuropsychiatrist, so I practice Psychiatry, some
16 -- well, Behavioral Neurology, Neuropsychiatry, Pain
17 Management, some Primary Care, and Forensics

18 Q All right Let's talk about Neuropsychology,
19 Behavioral ---

20 A Neurology

21 Q ---Neuropsychiatry, Behavioral -- what did you say,
22 Behavioral ---

23 A Neurology

24 Q ---Neurology What do you mean by those terms?

25 A Behavioral Neurology is what the Neurologists call it

1 Neuropsychiatry is what the Psychiatrists call it It is
2 special training in the brain disorders and brain diseases
3 that cause psychiatric or brain problems, problems with
4 thinking and cognition and mood

5 Q Have you had an opportunity to do any work with
6 reference to Stephen Stanko?

7 A Yes

8 Q Tell us what you've done in that regard

9 A I performed an evaluation of Mr Stanko several years
10 ago I did a psychiatric evaluation of him where I did a
11 neurological evaluation of him I made sure that he had an
12 M R I scan done and a P E T scan done, and that a
13 morphological analysis would be done of his brain

14 Q All right Have you ever testified as an expert in any
15 courts in the United States ---

16 A Yes

17 Q ---In the area of Psychiatry?

18 A Psychiatry, Neuropsychiatry, yes, forensics

19 Q And have you ever testified in South Carolina as an
20 expert in those areas?

21 A Yes

22 MR DIGGS And Your Honor, we offer Dr Sachy as an
23 expert in the area of Psychiatry and Neuropsychiatry

24 THE COURT Do you wish to question the witness?

25 MR HEMBREE Very briefly, Your Honor

THOMAS SACHY - CROSS BY HEMBREE

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1 THE COURT You may do so

2 CROSS-EXAMINATION BY MR HEMBREE

3 Q Dr Sachy, are you licensed to practice in the State of
4 South Carolina?

5 A No

6 Q Have you testified -- you have testified today that
7 you've testified in other cases before, you've been qualified
8 in other cases before On how many occasions have you
9 testified in criminal cases?

10 A I believe between fifty and a hundred, maybe more I
11 don't keep track anymore

12 Q Okay And of those cases how many involve murder?

13 A Probably twenty, thirty, forty, fifty

14 Q Okay And of those quite a -- a significant number of
15 murder cases?

16 A Yes

17 Q On how many occasions have you testified that the
18 defendant was sane?

19 A Several in my training It's been a long time ago, but
20 when I worked for the State, and when I worked at Emory --
21 that was -- I had quite a few of those cases

22 Q Okay Since you left and entered private practice ---

23 A Uh huh (indicating positive)

24 Q ---How many cases have you -- how many murder cases
25 have you testified in?

1 A Like I say, twenty to fifty, maybe more

2 Q Of those cases how many times have you testified that
3 the defendant was sane?

4 A I don't think I've testified that any of them were sane
5 because, by the time they got to me it was already established
6 that they had severe mental illness If someone brought a
7 case to me where they are obviously sane, and it was a case
8 like this, there wouldn't be anything for me to do

9 Q And when you said that they were obviously sane,
10 because another doctor had already evaluated them and made
11 that determination?

12 A And by reviewing the records

13 Q Is that -- is that -- I mean, answer my question,
14 please Is -- is it -- would you say that they were obviously
15 sane based -- it would have to be based on someone else's
16 determination, isn't that correct?

17 A No No, it isn't correct Obviously it would be based
18 on my review mainly of the record in the case If there is no
19 case there's no reason to take it

20 Q All right So since you've been in private practice
21 you have not once testified that the defendant was sane?

22 A No

23 Q All right That answers my question

24 MR HEMBREE Your Honor, I have no objection to Dr
25 Sachy testifying as a Psychiatrist I have no objection

THOMAS SACHY - DIRECT BY DIGGS CONTINUED

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1 MR DIGGS And Neuropsychiatrist

2 A Neuropsychiatrist Yes

3 MR HEMBREE I have no objection

4 MR DIGGS Okay Thank you

5 THE COURT He's qualified to give his opinion in those
6 areas Thank you

7 DIRECT-EXAMINATION BY MR DIGGS CONTINUED

8 Q All right Dr Sachy, let me ask you what you did with
9 respect to Mr Stanko

10 A Well, several years ago I came out and I did a
11 psychiatric evaluation of Mr Stanko at the jail I did a
12 neurological examination of him there as well I reviewed
13 records that were provided to me, mental health records I
14 reviewed the report by the doctors, etcetera, the other
15 doctors involved in this case, and as I said, I sent -- I
16 obtained imaging data which was sent away for further
17 analysis

18 Q All right Now, I notice you have set up a computer
19 over here What is the purpose in utilizing -- or do you plan
20 to use the computer in your testimony in this case?

21 MR HEMBREE May we approach, Your Honor?

22 THE COURT Yes sir

23 (BENCH CONFERENCE TAKES PLACE OFF THE RECORD)

24 THE COURT Ladies and gentlemen of the jury, go to
25 your jury room, please

1 (THE FOLLOWING TAKES PLACE OUTSIDE THE PRESENCE OF THE
2 JURY)

3 THE COURT Yes, Solicitor Do you have an objection?

4 MR HEMBREE I do, Your Honor I have an objection to
5 the introduction of any photographs, slides or other materials
6 that Dr Sachy intends the use from this computer as the State
7 has not been provided those materials in discovery, and we
8 have absolutely no idea what that presentation might involve,
9 and therefore we would object to it based on discovery
10 violation

11 THE COURT All right When was the slideshow or this
12 information prepared?

13 MR DIGGS It was prepared in 2006

14 THE COURT Okay And is it on a hard disk?

15 MR DIGGS They were originally on film, the data and
16 the film being provided to the State at that time

17 THE COURT Mr Diggs, let me be real clear

18 MR DIGGS Yes

19 THE COURT What you want to show to the jury right
20 now, is it on a disk?

21 MR DIGGS We have a copy of it on a disk, yes

22 THE COURT All right And did you give a copy of the
23 disk to the State?

24 MR DIGGS No sir We gave a copy of the photograph
25 to the State that is on the disk It's in the report ---

THOMAS SACHY - DIRECT BY DIGGS CONTINUED

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1 **THE COURT** Play what you have for the State, please,
2 so they have an opportunity to review it

3 Can this be the last time in this trial that you bring
4 up something you haven't turned over? Please

5 Thank you very much We are taking a break You can
6 play for the State

7 **(THE FOLLOWING TAKES PLACE AFTER A BREAK, AND OUTSIDE**
8 **THE PRESENCE OF THE JURY)**

9 **THE COURT** Solicitor, have you had an opportunity to
10 look at whatever was going to be projected on the screen?

11 **MR HEMBREE** I have, Your Honor, and the State has no
12 objection to the use of the slides, no objection to the use of
13 the slides

14 **THE COURT** Very good
15 Ask the jury to come in, please

16 **(THE FOLLOWING TAKES PLACE WITHIN THE PRESENCE OF THE**
17 **JURY)**

18 **THE COURT** All right, Mr Diggs

19 **MR DIGGS** Thank you, Your Honor

20 **BY MR DIGGS CONTINUED**

21 Q Let me -- before we get any further, Dr Sachy, can you
22 identify these for me, please sir

23 A These appear to be Mr Stanko's M R I from M U S C

24 Q All right

25 **MR DIGGS** And Your Honor, we have marked those as

1 32 -- Defense 32

2 THE COURT Any objection?

3 MR HEMBREE No, Your Honor My only question is, are
4 those the M R I scans or the P E T scans?

5 A M R I

6 MR HEMBREE M R I No objection, Your Honor

7 THE COURT All right In evidence without objection

8 MR DIGGS Thank you

9 (M R I SCAN ADMITTED INTO EVIDENCE AS DEFENDANT'S
10 EXHIBIT NUMBER 32)

11 Q Dr Sachy, since we've got it up here on the screen
12 what is that image we are looking at there?

13 A We are looking at an axial cut slice of Mr Stanko's
14 brain If we took a blade, a saw, and cut someone's head in
15 half this way that's what we would see That's the image we
16 would see of their brain

17 Q And what -- why are we looking at that?

18 A I was looking at that level in this particular image
19 because -- and I'm going to blast with my laser -- it says a
20 FL A I R image Fl a i r means Fluid Attenuated Inversion
21 Recovery It is a special number-crunched picture from the
22 M R I computer where damage to the meat part of the brain,
23 the part of our brain Damage to it appears as white Now,
24 we see some things that are white around here, and there is
25 some white stuff around here, but in particular what we are

THOMAS SACHY - DIRECT BY DIGGS CONTINUED

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1 looking at is white matter tracks with a Fl a i r image to
2 see if there is damage And the white matter tracks actually
3 on a Fl a i r image are these dark areas, here, here, not
4 this dark butterfly which is fluid, by the way, but these dark
5 areas back here, these dark areas here And what's abnormal
6 in this image -- it's very slight in him but it's abnormal --
7 we have a little white dot here, and a little white dot there
8 It has a special name in Neurology and in Neuroradiology
9 It's called Frontal Horn Capping This butterfly here --
10 these are called the frontal horns of his lateral ventricles,
11 the frontal horns of his fluid-filled spaces in his brain, and
12 there should not be a little white spot there, and there
13 should not be a white spot there, and that's why we get a
14 Fl a i r image, to look for signs of damage He has it The
15 actual term for this damage for this Frontal Horn Capping is
16 called Deep Periventricular White Matter Disease, or
17 Leukoaraiosis

18 Q Okay And is -- why is that significant, or can you
19 tell us, is that a good thing, is it a bad thing?

20 A Well, it's a bad thing We see this in people as they
21 get older These white things get big, and can actually
22 spread out this way and this way These butterflies can get
23 big as we lose brain meat, and the fluid fills the space where
24 the meat is lost as our brain atrophies, but we tend not to
25 see it until people get in their forties He was in his

1 thirties when this was done The problem for him, or anyone
2 with this damage, here and here, is that it affects the
3 function of their frontal lobes, which are right here, and in
4 fact scientific literature is clear that this white matter
5 stuff here, this Leukoaraiosis, causes a decrement in frontal
6 lobe functioning

7 Q Okay Now, if I wanted to refer to this condition what
8 would I call it?

9 A You would call it Deep -- you would call it Deep
10 Frontal Periventricular White Matter Disease, or hyper-
11 intensity, because on this image it's hyper-intense, it's
12 white -- it's worse on this left side than the right -- or
13 Frontal Horn Capping as the radiologist will note on an
14 M R I They will states, well, there's Frontal Horn Capping,
15 but they may not state what it means because they are not
16 trained to describe what behavioral effect it has, but it is
17 pathological

18 Q All right And by pathological we mean ---

19 A Abnormal, damaging

20 Q And it's Deep Frontal ---

21 A Lobe Periventricular White Matter changes or hyper-
22 intensity, and it is a structural manifestation that we see
23 with F l a i r images that's -- this is why we invented
24 F l a i r , to show things like this, to make it stand out

25 Q Okay Now we'll come back to that in a minute There

THOMAS SACHY - DIRECT BY DIGGS CONTINUED

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1 are -- I believe you have a couple of other images you want to
2 make reference to

3 A Yes

4 Q Can we go to the next one?

5 A Right -- right here

6 Q All right What do we have here?

7 A Well, this is a sagittal image of Mr Stanko's brain,
8 so if I took my head and just cut it in half this way that's
9 what I would see in the brain, and we can see his nose here,
10 and mouth here, back of his head here, front of his head here
11 By the way, just -- this black thing here is that fluid-filled
12 sac that looked like a butterfly -- that's the front of it
13 Well here we see Mr Stanko's brain, and here's his frontal
14 lobes Now, he has some atrophy, okay He has brain
15 shrinkage, and I can show exactly where it is Adjust this
16 I need to explain This white line here is his scalp
17 That's his skin and scalp There's a faint white line
18 underneath it with black on either side That is the marrow
19 of his skull, that faint light gray line Then we have some
20 more black space, then we have his brain His brain is
21 pushed right up to the inside margin of his skull, right to
22 about here, then it comes away, and we have this black space
23 there So let's look at where the margins of his brain are
24 pressed right up on the inside of his skull, from here ---

25 Q Yes

1 A ---To about here Then these folds get thicker, and
2 especially here, especially right here I'm just underlining
3 underneath it We can see the folds get very wide and deep,
4 and we are not touching the underside of his brain -- on the
5 underside of his skull This is shrunken brain, from here to
6 here I know it is shrunken because the skull above it could
7 not have grown and been pushed out to this size unless the
8 brain underneath pushed it out The only way our skull grows
9 is by this brain growing and pushing it out So at one point
10 in time his brain was touching up here, and since that point
11 in time his brain has dropped to these levels here

12 Another way to visualize it and see it -- and it's
13 important -- look at the little lines here, the folds of the
14 brain, how thick and line-like pencil-like thin they are, but
15 here we see deep valleys, thicknesses We see deep, thick
16 lines that look like mini-tornadoes coming from the sky rather
17 than lines like back here and back here That's a sign of
18 atrophy

19 So what we have here at signs of -- beginning about
20 here, frontal-lobal or dorsa-lateral pre-frontal, and parietal
21 atrophy or shrinkage that is not normal

22 Q Why is that significant in this case, if it is?

23 A Well, people with frontal lobe, Frontal Horn
24 Leukoaraiosis -- we know that leukoaraiosis is now connected
25 with atrophy If you've got the white stuff inside you are

THOMAS SACHY - DIRECT BY DIGGS CONTINUED

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1 likely to have shrinkage of the brain on top And any -- and
2 beside that, your brain is your computer This is responsible
3 for everything you are thinking and feeling, and going over in
4 your box right now, this thing is doing it When it shrinks
5 our computing power is decreasing, especially if it's -- you
6 are an adult There's a time for the brain to mature and go
7 through changes, but as an adult any time the brain shrinks
8 it's not particularly good, and in fact, studies have shown
9 that the smaller the brain shrinks the more intellectually
10 impaired individuals are And in fact, if you had Alzheimer's
11 Disease the brain might be shrunk right to this level here,
12 and all of this would be fluid, rather than just that

13 Q All right And before we move on, do you have any idea
14 what might cause this?

15 A You know, they say it's multi-factorial, but a history
16 of brain damage during birth, or inside the mother, any kind
17 of traumatic, anoxic -- that means lack of oxygen -- or toxic
18 injury to the brain, the brain will eventually do this But
19 again, you can be healthy and have Alzheimer's, and a young
20 Alzheimer's patient who doesn't know they have Alzheimer's yet
21 -- and no one knows -- their brain is going to look like this
22 before it gets to the point where it's shrunken down to here
23 So we have the start of something here, something has started,
24 and things in the brain typically progress one way, and then
25 unfortunately it's like aging, it's downhill

1 Q All right Now, you have -- there's another image that
2 you would like to have shown We'll go to that one

3 A These two images we just did, and we'll keep going to
4 the next one Just highlight that there are structural
5 abnormalities that, if you are careful when looking at the
6 M R I you can see If you are not careful, and you don't
7 specialize in this area, Neuropsychiatry, you might overlook
8 them Neuroradiologist and Radiologists tend to look for
9 tumors, and big white things that look like a big ball, or
10 something grossly abnormal We Neuropsychiatrist, we tend to
11 look for the little things to explain what's going on

12 Q Okay Now, this is what you wanted us to look at
13 Tell us why you brought this up

14 A Well, I gather that the video has been reviewed, and
15 obviously I have reviewed it, and these are two stills from
16 the video This is a shot from the front and this is a shot
17 from the side of the head, and they obviously highlight Mr
18 Stanko's medial-orbital frontal lobes are cold there compared
19 to normals See all the red here, and the lack of red here

20 Q Yes

21 A And looking sagittally a normal person's frontal lobes,
22 and especially the part right above their eyeballs, here, very
23 bright and active, and in Mr Stanko they were very cool

24 The -- in my report that I did for this case I mentioned
25 several literature articles certainly that have come out since

THOMAS SACHY - DIRECT BY DIGGS CONTINUED

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1 the last time I examined him, but I just want to focus on this
2 image right here This is not one of these images It's just
3 a study that shows that, if you damage certain areas of the
4 brain you are more likely to act in an impulsively violent or
5 psychopathic manner, and they show two halves of the brain,
6 but we'll compare this to this, because they are the same
7 view, Stanko, and from the literature, that anywhere in this
8 brain where you see red it doesn't correspond to the red on
9 him, but where you see brighter red or colors in this study
10 sample, those are the areas that, if there is damage you are
11 more likely to act in an impulsively aggressive or
12 psychopathic manner And again, the most damage you see is
13 right here, and compared to Stanko's brain that's where we see
14 the least activity So most damage here in normal folk who
15 aren't psychopaths, but they get damage there and start acting
16 like psychopaths, most of it occurs here, they start acting
17 more psychopathic This is where we have less activity in
18 Stanko compared to normal

19 This shot here, I just think it was perfect because, if
20 we compare this -- this slice here is actually one of these
21 slices, if you sliced it, and if we look at this slice here we
22 are at the same level of the frontal lobe as Stanko, and we
23 can see in red -- now in this slice, again, red means where
24 the damage is most If you are going to damage this part of
25 the brain you are more likely to show impulsive, aggressive,

1 violent tendencies, and that's exactly where Stanko is quiet
2 on his brain, so damage here, or quietness there If I have a
3 stereo and it's quiet, and I turn it on and it should work,
4 something is wrong with it, it's quiet for a reason, so Mr
5 Stanko has something going on here, definitely, that's not
6 turning his brain on as a normal brain should, and that's an
7 important part of the brain for morality and that kind of
8 behavior

9 Q Okay Can we turn the lights up?

10 A Yes

11 Q Okay Dr Sachy, can you tell us what the importance
12 of a healthy frontal lobe function is for a human brain?

13 A It's the most important part of our brain You can't
14 be human without it If you take it off of a human we'll act
15 more like animals that don't have large frontal lobes, like
16 lizards, or lower life forms Frontal lobes are what make us
17 human This is where our empathy is, this is where our moral
18 behavior lies, where our impulse control lies, where our kind
19 of planning and things like that lie It's all kind of mixed
20 up around in there

21 Q What do we mean when -- you said this is where our
22 empathy is in the brain Can you tell us what is meant by
23 that, if -- what does that function do, or that -- is it an
24 attribute, I mean, what is empathy?

25 A Empathy is the ability to feel someone else's pain or

1 agony, and if we feel it we sympathize with them, and we try
2 to console them, we feel bad ourselves Without it we can't
3 do that

4 Q Is it a normal thing for human beings to feel, empathy?
5 That's a normal trait that everyone -- every normal brain
6 should have?

7 A Unless those areas of the brain are dysfunctional

8 Q What role, if any, would it play in understanding moral
9 right and wrong?

10 A From the medical literature, again, since I've last saw
11 him three years ago, it's quite clear Besides controlling
12 impulsive aggression, moral decision-making, our moralizing,
13 our ability to moralize, comes from that area of the brain

14 Some people hyper-moralize, and in fact, in obsessive-
15 compulsive disorders some people worry too much, and are
16 guilty -- they feel guilty, just -- you know, and -- they may
17 be driving down the street and hit a bump and they are certain
18 that they hit a person and they are hurt, and they are
19 checking to see if they ran over someone If that area is
20 turned on too much they can actually seem hyper-moral bit
21 when that area of the brain is not functioning people are more
22 likely to do things in amoral ways, but especially when their
23 brain is being stressed out, tested, they are fatigued, they
24 are in a highly -- you know, lots of noise, lots of stress,
25 etcetera, they are more likely to -- that amorality or lack of

1 morals, or decreased moral behavior or thinking is more likely
2 to show itself

3 Q If one is going to have the capacity to distinguish
4 moral or legal right from moral or legal wrong ---

5 A Your frontal lobes

6 Q If one is going to have that capacity, how important is
7 a proper functioning of the frontal lobe?

8 A Without it you can't distinguish morally right from
9 wrong That's the part of the brain that does it If I take
10 the back part of my brain out here I am blind I may have
11 eyes, but I won't be able to see, because this part of my
12 brain does that There are parts of the brain that are
13 responsible for specific functions, and emotions, and
14 memories, etcetera Facial recognition is the right side of
15 my brain, language, left side of my brain, morality is right
16 here

17 Q Let me talk about the amygdala just a minute Can you
18 tell us -- are you familiar with what that is?

19 A Yes

20 Q Tell us what the amygdala is, and what function it
21 serves?

22 A Well, deep inside the brain emotions come from there
23 and they are fired up to the front of the brain for
24 processing The frontal lobes will decide, in milliseconds,
25 what to do or not to do It's that quick It's unconscious

1 Q Would this help you to ---

2 A Sure, if you can just face it to them and lay it there

3 Right about here and here -- the amygdala you can't see
4 it here -- but right about here and here, but just within the
5 flesh here, just deeper in, are two structures on either side
6 of the brain -- they are just little pea-sized nodules -- but
7 they are responsible for starting emotional impulses, but
8 especially highly valent, we call them, strong emotional
9 impulses, they fire the signal, they respond to environmental
10 ques and fire the signal up to the front of something that's
11 strongly emotionally valent, and it's -- it's -- you know, can
12 be fight or flight, it can be something very negative It
13 could be aggression, fear That's where it starts, and it's
14 signal starts there, goes to other structures, but ultimately
15 has to go to the front for further processing

16 Q All right Now, for the amygdala to fire -- where does
17 the amygdala get it's information?

18 A From our eyes and our ears It's very primitive

19 Q All right Our senses, all five senses funnel
20 information into the amygdala

21 A Correct

22 Q And does the amygdala -- amygdala -- is it important to
23 have a healthy amygdala?

24 A Correct If your amygdala isn't there you are not
25 going to respond at all You would be emotionally dead If

1 your amygdala is working improperly and some how overly
2 functional in some way you are going to be unnaturally and
3 inappropriately angry or fearful In fact, when they take
4 cats and put an electric wire into their brain -- or monkeys -
5 - and they've done this from the fifties -- and put a little
6 electric juice into their amygdala -- they've done this with
7 rats -- you can take a rat, put it in a cage with a
8 credibility Cat normally eats rat You stimulate the
9 amygdala in the rat, it jumps on the cat and starts tearing it
10 up

11 Q Now, the amygdala, is it a sophisticated analysis, or
12 is it an analysis at all? What happens in the amygdala?

13 A There is no analysis It just gets information -- it
14 does some processing The amygdala seems to store memory, if
15 we can call it that, or memory traces of emotionally
16 important, either very good or repugnant situations, so if I
17 see horse poop on the ground here or something, and I'm aghast
18 at it, my amygdala is what sent those signals to my frontal
19 lobes to kind of be aghast at it, but my frontal lobes will
20 decide whether or not to keep my composure or a stiff upper
21 lip, as the British do, or to freak out

22 Q All right Now, with respect to the impulses or the
23 emotions that come out of the amygdala from our sensory
24 inputs, is it possible for emotions to come out of the
25 amygdala that are not really -- that are caused by something

THOMAS SACHY - DIRECT BY DIGGS CONTINUED

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1 that is not, in actuality there, but a perception?

2 A Correct For instance, a schizophrenic mis-perceives
3 most innocuous things as something that's threatening That's
4 why they call -- we call them paranoid schizophrenics The
5 amygdala can get false signals

6 Q Does Mr Stanko show any evidence of that?

7 A Well, he doesn't show evidence of Schizophrenia, but,
8 you know, I have to say that, in the medical literature it's
9 fairly clear that the amygdala and pre and frontal circuitry
10 is dysfunctional in psychopaths That -- all you have to do
11 is watch Discovery Channel and anyone can learn that, you
12 know, watching it weekly The amygdala and the frontal lobes
13 have to work together for us to behave normally

14 Q All right Now, the amygdala sends out a -- an
15 emotion

16 A Yes

17 Q And would it -- that emotion is send immediately to
18 what area of the brain?

19 A It's sent to the frontal lobes within -- they've timed
20 it -- about three hundred, or two hundred milliseconds If
21 you divide a second up into one thousand cuts within two to
22 three hundred of those cuts out of one second this has already
23 been done It's that quick It's faster than I did that So
24 it's unconscious It's beyond conscious

25 Q Okay It goes immediately into the frontal lobe?

1 A Yes

2 Q And can you tell us what happens to it there?

3 A There it's processed in the frontal lobe, along with
4 other structures in the brain, but mainly the frontal lobe
5 decides what to do

6 Q Now, in terms of deciding what to do, what might that
7 encompass?

8 A Electrical signals being fired between various bundles
9 of cells in the brain, and based on genetics, learning, damage
10 to the brain, what-have-you, a person will react in a certain
11 pattern

12 Q What is a complex thought process?

13 A It's complex It's very intricate, and multi-leveled,
14 multi-faceted

15 Q How about executive process?

16 A Executive process is what the frontal lobes do amongst
17 the various things I've talked about, but that is a complex
18 multi-functional function of the frontal lobes, executive
19 function An executive is someone who is in control of a
20 company Well, the frontal lobe is our executive for the
21 whole company of the brain

22 Q What determines an appropriate response in -- or to the
23 emotion that's sent out of the limbic system?

24 A Again, it's the frontal lobes

25 Q And how does it do that?

1 A Well, through all the complex wiring and chemicals that
2 are there it processes that information, and either dampens
3 down an impulse or lets it go, depending on how well it's
4 functioning itself

5 Q Are choices presented there?

6 A Well, choices come after the fact The medical
7 literature is quite clear on this A person tends to, or
8 seems to make a choice Choices are made before they are even
9 consciously aware they've made a choice When we look at our
10 choices that we make it tends to be, is it Monday morning
11 quarterbacking, but it's after the fact In a highly
12 emotionally-charged situation our brain is running on pure,
13 you know, instinct, I guess you could say, a pure-wiring
14 that's -- and signals being sent within milliseconds There's
15 no thinking You just do

16 Q All right Decisions are made with respect to those
17 impulses where? Are they made in the amygdala, or are they
18 made elsewhere?

19 A Well, they are made in the frontal lobes, but it
20 depends on other areas of the brain, but mainly the frontal
21 lobes play the major role in that

22 Q And in terms of judging the appropriateness of a
23 response, where is that analysis and judgment made?

24 A It appears to be exactly that area of the brain between
25 my eyes, above my nose, in the medial-orbital frontal lobes,

1 and I guess that would be, you know, morality, or judging
2 moral value to something The medical literature is fairly
3 clear on that, quite clear It is something that is
4 genetically and biologically determined

5 Q All right And so the judgment of morality, and the
6 judgment of the appropriate response, are those judgments that
7 occur in the same area, and are processed in the same area in
8 the brain?

9 A Yes And we know that by people who have brain damage
10 to the frontal lobes who aren't psychopaths, who are normal,
11 and now got cancer, or a gunshot wound, or some kind of damage
12 there, and now they act socially and morally inappropriately

13 Q If someone lacks the ability to -- or the capacity to
14 distinguish the moral or legal right from moral or legal wrong
15 where should we look in the brain -- I assume that's a result
16 of something to do with the brain

17 A Absolutely, it has

18 Q And where would we go to in the brain to look at that
19 particular lack of capacity?

20 A Frontal lobes It's a frontal lobe function It's not
21 here, it's not here A bit of it might be distributed to
22 other areas, but it's right here

23 Q Okay And your testimony is, those judgments occur in
24 the same area?

25 A Yes

1 Q How about memory? Where does memory come into play?

2 A Frontal lobes are involved in memory too

3 Q Why is that?

4 A Because the first part of an intact memory is intact
5 attention If I cannot attend properly to something I will
6 never store that information Attention -- if you threw me
7 three balls and I jug -- if you gave me a phone number, very
8 quickly, and I had to memorize it, it's actually my
9 attention -- I remember it It's my attention that holds that
10 phone number, my short-term memory, which -- and attention go
11 hand in hand, but whether or not I store it depends on how
12 much force and energy I put into storing it for the long-term,
13 but that is a frontal lobe function too

14 Absolute proof of that that we see everyday are kids
15 with Attention Deficit Disorder, which I treat, and
16 unfortunately there are so many kids with A D D They have
17 frontal lobe disfunction, and they have very poor attention

18 Q Let me ask you this, pretty much just out of curiosity
19 Have you ever heard of Kluver-bucy Syndrome?

20 A Kluver-bucy syndrome is where you damage the inferior -
21 - underside of the brain, undersize of the frontal lobes and
22 the temporal lobes, and it damages the areas close to the
23 amygdala, and these people, actually because of that damage to
24 the amygdala area which, remember, helps them recognize
25 horrible or grotesque or anger-making things If that's

1 damaged they no longer recognize anything as horrible or gross
2 or angry, and now a lamb, with Kluver-bucy, will sit down with
3 a lion, fearlessly, and just get eaten

4 And they also, because the frontal lobe -- they do other
5 things, like stick things in their mouth, but the main thing
6 is, they are very docile, and less intellectual, and very --
7 they are not afraid of anything They are just there

8 Q Do they ever act out of rage?

9 A Technically speaking they are a little more docile, but
10 they can become hypersexual They tend to put things in their
11 mouth and they tend to try to have sex with anything that
12 comes through within grasp, not all the time, but at
13 inappropriate times

14 Q Now, with respect to Mr Stanko, let's review the
15 materials that you put to use in his case Can you do that
16 with us? What, again, have you had access to in coming to any
17 kind of diagnosis or opinion, if you do have such?

18 A I did his evaluation, psychiatric, and neurological
19 We got the imaging, and I reviewed past records I reviewed
20 reports from other mental health treaters and experts

21 Q Uh huh (indicating positive)

22 A I talked to Dr Wade who treated him in Charleston, or
23 Berkeley County Mental Health There are various things that
24 I reviewed

25 Q And what, of anything, significant about his status

1 comes to mind, or can you tell us about?

2 A Well, in the past, before this -- well, number one ---

3 Q I'm talking about basically -- not necessarily conduct
4 that he's done, but I'm talking about things that have come as
5 a result of testing and the like

6 A Well, at birth I reviewed his Guantanamo birth records,
7 and it shows that at birth something bad happened to him and
8 the doctors at Guantanamo Naval Base, the doctor, thought that
9 he was precarious, that he would -- there was a threat that he
10 might die, that he was in precarious health, and that he was -
11 - he had signs or an indication of brain damage, and they ---

12 Q Why do you say that?

13 A Because they actually wrote that, that there is --
14 intracranial damage was written down as a possible diagnosis

15 Q Okay

16 A They also recommended that his mother not have
17 sterilization or tubal ligation because they thought he would
18 die, so they wanted her to still be able to have other
19 children in case he died

20 Q All right And that's in the birth records?

21 A It's in the birth record I might add, they also found
22 poor neurological reflexes, which is another indication of
23 brain damage, and I would -- my opinion is, that's why they
24 wrote intracranial damage as a possibility

25 Q All right And with respect to the M R I and P E T

1 scan data, what does that show you?

2 A We know that animals, or people who have damage to the
3 frontal lobes, something caused it, okay, or people with
4 leukoaraiosis, something caused it, and we try -- well, those
5 of us who are interested, try to find reasons for it, like
6 what was the initial cause We know that -- and we are not
7 allowed to -- you know, I don't do experiments, but those who
8 do can't experiment on baby humans, but they do experiment on
9 baby rats and monkeys, and we know that anoxic, or lack of
10 oxygen damage to the brain, around the time of birth, can
11 cause leukoaraiosis, and damage to other structures of the
12 brain

13 Q Now, when someone -- let me follow up I want to make
14 sure that we've covered everything that you had access to
15 through the imaging, the technologies You had the M R I
16 studies, you had the P E T scan, and before we get into the
17 area that we've brought you here for this afternoon I want to
18 ask you, when someone suffers from a deficit in the frontal
19 lobe, and lacks an ability, in a normal healthy way, to
20 process limbic emotions, and they do -- they undertake a
21 certain act that's in response to the limbic emotion, can we
22 say that that is an activity that's engaged in by choice?

23 MR HEMBREE Object, Your Honor, to the leading nature
24 of the question

25 THE COURT I'm going to allow him to answer the

THOMAS SACHY - DIRECT BY DIGGS CONTINUED

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1 question Go ahead

2 MR HEMBREE Thank you, Your Honor

3 A No You don't have any choice on how your brain works
4 We have -- you know, science is -- Neuroscience is kind of
5 indicating that actually our choices are very limited
6 Choices made on a very short time span, like milliseconds, we
7 probably have no choice in what we do It's just -- it just
8 happens, and then later on we can talk about what we've done,
9 but these things happen very quickly, but when someone's brain
10 is damaged, and it affects their behavior or cognition, they
11 have no choice That's happened to them It's done, and in
12 an act of God it's happened

13 Q In a situation -- in this situation, based upon your
14 review of the medical records, history, your interviews and
15 testing with respect to Mr Stanko, your use of his imaging
16 technologies, the results of that data, do you have an opinion
17 as to whether or not he was sane at the time this particular
18 incident that's alleged in this case occurred?

19 A Yes

20 Q What is the opinion?

21 A At the time that these things occurred he was insane

22 Q All right And by that do you mean to say, if I could
23 read you the definition of insanity that we have in South
24 Carolina, that he lacked the capacity to distinguish moral or
25 legal right from moral or legal wrong, or to recognize the

1 particular act charged as morally or legally wrong, are you
2 saying he meets that definition of insanity?

3 A At that time, given his diagnosis, and history, but
4 clearly his diagnosis, he does

5 Q When we -- when the Law of South Carolina puts the
6 burden, or the necessity upon an actor, a defendant, an
7 accused, to recognize a particular act in a certain way, in a
8 situation where that individual lacks the -- or has brain
9 damage that prevents an executive functional analysis of that
10 process, is it fair to say that person recognizes the act to
11 be in any -- to be anything? Do you understand my question?
12 Is there an ability to recognize, at that point?

13 A Not at that point, and I would assume that the
14 writers -- I would have to assume that whoever wrote the laws,
15 that's the reason they put it in that, at that time ---

16 Q Yes

17 A ---Rather than, at that time, and the next half-hour,
18 two days, or, you know, it's at that time ---

19 Q Of course

20 A --I suspect for a good reason it's there

21 Q All right And your opinion is that Mr Stanko, at
22 this time, did not have the ability to recognize, or
23 distinguish moral or legal right from moral or legal wrong

24 A Yes

25 Q All right

THOMAS SACHY - CROSS BY HEMBREE CONTINUED

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1 **MR DIGGS** Beg with me, Your Honor Beg the Court's
2 indulgence

3 **THE COURT** Yes sir

4 Q Just one line of follow-up, Dr Sachy Are there --
5 what are the most important relationships in an individual's
6 life? As a psychologist/psychiatrist, generally speaking,
7 with respect to ourselves, who are the most important persons?

8 A Our loved ones, those around us that we interact with
9 and ---

10 Q Our families?

11 A Yes

12 Q Okay And what would it -- I'll leave it at -- there

13 **MR DIGGS** That's all I have at this time, Your Honor
14 Please answer any questions the Solicitor may have

15 **THE COURT** Cross-examination

16 **MR HEMBREE** Thank you, Your Honor

17 **CROSS-EXAMINATION BY MR HEMBREE**

18 Q Good afternoon, Dr Sachy

19 A Hello Good afternoon

20 Q Dr Sachy, is it your testimony that Defendant Stephen
21 Stanko, as he sits here in this courtroom today, does not know
22 that armed robbery is morally wrong?

23 A No

24 Q It would be your testimony that, as he sits here today
25 he understands and appreciates that armed robbery is wrong ---

1 A I agree

2 Q ---Both morally and legally

3 A I agree

4 Q Both

5 A I agree

6 Q Would it be your testimony, Dr Sachy, that Stephen
7 Stanko, as he sits here today, understands that murder is both
8 morally and legally wrong?

9 A Yes, I believe he understands that

10 Q Do you believe that when you interviewed him on June
11 24th of 2006, that he understood that armed robbery was
12 morally and legally wrong ---

13 A Yes

14 Q ---And that murder was morally and legally wrong?

15 A Yes

16 Q So he understands the difference between right and
17 wrong except in certain situations Is that your testimony?

18 A Yes, in essence, that is my testimony It's called
19 moral insanity

20 Q Well, I appreciate that that's your characterization of
21 it That's a term that you have selected to describe this
22 situation, but there are -- so it's your testimony that there
23 are times, there are circumstances that trigger -- if I
24 understand the sum and substance of this, there are
25 circumstances that trigger Mr Stanko to go into this state

1 that he does not understand the moral and legal wrong of
2 criminal offenses, of violent criminal offenses such as armed
3 robbery and murder?

4 A Say that one more time, just -- I want to answer it
5 clearly

6 Q Is it your testimony that -- is it your testimony that
7 Defendant Stephen Stanko is only insane -- excuse me -- that
8 he only doesn't understand moral and legal right from wrong
9 under certain circumstances or conditions?

10 A Partially, yes But let me explain

11 Q All right

12 A He has a disease called Psychopathy, or Anti-social
13 Personality Disorder He has that all the time, and it covers
14 and flavors his behavior It makes him what he is It makes
15 him what makes him so similar to all the other psychopaths we
16 know about They all sound and act pretty much the same
17 Part of their similar behavior is that, in high conflict,
18 emotionally-charged situations they reach the level of moral -
19 - for certain, moral insanity It's part -- it doesn't get
20 triggered It's always there, but it's not unmasked until
21 certain brain conditions are met

22 And if I can just quickly give you one example A car
23 that's got something wrong with it, driving at thirty or forty
24 miles an hour, looks okay, but until we push it to the limit -
25 - let's say eighty miles an hour, then the problems become

1 apparent, so it's not triggering something That problem was
2 always there, but until the situation, the right threshold was
3 met, then it becomes unmasked It's not triggered, but it is
4 unmasked Triggered means something new is happening
5 Unmasked means it was always there but now becomes apparent
6 So I agree with you, but with this explanation

7 Q And isn't it fair to say, Doctor, that what you are
8 testifying is that his inability -- that at this particular
9 moment, under these specific circumstances, that he -- when
10 that occurs, that he is unable to form the specific intent
11 necessary to commit a crime?

12 A Yes He's reacting He's reacting, but I have to also
13 say -- remember, impulsive, aggression and violence among
14 psychopaths is not the de riguer, or the constant activity
15 that they do, but the other criminal activity, the low-level
16 criminal activity, the conning, the manipulation, the stuff
17 that occurs in not so high morally-charged situations, that's
18 occurring pretty much all the time So it's a spectrum,
19 right, the low-level criminal activity is kind of all the
20 time, and the very worse is at certain times

21 Q Well, there were times in his life that Stephen Stanko
22 could follow the rules, that he wasn't conning, that he wasn't
23 lying, that he wasn't stealing He's had a history where
24 there were times when doesn't, and times that he does Fair
25 to say?

THOMAS SACHY - CROSS BY HEMBREE CONTINUED

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1 A I -- I don't think that's fair unless we were standing
2 by his arm all the time If it were on and off, as you've
3 just characterized it, the medical textbooks would say that,
4 and then I would agree with you They don't

5 Q Let me make sure I understand what you are not
6 testifying to

7 A Okay

8 Q Okay I just want to clarify one point

9 A Okay

10 Q You are not saying that at the time he had the capacity
11 to distinguish between right and wrong You are not saying
12 that at all

13 A At the actual time ---

14 Q Right

15 A ---I'm saying that he lacked it

16 Q Lacked the capacity to distinguish between right and
17 wrong

18 A Right At the -- at the time that these are occurring,
19 at that time That's what the Law says I mean, I agree with
20 it I ---

21 Q You are not saying that he lacked the capacity to
22 conform his conduct to the requirements of the Law, you are
23 saying he actually didn't understand the difference between
24 right and wrong?

25 A He didn't -- he was morally -- well, how does the Law

1 say it? He didn't understand, appreciate the moral difference
2 between right and wrong Again, morals aren't something we
3 think about They are something we appreciate They are --
4 they are -- basically they are biologically determined,
5 basically, as well as your brain works

6 Q And right and wrong, by very definition, is a moral --
7 I mean, it's a moral concept

8 A Absolutely

9 Q Right So, you are not saying that he understood right
10 from wrong and couldn't conform his conduct to the Law You
11 are not saying that, are you?

12 A I'm saying that he didn't know right from wrong at the
13 time And I guess I could say that, through most of his life
14 he -- what's that second part you were saying? I mean, all
15 the conning, all the -- in prison, you know, being in prison,
16 all the mental health things that he went through, and all the
17 diagnoses of Anti-social Personality Disorder, which is
18 Psychopathy, all those things, continuous, repetitive, his
19 inability to learn, his inability to be successful at being a
20 criminal, all these are part of a medical diagnosis

21 Q And I'll ask you about those in a little while What
22 I'm asking you about is, in connection with your diagnosis of
23 him you are not saying that he understands right from wrong
24 but he lacks the capacity to conform his conduct to the
25 requirement of the Law?

THOMAS SACHY - CROSS BY HEMBREE

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1 A No

2 Q That is not your opinion?

3 A I'm saying he ---

4 Q I just want to make that clear That is not your
5 opinion

6 A I just want to make sure you are saying -- I'm saying -
7 - that I'm not saying something I just want to say, he
8 didn't know right from wrong at the time Does that answer
9 your question?

10 Q Got you That answers my question I just want to
11 clarify that you are not saying there's some other ---

12 A I'm definitely not

13 Q ---Definition Fair enough So he just outright
14 doesn't know right from wrong at the -- these certain times,
15 that we will talk more about in just a moment

16 A Yes

17 Q Now, he's been diagnosed with a personality disorder on
18 several occasions by several different doctors

19 A Yes

20 Q - He was diagnosed by Dr Einhorn, and I think by you as
21 well, with an Anti-social Personality Disorder

22 A Yes And Dr -- is it Frierson, or Frierson?

23 Q Frierson Had a personal disorder with anti-social
24 features

25 A And I think Pam ---

1 Q And Pam Crawford, Dr Pam Crawford also, I believe,
2 offered that same diagnosis

3 A And Randy Wade

4 Q I -- fair enough So it's a consistent -- there's a
5 consistent

6 A Five of us

7 Q Yes There's a consistent diagnosis there, that he - -
8 he -- you know, I don't think there's an issue about -- about
9 that he does have -- he has been diagnosed as someone who has
10 an Anti-social Personality Disorder

11 A Yes

12 Q Now, let's talk about what an Anti-social Personality
13 Disorder is Isn't it fair to say that an Anti-social
14 Personality Disorder is -- can be defined as someone who
15 cannot follow the rules, they cannot -- they don't get along
16 with the rules that are established by society, and they --
17 well, that they don't -- they don't follow the rules

18 A Correct They have great difficulty following rules

19 Q Okay And it's even fair to say that career criminals
20 are frequently diagnosed, and people that spend ---

21 A Yes

22 Q ---In and out of jail their whole life, that they are
23 frequently diagnosed with Anti-social Personality Disorder As
24 a matter of fact, about fifty percent of the people in prison
25 are diagnosed as Anti-social Personality Disorder

1 A Yes I'm smiling because I'm glad you've picked that
2 up That's true That's right out of the literature

3 Q And well, it kind of makes sense, doesn't it ---

4 A Yep

5 Q ---Because the reason they are in jail is because they
6 didn't follow the rules Fair to say?

7 A Fair to say And -- and my -- just a short -- and
8 because of their disorder they have an inability to learn from
9 that punishment, and they keep doing it

10 Q Okay And they are diagnosed -- and here's the other
11 side of it that is kind of the -- kind of the interesting
12 part, they are diagnosed with Anti-personality -- Anti-social
13 Personality Disorder because they can't follow the rules, and
14 they keep getting in jail

15 A Well, they have to meet other criteria too It's not
16 just that

17 Q Right But that's a -- that's a big one

18 A It's a big one, but you know, you've got to include all
19 these other things, these cognitive things that we've been
20 talking about because they do, in the medical textbooks, so we
21 don't want to give the jury the wrong impression that it's
22 just that and not other ---

23 Q Right And I mean, we've talked a lot about P E T
24 scans and M R I s and all of that, but all that -- all you are
25 really saying, if I understand correctly, is you are assigning

1 -- you are saying that these are things that could contribute
2 to an Anti-social Personality Disorder

3 A They are the cause of it

4 Q In your opinion -- in your opinion, they are the cause
5 of it

6 A Well, yes

7 Q Well, I mean, that's what we are talking about You've
8 offered an opinion You are an expert You've offered an
9 opinion Your opinion might be accepted by this jury, might
10 not, but it's an opinion, true?

11 A Okay I would hate to pick a wrong opinion It's
12 embarrassing

13 Q Well, I'm -- I better just let that one go

14 Let me take you back to -- you -- let's talk -- we'll
15 talk a little bit about the P E T scan and the M R I
16 briefly On the P E T scan, the P E T scan was done at
17 M U S C in Charleston, correct?

18 A Yes

19 Q And I believe you indicated in your report that the
20 study was of good quality

21 A Yes

22 Q So there's no problem -- I mean, we are not talking
23 about, you know, a P E T scan that is going to run into
24 difficulty in being interpreted because of a poor quality?

25 A No

1 Q Now, the M R I -- Doctor, this M R I was done May
2 18th of 2006, I believe

3 A Yes

4 Q And it was done at your request?

5 A Yes

6 Q And the results of that M R I were provided to you,
7 and ultimately to Dr Gur and -- or I think to Doctor -- well,
8 they were provided to you, correct?

9 A Yes The disk was provided to me

10 Q And you evaluated that M R I at sometime in the past,
11 did you not?

12 A I did, three years ago

13 Q Correct And as a matter of fact, you evaluated that
14 M R I and you prepared a report on July 22nd of 2006, didn't
15 you?

16 A Yes

17 Q And in the course of that report you didn't mention,
18 not even a word, about the two diagnoses that you've offered
19 this jury today

20 A Correct

21 Q Doctor, those -- you have indicated to Mr Diggs that
22 those are very, very important diagnoses

23 A They are

24 Q And I'm concerned, and I want you to tell me, and
25 explain to me how a man of your skill and ability, in charge

1 of this -- this important evaluation of Mr Stanko, so
2 woefully failed to diagnose these two serious conditions back
3 in 2006 This is new material, isn't it, Doctor?

4 A It is, but I was unaware of it then because I didn't
5 have the expertise in leukoaraiosis that I have today That
6 was three years ago I wouldn't want to embarrass myself I
7 guess I could have not mentioned it in the second report, and
8 knowing that you have a report, the first one, and knowing
9 that I had to add these extra diagnoses to that same report, I
10 guess I could have assumed you might say what you are just
11 saying now, but I'm unafraid I didn't know about
12 leukoaraiosis then I do know

13 Q You knew about brain atrophy, Doctor Come on

14 A I mentioned the brain atrophy, but I didn't know about
15 the leukoaraiosis

16 Q Doctor, do you need more time? Do you think you could
17 find some more diagnoses if we let you take a little more time
18 with it?

19 A No

20 MR DIGGS Your Honor, we object It's argumentative

21 THE COURT Let's rephrase the question, Solicitor,
22 please

23 MR HEMBREE Thank you, Your Honor

24 A No

25 Q Let me ask you about this -- this defect, or this

THOMAS SACHY - CROSS BY HEMBREE

1811

1 condition, Anti-social Personality Disorder That is as -- in
2 your opinion, is caused by this defect, or these defects in
3 the brain This defect manifests itself by repeated criminal
4 or other social -- anti-social behavior

5 A Yes By definition, that's the disease

6 Q You've offered an opinion that this -- essentially that
7 this -- because of this frontal lobe problem Mr Stanko gets a
8 stimuli -- tell me if I'm characterizing this properly when I
9 finish He gets a stimuli, and it goes to the frontal lobe,
10 and because he has this frontal lobe defect -- your opinion he
11 has a frontal lobe defect -- that he is unable then to know
12 moral right or moral wrong, or legal right from legal wrong,
13 and he may act -- act that out in some way, manifest -- he
14 will manifest -- manifest himself with criminal or other anti-
15 social conduct

16 A Correct

17 Q All right And you've also offered an opinion that
18 this is -- this occurs, most likely, in challenging, high-
19 conflict and emotionally-charged situations

20 A Yes And in situations of high moral dilemma, high
21 conflict, they are more likely to act out on impulsive,
22 aggressive -- on impulsive, aggressive impulses

23 Q Right

24 A Yes

25 Q Now, you've reviewed Mr Stanko's history ---

JURY OUT
THOMAS SACHY - CROSS BY HEMBREE CONTINUED

1812

1 A Yes

2 Q ---His criminal history, his social history ---

3 A His ---

4 Q ---School records Did you have a chance -- did you
5 review his school records?

6 A I've look at them He had great grades

7 Q Right Good grades, good school records

8 A Great grades I ---

9 Q But you've got -- you've taken this thing -- you've
10 done a thorough job looking at his background

11 A I hope I have

12 Q Yes And you -- in that entire -- he's thirty-eight
13 years old when these tests were done, I believe In those
14 thirty-eight years leading up to this testing in your --
15 beginning of your diagnosis he's only had two significant
16 occasions where he acted out in violence

17 MS WILLIAMS Your Honor -- Your Honor, we need to
18 approach, please

19 (BENCH CONFERENCE TAKES PLACE OFF THE RECORD)

20 THE COURT Ladies and gentlemen of the jury, if you
21 would go to your jury rooms, please Thank you very much

22 (THE FOLLOWING TAKES PLACE OUTSIDE THE PRESENCE OF THE
23 JURY)

24 THE COURT Solicitor, why don't you ask your
25 questions, and then you will know exactly -- if you would, or

JURY OUT
THOMAS SACHY - CROSS BY HEMBREE CONTINUED

1813

1 what it is that there is a problem with

2 BY MR HEMBREE CONTINUED

3 Q Dr Sachy, my question to you was, in the -- in Mr
4 Stanko's prior history he -- in your review of those records
5 he had only had two significant violent experiences That was
6 my question to you

7 And that was when the objection came, Your Honor I
8 hadn't heard the response to that

9 A Three -- I mean, two -- on the three previous victims
10 of violent crime, besides the one in this case

11 THE COURT Well, you -- first, Doctor, you need to
12 speak up, because the Court Report can't hear you

13 A There were three previous victims of violence, I
14 believe, on, I guess you could say, two separate -- two
15 events

16 Q Two events

17 A Two events

18 Q That's what I meant, and your answer is a fair answer

19 MR HEMBREE Judge, I -- I believe I can avoid --
20 we'll see where it goes I'm going to try to avoid both --
21 I'm going to avoid the Ling crime, unless there's something
22 that I absolutely can't anticipate right now, but I will seek
23 to avoid that, and I likely will avoid the Buckner or McLandon
24 crime also, depending upon Doctor -- I mean, it would have to
25 require something from Dr Sachy that requires me to bring it

JURY OUT
THOMAS SACHY - CROSS BY HEMBREE CONTINUED

1814

1 out, but it would be my position that we would be allowed to
2 go in -- actually, I think -- I believe we are allowed to go
3 into any material that led to Dr Sachy's diagnosis

4 And Judge, if I may ---

5 Q Dr Sachy, did you review the records of the McLandon
6 assault and the Ling assault in reaching your diagnosis?

7 A Yes

8 THE COURT What objection, if any, is there?

9 MS WILLIAMS One moment, Your Honor

10 Your Honor, my objection is that I think that, you know,
11 part of -- the Court has ruled this continuance times, but we
12 are not to address the Ling incident It's not doing -- I
13 mean, the graphic part of it, coming into it, anything being
14 characterized as violent, none of that is in here, and I think
15 if we get into that we are getting real close to where we
16 should ---

17 THE COURT Well, I did that before -- that was a
18 restriction on the State You have presented your defense,
19 and in your defense you have placed an expert on the stand
20 When you did that -- and an expert you supplied materials to,
21 and an expert you supplied these previous criminal acts the
22 Defendant committed -- you supplied that information to your
23 expert, he relied on that to come to his opinion, therefore,
24 since you have done that then the State may now, if it chooses
25 to, question him about it It was a previous restriction on

JURY OUT/ ON RECORD
COURT TO DEFENDANT

1815

1 the State You placed it in evidence, the Defense did

2 All right

3 Let's take a short break for about five minutes Thank
4 you very much

5 (THE FOLLOWING TAKES PLACE AFTER A BREAK AND OUTSIDE THE
6 PRESENCE OF THE JURY)

7 THE COURT Can I -- before we bring the jury back in
8 let me ask a question, Mr Diggs, Ms Williams Will you have
9 further defense witnesses after this particular witness?

10 MR DIGGS Your Honor, as it stands right now I don't
11 think so There's like a five percent possibility, but
12 probably no

13 THE COURT All right Well, we need to cover with
14 your client, with the Defendant, about his right to testify in
15 this particular matter Usually I give the Defendant the full
16 opportunity of hearing anything that the defense would like to
17 put on before I question them so they have the full knowledge
18 to see what the defense has done before they make a decision
19 as to whether they need to testify or not, but -- so I don't
20 have to send the jury back in and out, since they are already
21 out it, it would seem to be now would be an appropriate time
22 to review that with your client, unless you had an objection
23 to that

24 MR DIGGS I don't have any objection to it

25 THE COURT All right

JURY OUT/ ON RECORD
COURT TO DEFENDANT

1816

1 Mr Stanko, if you would please stand, sir
2 Madame Clerk, if you would place him under oath, please
3 Ma'am

4 STEPHEN CHRISTOPHER STANKO, being
5 first duly sworn, testifies as follows

6 BY THE COURT:

7 THE COURT All right, Mr Stanko, at this point in
8 time I am going to explain to you certain of your
9 Constitutional Rights If, at any point in time during my
10 discussion with you, the times I'm asking you questions, that
11 you do not understand, or you have a question, if you can just
12 indicate, and raise your hand, or say I have a question, or I
13 need to talk to my attorney, whatever that might be, is that
14 agreeable with you?

15 A Yes sir

16 THE COURT Very good

17 Now, we are obviously in the stage of the trial where
18 you are presenting your defense in this particular matter, and
19 based upon my inquiry of Mr Diggs it appears that the
20 majority, if not all of the Defense witnesses, potentially,
21 other than yourself, have already been presented by the
22 Defense in this case, so I believe it's appropriate now to
23 tell you that you have the right to claim the protection given
24 to you by the Fifth Amendment to the Constitution of the
25 United States of America, and that Amendment states, in part,

JURY OUT/ ON RECORD
COURT TO DEFENDANT

1817

1 that no person shall be compelled in any criminal case to be a
2 witness against themselves That means nobody can make you,
3 or force you to testify in this case You certainly may
4 testify, and you can testify, if you want to, but certainly no
5 one can make you Do you understand that?

6 A Yes sir, I do

7 THE COURT All right, sir Now, that being your
8 right, you understand it is a personal right to you, and only
9 you can either exercise that right, or waive it, or give it
10 up Do you understand that?

11 A Yes sir, I do

12 THE COURT You certainly can seek the advice of your
13 attorneys, or close confidants, but it is your decision to
14 make You understand that?

15 A Yes sir, I do

16 THE COURT All right, sir Now, if you decide to
17 testify you would be subject to all the rules that you have
18 seen govern all the other witnesses that have come before you
19 in this trial, and that would be, you would be examined by
20 your attorneys, you would be cross-examined by the State as to
21 any matters the Court deemed relevant

22 And in that regard, Solicitor, are there certain crimes
23 involving dishonesty, or false statement, or crimes punishable
24 by imprisonment for more than one year that you would seek to
25 question the Defendant about?

JURY OUT/ ON RECORD
COURT TO DEFENDANT

1818

1 **MR HUMPHRIES** Your Honor, we can do that with some
2 specificity We are going to get the actual indictments so
3 there will be no question about it ---

4 **THE COURT** All right, sir

5 **MR HUMPHRIES** ---And they are right -- they are just
6 outside the courtroom

7 **THE COURT** All right

8 **MR DIGGS** Your Honor, I think Mr Stanko has a
9 response I don't think that we need, or he needs, you know,
10 a complete list of any crimes that might be used to impeach
11 him in terms of ---

12 **THE COURT** Well, it looks like the State has it right
13 now, so why don't we just -- so it's clear for the record, we
14 will put it in the record

15 So if you will just read that off, Solicitor, if you
16 would

17 **MR HUMPHRIES** Yes sir, Your Honor

18 Your Honor, we would intend to impeach Defendant Stanko
19 with conviction out of Charleston County with Breach of Trust,
20 from 1995, Breach of Trust, 1995, Breach of Trust, 1995, and
21 Grand Larceny, 1995

22 In Berkeley County, Charleston, coming from Berkeley
23 County, Kidnapping, 1996, and then, of course, the convictions
24 from the Georgetown case in 2006

25 **THE COURT** All right Very good

JURY OUT/ ON RECORD
COURT TO DEFENDANT

1819

1 Now, you understand, Mr Stanko, that the Court -- and I
2 would so tell you that I would determine that the probative
3 value of admitting that kind of evidence would outweigh it's
4 prejudicial effect to you There might be -- if you were to
5 testify I might have the -- make sure that certain details,
6 especially of any of the crimes in Georgetown -- none of that
7 would be admitted, but the crime for which you were convicted
8 the State would be allowed to ask you You understand that?

9 A I do

10 **THE COURT** All right, sir Now, understanding it's
11 your decision to make -- and it's got to be made freely,
12 voluntarily, with the knowledge of these protections given to
13 you by the Fifth Amendment, as well as consequences if you
14 decided to testify

15 Now, if you decide not to testify I will instruct the
16 jury that they cannot give that fact any consideration
17 whatsoever, the fact that you didn't testify, they are not --
18 I will tell them they are not to talk about it, they cannot
19 use it in reaching their determination or their decision in
20 this matter

21 It being, again, left entirely up to you to decide
22 whether or not you want to testify do you, at this point in
23 time, want to discuss anything further with your attorneys?

24 A Not at this time No sir

25 **THE COURT** All right, sir

JURY OUT/ ON RECORD
COURT TO DEFENDANT

1820

1 A I have one question to ask you

2 THE COURT Why don't you ask your counsel first

3 A Thank you, sir

4 THE COURT All right, sir Not asking you to tell me
5 what it was that you asked your attorneys, but you had an
6 opportunity to ask them Did they adequately answer the
7 question to your satisfaction?

8 A They did Yes sir

9 THE COURT All right Thank you, sir
10 Do you understand everything we have been talking about?

11 A Yes sir, I do

12 THE COURT All right, sir And do you have any
13 further questions at this point in time?

14 A No sir, I do not

15 THE COURT All right Do you wish to testify in this
16 particular case?

17 A No sir

18 THE COURT All right Thank you, sir You may be
19 seated

20 A Thank you

21 THE COURT All right Solicitor, are you ready to
22 continue with your cross-examination in this matter?

23 MR HEMBREE I am, Your Honor

24 THE COURT All right, sir

25 Ask the jury to come in, please sir

1 (THE FOLLOWING TAKES PLACE WITHIN THE PRESENCE OF THE
2 JURY)

3 THE COURT All right, Solicitor, you may continue,
4 sir

5 MR HEMBREE Thank you, Your Honor

6 CROSS-EXAMINATION BY MR HEMBREE CONTINUED

7 Q Dr Sachy, let me kind of get back on track a bit here,
8 and we were talking about Mr Stanko's violent responses to
9 stimuli, and just to kind of bring us back to where we were
10 before the break, it was your testimony that, because of an
11 anti-social personality disorder that when faced with certain
12 stimuli that was likely to occur in challenging, high-conflict
13 and emotionally-charged situations, that he would -- he might
14 respond in impulsive, aggressive and explosive manner

15 A Yes

16 Q Okay And I had asked you the question right before
17 the break about your review of his record, and my question to
18 you was, isn't it true that, in his thirty-eight years of
19 life, before your evaluation of Mr Stanko, in his thirty-
20 eight years of life he only, on two occasions, exhibits these
21 violent, impulsive, aggressive, explosive behaviors?

22 A That we know of

23 Q But that's all you know of, so we can only -- you can
24 only tell this jury that there are two occasions when this
25 condition manifested itself

1 A I can tell the jury that there are two occasions that
2 he did something very bad, terribly violent things, but I can
3 also tell them that he has a -- apparently life-long history
4 of committing, you know, illegal, fraudulent acts that are
5 consistent, just the same with, a mental disease

6 Q Understood But they are -- those acts were not
7 aggressive acts or explosive acts Those were -- they were
8 criminal acts, but they were more cons?

9 A Yes

10 Q I mean theft ---

11 A Correct

12 Q --Sneaky stuff?

13 A Definitely

14 Q But not for that -- I mean, I don't believe you are
15 saying that that -- you are not saying to this jury that that
16 falls into this category of the aggressive and explosive
17 behavior that you are talking about?

18 A I am, and I'm following D S M 4, because, you know --
19 you have faith in the D S M 4 -- I'm following it I have
20 less faith than you, but I've reviewed it now, you know, the
21 D S M 4 -- I won't be long -- it lists the pattern of behavior
22 that these guys have, and it mentions aggressive behavior and
23 physical assault, that it is possibility you would see more in
24 them than the average person, but it also -- they performs
25 acts that are grounds for arrest continually ---

1 Q Right

2 A ---Low-level things, but it's part of this whole
3 picture I just fear you are trying to split off one thing
4 when it's part of the whole thing

5 Q No I understand And I appreciate what you are
6 saying, and I'm not trying to -- I'm not trying to take you
7 down a track anywhere, because I appreciate that -- that these
8 other crimes are part of the diagnosis, because it's not
9 following the rules ---

10 A Correct

11 Q ---And that's what anti-social behavior is all about,
12 is not following the rules

13 A Yes It's a big part of it, yes

14 Q I've got you Now, I do want to -- but I do want to
15 focus on these violent offenses I understand, and I'm not
16 trying to -- I just want to focus on the violent offenses,
17 that -- it would be your testimony that because of his low
18 function in his frontal lobes, or for whatever reason --
19 that's -- your opinion is the low function in the frontal
20 lobes -- and other causes in his brain, that he cannot control
21 -- when faced with these highly emotional situations, that he
22 is not able to control his violent behaviors

23 A Yes

24 Q And we only have two occasions in his life that he --
25 that we know of, that he committed violent offenses

1 A Yes

2 Q And -- but he certainly -- wouldn't you agree with me,
3 Doctor, that he has certainly been exposed, time and again, to
4 challenging, high-conflict and emotionally-charged situations?

5 A I don't know if he has But I also have to add --
6 explain that Right in the D S M 4 it says that aggressive
7 acts required to defend oneself, or someone else -- for
8 instance, if he got in a fight in jail -- wouldn't be
9 considered part of the aggression of psychopathy, so you know,
10 I hear what you are saying There's only two I know about
11 With Ted Bundy there were twelve but they think there were
12 forty more, you know, I don't know -- but I know of two

13 Q Okay He's been in jail, incarcerated a significant
14 period of time, true

15 A Yes

16 Q He hasn't killed anybody in jail

17 A No

18 Q Hasn't seriously injured anybody in jail?

19 A Nope

20 Q Hasn't even had a scuffle or a fight with anybody in
21 jail

22 A No

23 Q Yet he -- and he claims to have been assaulted more
24 than thirty times in jail

25 A Psychopaths victimize weak victims They don't go

1 after the big thugs, or people who are in positions of, you
2 know, beating the heck out of them They are -- they are very
3 smart, they tend to be -- he's got an I Q of one forty-
4 three -- they tend to victimize the weak, they tend to
5 manipulate and abuse the weak, but in jails, which are very
6 structured and supervised, they are actually very docile
7 They are more likely to be the victim of violence, like
8 Jeffrey Daumer was

9 I am not aware of any serial killed -- or psychopath --
10 let me just say this -- I'm not aware of any that did
11 something in jail Maybe it's happened where they've hurt
12 another or killed another client or something, whatever you
13 want to call it, but a high profile one, I've not heard of it

14 Q But Doctor, I mean, wouldn't you agree that -- what
15 could be more challenging, more high-conflict, and more
16 emotionally-charged than life in a prison?

17 A You know, you brought that up yesterday and I reviewed
18 that Jails are -- and prison, is very mundane Life is
19 mundane If it were very highly emotionally charged, with a
20 bunch of psychopaths and anti-social, we would have a blood
21 bath daily in prison, but we don't Their life is very
22 regulated They don't have access to weapons

23 And by the way, psychopaths frequently use weapons when
24 they do their impulsive act of violence, impulsive acts of
25 violence

1 Let me just say this, going to jail, I'm sure, is very
2 emotionally stressful, but once you are there, and once you
3 have been there for a long time and the mundaneness of it
4 comes into play, it's very -- you know, I'm sure there is
5 emotional stress like in daily life, but it's mundane It's -
6 - we are not allowed to torture there or have them suffer
7 It's part of our civilized society

8 Q So it's your testimony that he became conditioned in
9 jail, and was able to conform his conduct and can control
10 himself in jail regardless of the emotional and --
11 emotionally-charged or conflict situations that he might face

12 A No In just the same way that a child with A D D
13 placed in a structured environment performs better on their
14 studies, and is better behaved just because of the structure
15 we have not changed their A D D

16 Q Okay But somebody is controlling him He's
17 controlling himself I mean, everybody ultimately controls
18 himself I mean, this is the C E O right up here -- you told
19 us -- is the C E O that controls the rest of the brain, that
20 controls the rest of the body, and I mean, is that -- that was
21 your testimony, right?

22 A Correct

23 Q So he's exhibiting some level of control because
24 otherwise, every time he ran into an emotional situation he
25 would go bonkers and go -- go -- you know, taking a swing at

1 somebody True?

2 A Well, it has to be unmasked It disease is always
3 there There's no cure He has not been conditioned and
4 cured That's like StarTrek level medicine He's in a
5 controlled, stable environment, and psychopaths, in the
6 medical literature, are -- they don't get into a lot of
7 trouble in jail We know this, when they get out of jail they
8 have about an eighty percent chance of committing another
9 crime I mean, that's very high How can someone who has
10 gone to jail and should learn, and is docile, and supposedly
11 has been conditioned, come right out and do the same things if
12 they've been properly conditioned It's because they have not
13 been cured They have controlled

14 Q The -- let's talk about the Turner case, Henry Turner
15 case

16 A Okay

17 Q You've talked to Defendant Stephen Stanko about the
18 events that led to the death of Henry Turner?

19 A Yes, three years ago, I did

20 Q All right And what did he report to you?

21 A Well, after the first incident he went over there and
22 he did some terrible things, he did a terrible thing

23 Q Well, I appreciate that -- that's a very -- I mean,
24 it's a pretty broad statement

25 A I mean horrible ---

1 Q Let me ask you to help me out with a little more detail
2 than that What did he specifically tell you about the
3 leading up to and shortly after, and during ---

4 MR DIGGS Your Honor, we object, and -- maybe I could
5 approach

6 THE COURT Yes sir

7 (BENCH CONFERENCE TAKES PLACE OFF THE RECORD)

8 THE COURT All right, Solicitor, you may continue

9 MR HEMBREE Thank you

10 Q Dr Sachy, in discussing the matters with you, the case
11 with you, or the facts with you, did you find Mr Stanko's
12 conduct goal-directed?

13 A Well, there was -- it's goal-directed, but it seemed to
14 me, senseless I mean, goal-directed means I do something but
15 -- you know, in my opinion -- yes, I guess you are asking my
16 opinion He didn't need to do this He didn't

17 Q And -- but he took steps -- and there has been evidence
18 in this record -- there has been evidence presented to this
19 jury that he armed himself with a weapon That shows a
20 certain amount of intentionality and goal-direction Would
21 you -- wouldn't you agree with me?

22 A He chose criminal intent, I guess, criminal thought

23 Q Okay He, in an effort to keep this crime quiet, or
24 avoid detection, he took a pillow and fired the gun through a
25 pillow into the back of Mr Turner Wouldn't you agree with

1 me that that is very intentional and goal-directed?

2 A I can't agree with you on that

3 Q You cannot agree with me on that?

4 A A 357 Magnum through a pillow is like -- it's like me
5 just dropping this mic here It sounded explosive There are
6 -- you know, there are many ways for criminals to do things,
7 but that is almost like putting a beacon or a speaker out
8 there for someone to -- to draw attention to it

9 Q I mean, that's stuff they do on television, isn't it?
10 I mean that's kind of -- I mean, you see that kind of
11 silliness where they -- like some old movie, that some guy
12 would shoot through a pillow to try to use it like a silencer,
13 right?

14 A I don't know who would use a pillow for a silencer

15 Q I'm not saying it's a good idea, Doctor I'm saying it
16 was -- it was a reason -- I mean, you don't shoot through a
17 pillow just for fun, I mean, there was a reason that he took a
18 pillow and fired the weapon through the pillow There was an
19 intentionality, even if it was a failed attempt

20 A It was an unsuccessful or a poor choice, yes

21 Q Poor choice I'm not disagreeing with you there, but
22 there was intentionality behind it There was some thought
23 that, in the next step I'm going to do this ---

24 A Yes

25 Q ---Take this step in the process

1 A Well, I don't know -- yes, I mean there was thought

2 Q Let me ask you this He -- he reloaded the weapon ---

3 A Yes

4 Q ---And so that involves intentionality That involves
5 goal-directed thought

6 A Yes

7 Q I mean, the fact that he shot him in the back, that
8 involves -- I mean, selected -- he selected that method of
9 killing Mr Turner That minimizes the likelihood that
10 something goes wrong, if they -- if your -- if your victim
11 can't face you I mean, that's goal-directed, isn't it?

12 A It's goal-directed, but it is victimization It's --
13 you are truly victimizing someone when you shoot them in the
14 back It's goal-directed, but it is amoral

15 Q Certainly it's amoral No question that it's amoral,
16 that it's wrong

17 A It's cognitively amoral

18 Q Correct No doubt about it's wrongfulness, but it's
19 intentional and goal-directed

20 A I guess so But there are two things there that are
21 connected and separate in a way

22 Q And he goes through Henry Turner's pockets after he's
23 dead and takes -- certainly he takes car keys We know that
24 he takes car keys He may have taken money We don't know
25 what else he might have taken, but there was no cash recovered

1 on Mr Turner at all I mean, that's certainly a goal-
2 directed -- the robbery of Mr Turner is certainly a goal-
3 directed intentional activity

4 A It is -- I guess it's -- it is thought I guess it is
5 goal-directed, but is it with proper forethought and
6 consideration of the consequences

7 Q And the switching vehicles from, you know, kind of a --
8 at least a shiny red Mustang convertible to a much more low
9 profile vehicle to make his escape from the crime scene shows
10 some intentional goal-directed thought, does it not?

11 A It does It shows impaired goal-directed thought
12 That's just dumb It's -- it is evil, the general act, but
13 it's dumb

14 Q Well, I'm not disagreeing with you that he made
15 mistakes No question that he made mistakes, that he may have
16 thought more like a checker player than a chess player, but --
17 but there -- he's taking one step at a time, at least, with
18 some intentionality, and with an objective in mind

19 A He makes errorful steps, but he's doing it, yes

20 Q Uh huh (indicating positive) And he leaves town I
21 mean, doesn't hang around, he gets out of town I mean,
22 that's a -- that's an intentional goal-directed step, to flee
23 the crime scene

24 A And -- yes, and like anti-socials, they fail to
25 compensate, or make amends for their behavior They -- they

1 hit the road

2 Q Uh huh (indicating positive) And I mean, most -- most
3 anybody would hit the road after they had killed somebody,
4 wouldn't you say?

5 A I disagree I believe if you are morally wired very
6 well, if you kill somebody you are going to stop and bring
7 attention to it You are going to show -- when I say bring
8 attention, you are going to take yourself to the authorities,
9 and you are going to turn yourself in

10 Q Then it would be your testimony, if I understand you
11 correctly, that under that theory anybody who breaks any kind
12 of law, if they are a moral person, will immediately pick up
13 the telephone and dial 911 and report themselves

14 A They may not, but they would feel guilt, they wouldn't
15 like remorse like anti-socials do And you know, you can kind
16 of generalize They are all going to call the cops or they're
17 not, but things are more complicated than that

18 Remember, I'm one of five people who has diagnosed him
19 with anti-social personality disorder, a mental illness, and
20 part of that mental illness is doing all of the stuff you are
21 talking about

22 Q He goes to another -- yet another city that is quite
23 crowded, I mean, lots of strangers in town It's the Master's
24 week at Augusta, and you know, nobody knows nobody It's a --
25 I mean, wouldn't you agree with me, Doctor, that that's a

1 pretty good choice -- if you are going to try to go some place
2 where somebody won't know you, that's a pretty good choice

3 A No, not after murdering someone and driving off in
4 their truck

5 You know the guy who -- was it blew up the bomb in
6 Atlanta and went to the mountains That's probably the kind
7 of thing someone with correct cognition would do, but taking a
8 stolen truck from a murder victim to a big town, and then
9 getting filmed on T V in a church, and all that stuff, you
10 know, not laying low, isn't that -- you know, laying low, yes,
11 he went to another town You know, he's going to be -- feel
12 that he is in danger, but he's going to do the typical
13 psychopathic anti-social things

14 Q Doctor, you testified this murder was an act of God
15 Is that your testimony?

16 A I don't believe I said that His brain, in the State
17 it's in, is considered an act of God

18 Q And going back to the P E T scan -- and I will be very
19 brief about this -- the P E T scan was actually read by the
20 radiology staff at M U S C ---

21 A Yes

22 Q ---And provided to you ---

23 A Yes

24 Q ---And their report said it was a perfectly normal
25 P E T scan

1 A That was either ---

2 MR DIGGS Your Honor, we -- I object to that, and I
3 move that it be stricken That is absolutely hearsay

4 MR HEMBREE Your Honor ---

5 THE COURT I'm going to allow the question, and the
6 witness can either agree or disagree

7 A It said that, but either that was due to medical
8 negligence, or willful mischaracterization of the evidence
9 That's not a normal P E T scan and they knew it, and I can't
10 wait till that part is exposed in this case

11 Q Well, I'm sure we will all look forward to that

12 A Oh yes

13 Q But medical negligence or willful mischaracterization -
14 --

15 A Mischaracterization ---

16 Q ---Would that be how you would characterization your
17 failure to diagnose the M R I findings?

18 A No That was based on my medical knowledge at the
19 time But let me add, they read a stimulated M R I -- I'm
20 sorry -- a stimulated P E T scan where a guy is doing a
21 computer test to turn on those frontal lobes, they compared it
22 to their normal group of people who were literally almost
23 asleep in a room with the lights turned off That is
24 unbelievable It's unconscionable, and I can't believe any
25 expert from anywhere would have the guts enough to come in and

1 say something like that

2 Number two, you know what it does prove It proves the
3 point that our P E T got -- our stimulated P E T of Mr
4 Stanko, his frontal lobes shown no brighter than normal people
5 in a quiet room with the lights off They read them as
6 looking the same All your experts did from there was really
7 bolster our case, and strongly

8 Q And Dr Sachy, I mean, I appreciate this dickering over
9 the P E T scans, and dickering over the M R I s ---

10 MR DIGGS Your Honor, we object That's not a
11 question It's a ---

12 MR HEMBREE I'm -- I'll be asking him ---

13 MR DIGGS ---Statement

14 THE COURT I'm going to allow the Solicitor to
15 continue Thank you, sir

16 MR HEMBREE Thank you, Your Honor

17 Q I mean, I understand there are differences of opinion
18 about this I appreciate that, and I understand that, but the
19 bottom line on it, the bottom line, now there may be opinions
20 that say the P E T scan is fine, all right, but everybody
21 agrees, everybody agrees that, for whatever reason, whether
22 it's a brain function or not, that this Defendant is diagnosed
23 with anti-social personality disorder

24 A Correct

25 Q I mean, the net -- the bottom line on it all is, you

1 just used that to get to your diagnosis

2 A I used it as a part -- it's a tool to get that
3 diagnosis ---

4 Q Right

5 A ---But to also show that anti-social personality is not
6 just something in a book It is a dysfunction in brain, and
7 now we have the technology to show it, and that's God-given

8 Q Well, and it can be -- you know, that's a whole
9 different issue I mean, that may or may not be The point
10 of it is, whether it's through P E T , or whether it's through
11 Dr Einhorn's psychological testing -- Dr Einhorn didn't look
12 at any of this stuff, did he? That wasn't part of his --
13 that's not in his area of expertise, is it?

14 A No

15 Q No So based on just his personality test he
16 determined that this Defendant is anti-social personality
17 disorder, right?

18 A Yes

19 Q So, you know, all this stuff is, you know, maybe
20 interesting, but when it gets right down to it all we are
21 talking about, is this Defendant has Anti-social Personal
22 Disorder Isn't that true?

23 A Yes, that he has a disorder that predisposes him to act
24 like this

25 Q Well, whatever causes it I mean ---

1 A It's beyond his choice

2 Q Whatever causes it

3 A Okay

4 Q I mean, it really doesn't matter what causes it The
5 bottom line is, he has it

6 A That is true You are right

7 Q Okay And he had it before, and he has it today

8 A Yes

9 Q And we are not debating that he has that diagnosis

10 A Yes

11 Q Okay And you are telling this jury he can't be fixed

12 A No, we can't fix it We can't cure it yet It's in
13 the future

14 Q And Dr Sachy, tell this jury how much money you have,
15 or will be paid in connection with your diagnosis of Stephen
16 Stanko

17 A Nothing so far I don't know how much I'm going to get
18 paid I haven't discussed it On the previous case I worked
19 in I haven't been paid for that one yet either

20 Q Well, have you submitted a bill?

21 A To this case?

22 Q I'm asking you, have you submitted a bill from the time
23 you began working with Dr -- with Defendant Stanko, how much
24 time -- how much are you charging for your services in
25 connection with this case?

1 A Four Hundred Dollars an hour, typical expert witness
2 fee

3 Q Fair enough And how much have you billed to date?

4 A I haven't billed anything yet

5 Q How much of a bill have you generate -- how much of a
6 bill have you tallied up? How much time have you put into the
7 case?

8 MR DIGGS Your Honor, we object It's not
9 appropriate, and -- if you want me to go further probably be -
10 - should be done in a matter -- as a matter of law

11 THE COURT It is proper fodder for cross-examination
12 to examine any expert, whether it's in criminal or civil
13 court, what they are being paid

14 A I -- I have worked all this week in the hours, the
15 evening hours after work preparing for this case, reviewing
16 You know, I've driven here and back I have reviewed all last
17 night until the early morning hours

18 Q I've talk -- I'm talking with you, since 2006 ---

19 A Oh

20 Q ---How much time have you logged on this case?

21 A A lot

22 Q I mean, ten hours?

23 A Oh, way more than that

24 Q Two hundred hours?

25 A Probably I -- it's a lot

1 Q Okay And your normal rate is Four Hundred Dollars an
2 hour?

3 A Right

4 Q So ---

5 A Well, actually it isn't It higher, but for this I ---

6 Q You are willing to ---

7 A Correct

8 Q So you've agreed to Four Hundred Dollars an hour

9 A Correct

10 Q And you've got three hundred hours in the case?

11 A Well, you know, I didn't get paid for the first case,
12 so I don't know what's going to happen there, and this case
13 I'll have to tally up my hours and put it in, and hope that I
14 get paid

15 Q At least two hundred?

16 A Maybe -- at least a hundred

17 Q All right

18 A Oh, but if you are counting going way back ---

19 Q I'm talking about since 2006, when you first got
20 started on it

21 A Right Right Yes

22 Q So at least Eighty Thousand Dollars?

23 A I wish I hope It would be nice You know, I don't
24 work for the State I don't have medical benefits I don't
25 have benefits I -- when I'm not at my office no one makes

1 any money I have to charge for my time to make a living

2 MR HEMBREE Thank you, Dr Sachy

3 MR DIGGS May it please the Court

4 THE COURT Yes sir, re-direct

5 REDIRECT-EXAMINATION BY MR DIGGS

6 Q Any money that you get from work on this case is
7 initially approved by the Court

8 A Yes

9 Q Okay And then it -- are you aware of what happens to
10 it after that?

11 A No

12 THE COURT Now Mr Diggs ---

13 MR DIGGS Your Honor, he's opened the door on it

14 THE COURT No sir No sir

15 MR DIGGS All right All right

16 I've got another area that I want to go into

17 THE COURT Yes sir

18 Q This question, the whole subject of anti-social
19 personality, would it be fair to say that that ranges all the
20 way from someone who lies a lot to someone who murders a lot?

21 A Yes

22 Q All right And so simply because we say -- when the
23 Solicitor says, all he has is an Anti-social Personality
24 Disorder, that could be, by definition, someone who murders a
25 lot

1 A Yes

2 Q Okay And they would still have an Anti-social
3 Personality Disorder

4 A Yes We don't grade them

5 Q All right Exactly Okay So it could be a baby
6 anti-social personality, or a ---

7 MR HEMBREE Objection, Your Honor Leading

8 THE COURT I'm going to allow it

9 MR DIGGS Thank you

10 A Mild to moderate, to severe

11 Q Yes Mild -- okay Now on the other occasions that
12 the Solicitor ---

13 And Your Honor ---

14 Well, on the other occasions that the Solicitor asked
15 you about, not only were there other opinions about Anti-
16 social Personality Disorders, there were other opinions, or at
17 least another -- one other psychiatric opinion that he was
18 insane, wasn't there?

19 A From the previous case ---

20 Q Well, from any -- any -- the medical information that -
21 --

22 A That he had mental illness?

23 Q There was another psychiatric opinion that he was
24 insane

25 A Yes, I'm sorry Dr Thrasher, yes

1 Q All right Now, with respect to the other incident
2 that comprised one of the two, were you aware of the facts
3 that were recounted by the alleged victim in that case, which
4 relate to the Defendant's actions during that event?

5 A Yes

6 Q What do you remember -- what were you informed of with
7 respect to those?

8 A Those terrible, terrible, terrible, terrible acts

9 Q Do you remember -- were you told anything about his
10 conduct during that event?

11 A From the interviews of the victims, etcetera ---

12 Q Yes

13 A ---And the police reports -- well, mainly from the
14 interviews of the young victim, yes

15 Q Were you aware about his behaviors?

16 THE COURT Mr Diggs, come here? Y'all come over
17 here

18 (BENCH CONFERENCE TAKES PLACE OFF THE RECORD)

19 THE COURT Ladies and gentlemen, go to the jury room,
20 please

21 (THE FOLLOWING TAKES PLACE OUTSIDE THE PRESENCE OF THE
22 JURY)

23 MR DIGGS Your Honor, we would ---

24 THE COURT All right, Mr Diggs, you can try your case
25 however you would like to try your case Now it is my job to

THOMAS SACHY - DIRECT BY DIGGS CONTINUED
JURY OUT/ON RECORD

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1 make sure that there is a fair and impartial trial in this
2 case, but before you went any further with your questions I
3 wanted you to be clear about the implications about what you
4 were about to do, and that was the reason I stopped you
5 If you wish to continue you certainly may

6 MR DIGGS Your Honor -- and I certainly appreciate
7 that, and here are my thoughts on it We had objected earlier
8 to the Solicitor being permitted to go into those areas, and
9 the Solicitor was permitted to, at least to mention the fact
10 that those incidents had occurred Now they are part of the
11 record, and given that fact there are factual details -- and
12 I'm not sure this witness -- I don't know if the witness -- it
13 may be something we want to discuss out of the witness's
14 presence, because I'm not sure he, you know, is capable -- I
15 might ask questions and he may lack the knowledge with which
16 to respond, but ---

17 THE COURT As I understood your question -- and you
18 correct me if I'm wrong -- you were asking him to give you
19 details about how the crimes were committed

20 MR DIGGS No I was asking -- what I was trying to
21 get at was the details of his mental ---

22 THE COURT Well, that certainly wasn't the question
23 you asked ---

24 MR DIGGS ---Of what he was doing

25 THE COURT ---And I'm certain that wasn't the answer

1 you were going to get

2 MR DIGGS Yes And I -- and he may not know But
3 what I'm referring to specifically, Your Honor -- and I don't
4 think Dr Sachy was in the room -- when the -- is it Ms
5 McLandon -- testified -- do I have the name right on that --
6 when she testified ---

7 MR HEMBREE I'm sorry, Bill I don't mean this -- it
8 may have been Dana Putnam Ms McLandon has not testified in
9 this case

10 MR DIGGS No I mean, in a prior occasion she
11 testified, and she gave a good amount of detail about Mr
12 Stanko's conduct, and what he was doing at that time, which to
13 me clearly indicated that he -- he was not sane at that
14 moment, and so what I was going to try to elicit from this
15 witness is that type of behavior from him, not -- you know,
16 not the additional acts for which he was convicted, but his
17 signs of insanity at that time, and so what we have there on
18 those two incidents that were mentioned by the Solicitor in
19 his cross-examination, we have pretty -- we have one
20 professional opinion that he was insane in addition to Dr
21 Sachy's, and some conduct that probably indicated as much too,
22 in that incident ten years prior, or eight and a half to ten
23 years prior that occurred down in ---

24 THE COURT All right But now you are -- now you are
25 going to be giving him the details ---

THOMAS SACHY - DIRECT BY DIGGS CONTINUED
JURY OUT/ON RECORD

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1 MR DIGGS Yes

2 THE COURT ---If he doesn't have them, you are going
3 to be giving him the details of another crime, which is going
4 to form the foundation of his expert opinion ---

5 MR DIGGS Well, ---

6 THE COURT ---Which then, on that grounds alone, would
7 allow the State to fully explore the issue to test his
8 credibility an believability before the jury

9 MR DIGGS Well, I think at this point, because I
10 don't have the victim here, you know, if we get into that,
11 it's not a situation where we need to open that door and go
12 down that path I think if we had the witnesses here prepared
13 to offer that evidence it would be one thing, but we don't
14 have it, and I don't want to get into a situation where we
15 simply allow the State to bring out additional details of the
16 crime and we can't rebut that

17 THE COURT I was -- and that was my purpose of ---

18 MR DIGGS And I understand that, and I appreciate
19 that

20 THE COURT You know, I ---

21 MR DIGGS But then I won't go any further in that
22 regard

23 THE COURT All right

24 MR DIGGS There are a couple of other follow-ups, and
25 other things I want to throw out, and then we will be -- we

JURY IN
THOMAS SACHY - DIRECT BY DIGGS CONTINUED

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1 will be through

2 THE COURT All right Ask the jury to come back in
3 Thank you very much

4 (THE FOLLOWING TAKES PLACE WITHIN THE PRESENCE OF THE
5 JURY)

6 THE COURT All right, Mr Diggs, you may continue,
7 sir

8 MR DIGGS Thank you, Your Honor
9 BY MR DIGGS CONTINUED

10 Q With respect to your examination of Mr Stanko, while
11 you may have indicated you felt he had Anti-social Personality
12 Disorder, you always, at that same time, felt he was insane
13 Is that correct?

14 A Yes I mean, insane is a legal term

15 Q Okay Exactly

16 A Insanity -- when I look at the statute it says, a
17 defect of mind, or what-have-you, so insanity, I translate it
18 to mental illness Does he -- did he have mental illness
19 then, at all times, yes Are there times when it's worse or -
20 - it manifests worse -- badly, more worsely, if that's a word,
21 yes

22 Q Okay So it's not that you change from one diagnosis
23 to another, it's simply wording

24 A Correct

25 Q You've always felt he was insane?

JURY IN
THOMAS SACHY - DIRECT BY DIGGS CONTINUED

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1 A Correct He has mental illness, insanity

2 Q All right And now the P E T scan reading from
3 M U S C that the Solicitor asked you about, and the purported
4 finding of normalcy ---

5 A Yep

6 Q ---Now that was based on the way that they normally
7 read P E T scans at M U S C

8 A Yes

9 Q Is that correct? And do you know anything about that?
10 Can you shed light on how that process works?

11 A I think they may have heard it before, but they stick
12 the radioactive sugar in them, they take a picture of their
13 brain They are in a quiet room, it's dark, their eyes are
14 closed, it's at rest They are just looking for a tumor to
15 show up as a bright spot on the brain They are not looking
16 at frontal lobe activity That's not even near what they are
17 looking for

18 Q All right And so in someone such as Mr Stanko's
19 case, if there is no frontal lobe activity because of a
20 defect, because it's dead, because it doesn't work, it's going
21 to appear normal on a P E T scan if you are looking at a
22 P E T scan read from someone at rest

23 A Correct But that's not the way it's suppose to be
24 done These are experts These are P E T scan experts
25 They know exactly how his was done It was a activated

1 P E T It's just unbelievable -- it's just -- you know, and
2 I get hot about this I get angry about this This is -- I
3 don't like this kind of stuff They knew how it was done, and
4 the way it was done, and it was done different than the way
5 their's was done, and they mischaracterized it, and yet it's
6 fully, really they proved the point, because his brain looks -
7 - when he's doing a computer test and suppose to be focusing
8 his brain looks no different than someone in a quiet room with
9 their eyes closed That's astounding They proved our point
10 with their own P E T

11 MR DIGGS All right And I believe that's all I have
12 on redirect Thank you very much

13 THE COURT Anything else, Solicitor?

14 MR HEMBREE Very briefly

15 RECROSS-EXAMINATION BY MR HEMBREE

16 Q One question for you, Dr Sachy We've got another
17 Doctor that you testified found, or opined, offered an
18 opinion, that Stephen Stanko was insane That was Dr
19 Thrasher, correct?

20 A Yes

21 Q And he is the -- he is another Doctor that is on the
22 Defense team in this case He was retained by the Defense in
23 this case, correct?

24 A Correct

25 Q He testified yesterday, I believe I don't know if you

1 are aware of that He testified yesterday

2 A I guess so

3 Q A local guy, works at Waccamaw Mental Health now

4 A I guess so I don't know where he works

5 Q Okay And that was done in connection with this case

6 That was -- his services -- or he was consulted in connection
7 with this case

8 A Yes What was your original question?

9 MR HEMBREE Well, that was three questions, I guess -
10 --

11 A Okay

12 MR HEMBREE ---But that's all

13 A No, but -- but -- but if I may answer You said there
14 was one other who said he was insane

15 Q Right And you testified that Dr Thrasher

16 A Insanity means mentally ill, and Anti-social
17 Personality Disorder is one of the mental illnesses in this
18 book There are five who found that Now, maybe just one
19 other testified about that he met -- that he was insane, but
20 anyone who said he had a psychiatric diagnosis is saying he's
21 insane They are saying he has mental illness

22 MR HEMBREE Well, I'm not going to -- I'm not going
23 to debate that with you, Doctor That's going to be a
24 question for the Court and this jury to deal with, and not for
25 us to deal with, so thank you

JURY OUT/ON RECORD
JURY IN/DEFENSE RESTS

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1 **THE COURT** All right, sir Do you wish the witness to
2 be excused?

3 **MR DIGGS** Your Honor, I do

4 **THE COURT** All right Any objection?

5 **MR HEMBREE** None whatsoever, Your Honor

6 **THE COURT** All right, sir You are released from your
7 Subpoena, sir You may go back to your regular activities
8 Are there going to be further witnesses on behalf of the
9 Defense?

10 **MR DIGGS** Your Honor, could -- I know -- I apologize
11 for doing this, but could we have a couple of minutes to
12 discuss that?

13 **THE COURT** Ladies and gentlemen of the jury, go to
14 your jury room please

15 **(THE FOLLOWING TAKES PLACE OUTSIDE THE PRESENCE OF THE**
16 **JURY)**

17 **THE COURT** Yes sir, Mr Diggs Do you have further
18 witnesses you want to present?

19 **MR DIGGS** Your Honor, we had subpoenaed Dr Spicer
20 I haven't heard -- he hasn't responded, to my knowledge, to
21 the Subpoena ---

22 **THE COURT** Where is Dr Spicer located?

23 **MR DIGGS** He's in Charleston

24 **THE COURT** Without the subpoena powers of this Court,
25 isn't it?

JURY OUT/ON RECORD
JURY IN/DEFENSE RESTS

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1 **MR DIGGS** No Our Clerk has State-wide subpoena
2 powers

3 **THE COURT** I mean, we probably need to look at the
4 Rule again

5 **MR DIGGS** But if ---

6 **THE COURT** Are you asking for the assistance of the
7 Court to have this Doctor arrested and brought to court?

8 **MR DIGGS** Not yet It's -- last time he was a
9 witness for the Prosecution, and I anticipate he will be
10 again, and if that's the case then that will satisfy me

11 Could I have the Court maybe inquire of the Solicitor if
12 they are going to call him

13 **THE COURT** I don't know who is going to be called I
14 have no idea I have no idea who is going to be called, if
15 they are going to have any reply testimony

16 So, I -- who served your Subpoena?

17 **MR DIGGS** Pardon

18 **THE COURT** Who served your Subpoena on the Doctor?

19 **MR DIGGS** Beg the Court's indulgence for just a
20 second, please

21 **THE COURT** Yes sir

22 **MR DIGGS** Your Honor, we've -- Your Honor, I'm not
23 going to ask for the Court's assistance at this point

24 **THE COURT** All right, very good

25 **MR DIGGS** Certainly not at this stage of the trial,

JURY OUT/ON RECORD
JURY IN/DEFENSE RESTS

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1 so -- and I assume -- having said that, Your Honor, I think
2 that the Defense is going to rest at this point

3 THE COURT All right Very good Well, we need to
4 cover that with the jury, so they understand the procedure
5 All right

6 (THE FOLLOWING TAKES PLACE WITHIN THE PRESENCE OF THE
7 JURY)

8 THE COURT All right, Mr Diggs, further witnesses on
9 behalf of the Defense?

10 MR DIGGS Your Honor, we are not going to call any
11 additional witnesses, and the Defense is going to rest at this
12 point

13 THE COURT All right, sir
14 All right, ladies and gentlemen, I find this to be an
15 appropriate place to stop for the evening We've had ---

16 MR HUMPHRIES May we approach the bench?

17 THE COURT Yes sir

18 MR HUMPHRIES I'm sorry, Your Honor That's fine
19 Forgive me Sorry

20 THE COURT All right We are going to stop for the
21 evening, and we will come back tomorrow morning and continue
22 on with this particular matter, so leave your pens and pads
23 and obviously you will be back tomorrow morning, same time
24 that we have already established

25 Thank you very much

JURY OUT/ON RECORD

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1 (THE FOLLOWING TAKES PLACE OUTSIDE THE PRESENCE OF THE
2 JURY)

3 THE COURT All right I will see y'all back tomorrow
4 morning We will have the jury here by 8 30

5 MS WILLIAMS Your Honor, if I may, just as a matter
6 of housekeeping

7 THE COURT Yes Ma'am

8 MS WILLIAMS I just want to ask how the Court wants
9 to do this

10 THE COURT Yes Ma'am

11 MS WILLIAMS Dr Gur's PowerPoint, I've asked him to
12 e-mail that to me so that I can submit that to make sure we've
13 got that clear, and on the record, so I anticipate bringing
14 that in here tomorrow

15 I will also ask Dr Sachy for his, to make sure I've got
16 that

17 The other thing at this point is, I would like to -- I
18 do not believe that this brain poster has been introduced, or
19 at least marked for identification, or officially on the
20 record, so I would like to mark this -- the brain poster that
21 we've just ---

22 MR HUMPHRIES It's been marked for identification,
23 has not been admitted

24 MR HEMBREE Without objection

25 MS WILLIAMS And ---

1 THE COURT All right

2 MS WILLIAMS ---So admit that, Defendant's Number 20

3 THE COURT All right Was it -- had you entered it,
4 Madame Court Reporter, for identification at any point in
5 time?

6 COURT REPORTER No sir

7 THE COURT I didn't see that it had either So, you
8 are wanting to admit it for identification at this point in
9 time, or you are trying to get it in evidence at this point in
10 time?

11 MS WILLIAMS Your Honor, what I really want to do is
12 make sure we have the demonstrative evidence and -- and the
13 record clean, so I can move to admit it into evidence, if they
14 don't object, otherwise I'll just mark it for identification

15 MR HUMPHRIES We are not objecting

16 MR DIGGS Your Honor, let's put it into evidence,
17 because when you read that transcript it's going to say, now
18 what about this and this They are not going to know what we
19 are talking about

20 THE COURT Well, I mean, I don't -- I don't care, I
21 mean, if it's admitted for identification then it's part of
22 the record, and it would be part of the Appellant record

23 MR DIGGS That's fine

24 MS WILLIAMS Well, I'd like to move it -- Fran
25 doesn't object, so I would like to move this into evidence,

JURY OUT/ON RECORD

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1 and it will be Exhibit Number ---

2 COURT REPORTER 20

3 MS WILLIAMS Twenty

4 THE COURT All right, Solicitor, is there any
5 objection to Defendant's Exhibit Number 20 coming into
6 evidence?

7 MR HUMPHRIES No, Your Honor

8 MS WILLIAMS Now, my second question, Your Honor ---

9 THE COURT Wait a minute Defendant's 20 is in
10 evidence without objection If you'll hold on a second so I
11 can make my notes, please Ma'am Thank you

12 (COLOR PICTURE DIAGRAM OF HUMAN BRAIN ADMITTED INTO
13 EVIDENCE AS DEFENDANT'S EXHIBIT NUMBER 20)

14 THE COURT Yes Ma'am

15 MS WILLIAMS Your Honor, secondly, I would like the
16 Court's guidance as to what to do with my little brain Fran
17 and I talked about it yesterday, and rather than actually
18 submitting it, and entering this, is it okay with you if I
19 take pictures and have the pictures marked for identification
20 in the record? Just because, really they are actually
21 expensive

22 THE COURT I appreciate that, but the -- since the
23 witness is gone now it's still going to be extremely difficult
24 -- even if you take pictures of the whole thing, and every
25 little part of it, it's now going to be very hard to tie what

1 those pictures are to the actual testimony of the particular
2 witness, because then they didn't identify which picture was
3 the item they were talking about when they were testifying at
4 that point in time I don't know that I have a problem with
5 you doing it, but it really doesn't solve the problem as far
6 as the record is concerned because it's not then tied in any
7 way to the testimony There is just some -- now some pictures
8 in the record Do you see my point?

9 MS WILLIAMS I apologize I did it wrong

10 THE COURT No, I'm not saying you did it wrong, I'm
11 just saying -- you know, I'll be glad for you to do that
12 I'll be glad for you to take some pictures and put them in
13 there for identification, but now we don't have any way to tie
14 them to what the witness was pointing to, or had in their
15 hand, or we are talking about when they gave their testimony
16 So, if you want to make pictures, be glad for you to do, and
17 we can mark them for identification, but there's just no way
18 to tie them to the testimony now I don't see how, because
19 the witness didn't identify them in any way, but if you like
20 to, you can mark them for identification, take the pictures
21 and do so Okay

22 MS WILLIAMS Okay Thank you

23 All right I'll see y'all back tomorrow morning at

24 8 30

25 MR HEMBREE Thank you, Your Honor

JURY OUT/ON RECORD

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1 (THE FOLLOWING TAKES PLACE ON THE NEXT DAY, MONDAY,
2 NOVEMBER 16, 2009, OUTSIDE THE PRESENCE OF THE JURY)

3 THE COURT All right Is the State ready for the
4 jury?

5 MR HEMBREE Judge -- we are ready to proceed, Your
6 Honor We may want to take one moment prior to bringing the
7 jury in Our next -- well, I guess -- our next -- well, I
8 guess we will -- upon the Defense resting our first witness
9 will be Dr Pam Crawford, will be testifying regarding the
10 Defendant's criminal responsibility and capacity to conform
11 his conduct to the Law

12 THE COURT All right, sir

13 MR HEMBREE And in the course of her evaluation of
14 the Defendant Stanko she -- Defendant Stanko related a version
15 of the facts of the events that occurred at the Turner home
16 leading up to and -- when the murder occurred We intend to
17 elicit that testimony from her as it was essential in making
18 her diagnosis of Mr Stanko, and under the -- well, in
19 accordance with the order that authorized Dr Crawford to
20 conduct this evaluation -- which I will hand up to the Court -
21 - the Order was issued -- as you can see the evaluation was
22 requested by either party after the Defendant asserted an
23 insanity defense, so it was pursued in that context

24 I would turn the Court's attention to page four which
25 covers the access to information in paragraph (B) This is

1 the paragraph that applies, in this circumstance, evaluation
2 requested by either party after assertion of insanity defense,
3 and the next to the last sentence of that paragraph,
4 "Examiners and agency staff may not be compelled to testify
5 regarding statements made during the criminal responsibility
6 and capacity to conform examination for any purpose other than
7 the issue of criminal responsibility and capacity to conform",
8 and it goes on to say that they can't use to impeach the
9 Defendant We would not be offering these statements to
10 impeach the Defendant We would not be offering these
11 statements for any other purpose but to -- but on the issue of
12 criminal responsibility and capacity to conform

13 Furthermore, Your Honor, the statement is just -- and we
14 -- well, just -- I'll give you the quick version of it The
15 statement essentially says -- Mr Stanko says that he -- that
16 Mr Turner approached him with a gun, and that he struggled
17 for the gun, took -- was in the process of taking the gun away
18 from Mr Turner and he shot and killed Mr Turner So it's a
19 self-serving, kind of a self-defense statement It's not a --
20 it's not an inculpatory statement It's actually an
21 exculpatory statement, but it is, in conversing with Dr
22 Crawford it's extremely important, and is a part of her --
23 it's an important component of her diagnosis and opinion in
24 this case

25 Furthermore, Your Honor, we have the case of State

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1 versus Slocum which deals with this very issue Your Honor,
2 in Slocum the State was allowed to cross-examine a defense --
3 in this case it was actually a defense expert, a psychiatrist,
4 regarding the number of sexually inappropriate acts committed
5 by the defendant when he was a juvenile at D J J , and the
6 Court found that they were the types of -- the defense
7 psychiatrist acknowledged that these were the types of
8 incidents that would be relied upon by an expert to reach an
9 opinion, that this expert did, in fact, review those
10 incidents, and considered those incidents in reaching that
11 opinion The difference -- the only difference in this case
12 and the statements were -- the State was permitted to cross --
13 actually cross-examine the defense expert about these
14 incidents The only difference here is, those incidents were
15 inculpatory They were much more prejudicial in that sense,
16 where this statement is a -- in no way prejudicial, and it is
17 in accord -- well, according to Dr Crawford, highly probative
18 in reaching her opinion

19 THE COURT All right Don't you think a huge
20 distinction there is that that was a defense witness, and the
21 reason that State was allowed to go into those facts was to
22 test the opinion of the defense expert, and to test the
23 veracity, the credibility and believability of that defense
24 expert before the jury? That was the reason that the State
25 was allowed to cross-examine him on the facts, not just

1 because those facts were part of the opinion

2 In this case you've got your witness that you are
3 putting on that's going to state a conclusion It seems to me
4 it serves absolutely no purpose to allow the State to ask that
5 question, except in re-direct Now, depending on what
6 questions the Defense might ask of the expert you might very
7 well then be able to go into that, but here -- and it's not
8 only this issue, it's an issue of relevant evidence, and then
9 testing that relevant evidence as far as the prejudice that
10 might be resulting from that, under the South Carolina Rules
11 of Evidence

12 Mr Williams, let me hear from you

13 MS WILLIAMS Well, Your Honor, what I was going to
14 say it, it seems to me that that absolutely crosses the line
15 against the Defendant's right to not have to testify, not have
16 to -- I mean, you know, his statements don't come in He
17 doesn't have to testify He doesn't have to give his version
18 of it, and I would think that it would be extremely
19 prejudicial in this case to go into it, Your Honor I mean, I
20 think Your Honor was absolutely correct In that case it was
21 the defense witness This is their witness It is absolutely
22 self-serving It is absolutely redundant I think that Dr
23 Crawford can say she explained the versions with him She
24 talked about it I think she can go into the fact that she
25 fully discussed it with him, but I think the details of it are

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1 not appropriate

2 **THE COURT** And he discussed with her certain
3 statements, but not to say what the statements were

4 A Absolutely I think to get into the details are
5 completely inappropriate and extremely prejudicial that --
6 that the probative value simply can't compare to it

7 **THE COURT** Solicitor

8 **MR HEMBREE** Your Honor, this is -- this is absolutely
9 right out of the Rule This is a -- this is an element This
10 is a part of her examination It is part of her opinion We
11 are allowed to ask our witnesses, just as we are allowed to
12 ask defense witnesses what they base their opinion upon
13 That's a critical, critical fact for this jury to understand

14 The Defense has been repeatedly allowed to ask their
15 experts what they base their opinion upon That's admissible
16 That's appropriate under ---

17 **THE COURT** I'm certainly going to allow you to ask her
18 what she based her opinions on, that is, statements made to
19 her by the Defendant It's just the actual statement that is
20 the problem

21 And I appreciate it and I will -- continue with your
22 statement for the record, but I'm not going to allow it
23 Under Rule 403 I am not going to allow this

24 **MR HEMBREE** Your Honor, can we -- is it -- the ruling
25 of the Court is that the probative -- the prejudicial effect

1 outweighs the probative value?

2 **THE COURT** Yes sir That, although relevant, this
3 evidence may be excluded if it's probative value is
4 substantially outweighed -- and I don't think there's any
5 question about that -- by the danger of unfair prejudice,
6 misleading the jury, also considerations that would now be not
7 proper for them I just -- there's no question that it needs
8 to be excluded

9 I will be glad for you to state anything else on the
10 record you want to

11 **MR HEMBREE** Thank you, Your Honor I appreciate
12 that I don't want to argue after your ruling

13 **THE COURT** Well, no You -- you just state your --
14 make your case on the record, but I'm not going to allow it

15 **MR HEMBREE** I guess I would ask this question Would
16 it be helpful for the Court to actually hear very brief
17 testimony that Dr Crawford would offer as to the statement
18 that was made to her ---

19 **THE COURT** Well, it's probably good for the record to
20 allow that, and I'll certainly listen to it, but I'm just
21 telling you, State versus Slocum doesn't allow this It's a
22 completely different reason that the State was allowed to do
23 that

24 **MR HEMBREE** And Your Honor, let ---

25 **THE COURT** All right Why don't you call the Doctor

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1 up and put in the record what you would like to put in the
2 record

3 MR HEMBREE Thank you, Your Honor

4 THE COURT And for that examination did you want to
5 make this previous Order of the Court an exhibit?

6 MR HEMBREE Yes, Your Honor

7 (STATE'S REQUESTS TO CHARGE MARKED COURT'S EXHIBIT
8 NUMBER 106)

9 (COURT'S ORDER FOR EVALUATION DATED JULY 12, 2006,
10 MARKED COURT'S EXHIBIT NUMBER 107, NOT TO GO TO THE JURY)

11 / PAMELA CRAWFORD, being first duly
12 sworn, testifies as follows

13 DIRECT-EXAMINATION BY MR HEMBREE

14 Q Dr Crawford, you are a Forensic Psychiatrist, been
15 qualified many times in courts of record in this State

16 A That's correct

17 Q And you were called upon to conduct a competency
18 criminal responsibility and capacity to conform evaluations on
19 Defendant Stephen Stanko

20 A Yes

21 Q That was ordered by the Circuit Court on July 12, 2006,
22 I believe

23 A That's correct

24 Q And this was an Order that was requested after the
25 Defendant had indicated he was going to assert an insanity

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1 defense

2 A Yes

3 Q You undertook to evaluate him and covered many
4 different -- reviewed many different materials, and talked to
5 many different witnesses

6 A I did

7 Q You also interviewed the Defendant regarding the Henry
8 Turner event over the course -- well, you interviewed him over
9 the course of about seventeen hours?

10 A Yes

11 Q And in the course of that interview you discussed the
12 Henry Turner event

13 A Yes

14 Q If you would, tell this Court, in summary, what Mr
15 Stanko revealed to you regarding the Henry Turner event

16 A What Mr Stanko told me was that Henry Turner was anger
17 with him when he found out that he had -- had killed Ms Ling,
18 and that Mr Turner pulled a gun on him, that Mr Stanko
19 begged him to call 911 and not to shoot him, but Mr Turner
20 approached him with the gun and that he wrestled with Mr
21 Turner and two shots went off, one went into Mr Turner and
22 the other went into the room somewhere

23 Q Very good Now, Dr Crawford, you've testified in
24 these types of cases many, many times

25 A Yes

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1 Q Is this the type of testimony that is relevant and
2 important in forming your opinion?

3 A It's very important When I'm asked to do a criminal
4 responsibility evaluation part of what I'm looking for is, you
5 know, does this person have a psychiatric diagnosis The
6 other thing that I have to look at is the state of mind during
7 the time of the events that led to the charges, and so I have
8 to look very specifically at what happened before, during and
9 after those events And what's crucial here is that -- the
10 question that's brought up is is this -- did he not know legal
11 or moral right from legal or moral wrong, and it's clear from
12 what he told me that, not only did he remember the events, but
13 that he's asserting that he was defending himself, which is --
14 it sort of ruled out a insanity defense in the sense that he
15 said, I remembered it, and I did this because I was trying to
16 protect myself, and that's just pretty crucial

17 Q Those -- Dr Crawford, are those -- without going into
18 the details of the events, are the significant portions of his
19 conversation with you about these that he was aware of them --
20 -

21 A Yes

22 Q ---And that he claimed that he was doing these things
23 in self-defense?

24 A Yes That's very important, because we are looking at
25 legal or moral -- knowing legal or moral right and wrong, and

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1 what he is saying is, I had to protect myself, I remember
2 exactly what happened, I had to protect myself, this is not an
3 issue of mental health, it's what he is telling me in his
4 story of what happened, but this is something he did in order
5 to protect himself, he didn't do this out of rage, he didn't
6 do this out of losing control, he did this to protect himself,
7 and that's, in my opinion, crucial to my opinion that this has
8 nothing to do with a brain injury or -- this has to do with
9 him saying that he was protecting himself

10 MR HEMBREE Thank you, Dr Crawford

11 THE COURT Do you have any questions that y'all want
12 to ask or -- on that particular issue?

13 MS WILLIAMS Not at this time

14 THE COURT All right You can step down, Ma'am

15 Let me ask you a couple of questions, Solicitor As it
16 stands now do you expect to request any charge of the jury as
17 to an inference of malice from the use of a deadly weapon? As
18 part of the Court's charge on murder do you expect to ask the
19 Court to do that?

20 MR HEMBREE That's a standard charge, Your Honor ---

21 THE COURT And I understand that ---

22 MR HEMBREE ---And yes, yes

23 THE COURT ---But if you do, and I allow this
24 testimony, then have I not -- do we now put in the issue of
25 self-defense, there is now evidence of self-defense in the

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1 record, so that under that decision that was just made by the
2 South Carolina Supreme Court in October, this year, State
3 versus Belcher, then it wouldn't be proper if I allow that
4 testimony, so that's an issue

5 Now, going back to -- going back to Slocum, the Court in
6 Slocum, as I indicated said, because the State's cross-
7 examination was proper under 705, South Carolina Rules of
8 Evidence, we disagree with Slocum's contention that the
9 evidence was inadmissible under Lyle, or constituted improper
10 character evidence

11 And we look at 705 "The expert may testify in terms in
12 an opinion or inference and give reasons therefor without
13 first testifying to the underlying facts or data unless the
14 Court requires otherwise The expert may, in any event, be
15 required to disclose the underlying facts or data on cross-
16 examination "

17 That was my point That was why it was proper, because
18 the defense put in a witness, an expert, on the stand The
19 State was allowed to test the veracity, the believability,
20 credibility of that particular witness in front of the jury by
21 going to the underlying facts That's not what we have here
22 That's not the situation here, so that case is not applicable

23 What I do have is, are we treading on ground that goes
24 against the principle that the Defendant -- that we just
25 talked about, the Fifth Amendment to the Constitution of the

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COURT'S RULING

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1 United States of America, the defendant is not required to
2 testify would -- could be an improper aspect of that, and the
3 403 analysis I just don't see how it's proper, besides the
4 fact that it creates other issues that I don't think are
5 necessary to be created in this matter, so again, other than
6 the statement made to the witness as to the facts, you can
7 talk all around it, did you get facts from him, what was your
8 opinion from the facts, but the facts themselves may not be
9 testified to in front of the jury That's the Court's ruling

10 All right

11 MR HEMBREE Thank you, Your Honor The -- as a point
12 of clarification I think I -- I think I understand, but I
13 don't want to create a problem

14 THE COURT All right

15 MR HEMBREE The witness in Court's -- in considering
16 the Court's ruling, would the witness be permitted to testify
17 that the Defendant could clearly recall the events, that he --
18 -

19 THE COURT Well, she discussed the events with him, or
20 he discussed the events with her ---

21 MR HEMBREE Very good

22 THE COURT ---And based upon her discussion of the
23 events with him she reached certain conclusions, whatever they
24 may be She just cannot relate what he told her That's
25 where I'm drawing the line

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1 MR HEMBREE Understood, Your Honor, and we can
2 certainly ---

3 THE COURT Now, again, obviously then, dependant upon
4 the Defense's cross-examination, you know, you may be able to
5 go into it further, but I'm just going to caution the State,
6 or caution the Defense, that you can't make an issue here that
7 I just raised about self-defense and Supreme Court Decision by
8 your question, and I'm not going to allow that You are not
9 going to raise an issue in that regard because, again, it's
10 just not proper for this jury

11 MR HEMBREE Thank you, Your Honor

12 THE COURT All right Ask the jury to come in,
13 please

14 (THE FOLLOWING TAKES PLACE WITHIN THE PRESENCE OF THE
15 JURY)

16 THE COURT All right Good morning, ladies and
17 gentlemen

18 (JURY ANSWERED IN UNISON, GOOD MORNING)

19 THE COURT All right, Solicitor, any reply witnesses
20 or testimony in this case?

21 MR HEMBREE Yes sir, Your Honor We do have reply
22 testimony I'm not certain -- has the Defense formally
23 rested?

24 THE COURT Yes They did rest on the record
25 yesterday, they did

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1 **MR HEMBREE** The State calls Dr Pam Crawford to the
2 stand

3 **THE COURT** All right Please come around to be sworn,
4 Ma'am

5 **PAMELA CRAWFORD**, being first duly
6 sworn, testifies as follows

7 **DIRECT-EXAMINATION BY MR HEMBREE**

8 Q Dr Crawford, if you would, give the benefit of your
9 training and experience in the field of Forensic Psychiatry to
10 the jury

11 A Okay I'm a Forensic Psychiatrist Let me just kind
12 of give you my brief educational background I went to Emory
13 University and graduated in 1983 with a Bachelors in
14 Psychology, and then I went to Emory University School of
15 Medicine and became a physician, and finished that in 1988 I
16 then completed my residency in Psychiatry, also at Emory, in
17 1992, and then I took -- I was Board Certified in General
18 Psychiatry, and then later took my Forensic Psychiatric
19 Boards I was in the Air Force for several years, and that's
20 when I was introduced to Forensic Psychiatry, and the Forensic
21 Psychiatry is anywhere -- any place where legal issues and
22 psychiatric issues intersect, and so that was my first
23 introduction to that, was when I was in the Air Force

24 And my career kind of went along and then I came to
25 South Carolina about eleven years ago, and that's when I

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1 became much more involved with Forensic Psychiatry

2 Q In what capacity -- when you came to South Carolina
3 what sort of work did you do?

4 A Well, initially I worked as a general Psychiatrist, but
5 then, once I completed my Forensic Boards I ended up becoming
6 the Head of Forensics, basically, for the State of South
7 Carolina, at William S Hall Psychiatric Institute, so I was
8 the lead person who was administratively responsible for all
9 the evaluations throughout the State that were ordered by the
10 Court, Court-ordered evaluations for not -- people who are not
11 guilty by reason of insanity, and for competency, so for three
12 years I did hundreds of those evaluations, and also supervised
13 all the doctors doing that

14 I also ran the unit for people found not guilty by
15 reason of insanity

16 Q You've been qualified in courts of record in this State
17 and other states to testify as an expert in the field of
18 Forensic Psychiatry?

19 A I have

20 Q How many occasions?

21 A Several hundred, probably close to three hundred times

22 MR HEMBREE Thank you, Doctor

23 Your Honor, at this point we would offer -- I offer Dr
24 Pamela Crawford as an expert in the field of Forensic
25 Psychiatry

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1 **THE COURT** Any -- do you wish to examine Dr Crawford?

2 **MR DIGGS** Your Honor, no questions, and we don't have
3 any objection

4 **THE COURT** All right I'm going to qualify her to
5 give her opinion in the field of Forensic Psychiatry

6 Q Dr Crawford, you are licensed in the State of South
7 Carolina?

8 A I am

9 Q You are Board Certified as a Forensic Psychiatrist?

10 A Yes

11 Q And you were called upon back in 2006, I believe, to
12 conduct an evaluation of Defendant Stephen Stanko

13 A I did, yes

14 Q And how did you come into that role? What process
15 brought you into this case as the evaluating Forensic
16 Psychiatrist?

17 A This case is a little bit unusual in terms of how I
18 became involved with it At that -- my initial involvement in
19 the case was, I was the consultant with South Carolina Law
20 Enforcement Division, a Psychiatric Consultant with them, and
21 when a bunch of the issues with Mr Stanko happened, right
22 around the time of the crime, they asked me to come in and be
23 involved in that case So initially I was involved from a law
24 enforcement perspective, trying to give them advise about what
25 might be going on, and so that was when I thought that my

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1 involvement with this case would end

2 However, the case -- in 2006 I was ordered to do an
3 evaluation of him, and I brought to the attention of both the
4 Defense and the Prosecution, I said, look, you know, I've
5 already had some prior involvement, you need to make sure that
6 you understand that, but I understand that the Court wants me
7 to do this evaluation, but I want it out on the table that
8 I've had some prior involvement, and both sides agreed that
9 they thought that I could be fair with that, and so I was
10 ordered by the Judge to do an evaluation of Mr Stanko, as a
11 Court's expert, not for one side or the other, as a neutral
12 expert

13 Q All right Let me talk to you about that, because
14 that's -- I think that's a real important point when
15 evaluating your credibility, is, who are you representing, I
16 mean, who are -- when you begin this evaluation of Mr Stanko
17 at the Court's request, who are you working for?

18 A The Judge, and only the Judge, and that's why I was so
19 clear about disclosure of prior involvement to both sides,
20 because I think as the Court's witness you have to be above
21 reproach in terms of a bias in the case, and so I made it very
22 clear any prior involvement, so I am solely working for the
23 Judge

24 Q And continued in that role ---

25 A I do

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1 Q ---Throughout the process?

2 A I do My information is available equally to both
3 sides And what happens in these cases is, you know -- and
4 again, I've done a lot of these court-appointed cases -- is
5 that I'm -- I tend to be called by the side who my opinion is
6 favorable for, so if my opinion is favorable for the defense
7 that's who calls me to the stand, and that's happened a good
8 bit, as you are aware, so ---

9 Q And then, of course, if your opinion is favorable for
10 the prosecution, the prosecution calls you?

11 A Exactly

12 Q Now, you indicated that you were involved in the not
13 guilty by reason of insanity, N G -- when you said N G R I -
14 --

15 A Uh huh (~~indicating positive~~)

16 Q ---That's not guilty by reason of insanity

17 A That's correct

18 Q That you were in charge of the unit that oversees that
19 group of people

20 A Right

21 Q Tell us about your experience in that unit

22 A Well, I was in charge -- I ran that unit as the main
23 doctor I was also -- I was in charge of the process of
24 helping, you know, the courts to see who got into that unit
25 I was also involved in what's called the Forensic Review

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1 Board, who helps determine when the N G R I s are ready for
2 release from the hospital back into the community, so I was
3 involved in all phases of that program, I mean, I sort of
4 lived in the world of N G R I for a number of years, so
5 knowing how they get in there, how they -- what they do while
6 they are there and how they get out, and so became very
7 familiar with the whole issue

8 Q It's a -- I mean, within the field of Forensic
9 Psychiatric you have had a really an exceptional amount of
10 experience with not guilty by reason of insanity and this type
11 of issue

12 A Yes, absolutely

13 Q Let me draw your attention, or kind of bring you up to
14 this particular evaluation process of Defendant Stephen
15 Stanko When you begin an evaluation what's the first, I mean
16 absolutely first step you take?

17 A As trivial as this may sound, I always get the statute,
18 and put the statute in front of me I've done hundreds of
19 these evaluations But I take the Court Order and I look at
20 the statute and I say to myself, again, what does not guilty
21 by reason or insanity mean You know, I think it's fairly
22 easy in a lot of these cases to kind of get lost in all the
23 details, and so you always have to go back to the statute,
24 because that is the question that the Judge is asking me, does
25 this person meet that standard

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1 Q Okay And the statute being the State Law that covers
2 this question

3 A That's correct

4 Q And tell us what that statute says

5 A And I'll have to refer to my notes so I get it right
6 The statute has three parts, (A), (B) and (C), and the first
7 is that it's an affirmative defense to the prosecution for a
8 crime that, as a result of a mental disease or defect -- so
9 I'm looking for that -- as a result of a mental disease or
10 defect at the time of the commission of the act constituting
11 the offense the defendant lacked the capacity to distinguish
12 moral or legal right from moral or legal wrong, or to
13 recognize the particular act charged as morally or legally
14 wrong And so I always remind myself it's moral or legal
15 right and wrong, that they have to have mental disease or
16 defect, and they have to lack the capacity to distinguish
17 between moral or legal right So that's the (A) part

18 The (B) doesn't involve me so much That's the
19 defendant has the burden of proof of proving the defense of
20 insanity by the preponderance of the evidence

21 The (C) part is also very important, and that's evidence
22 of mental disease or defect that is manifested only by
23 repeated criminal or other anti-social conduct is not
24 sufficient to establish the defense of insanity That's the
25 other part that I always remind myself It's not enough just

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1 to be an anti-social personality to be found insane You have
2 to have a specific mental disease or defect, and they put, you
3 know, the (C) part which is, it's not enough to have -- be
4 manifested only by criminal repeated anti-social acts

5 Q Well, Doctor, let me ask you a -- I guess sort of a
6 hypothetical question If another psychiatrist, let's say
7 from Georgia, testified from that very witness stand that --
8 that Mr Stanko's condition manifests itself by repeated
9 criminal or other anti-social conduct, then that would not be
10 sufficient for an insanity defense, would it?

11 A That's correct You could not -- and this is -- having
12 done this hundreds of times -- you could not have simply a
13 diagnosis of Anti-social Personality Disorder in order to meet
14 the standard of an insanity defense That's what this -- what
15 the statute is saying

16 Q Now, you've reviewed the statute ---

17 A Yes

18 Q ---In the process of evaluating Mr Stanko

19 A Yes

20 Q What is the next step in the process?

21 A The next step in the process is -- what I tell both
22 sides is, I need every scrap of information that you have, I
23 need witness statements, I need crime scene photos, I need to
24 know everything that I can possibly know that's happened in
25 the commission of this crime, or alleged crime, because I

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1 never know when I start I also tell them that I'm going to
2 need access to police officers, I'm going to need access to
3 witnesses, I'm going to need access to any materials that may
4 have been found in the defendant's home, anything that's going
5 to give me any clue to this person's mental condition, state
6 of mind I very typically, if I have a chance, you know, we
7 go to the actual crime scene and try to see what I can see,
8 because what I'm trying to do is really two things One is,
9 I'm trying to see, does this person have a mental disease or
10 defect, and then two, if they do, what was happening at the
11 time that influenced their state of mind I'm also going to
12 do things like try to talk to their teachers, try to get
13 information certainly from their family

14 And then I'll have all that information, and then what I
15 do is, I need to interview the person, the defendant I take
16 that information and then, if there's questions -- sometimes
17 issues will come out -- come up in a case that are outside of
18 my area of expertise, like, I'm a Psychiatrist, I'm not a
19 Neurologist, so if something specifically comes out about a
20 neurology issue, or a neuroradiology issue, I consult with
21 somebody, so I've interviewed the person, I've gotten all this
22 information, and then I consult with folks, say, help me
23 understand this, and I go to people that I know are neutral,
24 that don't have a dog in the fight, to tell me, you know,
25 explain this to me, because I can't be an expert in all

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1 things, I really am kind of confined to Psychiatry, and so I
2 do that as well

3 Q And that brings up an interesting point So it's your
4 testimony that you would consult -- if you were going to
5 interpret an M R I you wouldn't interpret as a Psychiatrist -
6 --

7 A Absolutely not

8 Q ---Because it's not your role to interpret an M R I ?

9 A No

10 Q You would look to whom to interpret an M R I ?

11 A What I would probably do is go to a Neurologist, and a
12 Neuroradiologist I would go to somebody specifically I do
13 not have training and certification in that

14 Q And if you were familiar with a P E T scan ---

15 A Uh huh (indicating positive)

16 Q ---Would you interpret that P E T scan?

17 A Absolutely not

18 Q Not appropriate for a Psychiatrist ---

19 MR DIGGS Your Honor, object He's leading a little
20 bit, and I would object

21 THE COURT I'm going to allow it

22 MR DIGGS All right

23 THE COURT You may continue, sir

24 MR HEMBREE Thank you, Your Honor

25 Q You would not interpret that P E T scan You would go

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1 to someone else to interpret that P E T scan

2 A That's correct I would be risking malpractice I am
3 not trained, I am not certified to do that, and so I would --
4 one thing that we have to do in this field is be very clear of
5 our boundaries, this is what I know, this is what I can do,
6 and this is what I can't do, and what I can't do I need to ask
7 for help with

8 Q Let's zero in now on the specific -- the specific
9 material and acts that you took in preparing for your
10 interview with Mr Stanko What materials did you review,
11 collect, interviews did you undertake in preparing for this
12 evaluation?

13 A Okay I interviewed a large number of people Do you
14 want me to go through the specifics of who I interviewed, not
15 all of which pertain exactly

16 Q No That's not necessary Perhaps just tell the jury
17 I think it's important for them to know the degree that ---

18 A Okay

19 Q ---And care that you took How many people did you
20 interview?

21 A Okay I looked at all the Arrest Warrants, Incident
22 Reports, Investigative Reports, witness statements, medical
23 records from the Richmond County Jail, medical records from
24 S C D C back in 2006, and also asked for new records since
25 then, mental health services notes from S C D C ,

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1 administrative records ---

2 Q When you say S C D C

3 A I'm sorry, South Carolina Department of Corrections

4 Q Okay ---All regarding Mr Stanko, a R A P sheet
5 records from Pardon and Parole Services I interviewed one,
6 two, three, four, five, six, seven, eight, nine, ten -- ten
7 witnesses or people that knew him I interviewed Dr Sachy,
8 or Sachy I looked at the report of Dr Einhorn I reviewed
9 the reports that had to do with the P E T scans, and the
10 report of Dr Gur I reviewed a Forensic evaluation by Dr
11 Frierson, I reviewed a report by Dr Sachy, and I also
12 reviewed one recently by him I did a consultation with Dr
13 Brandon, who is a Neurologist I did a consultation with a
14 Neuropsychologist, Dr Brawley, I examined records from
15 Berkeley County Mental Health, looked at crime scene photos,
16 autopsy photos, autopsy reports, e-mails, school records of
17 Mr Stanko, some court documents regarding some filings that
18 he had done I listened to recordings of telephone
19 conversations between him and one of the witnesses I got
20 hold of a lot of fiction and non-fiction writings of Mr
21 Stanko, records from the Greenville County Sheriff's -- I
22 mean, Greenville County Detention Center, incident reports, a
23 letter Mr Stanko had written, and then I spent approximately
24 seventeen hours with Mr Stanko, interviewing him

25 Q In the -- it's a client -- what you would consider the

1 clinical interview process

2 A Clinical interview process

3 Q And even had an opportunity to reinterview Mr Stanko
4 within the last few weeks to update your ---

5 A With regards the competency

6 Q And there's no need to go through the details, but you
7 get a -- did you review his -- what did you find about his
8 family history and his upbringing?

9 A Family history was -- I mean, he was a very bright
10 young man without a lot of significant behavioral problems,
11 very superior student, that he was described as kind of cocky
12 or arrogant by some of his fellow students and teachers, but
13 you know, not -- not disliked He was near the top of his
14 class when he graduated, and no major behavioral problems as a
15 kid that came out

16 Q Let me bring you up to -- kind of focus on the -- did
17 you -- did you interview Mr Stanko regarding the events
18 surrounding the death of Henry Turner?

19 A I did

20 Q Could you tell us about his state of mind? Well, just
21 tell us -- without telling us the details of the
22 conversation ---

23 A Uh huh (indicating positive)

24 Q ---Details of the conversation, tell us how he
25 presented

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1 A Okay He -- and again, this whole interview was about
2 seventeen hours, so I spent a lot of time with him He --
3 regarding these events he was very clear about his version of
4 events He was very calmly able to describe them He
5 remembered -- he claimed to remember every detail of it He -
6 --

7 Q Would it be fair to say that he remembered the details
8 leading up to it, during it, and after it?

9 A He did And I'm -- and when I say he remembered it, I
10 had questions about the veracity of what he was telling me,
11 and I brought that up to him with some of the other
12 information that I had, but he told me he could clearly
13 remember, and that there -- there weren't any particular
14 psychiatric or psychological factors involved in those events

15 Q Did he indicate that he was in a rage?

16 A Not at all

17 Q Did he indicate any kind of amnesia?

18 A No, he did not

19 Q Alcohol or drug abuse?

20 A No

21 Q I mean, anything of psychiatric significance that would
22 explain, other than -- in a psychiatric -- I guess to offer
23 some sort of psychiatric explanation why

24 A No I mean, there was none, which, you know, it was
25 interesting When I'm dealing with an insanity defense one of

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1 the most important things is to try to understand what
2 happened at the time because you are looking at how those
3 factors played in psychiatrically, but gave a plausible,
4 logical explanation that involved no particular overriding
5 emotion or psychosis, or hearing voices, or being particularly
6 angry, very clear discussion of what happened, and was able to
7 -- said that he remembered the details

8 Q He -- Doctor, do you have an opinion, within a
9 reasonable degree of medical certainty as to Mr Stanko's
10 diagnosis?

11 A Yes

12 Q What is his diagnosis?

13 A Mr Stanko has a severe personality disorder The
14 diagnosis I've given him is personality disorder, not
15 otherwise specified, with anti-social and narcissistic
16 features He meets almost all the criteria for an Anti-social
17 Personality Disorder There is one he doesn't meet, which is
18 why you can't just give him that diagnosis, and that is, that
19 a person, to have an Anti-social Personality Disorder has to
20 have evidence of a conduct disorder before the age of, I
21 believe it's fifteen, and he doesn't have that He has all
22 the other aspects, but he doesn't -- he didn't -- he wasn't a
23 bad actor as a young kid So what he has is a combination of
24 those traits as well as severe narcissistic traits

25 Q Well, tell this jury, what does that mean when you say

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1 narcissistic traits

2 A Well, we use the Diagnostic and Statistical Manual Four
3 to discuss diagnoses It's just so that all psychiatrists are
4 kind of on the same page

5 Q Let me stop you there for one second

6 A Yes

7 Q But that's what also referred to as the D S M 4

8 A The D S M 4 (TR) actually

9 Q Okay (TR), and it's a book about that thick ---

10 A Yes

11 Q ---And it is the document -- tell me if this is
12 correct, it's the document used by Psychiatrists all over the
13 United States ---

14 A It is

15 Q ---To diagnose a whole host of psychiatric,
16 psychological issues

17 A That's correct

18 Q And that's what -- I mean, that's the standard That's
19 what ever ---

20 A It's a standard, so that we can all speak the same
21 language

22 Q Got you And it's a document that's peer-reviewed
23 and ---

24 A Yes

25 Q ---I mean, it's the Bible when it comes to this issue

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1 A Right I never like to call it the Bible, but it is
2 the standard text which describes each of the conditions, and
3 that way it's less subjective, and so that we can -- so I can
4 be talking about an illness here, and someone in Alaska can,
5 and we can be talking about basically the same kind of
6 problem

7 Q Doctor, let me -- what would be your response to hear a
8 fellow psychiatrist say that every diagnosis in the D S M 4 is
9 insanity?

10 MR DIGGS Your Honor, I would object to the pitting

11 THE COURT Rephrase your question, Solicitor

12 Q Dr Crawford, is every diagnosis in the D S M 4 equate
13 to insanity?

14 A Absolutely not

15 Q Okay And tell this jury why that is the case

16 A Well, for a variety of reasons The diagnosis -- for
17 example, nicotine dependence is a diagnosis in there, and I
18 mean, maybe you do have to be crazy to smoke, but you wouldn't
19 meet the South Carolina Statute There is not any diagnosis
20 in there that it -- that, standing alone, means that you are
21 insane You have to go back to the standard, do you have a
22 diagnosis of a severe mental illness, or defect, and are you,
23 because of that, at the time the events that led to your
24 charges -- are you unable to determine legal and moral right
25 and legal and moral wrong, meaning you can actually be

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1 schizophrenic, but if you are schizophrenic and you shot Bob
2 at the grocery store when you were robbing the grocery store,
3 that doesn't mean you are insane Now, if you were
4 schizophrenic and the voices told you if you did not shoot Bob
5 you would -- the world would end, and you shot Bob, then we
6 could be talking about an issue of insanity, but having a
7 diagnosis, it's one part, but -- and you also have to look
8 at -- there are numerous diagnoses in there For example,
9 parent/child problem, that's not a diagnosis that's going to
10 get you an insanity defense, and again, like nicotine
11 dependence, like -- there's numerous I mean, most of them
12 would not even get you in the ballpark

13 Q Now, you were testifying about the narcissistic aspects
14 ---

15 A Yes

16 Q ---That Defendant Stanko's personality, and I know
17 you've referred back to -- I think you touched on D S M 4
18 Tell the jury what that means

19 A A personality disorder is essentially a behavioral
20 disorder It's a disorder of interaction of -- it's a
21 pervasive pattern of behavior that begins in early adulthood,
22 and that sort of lasts a lifetime It's a pervasive pattern
23 of mal-adaptive behavior, a behavior that doesn't help you too
24 much getting along with people, and there's all sorts of
25 different personality disorders They are not mental

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1 illnesses in the sense of, if you've schizophrenia, or if you
2 have major depression you are given medication to make you
3 better It's a mal-adaptive way of interacting with the
4 world

5 And when you talk about Narcissistic Personality
6 Disorder -- and let me refer to the definition It's a
7 pervasive pattern of grandiosity, in either fantasy or
8 behavior, need for admiration, and lack of empathy beginning
9 in early adulthood and present in a variety of contexts So
10 the narcissistic part, you are looking at things like, one,
11 has a grandiose sense of self-importance, exaggerates
12 achievements and talents, expects to be recognized as
13 superior, believes that they are special, requires excessive
14 admiration, has a sense of entitlement, is interpersonally
15 exploitative, that takes advantage of others to achieve his or
16 her own ends, lacks empathy, is unwilling to recognize and
17 identify with the feelings of others, shows arrogant, haughty
18 behaviors or attitudes

19 So what the D S M 4 does is, it give you, you know, nine
20 of these characteristics and you have to have five of them to
21 be considered to have a Narcissistic Personality Disorder So
22 -- and in Mr Stanko's case it was my opinion that he had the
23 grandiose sense of self-importance, required the excessive
24 admiration, the entitlement, he was interpersonally
25 exploitative, and he lacked empathy, so those were there So

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1 I thought that he had some elements of the Narcissistic
2 Personality Disorder, and he had some elements of an Anti-
3 social Personality Disorder

4 Q And tell us about that, Dr Crawford

5 A An Anti-social Personality Disorder, it's a pattern --
6 a pervasive pattern of disregard for, and violation of the
7 rights of others, occurring since the age of fifteen, and it
8 was my opinion that he had all seven of the characteristics,
9 failure to conform to social norms with respect to lawful
10 behaviors as indicated by repeatedly performing acts that are
11 grounds for arrest, deceitfulness, as indicated by repeated
12 lying, use of alias, or conning others for personal profit or
13 pleasure, impulsivity, or failure to plan ahead, irritability
14 and aggressiveness, as indicated by repeated fights or
15 assaults, reckless disregard for the safety of others,
16 consistent irresponsibility, as indicated by repeated failure
17 to sustain consistent work behavior or honor financial
18 obligations, and lack of remorse, as indicated by being
19 indifferent to, or rationalizing having hurt, mistreated or
20 stolen from another It was my opinion he met those criteria

21 Q Let me talk with you about one of those criteria
22 regarding assaults

23 A Yes

24 Q And without going into any detail about the nature of
25 the assaults, what was his -- did he have a history of lots of

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1 assaults, where he committed lots of assaults?

2 A No, he committed several, in very specific
3 circumstances, not a -- yes, not lots of assaults

4 Q As a matter of fact, is it fair to say that he had a
5 fairly ---

6 MR DIGGS Leading, Your Honor, and we object

7 MR HEMBREE I'll withdraw -- I'll rephrase, Your
8 Honor

9 THE COURT All right, sir

10 Q How would you characterize, if you could, his
11 propensity toward violence on a regular basis?

12 A Not -- I mean, he was not a particularly violent
13 person It was only, I would say, on about three
14 circumstances And so even -- yes, I mean, in a confined
15 setting not so, and not in other settings, but there -- it --
16 just in ---

17 Q Essentially in his entire life?

18 A Yes, about three

19 Q Do you have an opinion as to his ability to control his
20 violent tendencies?

21 A Based on my evaluation of him and my evaluation by
22 looking at his history of behaviors, he's shown very good
23 control He's been in numerous situations, particularly over
24 the last maybe ten years, little bit longer, where he, at
25 least reports to me that he's been threatened with assault,

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1 that he's been threatened where his life might actually have
2 been in danger where he was able to not respond, and he was
3 able to appropriately remove himself from the situation

4 Q The -- tell this jury a little bit about what steps you
5 took -- you consulted with some other professionals ---

6 A I did

7 Q ---That were outside of your scope of -- your -- the
8 scope of your expertise

9 A Yes

10 Q Tell the jury about your consultations with those
11 professionals

12 A Well, it was pretty clear to me -- the D S M -- and in
13 Psychiatry we base our diagnoses really on what the symptoms
14 of the patient, and what we see of the patient I think one
15 of the things you would notice in the D S M 4 is, there is no
16 mentioning of imaging, of testing of -- even psychological
17 testing of M R I s or P E T scans, because the science just
18 isn't there at this point to diagnose people based on those
19 things It's based on what symptoms that we see

20 So when it became apparent to me that somehow the
21 Defense was involving using P E T scans and M R I s to
22 diagnose a psychiatric condition I said, wait, wait, wait, I
23 need to talk to a Neurologist about this, because this is
24 going a way that didn't make a lot of sense to me

25 Q Is it fair to say that that's outside the scope of

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1 generally accepted medical scientific practice?

2 A It is I think that we would all like, at some point
3 in the future, to be able to -- as a Psychiatrist I know I
4 would -- to give somebody a P E T scan and be able to say, oh
5 my gosh, he's schizophrenic, or he's going to become this way,
6 or he's (X), (Y) or (Z), because that would make our jobs a
7 lot easier We are not there yet We are nowhere near there,
8 and the D M S is pretty clear on that I mean, that's not a
9 criteria listed Even -- you know, we do know that there are
10 some abnormalities with Schizophrenia, but we don't know
11 enough to have them as a diagnosis, and so when we start going
12 into these areas which are kind of research, and speculative,
13 and have more to do with Neurology, I was like, hold on, I
14 need to talk to a Neurologist, let's let them look at the
15 P E T scan, and the Neurologists, let's let them look at this
16 stuff

17 Q And you consulted with whom in connection to the P E T
18 scans -- P E T scan?

19 A It was Dr Brannon I consulted with He's a
20 Neurologist who I respect tremendously at the University of
21 South Carolina, and again, I'm always looking for people who
22 wouldn't have a dog in the fight, and so I said, you know,
23 these are the issues, and there's an M R I and a P E T
24 scan -- let me see who else I talked to -- and could you
25 please look at it and tell me what you think, and so Dr

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1 Brannon reviewed the M R I as normal, and Dr Brannon
2 reviewed the P E T scan as normal, and he consulted with a
3 Radiologist at M U S C , and he also looked at what we call
4 the Schoop's Neurological signs Apparently -- the
5 Psychiatrist, I believe -- the Psychiatrist for the Defense
6 was saying that there was some Schoop's Neurological signs, so
7 he did a detailed neurological evaluation and said there were
8 no Schoop's signs So I just wanted to make sure I wasn't
9 missing something

10 Q Nothing -- and you felt confident in their opinions,
11 and it was consistent with your ultimate opinion

12 A Yes I felt very confident

13 Q And did you also consult -- have a consult on a
14 neuropsychological evaluation?

15 A Yes I asked a neuropsychologist to see him, because
16 those are -- it's a psychologist who does specific testing on
17 neurological issues, and -- as well as personality issues, and
18 so she -- she did some testing for me, and she found no
19 evidence of neuropsychological impairment at all, so that was
20 helpful to know that

21 Q Anything else, Doctor, of significance in your
22 findings, or in your evaluation of Defendant Stephen Stanko?

23 A Not that I can think of

24 Q Fair enough Let me ask this question and then I'll be
25 finished Do you have a -- an opinion as to Stephen Stanko's

1 criminal responsibility, within a reasonable degree of medical
2 certainty?

3 A Yes, he -- under the South Carolina statute he would be
4 criminally responsible for his acts

5 Q And do you have an opinion regarding his capacity to
6 conform his conduct to the requirements of the law?

7 A He also -- he does not have a condition that would make
8 him unable to conform his conduct

9 Q And that's within a reasonable degree of medical
10 certainty?

11 A Yes

12 Q And you've provided those findings to the Court, as was
13 your responsibility in this case?

14 A Yes, I did

15 Q And to both sides?

16 A Yes

17 MR HEMBREE Thank you, Dr Crawford Please answer
18 any questions Defense counsel may have for you

19 THE COURT All right, Mr Diggs or Ms Williams

20 MR DIGGS May it please the Court

21 THE COURT All right, Mr Diggs

22 CROSS-EXAMINATION BY MR DIGGS

23 Q Dr Crawford, how are you this morning?

24 A I'm doing well

25 Q Good Good

1 Now, you were -- I understand that you've been a Court
2 witness, but are you actually a Court witness in this
3 prosecution?

4 A Yes In this case, yes

5 Q Yes And at the time that you were initially appointed
6 in the case, tell us again where you were working and who
7 you -- with whom you were consulting

8 A Okay When I did this case I was working for the South
9 Carolina Department of Mental Health, doing sexually violent
10 predator evaluations I have had, since 1998, I believe, or
11 '99, I've been, as part of my job with Mental Health, a
12 consultant with the South Carolina Law Enforcement Division

13 Q All right And who is -- what do they do, the South
14 Carolina Law Enforcement Division?

15 A That's the State police

16 Q All right And the initial report that you wrote was
17 on a letterhead that was -- it's dated what, do you remember?

18 A I put -- the letterhead I put was for the State -- was
19 for S L E D , and the reason that I did that was -- I made
20 clear to everybody from the beginning that that was my initial
21 involvement, was through them I didn't want ever it to seem
22 that that was a hidden fact, and I talked with you very
23 specifically about that, that everybody needs to know that
24 that was my initial involvement, so I chose that to emphasize
25 that point

1 Q Now, in your testimony -- and you've given your reasons
2 for doing so ---

3 A Yes

4 Q ---But you deferred reading M R I s and P E T scans to
5 others

6 A I did

7 Q Okay And you didn't do that, and you don't claim any
8 personal knowledge about what those technologies reveal?

9 A I read the reports I mean, I know what -- what is
10 said about them

11 Q Right

12 A I didn't read them, no

13 Q And you consulted with individuals from M U S C with
14 respect to the P E T scan and the M R I ?

15 A U S C , and I think there was someone from M U S C as
16 well

17 Q All right And U S C meaning ---

18 A University of South Carolina

19 Q Okay Got you In Columbia?

20 A Yes

21 Q All right And did you rely on the P E T scan report
22 from M U S C ?

23 A I consulted with Dr Brannon about the P E T scan from
24 M U S C

25 Q All right, now, is he from M U S C or ---

PAMELA CRAWFORD - CROSS BY DIGGS

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1 A He's from U S C And then the Radiologist at M U S C
2 found no abnormality in the P E T scan

3 Q That is Dr Spicer?

4 A You know, I'm not sure I don't remember

5 Q Okay Now, you made a statement in your testimony that
6 -- you remember when you said -- now, if he heard voices say
7 shoot Bob, and he did shoot Bob, that would be insanity?

8 A No, I didn't -- I didn't say that exactly

9 Q Tell us what you said

10 A It's actually much more complicated than that

11 Q Okay

12 A If he heard voices that said shoot Bob and he shot Bob
13 you would be in the realm where that might be considered, but
14 for example, if he heard the voices that told him to shoot
15 Bob, and he knew it was wrong, he still wouldn't meet the
16 insanity statute He would have to -- if he heard voices that
17 told him to shoot Bob, and he thought it would save the world,
18 that would be a delusional belief that he was doing the right
19 thing, and then he likely might meet the insanity statute So
20 it's very, very specific to the actions at the time

21 Q Correct And so the voices really are -- don't have
22 anything to do with whether or not the statutory requirements
23 have been met there ---

24 A They do

25 Q ---With respect to sanity or insanity?

1 A They do, in that you have to have the first part, that
2 somebody has a mental disease or defect

3 Q Right

4 A So we are saying mental disease or defect, does it
5 apply to knowing right from wrong, and is it not an Anti-
6 social Personality Disorder, so those are the three things
7 that you are looking at

8 Q But voices wouldn't be one of them?

9 A Yes Voices would be a significant factor into, does
10 the person have a mental disease or defect Yes, I would be -
11 - I would be going, okay, we've crossed that barrier, because
12 we have something -- now it could be voices because he was
13 using crack cocaine If I found that out I would be saying,
14 well, that might not meet the standard, but when I see that
15 somebody is hearing voices I'm thinking, in my differential,
16 it might be Schizophrenia, might be Bi-polar Disorder, might
17 be something that's going to get us in the ballpark Without
18 being in the ballpark, you know, it's ---

19 Q Okay But voices are not necessary?

20 A Voices are not necessary I have definitely rendered
21 opinions that people are not guilty by reason of insanity
22 for -- if they've, for example, had delusional beliefs, if
23 they've had firmly held false beliefs that, you know, if I
24 don't kill my children God will end the world, so I have to do
25 this They may not be hearing a voice telling them that, but

1 they have that belief I -- it's usually a psychotic process
2 of some sort, either hallucinations or delusions

3 Q The statute that you read, you indicated that you went
4 to it and consulted with it, and, in fact, almost do every
5 time you get involved in a case ---

6 A Yes

7 Q ---Which is a -- I agree, you need to do that every
8 time But it really doesn't say anything about delusional, or
9 voices, it's pretty straight-forward

10 A It says mental disease or defect

11 Q Right And that can be in a number of different forms
12 Tell us ---

13 A It can, but it's -- here's the thing, I mean, it can't
14 just be anything, I mean, you know, if -- again, nicotine
15 dependance, in D S M 4, you aren't going to get from nicotine
16 dependance to insanity

17 Q Right We -- and I understand that Let me ask you to
18 ---

19 A Yes

20 Q ---Tell us what -- what the scientific community means
21 when they talk about a mental disease or defect

22 A You know, that -- those are legal terms Those aren't
23 medical terms, and that's -- you know, that's where Forensic
24 Psychiatry has difficulties

25 Q In fact, insanity is the legal term ---

1 A Insanity is a legal term, and so what we have to do is
2 take what the legal folks say, which is mental disease or
3 defect, and apply it to Psychiatry, so what we come up with is
4 psychiatric diagnoses, or you could have, for example, a
5 neurological disorder such as Alzheimer's where, you know, you
6 grab the gun and shoot your wife and, you know -- or you could
7 be in a delirium, where you don't know what you are doing at
8 all, don't know here or there, and then do something, so it
9 can either be a psychiatric diagnosis, or something that's
10 such a severe neurological impairment that it causes those
11 problems, but we are talking severe, severe problems

12 Q Let me ask you, I've heard you mention the term
13 D S M ---

14 A Uh huh (indicating positive)

15 Q Am I correct? Tell us what that is Explain to me,
16 please Ma'am, what that is, and what it's purpose is

17 A The Diagnostic and Statistical Manual, it's -- it's a
18 book that gives Psychiatrists, Psychologists, a common
19 language to talk about diagnoses It lists diagnoses and the
20 characteristics that they have, so that we can sort of be on
21 the same page

22 Q Okay And so when a person comes in to you and -- they
23 are referred, and the referring individual says, we believe
24 this person needs psychiatric help or ---

25 A Right

1 Q ---You do an evaluation and make a diagnosis of him

2 A Uh huh (indicating positive)

3 Q In part when you do that, do you gather instances, or
4 trends in that person's behavior?

5 A Yes

6 Q And how does that play into the diagnosis that you get
7 for that person ---

8 A Well, you are looking at ---

9 Q ---Or the diagnosis that you made

10 A ---At behaviors, and at symptoms of an illness, and
11 behaviors may be part of that

12 Q All right It would be a lot like a medical doctor in
13 a -- for a sick person, physically sick Would that be true?

14 A Uh huh (indicating positive) Yes

15 Q Look at what the symptoms are, and then think, well
16 I've got -- you've got this, and so you need this kind of
17 medicine, or -- is that ---

18 A Kind of I mean, yes, I mean it's ---

19 Q All right

20 A ---It's maybe a tiny bit more complicated, but it's ---

21 Q All right I'm sure that it is more complicated than I
22 just set out, but let's say when you look -- you came to a
23 conclusion that Mr Stanko has anti-personal -- antipers --
24 tell us what he has

25 A He has a combination of Anti-social Personality

1 Disorder traits, and of narcissistic traits

2 Q Okay And you reached that conclusion based on things
3 he does, his conduct

4 A In his case, yeah

5 Q Yes And in most cases you would?

6 A Well, I mean, when somebody has Schizophrenia, I mean,
7 or any other -- or a, I would say a true mental illness ---

8 Q Uh huh (indicating positive)

9 A ---You are much more getting it from the interview, you
10 are much more getting it from how they talk, and from, are
11 they hearing voices, are they responding to internal stimuli
12 In his case he's clear as a bell

13 Q Uh huh (indicating positive)

14 A So there's none of those kind of characteristics

15 Q Now, is that true in every respect? Are you saying
16 that he's always been clear as a bell?

17 A When I've seen him he has ---

18 Q Okay All right But ---

19 A ---The seventeen hours I've spent with him

20 Q All right In reviewing any reports you've seen about
21 Mr Stanko's behavior in the past, did you see anything that
22 might be contrary to that?

23 A That -- no I mean, I -- not that I've seen I mean,
24 he's -- he's always been organized and clear from everything
25 I've looked at

PAMELA CRAWFORD - CROSS BY DIGGS

1903

1 Q Okay Now we know that, in the Defense -- you looked
2 at Dr Sachy's report?

3 A I did

4 Q He said personality disorder, in part, did he not,
5 anti- ---

6 A He said -- he uses the term psychopath, which isn't --
7 you know, again, it's sort of like using insanity It's not
8 an accepted term I think he ---

9 Q Did it used to be?

10 A Not in the twenty years I've been doing this No, not
11 really I mean it's a -- it's sort of a -- kind of shorthand
12 for saying somebody is a bad guy, he doesn't have a conscience
13 ---

14 Q Uh huh (*indicating positive*)

15 A ---And the closest thing we have to it is Anti-Social
16 Personality Disorder You say psychopath, it's kind of a lay
17 term where somebody is really a bad guy, you say he's a
18 psychopath

19 Q Anti-social personality can encompass a broad range of
20 behaviors ---

21 A Yes

22 Q ---Do you agree with me ---

23 A Yes

24 Q ---From slight to very exaggerated

25 A No, you've got to be -- you've got to be pretty -- to

1 actually meet the criteria for Anti-social Personality
2 Disorder you've got to be pretty bad

3 Q Pretty bad Okay And we agree that that includes
4 certain factors, certain types of behavior that regularly are
5 engaged in by that person

6 A I'm not exactly sure what you are asking

7 Q What do you look for -- if you saw certain behaviors
8 and you concluded, like in Mr Stanko's case, that he had an
9 anti-social personality

10 A Yes, the ---

11 Q What did you base that on in terms of his behaviors?

12 A The deceitfulness ---

13 Q Okay

14 A ---The lying, the disregard for the safety of others,
15 the financial irresponsibility, the lack of remorse, failure
16 to conform to social norms I would say -- the main ones I
17 would say would be failure to conform to social norms,
18 deceitfulness, irresponsibility, lack of remorse

19 Q Okay

20 A Yes

21 Q And that is a definition that evolved over a number of
22 years, did it not?

23 A I'm not sure what you mean, I mean, it has been the
24 definition of -- for years and years, of Anti-social

1 Personality Disorder

2 Q How long?

3 A I'm not sure At least -- that, or something close to
4 it, for twenty years probably, thirty years

5 Q In fact, it was invented by a psychiatrist, was it not?

6 A You know, I don't know who invented it I know that
7 there had to be consensus about the diagnosis

8 Q Well, if they didn't invent it they kind of adopted it,
9 or brought it into ---

10 A What they did is, again, they came up with the best
11 they could in terms of a set of features so that, you know,
12 when I'm talking about somebody with Anti-social Personality
13 Disorder, you know, some -- another psychiatrist basically
14 knows what I'm talking about

15 Q Do psychiatrists look at a person and try to determine
16 why people have these characteristics?

17 A Sure

18 Q And can you tell us generally, or even in Mr Stanko's
19 case, why he has these tendencies to engage in deceit and
20 lying, and why he has a lack of remorse?

21 A That's a tough question I think -- I think he's a
22 highly narcissistic, entitled person, who really feels
23 special I think he, throughout his life, has not really
24 wanted to work very hard, so he's done a lot of illegal
25 activities for quick gain He's a very, very smart person,

1 but I would say that, rather than applying himself in a way
2 that was consistently, you know, improve his lot in life he
3 would look for the fast¹ deal, the fast scam, in a lot of ways
4 because it's easier, and also because I think that, given how
5 narcissistic he is, that his fear of failing might have been
6 significant Why he doesn't have a conscience, I don't know
7 I don't think anybody can tell you why he doesn't have a
8 conscience

9 Q Are you of the opinion that Mr Stanko is here in the
10 courtroom this morning because of choices that he freely made?

11 A Yes, I am

12 Q And we acknowledge, he was smart in school, he was a
13 good student ---

14 A Yes

15 Q ---In terms of grades at least

16 A He was

17 Q And he could have, you would expect, been successful in
18 any career that he chose

19 A Had he chosen to apply himself I think that that's --
20 but I think what you see with him is, it was so important, you
21 know, when he didn't get into the Air Force Academy, when
22 there was failure it was so important for him to be a success
23 that he -- it's like, couldn't risk trying to do things the
24 right way, so he -- he got really good at scamming people

25 Q Okay Did you have an opportunity to interview his

PAMELA CRAWFORD - CROSS BY DIGGS

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1 family?

2 A You know, I think I did I think I talked with -- and
3 this was a while ago I believe I talked with his sister

4 Q Do you know how many siblings Mr Stanko has, by the
5 way?

6 A And I'm going from my notes, because again, this was in
7 2006, but he has two older sisters and two older brothers

8 Q And his parents, are they alive, or do you know?

9 A The last I heard I think they were

10 Q His mom -- did you get any information about his mom
11 passing, and I don't -- certainly don't want to testify

12 A No

13 Q All right So you don't ---

14 A I don't know anything about ---

15 Q You don't have any information about that Okay

16 And do you have anything in your notes that indicates
17 whether you had an opportunity to interview each of the
18 siblings?

19 A I believe I just interviewed one sister I think that
20 was the only one that I got

21 Q All right And let me just ask you generally, are they
22 roughly in his age group?

23 A I don't recall

24 Q All right Okay If the sibling you had had an
25 opportunity to interview had been abnormally, either older or

1 younger, you would have made a note of that probably ---

2 A Well, I don't -- I have my notes from those interviews
3 here, but I didn't make note of that in my report

4 Q Okay So there wasn't anything out of the ordinary in
5 terms of the age range?

6 A I don't recall

7 Q Okay Were you able to interview any friends of Mr
8 Stanko?

9 A Yes, I was

10 Q Do you remember who they were?

11 A I have a list of names here I have a John Fulmer, who
12 I believe was a teacher Wanda Brooks, Rebecca Tucker, Tim
13 Baldwin, Terry DeSinzo

14 Q Now, were those people generally from Mr Stanko's
15 earlier years, school years?

16 A They were I also interviewed a woman that he lived
17 with ---

18 Q Okay

19 A ---That he had had another charge for

20 Q All right Now, I don't want to go into the specifics
21 of anything about that other than, do you recall any
22 information that was provided to you about unusual behavior,
23 in terms of voices, or anything of that nature?

24 A Well, there was the behavior where he tied her up and
25 tried to kill her, and that was unusual to me, where he put

PAMELA CRAWFORD - CROSS BY DIGGS

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1 the -- some kind of clorox on her face ---

2 Q Okay And ---

3 A ---And that was unusual, but I thought what was
4 significant in that was that he did not kill her, that he was
5 able to calm himself and make -- but he was angry, and so yes,
6 I would say that his -- that's an unusual act

7 Q All right Did that individual indicate to you that he
8 was either singing or whistling, or talking, but not to her?

9 A I recall something about that he was -- he was -- may
10 have been singing or something Again, there was no -- I
11 remember not -- when I evaluated him there was not an evidence
12 of a psychosis ---

13 Q All right

14 A ---But I remember that she was terrified, and he had
15 tried to suffocate her, and then he maybe was taking a
16 shower -- I can't remember -- but then ended up letting her
17 go

18 Q All right And that was year -- just -- that was years
19 ago?

20 A Yes

21 Q Yes Okay And it really doesn't have anything to do
22 with what we are here about in this case, other than ---

23 A Oh, it does I mean, I think that what it ---

24 Q In terms of his mental history, you know, from your
25 perspective, I mean, other than that, we are not here to make

1 a decision about his conduct, you know, whether ---

2 A Oh no, does it make a decision -- I mean, it's
3 important information ---

4 Q Of course

5 A ---His history of violence, and the nature of that ---

6 Q All right All right

7 A ---And the sort of sadistic stuff But yes, that's
8 significant, but ---

9 Q Okay And that was a person he lived with?

10 A Yes

11 Q Yes

12 MR DIGGS Bear with me just a moment, Ms Crawford
13 I beg the Court's indulgence

14 Q Now this -- and I'm almost finished, and I appreciate
15 your time The term Anti-social Personality is, you said,
16 around -- came into being about twenty years ago?

17 A I don't know It's been around as long as I've been
18 practicing

19 Q All right And I'm sorry to ask you this, how long
20 have you been practicing?

21 A About twenty years

22 Q Okay All right

23 A But it's been -- I'm thinking it was a good bit longer
24 ago than that

25 MR DIGGS Dr Crawford, thank you very much ---

JURY OUT/ON RECORD

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1 A Thank you

2 MR DIGGS ---For your time I don't have anything
3 else at this point

4 THE COURT Very good

5 Any redirect?

6 MR HEMBREE No, thank you, Your Honor

7 We ask this witness be excused

8 THE COURT Any reason the witness cannot be excused?

9 MR DIGGS Not from the Defense

10 THE COURT All right Very good

11 All right, Dr Crawford, you are released from your
12 Subpoena You may go back to your regular duties

13 A Thank you

14 THE COURT Thank you

15 MR HEMBREE Your Honor, may we approach briefly on a
16 scheduling matter?

17 THE COURT Sure Absolutely

18 (BENCH CONFERENCE TAKES PLACE OFF THE RECORD)

19 THE COURT All right, ladies and gentlemen, if you
20 would go to your jury room for a short break, please Thank
21 you very much

22 (THE FOLLOWING TAKES PLACE AFTER A BREAK, AND OUTSIDE
23 THE PRESENCE OF THE JURY)

24 THE COURT Is the State ready to resume?

25 MR HUMPHRIES Yes sir, Your Honor

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WILLIAM LESTER BRANNON, JR - DIRECT BY HUMPHRIES

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1 MR HEMBREE Yes, we are

2 THE COURT And is the Defense ready, Mr Diggs?

3 MR DIGGS Your Honor, the Defense is ready but Ms
4 Williams is out, I think, and she will be back in just a
5 second

6 THE COURT All right Well, it will take a minute for
7 the jury to come in anyway

8 Why don't we go ahead and ask them to come in

9 (THE FOLLOWING TAKES PLACE WITHIN THE PRESENCE OF THE
10 JURY)

11 THE COURT All right, Solicitor, your next witness,
12 please

13 MR HUMPHRIES State calls Dr William Brannon

14 THE COURT All right, sir Please come around to be
15 sworn, sir

16 WILLIAM LESTER BRANNON, JR , being
17 first duly sworn, testifies as follows

18 DIRECT-EXAMINATION BY MR HUMPHRIES

19 Q Dr Brannon, good morning

20 A Good morning

21 Q Tell the jury what you do for a living

22 A I'm a Clinical Neurologist That means that I spent
23 three years of training after I finished an internship in
24 medicine, three years of training in Neurology, then I took an
25 extra six months of training in Neuropathology, which is the

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1 study of the brain itself, and what's wrong with it in the
2 autopsy situation, and after that I took six months of
3 training in what would now be called behavioral Neurological,
4 at the hands of Dr Edwin Weinstein, who arguably was the
5 leading Neurobehavioralist of his day, and then I spent twenty
6 years in the Navy, on active duty, as a medical officer When
7 I retired from the Navy I spent the last thirty years, almost
8 twenty-nine years, at the University of South Carolina School
9 of Medicine, teaching, practicing, and doing a little bit of
10 research, not much

11 Q Very briefly, give the jury the benefit of some of the
12 places in which you served during your Naval career

13 A Well, bless your heart I joined the Navy primarily to
14 see the world, and they sent me from Charleston, where I
15 finished medical school, to Portsmouth, Virginia for one year,
16 then to Washington, D C for seventeen years

17 Q And where in Washington, D C -- in what hospital or
18 hospitals did you serve?

19 A I was at the National Naval Medical Center for the --
20 for the time of my staff training I also did part of my
21 specialty training at Georgetown University Medical Center, so
22 those two hospitals Georgetown covered the City I worked
23 at the big D C General Hospital, which is a public hospital
24 I worked at Georgetown Medical Center, which is more of a
25 private hospital, then I worked at the National Naval Medical

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1 Center, Bethesda Naval Hospital, as many people know it I
2 had some time at Walter Reed Army Medical Center with
3 colleagues there, and time at the Armed Forces Institute of
4 Pathology, which is on the campus of Walter Reed, so I went
5 around the town pretty well during those seventeen years

6 Q And again, tell this jury, were you to be qualified by
7 this Court as an expert in what field would that be?

8 A I've been qualified in South Carolina as a Neurologist,
9 and as a Neuropsychiatrist because of my training in
10 Behavioral Neurology, and the fact that, through the first
11 probably ten years or so in the Navy Medical Corp there was
12 not a Department of Neurology, it was called Neuropsychiatry,
13 and then when I came to the University of South Carolina there
14 was not a Department of Neurology, it was called the
15 Department of Neuropsychiatry, and I interacted on a daily
16 basis with the Psychologists and the Psychiatrists, which make
17 up that Department at the University of South Carolina It's
18 a three-part department' Neurology was me, Neuropsychology
19 was Dr George Holmes, and Psychiatry was -- when I was
20 there -- Dr Alec Donald, so the three of us worked closely
21 together and interacted in their teaching and my teaching and
22 that sort of thing

23 Q Thank you

24 MR HUMPHRIES Your Honor, at this time the State
25 would offer Dr Brannon as an expert in the field of Neurology

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1 and Neuropsychiatry

2 THE COURT Do you wish to examine the witness, Mr
3 Diggs?

4 MR DIGGS No, Your Honor, we don't, and we don't
5 object

6 THE COURT All right Very good I'll qualify Dr
7 Brannon to give his opinion in the fields of Neurologist, or
8 as a Neurologist, and Neuropsychology

9 MR HUMPHRIES Psychiatry -- I'm sorry,
10 Neuropsychiatry

11 THE COURT I mean psychologist, Neuropsychologist
12 I'm sorry

13 MR HUMPHRIES It's Psychia -- Neuropsychiatry I'm
14 sorry Just so the record ---

15 THE COURT All right Neuropsychiatry

16 MR HUMPHRIES Yes sir, Your Honor Thank you

17 THE COURT All right Very good Go ahead

18 MR HUMPHRIES Thank you, Your Honor

19 THE COURT He's qualified

20 Q Dr Brannon, let me ask you, are you, on occasion,
21 asked, by way of consult, to interpret M R images?

22 A Yes sir In consultation, as well as in the patients
23 that I see personally

24 Q Very good And how long have you been looking at M R
25 images, Doctor?

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1 A Since there have been M R images, in fact, that M R ,
2 Magnetic Resonance Imaging, started in the late 1970s or early
3 1980s, and at that time, in the late 1970s, I was still at the
4 Naval Hospital, Bethesda, interacting with the colleagues
5 across the street, which is the National Institutes of Health,
6 in which Radiology and Research Neurology were all a part In
7 fact, one of the doctors there brought the first C T scan
8 that was ever seen in the United States to a conference that I
9 happened to be attending when it was shown, and from there the
10 Magnetic Resonance Imaging evolved In fact, one of the
11 doctors, who was a dentist, who also had a PhD in Physics,
12 created his own Magnetic Resonance Image machine, and he
13 called it a different thing, and so that was sort of the
14 beginning of Magnetic Resonance Imaging in the late 1970s or
15 early eighties, so I've been there since that was done

16 I've also taught Radiology students, or resident
17 physicians in Radiology, the anatomy of the brain as
18 demonstrated by the Magnetic Resonance Image

19 Q For how long?

20 A Golly, I guess probably three or four years

21 Q And let me ask you, we've established that you were
22 practicing at the inception of M R images Have you remained
23 current in terms of the technology, the advances that have
24 been medically accepted in your line of work throughout your
25 career?

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1 A Yes sir Mostly the clinical interpretation as opposed
2 to the details of the physics Magnetic Resonance Image is a
3 principle of Physics rather than a principle of Radiology, and
4 I've not kept up with the basic physics of that, in fact, I
5 don't think I ever knew them, but certainly the clinical
6 interpretation I stay current with

7 Q And let me ask you, is it important for you to have
8 kept up with the physics in order to be an accurate Clinical
9 diagnostic -- or in order to render a clinical diagnostic
10 opinion?

11 A No sir, it's not In fact, I don't know of anybody
12 that is expert in both of those areas It's important for the
13 person who is actually doing the running of the Magnetic
14 Resonance Image machine to know the physics, so that he knows
15 the quality of the image that he's generating We can -- you
16 can tell the quality of the image by looking at it, but if
17 something is wrong with the quality then the Physicist who is
18 with the machine has to correct that so that the machine works
19 as well as they need it to work to produce the image that's
20 going to be useful to people like me So what's important to
21 me is the quality of the image that is rendered, either by
22 computer, or sometimes those images are printed on an X-ray
23 film, and we can look at that

24 Q In connection with your responsibilities as a
25 Neurologist and a Neuropsychiatrist, did you have an occasion

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1 to do a consult with the Court's expert, Pam Crawford, in
2 connection with Stephen Stanko?

3 A I did

4 Q And tell the jury what was provided, and what were you
5 asked to do as a result of that consult

6 A I had a number of medical records that were provided me
7 from Dr Crawford, and I also had a C D , which I have here,
8 that demonstrated the Magnetic Resonance Image that was done
9 on Mr Stanko, and I reviewed both of those, and as I
10 recollect I examined Mr Stanko at the -- as a result of that
11 consultation

12 Q Now let me ask you, did Dr Crawford indicate to you
13 that there should be any certain result as a result of your
14 reviewing these images and examining Stephen Stanko?

15 A No No, in fact at the time this came about I had
16 never met Dr Crawford She worked in our Department, but she
17 worked in the William S Hall Psychiatric Institute, where I
18 was not working, and had no real affiliation I worked at the
19 University, so our paths did not cross physically, so to
20 speak

21 Q Again, let's talk about the -- now you did an
22 assessment as well as interpreting the M R images Is that
23 correct?

24 A That's correct Yes

25 Q And let's talk very briefly about your assessment

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1 What is it comprised of, and what were your results?

2 A Well, it's been a long time, and I don't have the
3 records anymore, but I believe I examined Mr Stanko, and
4 found that that examination was normal Certainly in
5 reviewing the medical records that I saw, and the Magnetic
6 Resonance Image those records did not indicate any abnormality
7 that one would suspect as being a Neurological issue, and
8 certainly the Magnetic Resonance Image was a normal image in
9 all respects

10 Q Now, I'm not going to ask you to look at these right
11 now, but let me ask you -- this is State's Exhibit 32 These
12 would be the M R image You actually had these on a disk
13 Is that correct?

14 A I have those on disk, and I've seen the ones that you
15 have in the package

16 Q And let me ask you, after having reviewed those what
17 was your opinion regarding the status of Defendant Stanko's
18 M R images?

19 A They are normal

20 Q Any question in your mind about that?

21 A No, they are as normal as any images would be called
22 normal There's just nothing there And I even looked at
23 them with -- initially with a Neuroradiologist who did not
24 know anything about the case He did not know anything about
25 my opinion I simply handed the disk and we loaded it into

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1 the computer, and I said, what do you think about this set of
2 images, and without any further consultation he would have
3 rendered a normal view, and I agreed with that, and then he
4 agreed with me as we discussed the issues that I had been made
5 aware of that should be evaluated, so I think he corroborated
6 my opinion, which is that they are perfectly normal

7 Q Now, have you been given the benefit of the report of
8 Dr Thomas Sachy, the Defense -- one of the Defense experts in
9 this case?

10 A I've seen that, yes sir Yes

11 Q And Dr Sachy or Sachy, testified yesterday, and he
12 indicated at that time, two new findings regarding the M R I
13 I'm going to ask you specifically about those, and I'm going
14 to read them

15 He indicated Frontal Horn Periventricular White Matter
16 Hyperintensities capping is apparent Based on your
17 interpretation of the M R images would you disagree or agree
18 with that particular finding?

19 A I would very much disagree with it It's just simply
20 not there

21 Q And as to his second finding, Dorsolateral Prefrontal
22 Atrophy

23 A It's -- that's not there either

24 Q Any question in your mind?

25 A No question

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1 Q Let's talk just a moment about Dr Gur and his -- his
2 statistical analysis of, I believe the P E T scan of
3 Defendant Stanko coming from Dr Wu Are you aware of -- it's
4 his finding, and I believe it's indicated in Defense Exhibit
5 31, this chart in particular You've seen this before

6 A Yes sir, I've seen that chart

7 Q Now let me ask you before we start talking about his
8 particular findings Can you tell this jury, is it medically
9 appropriate or efficient to use a statistical analysis in
10 order for the diagnosis of an individual?

11 A No No In fact, it's -- there are lies, and there
12 are damn lies, and then there's statistics, and what happens
13 in a statistical analysis is, you are looking at a large group
14 of people, and to try to pick, out of that large group of
15 people, something that applies to an individual is almost
16 random The -- the other point I would make in this
17 statistical analysis is, when you do a statistical analysis
18 you have to have a control group, or a baseline group Their
19 baseline group is forty people, and forty people out of what,
20 three hundred and twenty million we have in the United States,
21 and you expect that to represent the norm, is that statistical
22 analyses, and that anything that deviates from that is not
23 normal? I think that's ludicrous to come up with something
24 like that

25 Now I also noticed in Dr Sachy's updated report that he

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1 attempts to counter that by using a statistical analysis to
2 explain the statistical analysis, and what he -- what he's
3 trying to say is, well, you drop out one person from that
4 group of forty, then you re-analyze it, then you drop out
5 another one, and he thinks that by the end of the time you get
6 something like a matrix of -- the best I can tell it's forty
7 times forty, but I don't think it works that way If you drop
8 out one then you are looking at thirty-nine If you drop out
9 another one you are looking at thirty-eight, and that's where
10 your statistics are

11 The other issue is that -- in terms of the P E T scan,
12 is that the isotope that is used in order to get to the P E T
13 scan is a glucose-labeled isotope, sugar The brain works on
14 sugar, so when you are doing a P E T scan what you are
15 thinking, what you are looking at, what you are hearing, and a
16 variety of different inputs are coming to the patient's brain
17 which causes the blood flow to increase because the brain
18 demands more glucose for that particular function, and so you
19 could almost program a patient in having an abnormal P E T
20 scan compared to their statistical group of normals, depending
21 on what you ask them to do during the P E T scan So I think
22 that's probably not a valid concept either

23 In the M R scan they are looking at volume, the volume
24 of tissue, and the volume of tissue, in and of itself, doesn't
25 mean anything much It simply tells you what -- that some

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1 people have brains that weigh twelve hundred grams, some that
2 weigh fourteen hundred grams, some that weigh nine hundred
3 grams, and it doesn't tell you anything about what the
4 clinical circumstance might be, or should be, or even could
5 be It's just a statistical analysis, and we haven't moved to
6 that point in history where there are enough data about
7 statistical analysis to validate even the statistical
8 analysis So I just can't make anything out of that except,
9 you know, it's interesting that he did that

10 Q Now, in connection with your duties with the Navy over
11 the course of years did you have occasion to review birth
12 records that were typically used by the Armed Forces?

13 A Yes I've probably filled out about five hundred of
14 those birth records I was at the Naval Hospital in
15 Portsmouth, Virginia delivering babies until I wasn't sure I
16 wanted to have babies We delivered about -- I think we
17 delivered three hundred and sixty babies a month, so I
18 delivered well over a hundred babies during my two months of
19 time on the obstetrical service

20 All three of my children were born in the Naval Hospital
21 at Bethesda, Maryland, so I'm well familiar with the Navy
22 standard record

23 Q And let me show you Defendant's Exhibit 22, the birth
24 records from Guantanamo Bay, Cuba, related to -- again, the
25 Defendant You've had an opportunity in the past to review

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1 those records, have you not, Doctor?

2 A Yes sir

3 Q And without going into specifics, although we certainly
4 can, but at this point, without going into specifics, is there
5 anything, anything in those records that would indicate that
6 Defendant Stephen Stanko had some -- any neurologic concern,
7 or brain defect at the time of, or shortly after his birth?

8 A No In fact, in the -- this -- whatever page this is,
9 is the Diagnostic Clinical Summary, and this is what you put
10 down when the patient is discharged He had two diagnoses,
11 one is that he was a term birth, living child, which is the
12 standard, second, he had hyperbilirubinemia, parenthesis,
13 jaundice, coma, physiologic, and -- I can't read the last
14 work, e x something, but anyway ---

15 Q Well, it's in a doctor's handwriting, so ---

16 A Yes The physiologic jaundice is a very common
17 phenomenon, and doesn't mean any abnormality at all, in fact
18 it's a -- I don't know what percentage it would happen in, but
19 frequent

20 MR HUMPHRIES Thank you, Doctor, and I'm going to ask
21 you one last time, to a reasonable degree of medical
22 certainty, in your field, what is your opinion regarding the
23 status of Defendant Stanko's M R images?

24 A They are normal

25 MR HUMPHRIES Thank you, Doctor

WILLIAM LESTER BRANNON, JR - CROSS BY WILLIAMS

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1 THE COURT Cross-examination

2 MS WILLIAMS Thank you, Your Honor May it please
3 the Court

4 THE COURT Yes Ma'am

5 CROSS-EXAMINATION BY MS WILLIAMS

6 MS WILLIAMS Good morning, Dr Brannon

7 A Good morning

8 Q I don't have many questions Are you here under a
9 State's Subpoena, or just a Subpoena from the Defense?

10 A I don't know I was contacted by Mr Humphries' office
11 and asked to be here, and I agreed to do that

12 Q So the State brought you here today Is that correct?

13 A I guess so

14 Q Okay Now -- and the Solicitor asked you, and I'm just
15 going to verify You said when Dr Crawford contacted you she
16 didn't ask you one way or the other to -- didn't lead you to
17 give an opinion, isn't that right?

18 A I'm sorry You said, did not lead me ---

19 Q That's right

20 A No, she did not

21 Q Because, in fact, it would be unethical to do so,
22 right?

23 A I don't know about that Certainly it's not something
24 commonly done, although I've seen it done

25 Q But it would be improper for the most part?

1 A I think, in general, if somebody -- an attorney or a
2 doctor would call and say, would you see this patient and say
3 such and such and such I would say, thank you, no

4 Q That's absolutely right You are suppose to make your
5 decision based on what you see, and not what anybody else
6 tells you, isn't that right?

7 A Yes

8 Q Okay Let me ask you this You said, in part of
9 your -- when you were discussing some of your background and
10 your training, that you do a little bit of research, but not
11 very much

12 A Yes

13 Q Can you explain that to me

14 A Well, most of the research that I've done has been
15 what's called clinical research, and that is that, in my case,
16 applying drug trials, particularly in the area of Epilepsy,
17 and stroke We've done a fair amount of research in trying to
18 learn whether new drugs for Epilepsy work -- will work, or
19 whether they may have more side effects than benefit, and the
20 same is true in drugs of stroke, can we minimize the damage to
21 the brain, or can we remediate some of the damage that's been
22 done Those are the two areas in which I've done mostly
23 clinical research

24 Q Are you actively involved in any current research?

25 A I'm trying to retire I retired first in 2002 I

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1 stepped aside from my tenured faculty position, but then I had
2 to stay on until June the 30th of this year, when finally I
3 packed up my office, moved out, gave the Dean my key and said,
4 thank you very much, and I'm now a Distinguished Professor
5 Emeritus rather than a working doc

6 I still do some work at the V A though I still do a
7 clinic there every week

8 Q But we are trying to get out of it Is that right?

9 A Well, as soon as they can find another Neurologist that
10 will take over the clinic that I have -- and as you might
11 imagine, with all of the operation Iraqi Freedium, and
12 Afghanistan, with all the head injuries that we are seeing we
13 are now about nine hundred patients behind in evaluating those
14 Veterans for benefits, so I'll probably stay on

15 Q Let me ask you, are you familiar with a functional
16 M R I ?

17 A Yes Yes

18 Q Can -- does the -- what does the functional M R I
19 suppose to tell us, Doctor?

20 A Well, it's a special technique in doing Magnetic
21 Resonance Image in which the -- you load them with a contrast
22 material, and try to show that one area of the brain is
23 working more than another area, based on the paradigm that's
24 been set up for that particular issue For example, if we
25 were studying a patient with Epilepsy, considering maybe that

1 surgery would be helpful, we would give that patient an
2 isotope, then do a Magnetic Resonance Image and see if the
3 contrast would light up the area of abnormality in the brain
4 that would help guide the Neurosurgeon into what area would be
5 best for surgery That's sort of the concept behind
6 functional M R I , will the Magnetic Resonance Image
7 demonstrate the function of the brain

8 Q And then there are regular M R I s, which is basically
9 a still -- a still shot in time, in essence, is that fair to
10 say?

11 A Yes You can look at it that way

12 Q Okay And can a still M R I show any type of function
13 in the brain, or do they -- meaning, do they show function, or
14 do they actually show structure?

15 A Well, the -- I'm not sure where you are -- what you are
16 asking, but the function -- the purpose of the Magnetic
17 Resonance Image itself is to show the structure of the brain,
18 the anatomy of the brain, and then, if you see an abnormal
19 anatomy you might then begin to infer function from that, but
20 the M R I is not demonstrating the function

21 Q Let me ask you something -- let me switch gears for
22 just a minute You -- of course you've delivered a -- you
23 said you had attended the birth, and been around a lots of
24 deliveries of the babies Is that correct?

25 A Have done what?

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1 Q Delivery of babies

2 A Oh, I've delivered some, and been around lots of
3 babies, yes Yes

4 Q Okay And when babies are born there are two types of
5 reflexes that are tested for Is that right? And I'll say, a
6 swimmer's reflex, and I think it's a moro reflex, are the two

7 A Well, yes, you would -- you would observe a moro
8 reflex I don't know that you would specifically test for a
9 swimmer's reflex That's just a postural reflex, and it
10 doesn't really mean much of anything in a newborn

11 Q So you don't think having a swimmer's reflex is a good
12 or a bad thing?

13 A No I don't think it's good or bad The most important
14 issue in looking at the newborns at the time of birth is
15 something called the Apgar Score, and the Apgar Score takes
16 into account movements and respiration, primarily, and I think
17 Mr Stanko's was ten, which is the top level, and that, in
18 itself, is -- maybe you've heard of the Glasgow Coma Scale,
19 and the purpose of that is to predict an outcome, and the same
20 is true for the Apgar Score The Apgar is predictive If an
21 Apgar Score is ten then you expect that you will have almost
22 no cases of abnormality of brain function If the Apgar Score
23 is zero then you expect a hundred percent of the cases to have
24 abnormal brain function

25 Q Doctor, let me ask you, I would presume in those babies

1 that you've delivered -- you delivered, certainly quite a few
2 of them would be healthy -- good, healthy babies Is that a
3 fair statement?

4 A Fortunately most of them were

5 Q Absolutely fortunately And on those healthy babies
6 tell me what you typically -- what was the typical procedure
7 once that healthy baby was born, like in the first day or two?

8 A Well, in the -- nothing, because they are transferred
9 to the Pediatricians, and after I delivered the baby, cleaned
10 them up, had with mom an opportunity to begin bonding, they
11 then went to the nursery, and the Pediatricians took over We
12 did the -- as an Obstetrical Intern I did the initial Apgar
13 Score

14 Q Uh huh (indicating positive)

15 A Okay Now, as a Pediatric Intern I picked the follow-
16 up in those babies that somebody else had delivered If
17 that's what you are asking I'm not sure

18 Q And that's it And so if it's turned over to a
19 Pediatrician, and the Pediatrician -- if it's a good, healthy
20 baby the Pediatrician would maybe just make notes of, I saw
21 the baby, the baby is looking good, no additional problems, no
22 problems noted, things of that nature would be what you would
23 expect in the notes Is that fair to say?

24 A In the normal baby, yes

25 Q That's right And so if you saw notes where it said,

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1 make sure you look after that baby, make sure you don't leave
2 that baby alone very long, make sure you check for that baby,
3 those types of things would -- wouldn't that be fair to say,
4 that would indicate that that doctor had some concern?

5 A No

6 Q It wouldn't?

7 A No

8 Q Tell me what you think that would mean

9 A It would mean he probably does that to all of them, all
10 new mothers

11 Q And so, if a doctor said, if this baby continues to
12 throw up make sure you call me at home tonight, that would
13 mean ---

14 A That would mean that he wanted to hear if the baby
15 didn't resolve an issue

16 Q And if he didn't -- and he would want to hear that
17 because of why?

18 A Well, you would worry, primarily, about a stenosis --
19 what's called Pyloric Stenosis Food goes into the stomach,
20 and there's a valve that keeps it in the stomach long enough
21 for the acid to begin to dissolve the food so it can be
22 transferred into glucose, sugar It then opens that valve and
23 the food goes from the stomach into the small intestine That
24 valve is called the pylorus, and a number of babies have a
25 tightening of that valve called Pyloric Stenosis Vomiting is

1 a clear clinical sign of that, and so babies continuing to
2 vomit would not imply, or suggest brain damage It would
3 suggest a concern for G I tract disturbance, and that's why
4 you would want to hear that If that continued the next step
5 would be to put some contrast material, barium, into the
6 stomach, and see whether that pyloric sphincter is tight, and
7 if it is the surgeon will go there and resolve that issue very
8 quickly, and with little risk to the patient

9 Q So the doctor was concerned, at least about something -
10 - and I understand you don't think it was about brain damage,
11 you think it was about ---

12 A No I don't know that ---

13 Q ---This little baby's stomach?

14 A ---It was concern about anything other than maybe bad
15 food, but certainly the most common thing you would tell a new
16 mother, if a baby is vomiting, is to be sure, if that vomiting
17 continues, you let me know so I can follow up on it I think
18 that's all it means

19 Q I understand that, but you would -- wouldn't you -- you
20 -- so, if I'm hearing you right you say it's not significant
21 if the doctor -- or the nurses put in her notes that the
22 doctor said, don't leave the baby alone for long, make sure
23 you take care of him, make sure you are there, and if anything
24 happens, call me

25 A No, I didn't say I thought it was not significant I

1 guess the best thing to say is that it doesn't portend
2 anything ominous It doesn't mean that there's something
3 dangerous there It's advice that I would give all new
4 mothers In fact, in the military many of the new mothers
5 were first time mothers and yes, that's good advice to give
6 new mothers, particularly first time mothers

7 Q I understand for new mothers, but we are talking about
8 nurses who do this for a living, they are pediatric nurses who
9 are in there tending to the babies

10 A And so what's the point?

11 Q Well, my point is, you are saying that it's not
12 significant at all ---

13 A No, I didn't say that was not significant

14 Q ---And when the doctor tells that to the nurse ---

15 A I said it did not -- it does not suggest that anything
16 bad is going on with that patient, and particularly, it
17 doesn't suggest anything with brain dysfunction

18 Q And I understand that's ---

19 A Okay

20 Q ---Your opinion, absolutely Now, let me ask you this,
21 are you familiar with -- I think what you testified is that
22 you can't use statistics for analysis or a diagnosis?

23 A No No

24 Q Explain to me what you were saying

25 A Okay

1 Q Maybe I misunderstood

2 A Okay Well, what I said was that a statistical
3 analysis applies to large groups of patients It's very rare,
4 if ever, that a statistical analysis of a large group applies
5 to an individual It may occur, but that would probably be
6 almost a random occurrence, so you can't look at a large
7 statistical analysis and say that applies to each patient in
8 the world that doesn't fit these pre-defined norms that the
9 statistical analysis said

10 Q But Doctor, aren't statistical analysis used to get the
11 norm, exactly what you said?

12 A No Statistically a hummingbird can't fly, okay, but
13 yet we see hummingbirds flying all the time, and so ---

14 Q But ---

15 A ---Statistical analysis are used to look at
16 generalities in large groups of patients They are not, in my
17 opinion, best used to try to apply individually to a
18 particular circumstance

19 Q They are used for gen -- to get generalities of
20 patients That's correct, right?

21 A Yes That's right It's a big profile

22 Q A big profile

23 A Yes

24 Q So that we know that statistically, when you are older,
25 we can expect this type of problem, (A) problem, (C) problem,

1 (B) problem If you've been a smoker for twenty-five years we
2 expect this problem, we expect that problem Is that correct?

3 A Well, I wouldn't say that you would expect those
4 problems You would say that, statistically a smoker has a
5 higher risk of developing lung cancer than one who doesn't
6 smoke, or has never smoked, but that does not mean that all
7 smokers will get lung cancer, and that all non-smokers will
8 not get lung cancer

9 Q That's correct It is meant to be a baseline to ---

10 A Not a baseline, but a broad generality

11 Q And then you take the individual person and you compare
12 that person

13 A If you need to If you find something unusual in a
14 neurological examination, then I would certainly consider
15 looking to statistics to see if there's any application that
16 might benefit, but I wouldn't expect to find it

17 Q Dr Brannon, are you familiar with the National Health
18 Institute?

19 A National Institutes of Health

20 Q Yes

21 A Yes

22 Q Are you on the -- do you participate with them in any
23 way?

24 A Not now, but when I was at the Naval Hospital, Bethesda
25 I served on their Protection of Human Subjects Committee,

1 which means that I was their outside consultant, not
2 affiliated with the N I H directly, that I gave them opinions
3 as to whether the research they were doing on people was
4 likely to be productive, and was unlikely to cause any harm to
5 the patient, thus protection of human subjects Yes

6 Q And Doctor, I would say, it is pretty -- I mean, I
7 think it would be a pretty fair statement to say to actually
8 get on the Board, to be able to participate -- I'm going to
9 use the abbreviation, the N H I

10 A N I H

11 Q N I H -- to get it wrong See, I got it wrong then
12 Just to be fair -- pretty safe to say that, to be able to get
13 on those Boards, and to participate that is -- for lack of a
14 better term -- is a pretty big deal

15 A Well, it was helpful to them, if that's what you are
16 saying

17 Q Well, I mean ---

18 A I didn't solicit that position They asked me to do it
19 and I was available and close by, and happy to help them

20 Q So if they come -- they came to you because they
21 thought you could be helpful Is that right?

22 A Yes, and I was available

23 Q And so one would expect that the doctors that they put
24 on that, and doctors that they ask to do that they anticipate
25 to get pretty helpful information from them, and that they are

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1 available Is that right?

2 A Well, I think they anticipated that I would give them a
3 fair appraisal of their research project, and tell them what I
4 thought about them, and particularly would be outspoken if I
5 thought the project was dangerous to the people

6 Q That's right If the projects that any -- they were
7 doing or funded would be dangerous to the people we shouldn't
8 be doing them Is that right?

9 A Well, yes I think most people would agree that you
10 try your best to not harm patients

11 Q In fact, what we are trying to do is figure out new and
12 better ways to treat all these things that we don't know how
13 to treat Isn't that right?

14 A Well, much of the N I H research is not directed
15 toward treatment It's trying to -- it's directed toward
16 understanding the basic mechanisms of disease Most of the
17 treatment protocols at the N I H are not inhouse projects of
18 research They are farmed out to clinical institutions,
19 particularly, say cancer research, you know, you can get the
20 same cancer resear -- or cancer treatment in Charleston, South
21 Carolina, or Myrtle Beach, South Carolina, probably Conway, as
22 you can get if you go to the N I H itself, and go to the
23 National Cancer Institute, because their interest is more in
24 understanding the mechanism of disease.

25 Q And they want to understand the mechanism so we can

1 figure out how to treat it ---

2 A That's true

3 Q ---One would assume

4 A That's true

5 MS WILLIAMS Beg the Court's indulgence for just one
6 moment

7 THE COURT Yes Ma'am

8 MS WILLIAMS That's all the questions that I have
9 Thank you

10 A Thank you

11 THE COURT Any redirect?

12 MR HUMPHRIES No sir We ask the witness be excused,
13 Your Honor

14 THE COURT Any objection to the witness being excused?

15 MR DIGGS No sir

16 MS WILLIAMS No sir

17 THE COURT All right

18 All right, Doctor, you are released from your Subpoena
19 You may go back to your regular duties, sir Thank you

20 All right, Solicitor, any other witnesses?

21 MR HEMBREE Yes, Your Honor The State calls Dr
22 Kenneth Spicer to the stand

23 KENNETH M SPICER, being first duly
24 sworn, testifies as follows

25 DIRECT-EXAMINATION BY MR HEMBREE

KENNETH M SPICER - DIRECT BY HEMBREE

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1 Q Good morning, Dr Spicer

2 A Good morning

3 Q Where are you employed?

4 A At the Medical University of South Carolina in
5 Charleston

6 Q In what capacity?

7 A I am a Diagnostic Imager I interpret the patients'
8 images, supervise them and make a report to tell referring
9 physicians what we see in the images, and help them as they
10 diagnose diseases and manage therapies in their patient

11 Q And Dr Spicer, if you would, give this jury the
12 benefit of your training and experience in the fields of
13 Diagnostic Radiology and Nuclear Medicine

14 A Well, the training -- I went to high school, like
15 everybody, and then on to college Did some graduate school
16 work, seeking a PhD in Physical Chemistry, and then switched
17 in mid-field to go to medical school, and thereafter medical
18 school, completed my PhD work in Biochemistry, and also took
19 residency training in Diagnostic Radiology, and finishes that
20 I went up to N I H for a few more years and did Fellowship
21 training in Nuclear Medicine

22 Q What's N I H ?

23 A Excuse me National Institutes of Health in Bethesda,
24 Maryland, the Federal Government's headquarters for health
25 care

1 Q All right After you finished up your training at
2 N I H where did you go?

3 A Well, I came back to Charleston I had a taste of it
4 was like a golden pair of handcuffs, I couldn't leave, so I
5 came back to Charleston in 1980, and have been there since

6 Q And working with the Medical University ever since?

7 A At the Medical University in Charleston, yes

8 Q Dr Spicer, have you been qualified in courts of record
9 in this State or other states in the fields of Diagnostic
10 Radiology and Nuclear Medicine?

11 A Yes, I have

12 Q On how many occasions?

13 A Uh goodness Well, at least a half dozen, if not more

14 MR HEMBREE Your Honor, we would offer Dr Spicer as
15 an expert in the fields of Diagnostic Radiology and Nuclear
16 Medicine

17 THE COURT Any objection, or do you wish to question
18 the witness?

19 MR DIGGS Your Honor, we don't have any objections

20 THE COURT All right I will qualify Dr Spicer to
21 give his opinion in the field of Diagnostic Radiology and
22 Nuclear Medicine

23 Q Dr Spicer, your -- in your Department at M U S C ,
24 what sort of testing goes on?

25 A We, in general terms, refer to it as Diagnostic

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1 Imaging The discipline of Radiology and Nuclear Medicine
2 have changed over the years to where we now primarily utilize
3 the ability to make images of patients, or portions of
4 patients, their organs, looking at those images, then make
5 decisions about what type of disease they are likely to be
6 suffering from, and/or whether therapy that has been tried in
7 them is working or not

8 Q So you are looking at what sort of images ---

9 A Okay

10 Q ---In reaching a diagnosis?

11 A Okay Now I think I understand your question a little
12 better

13 Well, you've all heard of C A T scans, and we do M R
14 scans, and in Nuclear Medicine we do heart scans, or S P E C
15 scans, oftentimes referred to, or bone scans, those kind of
16 things

17 Q And what sort of equipment is used to conduct these
18 type of scans?

19 A Well, in the area I've practiced the most in in the
20 last couple of years, in Nuclear Medicine we use a gamma
21 camera, that's just a instrument that can sense radioactivity
22 coming out of the patient's body, and develop or make images
23 from that

24 And then in other areas I also do Diagnostic Radiology,
25 so I do ultrasound, with ultrasound probes, and we have large

1 magnets that make images with radio waves of patients, called
2 M R instruments, and of course you have all heard of C A T
3 scans, which is an X-ray source that transmits through a
4 patient to make images

5 Q And Doctor, let me get you to keep your voice up That
6 ---

7 A Okay

8 Q You might even want to move that microphone up a little
9 closer, but ---

10 Do you have -- tell us about a P E T scan What is a
11 P E T scan?

12 A Okay A P E T scan is, in essence, a scan of the
13 whole body, starting from the top of the head down through the
14 thighs, generally, but it can be made of certain areas, more
15 specifically, or with higher resolution if you would like,
16 such as the head or the heart

17 The instrument that makes the images looks a lot like a
18 C A T scanner nowadays : It's a big cylindrical tube, and
19 it's run by a series of very powerful computers The images
20 are made from energy that is emitted from the patient's body,
21 so the routine is, we inject a radioactive compound, or a
22 radiopharmaceutical, and then for my testimony it will
23 probably be, I sense, that we use something called F D G ,
24 standing for Flurodyoxyglucose -- it's a sugar molecule --
25 with a fluorine atom on it -- it's radioactive -- so when we

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1 inject, or put a needle in a patient's vein and inject slowly
2 the radiopharmaceutical into the vein it goes through the body
3 very quickly In every thirteen to fourteen seconds it
4 transits around the whole body again, and different organs
5 will take up this radiopharmaceutical to different extents
6 Generally those organs that use the most sugar will take it up
7 the most avidly, such as brain, G I mucosa, and heart, and as
8 well as skeletal muscle, so these organs then will have
9 grabbed onto, sequestered, or holding onto a lot of the sugar,
10 and when our detector system, our scanner, is placed over the
11 patient it senses all this radioactivity coming out of the
12 patient, and uses that information to make images, slice
13 images or it interrogates, or it looks at the whole volume of
14 the patient, and then sense where, in this volume, the
15 radioactivity is coming from to make the images

16 Q All right, Dr Spicer, and let me kind of take you back
17 to this case involving Stephen Stanko Was your Department
18 called upon to conduct a P E T scan on Defendant Stephen
19 Stanko?

20 A It was A physician sent in a requisition to the
21 Department, requesting a P E T scan of the brain be obtained
22 on Mr Stanko, and we did so

23 Q And that physician was Psychiatrist, Dr Thomas Sachy -
24 --

25 A I believe that's correct, yes

1 Q ---At the Georgia Pain and Behavior Clinic?

2 A Yes

3 Q And he -- the P E T scan was completed May 18th, 2006?

4 A That's -- 2006, in April or May I'm a little fuzzy on
5 that detail

6 MR HEMBREE Bear with me one minute, Doctor

7 A Okay

8 MR DIGGS Your Honor, no objection

9 MR HEMBREE Your Honor, this is --
10 State's 118 in evidence, Your Honor

11 THE COURT I'm sorry, 118?

12 MR HEMBREE 118, yes sir

13 THE COURT All right State's 118 is in evidence
14 without objection

15 (REPORT OF M U S C ADMITTED INTO EVIDENCE AS STATE'S
16 EXHIBIT NUMBER 118)

17 Q Dr Spicer, let me share with you State's Exhibit
18 Number 118, and ask if you can identify that report?

19 A Yes This is a Report utilizing our information
20 system, IDX/RAD, and it states that Dr Thomas Sachy was the
21 requesting Physician, and his title is, from the Georgia Pain
22 and Behavioral Center in Gray, Georgia

23 Q And Dr Spicer, I'm going to -- now this Report was
24 dictated by Dr Eva Zachlubera Who is Dr Eva Zachlubera?

25 A Dr Zachlubera was our Nuclear Medicine Fellow at that

1 time, in 2006

2 Q All right Working with your Department?

3 A Correct

4 Q And have you reviewed her report and her efforts on
5 this?

6 A I have

7 Q Do you agree with her Report?

8 A I do

9 Q And what does this Report indicate to you?

10 A That a F D G -- that's Flurodyoxyglucose P E T scan
11 of the brain was obtained on Mr Stanko, and after production
12 of the images the analysis of the images revealed them to show
13 no areas of abnormality It was no focal regions in either
14 increased or decreased glucose metabolism compared to what we
15 would normally expect to see

16 Q So in layman's terms that would be a perfectly normal
17 P E T scan?

18 A Correct

19 Q Have you prepared a PowerPoint presentation in
20 anticipation of your testimony today?

21 A I have

22 Q Would it assist you in presenting your testimony to
23 this jury?

24 A Yes, I think so

25 MR HEMBREE Very well

1 Your Honor, I've provided a disk to the Defense

2 MR DIGGS Can we approach?

3 THE COURT Absolutely

4 (BENCH CONFERENCE TAKES PLACE OFF THE RECORD)

5 MR HEMBREE Offered without objection, Your Honor

6 Thank you, Mr Diggs

7 THE COURT What number would that be?

8 MR HEMBREE State's 119, I believe, Your Honor

9 THE COURT All right State's 119 is in evidence
10 without objection

11 Is that correct, Mr Diggs? I'm sorry

12 MR DIGGS Yes sir

13 THE COURT All right Very good

14 (D V D ADMITTED INTO EVIDENCE AS STATE'S EXHIBIT NUMBER
15 119)

16 Q And Dr Spicer, I'm going to ask -- and we've got this
17 presentation on a computer here, with the projector It may
18 be -- I don't know how -- can you see pretty well from where
19 you are, or would you rather come down here?

20 A It will be hard to face both ways The microphone are
21 a difficulty too, I guess

22 THE COURT All right

23 A Maybe I'll stay here then if ---

24 THE COURT There's a microphone right there if you
25 need to use it

KENNETH M SPICER - DIRECT BY HEMBREE

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1 A Oh, okay

2 THE COURT Do you wish to step down?

3 A I'd like to try that

4 MR HEMBREE And Dr Spicer, you can either use this

5 microphone or you can -- certainly can use that one if it

6 would be ---

7 A This one, or this one?

8 THE COURT That's good

9 (FOREPERSON RAISES HIS HAND)

10 THE COURT I'm sorry Yes sir

11 FOREMAN Some of the jurors can't see ---

12 THE COURT Because of the podium All right, so you

13 are going to have to use that microphone on the desk over

14 there You probably need to just -- completely out of the

15 way

16 A Okay Is it possible to dim that light that's on the

17 screen that throws light across ---

18 THE COURT It is possible The Clerk isn't in the

19 room right at the moment

20 A Maybe not the first try, but in two or three

21 THE COURT We'll see how far that goes

22 A While that's happening, I was asked to interpret the --

23 look at the scans that have been interpreted as normal, and we

24 have had an interest in brain imaging for about twenty years,

25 and have the brain imaging center like at many academic

1 institutions, and we are able to take the P E T imaging data,
2 as we have for other patients, not so much in this kind of an
3 atmosphere, but more often we are asked to look at patients
4 who had strokes or early signs of dementia, and other patients
5 who have had seizure foci, or seizure, to see if we can find
6 out a focus in the brain that might be causing their seizures,
7 and we use more sensitive computer analysis to decide whether
8 the scans are normal or abnormal, and if they are abnormal,
9 where the abnormalities are All of our images are seen on
10 computer screen We have had a -- what's called P A C s, or
11 Picture, Archive and Communication System now since 1993 in
12 Nuclear Medicine

13 THE COURT Doctor, could I stop you for one second

14 Mr Diggs, the cups that are in front of you, and in the
15 middle, and then one that's right in front of you too,
16 apparently is blocking part of the -- very good

17 All right Good Thank you I'm sorry Go ahead

18 A So this is a digital copy then of one of images from --
19 produced from Mr Stanko's scan This is referred to as the
20 axial, or transaxial slices The computer labels it up there,
21 transverse, and we, in the vernacular, call it axial

22 And now, as I said earlier, what we do is have the
23 radionuclide injected into the vein of the patient It goes
24 through the whole body and very quickly is absorbed by the
25 brain Typically, within about -- well, the most absorption

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1 goes on while the blood levels are the highest, and the blood
2 levels fall very quickly, so in every pass, every fifteen
3 seconds or so, the amount of activity in the blood falls off,
4 so generally by about three to four minutes most of which is
5 going to the brain is there, well over half, and we know this
6 from animal experiments as well, so it's giving you a little
7 bit of a snapshot of what the brain function is at the time we
8 inject the radionuclide, certainly by about ten minutes it's
9 well fixed

10 Then we wait another twenty to thirty minutes after that
11 for the blood levels to fall in structures that don't relate
12 to brain, neurons and neuron function, structures such as the
13 blood vessels in the brain, in the scalp, and in the areas
14 under the brain Then the P E T scan -- or the patient sits,
15 or lies rather, in the P E T scanner for about fifteen to
16 twenty minutes, of which only about ten minutes is actually
17 required for sampling the brain radioactivity, to make the
18 images

19 Once this occurs then the technologist and/or the
20 Nuclear Physician will take the data that's been acquired and
21 process it in computers, taking a volume of data and dividing
22 it up into slices and different projections or different
23 orientations, and here you see what are referred to as the
24 transverse slices Remember, this is a volume of data, and in
25 essence -- you can see up in here -- we are starting at the

1 very top of the brain, and making sideward slices, like so,
2 until we get all the way down to the bottom of the brain So
3 the first slices are right up in here These are across the
4 top of the brain And you are looking at these slices as if
5 you were underneath the slice, looking up at it, so this would
6 be the front of the brain, the back of the brain This would
7 be a patient's right side, and this would be the patient's
8 left side Again, you are looking at the slice from below,
9 looking up This is a consensus that we do for all imaging
10 now It's varied through the years, but by now we are all
11 doing that for P E T scanning, for M R scanning, and for
12 Nuclear scanning as well

13 So then, as we move down through the brain, very, very
14 thin slices -- each of them is about one and a half
15 millimeters, and it's, you know, one tenth, or about one-sixth
16 of seventh of a centimeter, which is about the size of a --
17 your little fingernail on your hand, so it's about one-sixth
18 of that size, very thin slices, until we get all the way down
19 to the bottom of the brain, and here you see, in the bottom
20 slices, the orbital muscles, so the eyeballs are -- these are
21 the inferior orbital muscles Muscles, like brain, use sugar,
22 and take a lot of it up

23 And then if we move back up into the brain, leaving the
24 orbits -- right in through here are sort of the orbital slices
25 -- we get into the inferior-most margins of the brain, the

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1951

1 frontal lobes, as you see up in here, and the inferior
2 temporal, and high temporal, and then parietal lobes, and then
3 back in here you can see some of the brightest areas These
4 are the areas referred to as a visual cortex, the area of the
5 brain where signals that our eyeballs send us go, so there's -
6 - if the patient is looking out of their eyes at the time of
7 the dosing they will be hot, and that's as we would expect

8 Next slide

9 The same data then can be projected in different
10 orientations, looking again at that sagittal, or axial slice
11 you see here, we'll start in the front of the brain again and
12 make slices perpendicular to this slice, and these are
13 referred to as coronal slices, mainly because they are
14 parallel to the coronal sutures We all -- if you take our
15 scalps off, or have ever looked at a skull you will see all
16 these cracks that run through the brain, like a brain bone,
17 and those are called the sutures The one down the middle is
18 the sagittal suture, after William Tell, I suppose, the one
19 along the side that's parallel to these slices here is
20 referred to as a coronal suture because it parallels the
21 coronal tiaras that the princesses of Austria used to wear
22 back in the 1500, 1600s

23 And then finally we have the next series of slides
24 I'll show you what's referred to as a sagittal, and these
25 are -- each of these slice orientations are parallel to one of

1 these sutures, so this one is parallel to that big suture that
2 runs up and down the middle of the brain, and here we are
3 starting off on the patient's right side, moving into the
4 middle of the brain, right about in here, in the middle, and
5 then we are moving back over toward the left side, so we sort
6 of made slices from the right, down to the middle, all the way
7 across till we got to the left

8 And take a second here to orient -- oops, sorry Go
9 back on, please

10 Orient you here The front of the brain is up here, or
11 the frontal lobes, the posterior of the brain The visual
12 cortex is some of the hottest area -- because evidently Mr
13 Stanko's eyes were clearly open at the time he did the
14 dosing -- is in the back

15 And the primitive brain, the cerebellum, is down here
16 below Okay Next

17 Q Dr Spicer, I note that you've got -- that's -- you are
18 fine ---

19 I note that you've pointed out certain -- had certain
20 indications with a little red arrow What is significant with
21 that arrow?

22 A This is the area of -- referred to as the inferior
23 frontal and medial frontal regions of the brain, that the
24 Defense has mentioned in previous testimony, so I thought I
25 would highlight it so you all could see

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1953

1 What we look at when we interpret these images is two
2 things, one -- well, first let me back up You have to
3 understand that most of the radioactive sugar is going to the
4 most active part of brain The connective tissue, the blood
5 vessels, after things are cleared away -- the insulation or
6 the myelin around nerve cells doesn't use much sugar at all
7 What uses a lot of sugar is the gray matter, the gray cells,
8 the neurons, and so we know that The ventricles, obviously,
9 are just pools of water, and they don't have much
10 radioactivity either in them So the two things we assess
11 when we look at the scans are the thickness of the gray matter
12 in different areas, and it's a pretty thin rhine all the way
13 around, with certain areas as you get near the center of the
14 brain, near the falx, is a little bit thicker, and the center
15 is thin, and then as you get out to the sides it looks
16 thicker, and that's natural because you are slicing through,
17 tangentially, some of the brain that makes it look thicker

18 The second thing we look at then is, not only the
19 thickness of the area in relation to what we would normally
20 expect knowing the anatomy, but also the amount of
21 radioactivity which is present, the intensity, the signal you
22 see on there The brighter it is on these gray and white --
23 black, gray and white images, the brighter it is the more
24 radioactivity that the brain took up The darker it is the
25 less metabolically-active, or the less functioning, or the

1 less amount of sugar that was used by the neurons that are
2 there

3 And I highlighted this area because -- excuse me -- in
4 the nasal frontal Here is the eyeball right here Right
5 above is this -- these are frontal region, and I think you can
6 appreciate the intensity of the amount of sugar activity in
7 that area compared to the remaining, or the most active areas
8 of the brain, is very similar, if not even maybe a little bit
9 brighter

10 Q So, is it significant to you that you are seeing a
11 bright pattern in the frontal cortex, or the frontal lobe of
12 the Defendant's brain here?

13 A Well, significant only in that that's normal That's
14 what I would expect to see, and I wasn't disappointed in that
15 It's clearly as much -- it's not even a close call I mean,
16 if it were subtly down then I would have to look for other
17 indices that would help me decide if it was normal or
18 abnormal In this case it's very intense, and normal
19 thickness and normal

20 Okay

21 Q Next slide

22 A Next slide, please

23 Now, to make these easier we can display the images in
24 another color pattern Instead of using just shades of gray,
25 and black and white, we can -- because these are computer

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1955

1 digital images -- change the scale of the intensity of our
2 radioactivities display in the image using different colors
3 And this is -- was a very popular one back in the early --
4 late eighties and early nineties, called the N I H Color
5 Table, but it essentially shows pretty much the same thing
6 If you -- if you look at the area right up in here where the
7 red arrows are, this is just above the eyeballs, and this is
8 the inferior frontal, nasal frontal area, and I think you can
9 see the intensity of the radioactivity in this transaxial
10 slice It is very similar, if not more so, than back in the
11 parietal region, which is a comparable region in terms of
12 neuronal function, and intensity of glucose utilization

13 Next

14 So, as I said earlier, when I was asked to come back and
15 look at these images I took them to our computer system and
16 used a program referred to as, now sold by the vendor, called
17 Hermes, H e r m e s , and I don't know if it's on -- yes, it
18 is on there

19 Q Let me ask you about that Hermes ---

20 A Yes

21 Q ---Data base ---

22 A Okay

23 Q ---That computer system Is that an F D A approved
24 data base?

25 A Yes For commercially available vendors -- for

1 commercially available software that are used in the clinical
2 setting the F D A has purview, or complete control over the
3 situation No vendor is allowed to sell it until their
4 software has been approved, if it's to be used for clinical
5 use If somebody is going to use it, and then bill a patient
6 for making a diagnosis, it has to be safe, well-known,
7 problems with it are taken care of, or accounted for, and so
8 this is one of the first products available to anyone back in
9 the eighties, or no, actually it's the early nineties Hermes
10 came up with the first program to do that It's what we used
11 throughout the nineties

12 In essence what you do is -- well, I'll get into how we
13 do the analysis, and we will talk about the data base then
14 Okay

15 I just wanted to point out, we've changed the color
16 table on your again This is another one that this company
17 lies, and we've used for many years And it's -- the essence,
18 the brightest or most sugar used is reflected by white pixels
19 with yellow, the next most intense down to orange, and when
20 you have very little you get down into the purples and mauves,
21 and then very, very little, like in the ventricles, it's blue,
22 or purple then down to blue, and then eventually getting down
23 to black

24 And here again, you can see that the -- I've marked the
25 inferior medial frontal regions, and the intensity of the

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1957

1 radioactivity in use in that area is very comparable to what
2 you would see in the parietal region, which is another band of
3 similar thickness, maybe a little bit thicker, than the
4 frontal lobes

5 Q Doctor, I note that in the back it looks a little bit
6 brighter, sort of yellow -- yellow ---

7 A Yes Particularly when we get up a little bit higher
8 you will see, back in here -- this is, again, the visual
9 cortex, so obviously Mr Stanko's eyes were wide open, there
10 were lights on, his optical cortex was being stimulated at the
11 time we gave the dose

12 Okay This is the same data set again, the same color
13 table, referred to now as the coronal slices again, parallel
14 to the coronal sutures, and I'm marking here for you the same
15 areas, and these are frontal, or inferior frontal regions

16 Next

17 Q And what significance is -- I mean, what's your medical
18 opinion of that slide?

19 A Well, the same as on the previous slides There is
20 considerable radioactivity in this very thin cortex in the
21 frontal row, normal thickness and normal level of intensity in
22 that region

23 Perhaps it's a little easier for everyone to look at on
24 this slide You can take that same region of cortex and
25 again, compare it to the parietal region on both the right and

1 the left sides, and see that there's very similar levels of
2 radioactivity

3 Now what would I be expecting if it was abnormal, okay
4 Then you would see something in the shades of mauve, or purple
5 in that region, and if -- for one or two reasons, either the
6 brain could be damaged and the neurons lost in that area, in
7 which case they are much thinner, and you wouldn't have much
8 radioactivity come from that area, or secondly, you could have
9 the normal number of neurons there, but they are not
10 functioning very much, and they have less sugar use, and
11 hence, less intensity on these images

12 But another case, you can see clearly, these are orange
13 here, not at all anywhere a mauve or a purple or a blue, so
14 normal level of intensity

15 Okay The next then, we analyze these images just to
16 document that our perceptions as experienced imagers was
17 correct, we took Mr Stanko's data, his image data, the volume
18 data, transferred it into this Hermes system, displayed it in
19 the images you just saw, and looked at those, but we also
20 asked the computer then to compare, pixel by pixel, regions of
21 Mr Stanko's brain to a normal data base

22 We had two data bases to work with at the time One was
23 acquired from the Society of Nuclear Medicine, the Brain
24 Imaging Council that I have been working on for a number of
25 years, which contained a large number of patients They were

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1959

1 from many areas of the world, and many different parts of our
2 Country, so it is a very nice data base in that it's very
3 large, over a thousand patients in it, but it's not very
4 rigorously controlled, in terms of, there wasn't a lot of
5 follow-up of the patients two to three or four years later,
6 after the scans, to make sure they, in fact, were normal,
7 which is a critical feature The Hermes system itself has a
8 data base of about forty or so patients, and those are a
9 little bit more rigorously scrutinized I'll be candid with
10 you The data base is normal, mature adults, ages forty to
11 seventy, but they are primarily from Scandinavia, where Hermes
12 companies come from, so they tend to be blonde and from that
13 part of the world But their brain function wouldn't be --
14 the Danes might think the leads are a little different, but
15 most of us would the Swedes as having reasonable brain
16 function, so we consider that a normal data base

17 And what we do then is take Mr Stanko's brain and morph
18 it, or transfer it into a template, or onto a template, and
19 that just stretches some areas of the brain, but it keeps the
20 radioactivity the same, just stretches it so it matches, or
21 morphs, or assumes the same shape as our normal data base
22 This allows us then to go to specific regions and look at the
23 amount of radioactivity which is in each of these regions and
24 decide if there's a difference, or significant difference
25 between the data base and Mr Stanko's brain, and that's what

1 we've done here And this slide just shows you how well his
2 brain matched the standard data base The blue line is the
3 line of the standard data base Mr Stanko's brain images,
4 the P E T scan data you see in the normal color table And
5 there are a few spots around the tops of the brain, as you
6 would expect with everybody -- we all have different shaped
7 brains to a certain extent Just like our noses and ears and
8 eyes, and hair are different from person to person the brain
9 shape is also, but certainly well within the normal
10 variability Mr Stanko's brain fit our brain template
11 beautifully

12 Then we -- next -- ask the computer to decide whether
13 there were any areas in Mr Stanko's brain that had too much
14 radioactivity, or too little radioactivity And here you see
15 on this slide the comparison of Mr Stanko's brain to the
16 normal data base at what's referred to as two standard
17 deviations from the normal In other words, if Mr Stanko's
18 brain had less sugar metabolism, or decreased radioactivity in
19 any area that was significant -- and we use the criteria two
20 standard deviations significance -- this is what we've been
21 using in our discipline for more than twenty years -- that
22 means that we have -- in other words, the amount of
23 variability, twice that level of variability has to occur
24 before we would call it abnormal And that gives us ninety-
25 five percent confidence that what we are looking at is, in

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1961

1 fact, with ninety-five per -- or, you know, ninety-five times
2 out of a hundred will be due to a real difference, and not
3 just random because the, you know, variability of the
4 procedure itself

5 And this is a serious concern to us because, if I took
6 any one of you people and did a scan on you today, and brought
7 you back tomorrow, it will be different Circumstances are
8 different, the dose is different, the time between the dose
9 and scan varies Your blood sugar levels change dramatically
10 over time So, all of those factors and many others can
11 influence it, so we have to be very careful not to attribute
12 change to any of these other variables, but to be confident
13 that the change is really a real one And that's what this
14 slide is illustrating for you If, in fact, there were any
15 regions in Mr Stanko's brain that were different, with
16 ninety-five percent confidence -- and I will hasten to point
17 out to you, ninety-five is pretty lax Most sites now, and
18 with F D A approval and guidelines, require three standard
19 deviations to be able to call it abnormal

20 Well, as you see in this slide the -- if there was an
21 area in Mr Stanko's brain that was different from the normal
22 data base by two standard deviations, or ninety-five percent
23 confidence, that area would be -- have it's picture element,
24 or little piece of the image, replaced with green, such as you
25 see here on the top of the brain, up in here and up in here

1 These are not in the gray matter These are on the surface of
2 the brain As you would expect, if Mr Stanko's brain was a
3 little different shape, then the normal data bases

4 Q So Doctor, are there any -- any -- there's no green in
5 the frontal lobes, nothing that shows any abnormality in the
6 frontal lobes of this ---

7 A That is correct And in particular, I labeled again,
8 the medial frontal region, and you can see, I think, pretty
9 nicely, and on the other side there are no green pixels there,
10 and again, the level of intensity is very comparable to what
11 you are seeing the parietal cortex This is our frame of
12 reference there

13 So the computer analysis substantiated what we thought
14 just visually looking at the images, as there is no
15 significant difference between Mr Stanko's brain and --
16 particularly in the frontal lobes, and the normals

17 Just to illustrate for you, I took an anonymous patient,
18 or I anonymized the patient, took the patient's name off the
19 study, to show you, here is a patient who has had some brain
20 function loss in the frontal lobes, and you can see the
21 radioactivity here is markedly decreased compared to other
22 areas of the brain, and I only did the computer analysis on
23 it

24 Next line Those areas where there is abnormal brain
25 activity show the decreased metabolism

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1963

1 Go to the next slide For some reason there is -- those
2 areas have their pixels, or picture elements, replaced with
3 green to illustrate for you the regions that have ninety-five
4 percent confidence that the area is abnormal, and indeed, it
5 substantiates what you see, and it's pretty rare that you
6 don't see the abnormality and have the computer come up with
7 it, but this is a bit more rigorous, and takes out the
8 subjectivity of a human looking at it

9 Just to illustrate for you, we also looked at Mr
10 Stanko's M R Images, and his P E T images, and fused them to
11 make sure we were looking at the correct areas, and this is
12 the mesa frontal area annotated up in here, and you can see
13 the intensity again It's the same as in other areas of
14 brain

15 Q So as a result what was your -- what was your opinion
16 after fusing the two and doing this analysis?

17 A One, there was no anatomical abnormality, and two,
18 there was no metabolic abnormality Again, both M R and the
19 Nuclear scans were perfectly normal

20 Since this analysis a couple of years ago we have
21 acquired a new computer program which is referred to and sold
22 commercially as Neuro-Q This program primarily does the same
23 things we just went through on the previous study It is more
24 rigorous in that in two areas, it has almost double the data
25 base It has a data base which has been examined by the

1 F D A and found to be clinically very relevant The patients
2 went through questionnaires I shouldn't say patients -- the
3 subjects for the data base went through questionnaires, and
4 then were followed up two years later to make sure they did
5 not have any infections, any psychiatric illnesses, any brain
6 tumors or anything like that, so the patients included in this
7 data base were normal at the time of scanning, and found two
8 years later to also be normal, which is a much more rigorous
9 data base, and hence, I think more reliable

10 The other advantage of this program is that the computer
11 looks, not at just forty-five -- forty-eight areas of the
12 brain, but looks at two hundred and forty-four areas of the
13 brain, so it much more sensibly looks for very small regions
14 for very, very subtle, small areas of decreased or increased
15 metabolism, and this has proven to us to become very important
16 as we look at patients who are suspected of having Alzheimer's
17 Disease, or early Alzheimer's Disease, because if we can find
18 small areas that are characteristic of Alzheimer's Disease we
19 can now begin treating it and prolong the disease course, not
20 cure it, but help patients significantly

21 Well, in this arena we thought this might be of benefit
22 too It's going to look at six or so times more reasons of
23 interest much more carefully, and it has what we thought was a
24 much more rigorous data base It was -- it's made of
25 Americans cross section of the U S

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1965

1 Okay This is -- I'm sorry You'll have to go back for
2 me, if you would

3 This is the first slide This is called the Neuro-Q, as
4 I said, analysis software here This is Mr Stanko's brain
5 data This is the normal standard data base data And what
6 we do first is process the data, so that limits for the
7 software, to take away all the scalp activity and the base of
8 the brain activity, and get it out of the way Then we ask the
9 computer to morph this data, or transfer it again, like the
10 previous program did, to a standard brain template, and then
11 merge Mr Stanko's brain scan with that standard data base,
12 and here on the top right you can see Mr Stanko's, and the
13 normal data base, and in color down below -- you may not be
14 able to see it too well here -- but Mr Stanko's brain is in
15 the color pattern -- and superimposed behind it, or on it, but
16 well fused, is the gray data of the normal data base, and we
17 look at this and decide if the fusion of the two data sets are
18 correct You are looking at very, very small regions of
19 interest Even small areas of mis-registration or non-proper
20 fusion can make errors, so we have to be very careful of this

21 Next slide After the processing we have the same, but
22 I think you can appreciate here now that the two sets -- well,
23 at least I hope you can -- the two sets of images are fused so
24 well that you no longer see any gray areas of the normal data
25 base that Mr Stanko's brain does not match up to correctly

1 So having done that we then -- that's fine Next slice
2 Then we ask the computer to go through this entire data
3 base of brain activity and look for areas that have either
4 decreased metabolism or increased metabolism Now we use
5 increased when we are looking for seizure foci, and when we
6 are looking for abnormal brain function or brain destruction
7 we look for areas of decreased or hypo-perfusion, or hypo,
8 rather, metabolism And the computer then prints out for us
9 this listing like you see on the left describing one of -- any
10 number of two hundred and forty-four regions of the brain, and
11 gives us the standard deviation over here from the normal data
12 base

13 Now, with F D A approval the company states, and we
14 follow the standard, that you must have three standard
15 deviations or more to call it abnormal, and I think you can
16 see here that the only reasons they found -- the computer
17 software found were in areas like the palms, and the temporal
18 lobes, and nowhere near frontal lobes There's no (F) in any
19 of these over in here And anyway, all the standard
20 deviations were in the realm of one to two standard deviations
21 from the normal data base

22 Q And so the bottom line, this was just an additional
23 test, a newer test or data base you ran it through ---

24 A Yes A new comparison that showed that Mr Stanko's
25 brain, and especially this frontal area where there was

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1967

1 concern, is completely normal, and equal intensity to what we
2 would expect in the data base -- in a normal individual

3 The next slide we used, and looked for hypermetabolism,
4 just to make sure there wasn't some abnormality there, and
5 here again, you can see that there were no areas of
6 hypermetabolism, which we wouldn't have expected

7 Interestingly enough, some of the real high -- excuse me --
8 frontal lobes, way up about the level of where the scalp line
9 is, did show some increased metabolism, and if you go back one
10 slide, when we are looking for hypometabolism, that -- those
11 same areas of the brain also showed you hypometabolism, which
12 implies to us that there's a great deal of variability going
13 on there in that reason, so standard deviations are going to
14 be up, so if you wanted to look in that area you would have to
15 be very careful, and have to have very significant change to
16 be able to call something abnormal But clearly in the region
17 -- I didn't point out to you here, the computer is sort of
18 like the U S Navy's Electronics Handbook It's made by
19 geniuses, to be run by idiots They are considering the
20 Radiologists and Nuclear Physicians an idiot, I guess But
21 what they did in their program was, whenever they found a
22 statistically significant difference from the normal data base
23 they would replace the image pixels, or the elements of the
24 picture, with a color table, and when it's significant or
25 clinically abnormal the color is red When it's borderline

1 it's purple, and when it's getting close but not significant
2 it's mauve, and then any variability at all from zero is
3 replaced with a blue And here you see in the area of Mr
4 Stanko's lower frontal lobes, in front, there are no even blue
5 variability pixels there It's as normal as normal could be

6 Okay Next And same when we go to hypermetabolism,
7 also normal, so there wasn't even a great deal of variability
8 in that region

9 Okay And this was -- I think this is -- not necessary
10 You have to be careful when you are doing images and
11 displaying images for people to look at, to change the
12 contrast range up and down in the images You can narrow the
13 contrast range and make things look abnormal sometimes, or
14 expand it and make disease go away, so how you set the
15 presentation of the image to someone to look at is critically
16 important And I threw this slide in just to show you that
17 changes the images by adjusting everything to the ponds, which
18 is this area right down in here, normalizing that the ponds
19 does not change anything This is the area we were concerned
20 about, in the frontal lobe

21 Next slide If you normalize it to the center motor
22 cortex, which is very active in somebody who is not sitting
23 still and moving their arms or legs, again, it doesn't change
24 the display of the image, and it certainly didn't change the
25 statistical analysis in the least

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1969

1 And I think the last slide -- no, that's it Go back

2 So, in conclusion, it looks to us by the most rigorous
3 clinically accepted standards that the brain scan of Mr --
4 the P E T brain scan of Mr Stanko is completely normal

5 MR HEMBREE Thank you, Dr Spicer You can please
6 take your seat on the witness stand

7 Q Dr Spicer, were you aware -- or are you aware that
8 prior to this P E T scan ---

9 MR DIGGS Your Honor, we object to the leading

10 THE COURT Rephrase your question

11 MR HEMBREE Thank you, Your Honor

12 Q Are you aware of anything unusual, or different in the
13 testing procedure that was used on Mr Stanko?

14 A I -- I have become aware that the normal pattern, the
15 clinically-accepted standard for acquiring this study was
16 perturbed by the Defense in requesting the scan and actually
17 having it accomplished, and actually I -- during the time of
18 the scan I was sort of aware of that, as well as the
19 technologist called me and asked me if they could go ahead
20 doing what further perturbations they were going to do, and we
21 ---

22 Q What -- what was the word you just used?

23 A Perturbations, changes, alterations

24 Q Changes, or perturbations What -- could you describe
25 to this jury the nature of those -- those changes that they

1 proposed?

2 A Certainly Let me explain what normally is done first
3 Because the brain is very sensitive, neuronal function is very
4 sensitive to external stimuli it's important to get a standard
5 brain scan for everybody so we have the ability to compare
6 reliably from patient to patient As I've said, the
7 variability in P E T scans is pretty significant, just from
8 person to person, from day to day, from emotions, from blood
9 glucose levels, from timing and dose, all those factor and can
10 dramatically change a P E T scan, so we work rather
11 rigorously to make sure that we do every brain scan and every
12 P E T scan on every patient, as closely as possible, the same
13 way, day in and day out And what this means is, we have
14 special dosing rooms, with barcalounger-like chairs in them,
15 the technologist brings the patient in, settles them down in
16 that lounger, they sit there for about fifteen to twenty
17 minutes, then the technologist comes back in, puts an I V --
18 a venous access, puts a needle in the arm, which, as you can
19 imagine, it's somewhat irritating and excites the brain a bit,
20 then the technologist leaves, and turns the lights down in the
21 room, closes the door and asks the patient to relax, not to
22 talk, make sure that they are not chewing gum or have any
23 other thing that would stimulate muscle activity and sugar
24 use

25 Then in approximately twenty minutes after that we will

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1971

1 come back in and dose the patient and immediately leave the
2 room and close the door again And the room is not completely
3 black, it's dark enough though that there's not a lot of
4 visual stimuli going on There's no sound There's no music
5 playing There is no noises as best as we can control that in
6 our P E T suite, so that the external sensory stimuli are
7 minimized, and then practice what we do for ninety-nine
8 percent of our patients

9 Well, in Mr Stanko's situation the Defense chose to
10 change that Without asking us or talking to us ahead of time
11 they arranged for a Psychologist to fly in from Atlanta -- I
12 don't know, I've been sequestered -- you all may know this
13 already, and I'm sorry if I'm repeating it too much -- but he
14 came to our Institution and administered a computer test to
15 Mr Stanko, a brief one, and then as I'm told by my
16 technologist, they dosed the patient and waited a little bit,
17 and then they started this computer test up again So the
18 computer-generated test where the patient, or Mr Stanko in
19 this case, sits in front of a computer screen with a mouse and
20 reads the screen contents and clicks on the mouse to reply --
21 clicks with the mouse to reply or answer questions, and this
22 occurred It was a brief test ahead of time, and then a
23 prolonged one after the dosing, and this, of course, changed
24 the scan, or as you saw on that scan, the visual cortex was
25 really quite bright Generally it's the brain stem or the

1 ponds area that is one of the brightest areas in the brain
2 when we do our scans In this case it was the associative
3 parietal cortex and the visual cortex that was the brightest
4 in our scan, and that presumably comes from Mr Stanko staring
5 at a computer screen

6 Q Does that surprise you -- does it surprise you, Doctor,
7 that the area ---

8 A Oh, not at all In fact, if Mr Stanko had closed one
9 eye and done that, you know, for twenty minutes, only one side
10 of the brain would have lit up It's very sensitive to that
11 kind of input

12 Q So this -- the fact that that test was administered,
13 what impact does that have on your opinion about -- about Mr
14 Stanko's brain -- or P E T scan?

15 A Well, when I first looked at the scan I was concerned
16 that something was happening in the visual cortex, then I saw
17 that it was bilateral, symmetrical, and the associative cortex
18 in the posterior parietal regions were also increased, so I
19 inquired back of the technologist and found out that, yep,
20 this is the gentleman that had that test done during the test,
21 and clearly he was looking at a light source that would have
22 stimulated that area of his brain So then when interpreting
23 the study I could account for those changes as I looked at the
24 scan

25 Q So even considering -- it sounds like what you are

KENNETH M SPICER - DIRECT BY HEMBREE

1973

1 saying is, even considering that he took this test you got the
2 results you expected even though he took this test

3 A Yes, that is correct The results were quite ordinary

4 Q Once again, Doctor -- and I know I've asked you this
5 many different ways -- let me -- let me review this with you,
6 make sure I've covered -- covered, or I understand everything

7 You did the visual observation review of Mr Stanko's

8 P E T scan

9 A That is correct

10 Q Then you -- then you ran it through one F D A approved
11 computer program to compare it against -- to compare it to
12 confirm your findings ---

13 A That is also correct

14 Q ---Which it did

15 A Yes

16 Q Then you ran it through -- more recently you ran it
17 through the newest, most recent F D A approved data base

18 A That's correct also ---

19 Q ---And once again found that your initial diagnosis or
20 opinion was accurate?

21 A Ran it the second time through the most rigorous one
22 commercially available, that we routinely use now, and have
23 discarded the Hermes because it is so much more sensitive and
24 can look for smaller areas, and again, it showed very much the
25 same, normal

1 Q And that's -- I guess you have answered this for me,
2 but I'll finish with this Within a reasonable degree of
3 medical certainty is there any question as to Mr Stanko's
4 brain function?

5 A No sir, not in my mind, or the mind of my colleagues,
6 or anybody else I've shown this to It's a perfectly normal
7 looking brain P E T scan

8 Q Would you have concern about a colleague that would use
9 a data base that's not F D A approved?

10 A Certainly In a clinical sense, or even in a legal
11 sense Our society of Nuclear Medicine has worked for more
12 than fifteen years, a sub-set of fifteen thousand members in
13 the society of Nuclear Medicine, which are imagers that use
14 exclusively radioisotopes to do imaging has what's called a
15 Brain Council, and we've met always through the years,
16 developed our own data bases, and discussed technique and
17 instrumentation changes, and worked through the procedures,
18 and the Society of Nuclear Medicine has come out with
19 standards clearly stating what is appropriate and what's not
20 appropriate in the use of these imaging modalities, and in
21 their standards they've clearly shown that only very few
22 deliberate applications of this clinically can be utilized and
23 this type of analysis, and that's in cognitive impairment,
24 Alzheimer's, precorderers, malcognition, seizures, and in
25 brain tumor areas of the brain

KENNETH M SPICER - CROSS BY DIGGS

1975

1 Q Those are ethical standards?

2 A Those are the ethical standards, correct

3 Q And you've followed those ethical standards

4 A Yes sir, certainly do

5 MR. HEMBREE Thank you, Dr Spicer Please answer any
6 questions Defense counsel may have

7 MR DIGGS Your Honor, could I take a very brief break
8 before we get on cross?

9 THE COURT I really would like us to continue Is it
10 possible or not?

11 MR DIGGS Well, I'll see if they can Let me ---

12 THE COURT All right All right Very good

13 CROSS-EXAMINATION BY MR DIGGS

14 Q Dr Spicer, how are you this afternoon?

15 A It is afternoon, isn't it?

16 Q Yes, it is

17 A Fine Thank you

18 Q Good Couple of things I want to ask you I notice
19 that -- when did you use the motor -- hold on a second, let me
20 get the right name

21 A Sensory Motor Cortex

22 Q Yes When did you do that analysis initially --
23 analysis?

24 A When did we carry out this analysis? With that Neuro-Q
25 program, Friday afternoon

1 Q Friday -- okay, last ---

2 A This past ---

3 Q Three days ago?

4 A Yes

5 Q All right And initially when you rendered your
6 opinion in this case that was a couple -- two or three years
7 ago, wasn't it, initially?

8 A Yes

9 Q Right after the scan was done?

10 A Well, even that was a couple of years after the scan,
11 but yes, correct, in general terms

12 Q All right And so you were looking at your opinion and
13 tweaking it right up until the last minute, as well as other
14 people might have been?

15 A Well, I'm not sure I characterize exactly I was
16 subpoenaed last week I ---

17 Q I don't want to go over ---

18 A ---happen last week, so ---

19 Q Okay

20 A ---So on the spur of the moment I grabbed the software
21 and worked out the analysis on Friday

22 Q And just out of curiosity, who manufactures the Sens
23 Motor Software?

24 A Oh, the software is called Neuro-Q, N e u r o -Q, the
25 name of the company in Atlanta

KENNETH M SPICER - CROSS BY DIGGS

1977

1 Q Neuro-Q

2 A Right

3 Q A company in Atlanta?

4 A Yes sir

5 Q And what is the purpose of the software?

6 A To analyze -- well, they have this software for brain
7 imaging They also have a software package for cardiac
8 imaging, but in general it's taking Nuclear Medicine imagers,
9 analyzing the amount of activity in any one specific area to
10 assist in diagnosis and evaluating whether therapy was ---

11 Q And what is it's data base, or does it have a data
12 base?

13 A Yes sir

14 Q What does it consist of?

15 A It consists of a cross section of Americans, both male
16 and female, between the ages of sixty and seventy-five --
17 excuse me -- forty and seventy-five

18 Q All right And do you know how many people are put
19 into the data base?

20 A In the version we have -- the latest version has a few
21 more, but our version, I've been informed by the vendor, is
22 sixty-eight individuals

23 Q Sixty-eight?

24 A Yes sir

25 Q And how long have you been using that particular

1 software?

2 A We started about a year and a half ago

3 Q All right So you didn't even use that software at the
4 time Mr Stanko's scan was initially done?

5 A No sir It wasn't available until just about a year
6 ago

7 Q All right And are you aware of any of the conditions
8 under which the Neuro-Q software data base -- do you have any
9 information about how those scans are done?

10 A Yes The company, as is appropriate, requires that you
11 acquire the data, the brain P E T scan data, in the standard
12 format as set up by both the American College of Radiology,
13 American Society of Nuclear Medicine, so it's the standard
14 format, similar to what I just described a few minutes ago

15 Q Okay And tell us how those scans are conducted, how
16 the -- when the person's brain is actually scanned Tell us
17 what they are doing, and how they are positioned and so forth

18 A Well, the most critical feature, I think, that you are
19 alerting to -- alluding to, is at the time you make the
20 administration of the dose the radionuclide goes through the
21 body and gives you a snapshot of the way the brain is
22 functioning at that time So we take patients, as I described
23 to you, in a room, isolated room where sound and light is kept
24 low, and sensory input is minimized as much as possible
25 Patient is in a barcalounger, and injected in that sedate --

1 not sedated, but relaxed as much as we can, situation, and
2 then the patient waits in there, well, about twenty to twenty-
3 five minutes, typically, then is moved from there to the
4 scanner, and scanned for about fifteen minutes

5 Q Okay

6 A And then gets up out of the scanner and goes home

7 Q And so they are at rest?

8 A Correct Lying supine, lying semi-supine in the
9 barcalounger

10 Q All right And that's with respect to the Hermes ---

11 A Correct

12 Q ---And which would you use three or four years ago,
13 whenever you initially analyzed the results ---

14 A Right

15 Q ---And is that the same with the Neuro-Q?

16 A ---Neuro-Q?

17 A Yes sir In fact, it's the same data, just analyzed
18 with a different software program

19 Q All right Well, the data -- you are not talking about
20 Mr Stanko's data

21 A Mr Stanko's P E T data, right

22 Q Yes, but before we get there, it's data base is
23 comprised of people at rest as well

24 A Correct Well, Hermes had one data base, the Neuro-Q
25 has another one

1 Q Yes, but they are -- they are all comprised of -- the
2 reason they are compatible in your mind, would this be fair to
3 say, is because there are controlled conditions under which
4 those people were tested?

5 A There's that They were screened appropriately to make
6 sure ---

7 Q Of course

8 A ---They did not have a disease, and then subsequently
9 were screened a few years later to make sure that, in fact,
10 the screening succeeded

11 Q Of course, and you want to do that with a data base ---

12 A Certainly

13 Q ---Because that's what you are using to compare the
14 test subject against a ---

15 A Certainly

16 Q So you want to get as far and normal a data base as is
17 possible to get a reliable result? We are on the same page
18 there, correct?

19 A Yes, I think so

20 Q Okay We are, or in my mind we are

21 A All right

22 Q All right You agree -- you've had a chance to see the
23 images that Dr Wu presented?

24 A No sir I've been sequestered and been ---

25 Q No, no, no I don't mean during this trial, but they -

KENNETH M SPICER - CROSS BY DIGGS

1981

1 - haven't you had an opportunity to view them ---

2 A No sir

3 Q ---In the past?

4 A Actually, on Friday I received, for the first time,
5 some trial transcripts -- it was about three inches thick --
6 and I tried to look at that, and it didn't contain any images,
7 sir, so I haven't seen ---

8 Q All right, so you've never -- you don't recall ever
9 having seen any images that Dr Wu produced?

10 A I think in a previous ---

11 Q On some other ---

12 A You showed me a ---

13 Q I'm not asking you where, I'm just asking you if you
14 ever had an opportunity to see them?

15 A Yes I've seen some images you, in fact, presented to
16 me in a ---

17 Q All right I wonder if we could put those up at this
18 point so that you could look at them

19 Without having to put up the big thing, let me show you
20 a picture

21 A Fine Good Lord

22 Q And Dr Spicer, I can tell you -- and I realize you
23 haven't been in the courtroom, but these are some pictures
24 that are in evidence in this case

25 A Okay A picture You've got quite a few there

1 Q Well, you remember all those little things you had up
2 there on the screen They are similar

3 A Okay

4 Q All right Dr Spicer, this has been marked as
5 Defendant's Exhibit Number 13

6 A Yes sir Okay

7 Q All right Now, I'm not going to ask you where, or
8 anything like that, but I'm asking you if that kind of rings a
9 bell Have you had an opportunity to ever view that
10 particular image before, at any point?

11 A I do remember you previously showed me some 3-D
12 renderings of the brain They weren't static, they were
13 rotating around

14 Q Right Okay

15 A And this ---

16 Q And Dr Spicer, that is the image that we've used here
17 in this trial ---

18 A Okay

19 Q ---Just for your information

20 A So this is a 3-D rendering of the frame?

21 Q Right Now, do you -- let me ask you, first of all,
22 what your reaction is to that particular image

23 A I'm not sure what you mean by my reaction This isn't
24 something we routinely use for a clinical diagnosis It's
25 demonstrative It shows, you know, the brain It's kind of

KENNETH M SPICER - CROSS BY DIGGS

1983

1 impressive, but ---

2 Q All right To you what is it depicting?

3 A It's the exterior surface of the brain, and the
4 activity associated with the exterior surface of the brain

5 Q Exterior surface?

6 A Well, the neuron -- I assume what they've done here is
7 strip the scalp away and the M G S and the C S F and all, so
8 you are looking at the surface of the neuronal activity in a
9 P E T scan ---

10 Q Okay

11 A ---Not the full thickness of the cortical region, but
12 just the surface rendering

13 Q And what's depicted there in terms of function, if
14 anything?

15 A Well, it's showing Stephen Stanko on the left of the
16 image, labeled right, and normal control on the left of the
17 image, labeled left, and it's -- I'm not quite sure of the
18 orientation, but if I take it -- this head at the bottom ---

19 Q Yes sir

20 A ---It's trying to show us the -- the deflection of the
21 next back, then we are looking tangentially up through the
22 chin at the undersurface of the frontal lobes, primarily ---

23 Q Okay

24 A ---And it's less activity, bilaterally, in those areas
25 as compared to what's labeled the normal control

1 Q All right Now, I'm not asking you to make credibility
2 determinations, you know, in terms of the people that put that
3 image together, I'm asking you if that image shows a decrease
4 in function in the frontal lobe area?

5 A I don't think I can make that observation for you, sir
6 I have no idea how this was done, more or less how it was
7 rendered and leveled, or any of that kind of thing There are
8 so many variables involved here And further, looking at
9 surface renderings is just not clinically done

10 Q All right Suppose that that is presented for the
11 purpose of comparison frontal lobe function, okay, of Mr
12 Stanko, with a controlled data base Does it show, in your
13 opinion, a reduced frontal lobe function?

14 A I clearly see, as I'm sure everyone in the room does,
15 there's differences in color between the two

16 Q All right

17 A I just can't make the extraction -- function is a big
18 leap from looking at amount of radioactivity ---

19 Q Well ---

20 A ---On a color scale of an image

21 Q Okay What is the color scale intended to convey?

22 A Well, I assume it's the amount of radioactivity which
23 is present

24 Q All right And would that translate into function?

25 A It can But ---

KENNETH M SPICER - CROSS BY DIGGS

1985

1 Q Okay Well, let's assume in this ---

2 THE COURT Mr Diggs, he's answering the question
3 Please let him finish

4 Q All right

5 A It can, but we've learned through the years we have to
6 be very careful, and you cannot make a direct correlation
7 between amount of radioactivity and function You have to
8 have a number of other variable taken into account as you
9 make that

10 Q And what are those variables?

11 A Well, some of which I've mentioned already, blood
12 glucose levels, time of dosing versus time of scan, the way
13 things were put on in there, certainly the computer analysis
14 One of the biggest factors is how you set the contrast range
15 in these images, windows and levels, that sort of thing

16 Q Yes And is it your opinion -- let's assume that those
17 things are done -- well, I understand

18 A Okay

19 Q So your opinion -- your position is, you are not in a
20 position to give us an opinion about what's depicted in this
21 exhibit?

22 A That's correct

23 Q Okay That's correct

24 A Yes

25 Q Now, the Hermes software -- let's talk about that for

1 just a minute It is a data base of a certain number of
2 people, correct ---

3 A Correct ---

4 Q ---Done at rest?

5 A Correct

6 Q ---Scanned at rest?

7 A Yes, that's true

8 Q And you have used that data base to interpret Mr
9 Stanko's P E T scan

10 A That's also correct

11 Q All right Now, what -- tell us, if you will if, in
12 your opinion, that's a correct use of the Hermes software

13 A Well, in my opinion it is ---

14 Q Uh huh (indicating positive)

15 A ---In that it has met a number of criteria to allow us
16 to do that, the first and foremost of which is, multiple sites
17 have utilized it, and studied it after the fact to see how
18 efficacious it was, and ---

19 Q You are referring -- excuse me, not to interrupt, but
20 you are referring to the testing and approval of the Hermes
21 software?

22 A Well, not just the software, but you are alluding to
23 the data base as well

24 Q No, I -- all right

25 A Sorry

KENNETH M SPICER - CROSS BY DIGGS

1987

1 Q I'm sorry I probably wasn't clear

2 A Okay

3 Q I'm not challenging the validity of the University's --
4 or the Hospital's use of the Hermes software ---

5 A Okay

6 Q ---In general I want you to understand that

7 A Sure Okay

8 Q ---But I'm challenging -- what I'm questioning is the
9 appropriateness of the use of that software with respect to
10 Mr Stanko's P E T scan when the P E T scan was taken under
11 the conditions of -- including the administering of a
12 Continuanace Performance Test Do you understand?

13 A Yes, I think I do now

14 Q Okay

15 A And the -- well, let me back up a little The
16 variability in P E T scans is profound It's something we
17 have to struggle with all the time, and perhaps not so much in
18 this arena, but a large part of my practice is dealing with
19 young people who have seizures, and the maturation of the
20 surgical discipline now in handling patients with seizures has
21 approved so much that we see a great number of scans coming
22 through to us, to where on at least three or four times a week
23 we are asked to evaluate these patients' P E T scans to
24 determine whether they have a seizure foci present, and it's
25 very easy for us to say, whoa, you know, that little mesal

1 temporal are down there, hippocampal area, that's low, and
2 then the surgeon goes and operates on, but the consequences of
3 that are profound You are taking out brain and damaging
4 brain getting to the brain, so we've learned very carefully to
5 do our scans, see our diagnosis, and then test the diagnosis
6 against outcomes that have occurred, and this can't be done
7 just by one institution It has to be done by multiple
8 institutions, not necessarily academic, but generally
9 Academic institutions lead it, and then you will find a number
10 of others that do, and when you've gone through that kind of
11 peer review you are able to determine, not only a sensitivity,
12 but the specificity of your procedure And what we have
13 learned as a consequence of this, is to back off on our
14 rigorousness of our diagnoses, particularly in the seizure
15 area, but I would hesitate -- would not hesitate to say that,
16 even in this area much more so Until we know -- whenever you
17 are very sensitive, like these scans are, they are very, very
18 sensitive, they will show things that C T and M R , and all
19 of our imaging modalities won't Whenever you are very
20 sensitive you lose something very important, and that is
21 specificity, the ability to know that what you are seeing is,
22 in fact, what's happening, so you can be very sensitive but
23 not very specific, and that, unfortunately, is the situation
24 oftentimes on a brain image, and in this situation it's -- a
25 data base comparison is not nearly as rigorous or as tight as

KENNETH M SPICER - CROSS BY DIGGS

1989

1 I would like to make it, because we have to back away so that
2 we don't -- well, we don't know the error that we generate
3 when we do these scans very well

4 So the reason that there's only three products out there
5 now that will do this kind of analysis the F D A has approved
6 is just for those reasons You have to be sure that your
7 analysis is not creating an error in there, so determination
8 to specificity and knowing your error of your data base
9 analysis is critically important, and as a consequence we've
10 been restricted now, vulnerable to unethical practice and
11 concerns with attorneys if we utilize this data base
12 comparison in areas which have not been approved by the
13 F D A , and those are tumors, seizure foci, and in stroke ---

14 Q Right

15 A ---And in certain circumstances now, just in the last
16 two years, in early dementias

17 Q So, my question, again is, do you believe that this is
18 an appropriate use of the Hermes software, to analyze Mr
19 Stanko's P E T scan data with the use of that software that
20 you used in this case?

21 A I understand your question, and I would say it's not
22 perfect ---

23 Q All right

24 A ---But it's the best we have, and so, you know, just to
25 substantiate what my eyeball was seeing, I think it was a

1 reasonable application

2 Q All right It's the best software that you have that's
3 available

4 A That's correct

5 Q Now, at the time you did the initial evaluation of the
6 software you looked at it on the Hermes initial evaluation of
7 the data, and you used -- looked at it on the Hermes software,
8 you weren't aware that Mr Stanko had been engaged in a
9 Continuance Performance Test, correct?

10 A I was only aware that -- the technologist called me and
11 asked me if the person there could administer the test to the
12 patient and I, through a phone conversation, learned that he
13 was going to be doing something different ---

14 Q Okay

15 A ---And that was the on -- I had no idea it was called a
16 continuous performance evaluation ---

17 Q Okay And that's fair But you took the leap to go
18 ahead and make an analysis even though you didn't have that
19 information, and you didn't -- you weren't aware of that
20 procedure in this case?

21 A I knew none of the details of the procedure It wasn't
22 a leap, but I did go ahead and interpret the images I agree

23 Q All right You interpreted the images with the use of
24 software that measured people who were at rest

25 A Correct

KENNETH M SPICER - CROSS BY DIGGS

1991

1 Q And Mr Stanko was not at rest, he was engaged in a
2 Continuance Performance Test at the time of his P E T scan

3 A That's also, as I have learned to -- recently, to be
4 the case

5 Q All right So the assertion that Mr Stanko's brain,
6 fully engaged in a thought process, using the frontal lobe,
7 equates with a normal person at rest Is that your testimony?

8 A I'm not sure I would phrase it the way you just did it

9 Q All right How would you phrase it?

10 A I understand what you are saying is, Mr Stanko had a
11 task, to look at a computer screen, and ---

12 Q Do you even know what the task was?

13 THE COURT Mr Diggs, I've asked you, please let him
14 finish answering

15 Q Yes sir

16 A Okay He was undertaking a computer task which
17 involved looking at computer screen with lights on before
18 dosing, and then for a -- about an eight to ten minute period
19 after dosing, whereas most of our patients are completed at
20 rest We see this occasionally in some of our seizure
21 patients, where they will -- they will have to have lights on
22 to be monitored and everything if they are going through that,
23 and so we've learned to look at their scans and see the visual
24 and parietal cortex as more intense I certainly did not know
25 exactly what the test was doing or anything like that, if

1 that's your question

2 Q All right And therefore you didn't know the purpose
3 for the test

4 A No sir

5 Q And neither did your associate that read the scan and
6 said this is normal?

7 A It was a well-kept secret

8 Q There you go And did you ever ask anybody about those
9 things?

10 A Well, that's an open question There's a lot of time
11 interval in here

12 Q All right You are right

13 A At the time I asked what was going on, what was the
14 test, and they said it was a -- you know, a mental function
15 test and that was all

16 Q All right Did you ever ask anyone, or inquire of Dr
17 Sachy, for example, why are you doing this Continuance
18 Performance Test for P E T scan, and what does it involve?
19 Did you ever make that inquiry before you communicated to the
20 Prosecution that this was a normal P E T scan?

21 A We made inquiry of the Psychologist who came and gave
22 the test and he said he couldn't tell us exactly what the test
23 was, it was -- he was hired to do the test and he didn't know
24 specifically what was going on I did not ever speak with
25 this Dr Sachy, no

KENNETH M SPICER - CROSS BY DIGGS

1993

1 Q All right Did you ever attempt to make an inquiry to
2 find out what the purpose of the test was in this case?

3 A No sir

4 Q You just went ahead and rendered an opinion that this
5 was a normal scan without making any further inquiry?

6 A Well, no, that's not entirely the case When you know
7 there has been a perturbation of the normal technique and
8 normal routine you interpret in a little different manner than
9 you would if you knew it was going to be a typical resting
10 study with sensory input deprived

11 Q All right Let me ask you, when you say a normal
12 routine, and a perturbation ---

13 A Perturbation Sorry

14 Q ---Of the normal routine you are talking about the
15 normal routine that is anticipated for use of the Hermes Brass
16 software

17 A That's correct

18 Q And not necessarily the normal routine that would be
19 used in a -- for an analysis that was done in this case, like
20 that done by Dr Wu to produce these images

21 A I'm not sure, but Dr Wu could have used the Hermes
22 software, and then he would have wanted to use his -- or
23 whatever data base are used to come up with this from

24 Q All right Okay

25 A I mean, that's not a commercially da -- data base, so I

1 don't know if Dr Wu could get that or not I assume he has
2 some proprietary interest or something and ---

3 Q So when you -- let's get this clear When you talk
4 about normal routine, and deviations from the normal F D A
5 accepted routine, you are talking about those tests that were
6 done as anticipated by the manufactures of the Hermes
7 software

8 A Oh, it's not only anticipated, but dictated ---

9 Q All right

10 A ---By them and the F D A , yes

11 Q While at the same time those individuals done --
12 engaged in the type of research that resulted in this might
13 have an entirely different normal set of procedures that are
14 to be followed Is that possible?

15 A Well, I'm sure they had, as you are -- leading research
16 procedures which were followed ---

17 Q All right

18 A ---But I wouldn't call them normal procedure This is
19 very much out of the ordinary

20 Q Well, normal procedures, depending on the context,
21 correct?

22 A No I mean -- I'm sorry What -- giving a patient a
23 stimulation at the time that you are doing the P E T scanning
24 is, by no manner or means, the normal This is outside of the
25 standards that have been set up for all our societies

1 Q All right Have you ever read any peer-review articles
2 on this particular procedure that we are talking about that
3 resulted in image number thirteen, Defendant's Exhibit 13?

4 A I'm not sure what you mean by the procedure In terms
5 of evocative testing and P E T inspect imaging Yes

6 Q I'm talking about any -- yes And I assume you are
7 talking about the Continuance Performance Test, provocative?

8 A Well, not the Continuance Performance Test We,
9 ourselves were involved, in the late eighties and much of the
10 nineties, in looking at Attention Deficit Hyperactivity
11 children, and some adults, and doing evocative tests on them
12 I must have done at least three or four dozen on those, and
13 then doing the scans, and then following them up with repeat
14 studies after they've had medication to see if they change
15 things, and we did that, and we've had a lot of experience
16 doing it, but have backed away from that in the last five
17 years because of it's lack of clinical reliability, don't ---

18 Q All right So you haven't read any articles, peer-
19 review articles on this particular procedure recently?

20 A Not on this Continuance Performance Testing, C P T you
21 call it

22 Q That's all I'm asking

23 I want to ask you, I notice that in your use of the
24 Neuro-Q brain metabolism software you talked about -- there
25 was an image up there that talked about standard deviations

1 A Uh huh (**indicating positive**) Yes

2 Q And how can the use of standard deviation analysis,
3 statistical analysis be important in this setting?

4 A Well, as I've tried to, I guess explain before, these
5 scans are so sensitive to any number of variables that if you
6 don't account for those variables you are going to make false
7 diagnoses, or make statements that are clinically very
8 damaging, or potentially damaging to patients, so we have to
9 strive very hard to minimize those, and even doing that we
10 still have a great deal of variability, so we have to decide
11 as we look at a scan how big the change that you are seeing is
12 from what you expect normally to see before you call it normal
13 -- excuse me -- before you call it abnormal You have to have
14 everything go from those yellow areas up there, or orange
15 areas down to black to call it abnormal, or can you go down to
16 purple to call it abnormal So what we do is measure the
17 amount of radioactivity in a specific area of the brain, and
18 then we do this over large numbers of patients, and hopefully
19 we do this over the same patients multiples times -- maybe not
20 patients, that's not a fair word -- subjects, normal
21 volunteers, and in effort of repeating it we get some idea,
22 having held all the variables as closely as we can, how much
23 variation there still exists

24 You come in today with a hundred and twenty milligram
25 per deciliter blood sugar level because you had a Snickers

KENNETH M SPICER - CROSS BY DIGGS

1997

1 four hours early because we made you skip breakfast, and the
2 previous time we did the scan you had a blood sugar level of
3 ninety, you are going to see entirely different amounts of
4 radioactivity in the brain because of the production of
5 insulin with the Snickers bar and what that does to the sugar
6 when it goes to muscle instead of brain

7 So to account for these kind of changes we need to have
8 some level of confidence doing it, and we do these studies on
9 many people, over many times, and at multiple sites, because
10 it's important not just to do it in Charleston, but you've got
11 to do it at L A , and you've got to do it in Houston, Texas,
12 you've got to do it a number of places where different people
13 are involved, and having done that then you can determine the
14 amount of error that is introduced into your procedure And
15 have done that in other areas than what we are talking about
16 right now we've learned that you need at least three standard
17 deviations to feel relatively confident that what you are
18 looking at is real, and not just a random event that happened
19 because of the variability of the procedure And typically we
20 like to see four standard deviations, and that's what -- when
21 we are talking about standard deviation I assume that the jury
22 has had some of this before, or do I need to explain what a
23 standard deviation ---

24 Q No I had asked -- I was just asking you to confirm
25 for me that was a legitimate technique, or ---

1 A Oh, I'm sorry

2 Q --Legitimate practice in the use of ---

3 A Yes, it is

4 Q ---This kind of data and ---

5 A Just all in the Neuro-Q there

6 Q Sure And so you -- I think you have confirmed that

7 for me

8 In the -- when you were looking at the fusion of your

9 M R I data, and the P E T scan data ---

10 A Yes

11 Q ---And you said that was normal ---

12 A Yes sir

13 Q ---Were you doing that by eyeballing the image?

14 A There's two images that are fused there Are you ---

15 Q Yes

16 A We certainly -- we use computers to look at the images,

17 to fuse them and make sure that the volumes were properly

18 registered against each other

19 Q And did you use anything other than simply looking at

20 the image?

21 A In terms of the P E T , we've described all of that

22 Are you talking in terms of the M R then?

23 Q Yes, the fused image that you showed us

24 A We did not do computer analysis on the fused image

25 Q All right So you are eyeballing that to tell us it

KENNETH M SPICER - CROSS BY DIGGS

1999

1 looked normal to you

2 A Correct

3 Q Okay And with respect to the -- that Sens Motor,
4 again, you talked to us about areas in the brain that were lit
5 -- had lighted up -- lit up ---

6 A Correct

7 Q ---By various movements of the patient at the time the
8 scan was done

9 A Yes

10 Q All right And so you saw the motor areas of the brain
11 lit ---

12 A Right Well, they normally are

13 Q ---As you would expect it to be

14 A Correct

15 Q All right So that would, in effect, be a form of the
16 procedure done by Dr Wu here, but in a different area of the
17 brain

18 A I'm not quite sure what you are saying You could, in
19 essence -- and showed back in the seventies -- have a patient
20 move a hand repetitively, and make your dose at the moment
21 they are moving the hand, and see an area of the motor cortex
22 of the brain light up Is that what you are asking?

23 Q Yes And ---

24 A And that is true

25 Q And specifically, if I'm not mistaken, you testified

1 almost in that fashion in this -- in your direct-examination

2 A Well, sure, because the visual cortex was very bright,
3 and the associated visual cortex just bordering that ---

4 Q Right, and you ---

5 A ---Indicating ---

6 Q ---Testified specifically about motor skills and
7 brain -- the brain activity occurring in that area of the
8 brain when those motor skills were being activated

9 A I didn't really notice that In other words ---

10 Q Okay

11 A ---I didn't see specific areas of the motor strip light
12 up more than others and extrapolate from that ---

13 Q All right

14 A ---He was doing some sort of muscle activity

15 Q And it might be that I didn't hear it correctly, but I
16 thought that you had mentioned something about that

17 A I guess that's possible I ---

18 Q In fact that -- I took it that's why this software is
19 called Sens Motor

20 A Oh no The Sens Motor Cortex, frequently that is an
21 area of the brain that is -- as hard as we try to make people
22 lie in a lounge for a long period of time it still lights up
23 pretty much

24 Q Uh huh (indicating positive)

25 A ---So when you are trying to set the window and level

KENNETH M SPICER - CROSS BY DIGGS

2001

1 on your images -- sorry -- by window and level, the contrast
2 range -- you can narrow the contrast range and make things
3 look very bright, or widen it out and make things very dark
4 You have to decide -- if you narrow them down you make
5 everything look abnormal, or some areas much more than others,
6 and you take it way back out, the contrast range, and
7 everything looks normal You can't see any abnormality, so
8 you have to decide how to narrow your contrast range down, and
9 one way is to take one of the more active areas of the brain
10 and say that's the top hottest area, and that could be the
11 sensory motor cortex, because that frequently is, in spite of
12 our efforts Some people use the ponds

13 The third way of doing it is to take the whole brain
14 scan, look at all the radioactivity in it, and find out the
15 average, then make that average the average of the range of
16 the contrast you use It's the latter technique that we use
17 But I showed you sensory motor cortex used is the hottest area
18 in the brain and how, when you window and level it, or adjust
19 the contrast range relative to motor cortex, it really didn't
20 change the analysis at all That was the purpose of that
21 slide

22 MR DIGGS Beg the Court's indulgence for just a
23 second

24 THE COURT Yes sir

25 Anything else, Mr Diggs?

1 Q Let me ask just this very briefly Dr Spicer, if an
2 individual, like in Mr Stanko's case, is engaged in an
3 activity that requires use and concentration in his frontal
4 lobes, and a scan is doing under that circumstance, would you
5 expect it to be -- what would you expect it to show in terms
6 of the scan data?

7 A I'm assuming that it would look just like all our other
8 scans, in that, as I sit here and you there, we are all using
9 our frontal lobes constantly

10 Q All right So your testimony is, it would make no
11 difference?

12 A Not that we could -- I mean, not enough difference,
13 significant enough difference for us to be able to distinguish
14 an abnormality

15 Q All right Even though the machines are sensitive to
16 the extent that you have already alluded to

17 A Oh, they are very sensitive I agree with you It's
18 just that when we read them we have to be certain we are not
19 falling into a trap of looking at things too sensitively and
20 overcalling

21 MR DIGGS All right That's all I have
22 Thank you very much, Dr Spicer

23 A Okay

24 THE COURT Any redirect?

25 MR HEMBREE No redirect, Your Honor

JURY OUT/ON RECORD

2003

1 We would ask that Dr Spicer be excused

2 THE COURT Any objection to that?

3 MR DIGGS No sir

4 THE COURT All right, Dr Spicer, you are released
5 from your Subpoena You may go back to your regular duties,
6 sir

7 A Thank you, sir

8 THE COURT Thank you

9 Yes sir, Solicitor

10 MR HEMBREE With that, Your Honor, the State rests
11 with it's reply testimony

12 THE COURT All right Very good

13 All right, ladies and gentlemen, we are going to break
14 for lunch As I understand from the Clerk your lunch is here,
15 so if you would leave your pads and pens and go enjoy your
16 lunch

17 Thank you

18 (THE FOLLOWING TAKES PLACE OUTSIDE THE PRESENCE OF THE
19 JURY)

20 THE COURT As I understand it then, we have finished
21 the testimonial portion of the trial Is that correct,
22 Solicitor?

23 MR HEMBREE That's correct, Your Honor

24 THE COURT From the Defense?

25 MR DIGGS Yes sir

1 **THE COURT** All right Why don't we -- like I said,
2 we'll take a short break

3 How long has it been taking for the jury to eat lunch
4 Do you know? How long has it been?

5 **CLERK OF COURT** Around forty minutes

6 **THE COURT** All right Let's just say we'll break for
7 thirty minutes We'll come back in and discuss matters at
8 that point in time

9 Thank you very much

10 **(THE FOLLOWING TAKES PLACE AFTER THE LUNCH BREAK AND**
11 **OUTSIDE THE PRESENCE OF THE JURY)**

12 **THE COURT** All right, counsel, the state of the
13 proceedings is that the evidentiary portion of the case has
14 concluded, so are there any motions from the Defense at this
15 point in time?

16 **MR DIGGS** Your Honor, we would move for a directed
17 verdict at the close of all of the evidence now on the issue
18 of insanity The only reasonable conclusion, I would submit,
19 that the factfinder could find beyond a reasonable doubt would
20 be insanity

21 Dr Crawford, of course, opined that he was sane, but
22 didn't have any information or knowledge about the M R I or
23 P E T scans She believed that he had an Anti-social
24 Personality Disorder, but did not know why he would have such
25 a disorder Those -- I would submit that the evidence shows

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2005

1 that he has a defect, it's there in the scans that were
2 interpreted by Dr Wu, and the only reasonable conclusion is
3 that, as stated by Dr Sachy, the Defendant was not sane at
4 the time of the incident

5 **THE COURT** All right As I did at the end of the
6 State's case, which is set forth that the Defendant is
7 entitled to a directed verdict when the State fails to produce
8 of the offense charged, and the Trial Court is concerned with
9 the existence of evidence, not with it's weight, credibility
10 or believability, and if there's any direct evidence or
11 substantial circumstantial evidence reasonably tending to
12 prove the guilt of the accused then the case would be properly
13 submitted to the jury

14 In this particular case I find that there is more than
15 sufficient evidence, if that evidence is so believed by the
16 jury, to find the Defendant guilty of the crimes charged
17 beyond a reasonable doubt, and there being that sufficient
18 evidence, and indicated, more than sufficient evidence that
19 the jury could use to find the Defendant guilty of the crimes
20 charged beyond a reasonable doubt I would respectfully decline
21 to grant your motions for a directed verdict

22 All right Verdict form As to how it should be
23 presented to the jury, the possible outcomes, besides guilty
24 or not guilty, Mr Diggs, what would you present on behalf of
25 the Defense?

1 MR DIGGS I'm sorry, Your Honor Could you repeat
2 that?

3 THE COURT The verdict form, besides the choices of
4 guilty or not guilty being presened to the jury, what would
5 you suggest on behalf of the Defense?

6 MR DIGGS Not guilty by reason of insanity

7 THE COURT All right And we would not be arguing, in
8 any way, guilty but mentally ill, correct?

9 MR DIGGS Is not supported by our evidence, Your
10 Honor

11 THE COURT All right Very good

12 MR HEMBREE Your Honor, if I may ---

13 THE COURT Yes sir

14 MR HEMBREE ---And we may want to take a quick look
15 at the statute on that My recollect is that, when the issue
16 of sanity is raised by the Defense that, under the statute all
17 four verdict forms must be offered to the jury, regardless of
18 the ---

19 THE COURT Where would that be? I'm ---

20 MR HEMBREE That would be -- bear with me, Your
21 Honor That would be 17-24-30, I believe

22 THE COURT All right

23 MR HEMBREE I'll read this, Your Honor I have it

24 THE COURT Hold on Well, let me just go to the Code
25 here All right It's 17-24-10 is insanity, and 17-24-20 is

JURY OUT/ON RECORD

2007

1 guilty but mentally ill It's not in either one of those, but
2 you said 17-24-30 ---

3 MR HEMBREE Yes sir

4 THE COURT ---So let's look at that

5 MR DIGGS Your Honor, it's either 30 or 40, and I
6 agree with the Solicitor

7 THE COURT So 17-24-30 says "Form of the Verdict" so
8 let's see All right 17-24-30 says, "Form of the Verdict"
9 In a prosecution for a crime when an affirmative defense of
10 insanity is raised sufficiently by the Defendant, or when
11 sufficient evidence of a mental disease or defect of the
12 defendant is admitted into evidence the Trier of Fact shall
13 find under the applicable law, and the verdict must so state
14 whether the defendant is guilty, not guilty, not guilty by
15 reason of insanity, or guilty but mentally ill

16 Mr Diggs

17 MR DIGGS Well, I don't read that statute as the
18 Solicitor does I read it as saying, of all of these are
19 supported by the evidence this is the way it should read, or
20 sufficient -- or when sufficient evidence of a mental disease
21 or defect of the defendant is admitted into evidence, prior
22 facts shall find, under the applicable law, and the verdict
23 form must so state

24 And so I -- I mean, from our perspective, if the Judge -
25 - if the Court chooses not to submit guilty but mentally ill

1 then that possible verdict wouldn't be in the form You
2 follow what I'm saying?

3 THE COURT I understand what you are saying, but I'm
4 just trying to understand what the statute says I mean, the
5 Defense's expert certainly didn't give -- or none of them
6 There wasn't any expert that opined that he was guilty but
7 mentally ill

8 I mean, Solicitor, you asked a direct question of Dr
9 Sachy, and clearly he indicated that -- he was indicating that
10 the Defendant was insane at the time the crime was committed
11 under the legal definition, and not relying at all on guilty
12 but mentally ill

13 So, are you reading 17-24-30 to say, even if there isn't
14 any evidence of guilty but mentally ill I have to give that
15 choice to the jury?

16 MR HEMBREE Your Honor, I will admit that I am
17 reading it in the most liberal sense possible, simply because
18 it's a death penalty case

19 THE COURT All right

20 MR HEMBREE And I mean, I'll say it just like that
21 I would agree -- I would agree with Mr Diggs that there is no
22 evidence in this record that would support a verdict of guilty
23 but mentally ill, that even by the Defendant's own experts he
24 would not qualify for a charge on that -- on that possible
25 form of verdict I have just -- that's the only reason I

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2009

1 raised the question

2 **THE COURT** All right Well, let's just look at what
3 it says It says, in a prosecution for a crime when the
4 affirmative defense of insanity is raised sufficiently by the
5 defendant, or when sufficient evidence of mental disease or
6 defect of the defendant is admitted into evidence -- so those
7 parts are taken care of -- the Trier of Fact shall find, under
8 the applicable law, and the verdict must so state whether the
9 defendant is guilty, not guilty, not guilty by reason of
10 insanity, or guilty but mentally ill Trier of Fact shall
11 find, under the applicable law

12 **MR HEMBREE** It's a very confusing -- I mean, I hope
13 the Court can understand the reason for my concern

14 **THE COURT** Yes sir, I understand your concern Let's
15 see if there's anything that -- there is a notation of a case,
16 and I'm not reading the case, I'm just reading the notation
17 here We might have to look this case up It's State versus
18 Campen, C a m p e n -- it's an Appellate Court Decision from
19 1996 It's 469 S E 2d 619, but the note and the annotations
20 under the statute say, "The Defendant's own testimony, and the
21 testimony of the Defendant's Psychiatrist, raised the issue of
22 the Defendant's sanity so as to oblige the Trial Court to
23 submit a verdict form for guilty but mentally ill, even though
24 the Psychiatrist testified that the Defendant had the capacity
25 and ability to differentiate right from wrong at the time of

1 the incident, and had capacity to conform his conduct
2 accordingly, where the Psychiatrist, as well as the Defendant,
3 testified as to the Defendant's long history of mental illness
4 and his treatment thereof "

5 And they have State versus Remmert We'll look at that
6 one State versus Remmert, 446 S E 2d 400 Rehearing denied,
7 Cert denied by the U S Supreme Court at 115 S C T 730, 513
8 U S 1080, 130 Lore's Edition Second 634 Section 17-24-30
9 requires a submission of four different verdict forms, guilty,
10 not guilty, not guilty by reason of insanity, and guilty but
11 mentally ill wherein a prosecution for a crime the Defendant
12 raises the affirmative defense of insanity

13 MR DIGGS Your Honor, going back to Campen, you know,
14 it says "Provisions of 17-24-30 are mandatory, and may not be
15 waived

16 THE COURT Well, then we are going to submit all four
17 of them to the jury then

18 MR HEMBREE Thank you, Your Honor

19 THE COURT All right So, if you would, let me hand
20 to you then -- make sure I've got a copy of it -- a verdict
21 form ---

22 All right, Madame Clerk, could you give a copy to each
23 table, please Ma'am

24 If y'all don't mind, take a moment to review that
25 possible verdict form, please

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2011

1 MR DIGGS Your Honor, we'll hand this up to you too

2 THE COURT All right

3 MR DIGGS This is the only additional charge that we
4 are going to specifically request ---

5 THE COURT All right

6 MR DIGGS ---And that is -- I didn't put it on there,
7 but it's right out of the statute that defines insanity, and -
8 --

9 THE COURT Okay And I was going to ask y'all about
10 that I appreciate that

11 MR HUMPHRIES And Your Honor, as to that charge we
12 would obviously request the entire statute, (A), (B), and (C)

13 THE COURT Well, okay -- well, let's not get -- let's
14 not get into that yet

15 Y'all tell me when you've looked at the verdict form
16 If y'all have finished looking at ---

17 MR HEMBREE The verdict form is acceptable to the
18 State

19 MR DIGGS Yes, and it is to us

20 THE COURT All right Very good

21 All right All right, now, the State has submitted a
22 Request to Charge number one -- did you give a copy of that to
23 the Defense?

24 MR HUMPHRIES I did, Your Honor

25 THE COURT All right Is there an objection to that

1 from the Defense?

2 MR DIGGS Your Honor, if that -- I notice the Court
3 of Appeals cite -- and I mean, if there's a State Supreme
4 Court cite that says that then I don't object to it, but if
5 there isn't we would object to it, and ask the Court to stay
6 with the Common Law definition of robbery, or armed robbery

7 THE COURT Yes sir, Mr Humphries

8 MR HUMPHRIES You know, that -- that statement of law
9 is literally a part of every capital case in which there is a
10 murder and armed robbery, and the fact that I cited the most
11 recent Court of Appeals case versus a line of cases from the
12 Supreme Court and the Court of Appeals has absolutely no
13 bearing as to it's authority of law in this State

14 It needs to be charged in this case because it's
15 applicable to the facts without being a charge on the facts,
16 and the State would request it

17 THE COURT All right, sir Y'all hold on one second,
18 please

19 All right, I find the State's Request to Charge Number
20 One to be appropriate, and I will so charge to the jury

21 MR HUMPHRIES Thank you, Your Honor

22 THE COURT Dixie, mark that as a court's exhibit,
23 please Ma'am Great

24 COURT REPORTER Court's 108

25 (DEFENDANT'S REQUEST TO CHARGE MARKED COURT'S EXHIBIT

JURY OUT/ON RECORD

2013

1 **NUMBER 108, NOT TO GO TO THE JURY)**

2 **THE COURT** All right The Defendant's Request to
3 Charge Number One sets forth Subsections (A) and (B) of 17-24-
4 10 It does not set forth Subsection (C) which says,
5 "Evidence of a mental disease or defect that is manifested
6 only by repeated criminal or other anti-social conduct is not
7 sufficient to establish the defense of insanity "

8 You object to the (C) part of the Section being as the
9 law in this case, and being charged to the jury, Mr Diggs?

10 **MR DIGGS** Your Honor, what our objection is now is
11 consistent with the prior objections we've made We object to
12 the Law in South Carolina that allows the jury to find sanity
13 based -- or lack of sanity based on -- allows a lay juror, or
14 a jury to find sanity based on lay testimony, and so in -- I
15 don't -- we would argue that the language that was omitted
16 from the statute is -- I mean, if you look at the testimony of
17 Dr Crawford when she says, look, we base these things on
18 one's conduct, those opinions -- or I mean, those diagnoses
19 are based on the fact that these characteristics are present,
20 and so I would argue that it's unconstitutional to interpose
21 that last section of the statute because it's arbitrary
22 There's no reason for it, and it should be omitted from the
23 Court's charge Secondly, it's confusing, because the jury
24 really doesn't know, okay, what else is required You know,
25 we don't know what else is required to support it We can't -

1 - it kind of leads to the conclusion that the jury has to
2 forget about the conduct that appears to be result of insane -
3 - of an insane state, so I'm asking the Court not to charge
4 it

5 **THE COURT** All right Solicitor

6 **MR HUMPHRIES** Your Honor, it's a complete statement
7 of the Law To do anything else, under the circumstance,
8 would be absolutely improper

9 And also, the state of the Law is that a jury can
10 determine sanity, surely from lay testimony, but we are not
11 dealing with that We are dealing with expert testimony,
12 start to finish in this case, so the basis of that argument is
13 flawed to begin with We are not relying on lay persons'
14 testimony We are relying on experts' testimony It was a --
15 and it was the basis upon which Dr Crawford formed her
16 opinion, it should have been the basis under which Dr Sachy
17 formed his opinion, although it was wholly lacking, it's the
18 Law of this State

19 **THE COURT** All right What I would intend to do is,
20 consistent with the evidence in this case, that -- to read
21 Sections (A) and (B) and (C), but how I will read Subsection
22 (C) is, "Evidence of a mental disease or defect that is
23 manifested only by repeated criminal or other anti-social
24 conduct is not sufficient in and of itself to establish the
25 defense of insanity", because I think that conforms to the

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2015

1 evidence in this case, so that would be how I intend to ---

2 MR HUMPHRIES Thank you, Your Honor

3 THE COURT ---Charge it to the jury

4 All right, understanding then that we are going to use
5 the verdict form that has all four possibilities

6 Just so that y'all have an understanding, obviously I'm
7 going to talk to the jury about the normal things that we talk
8 about in any case, about expert witnesses, I allowed them to
9 take notes in this, but that they should not be given any
10 greater weight than the recollection of other jurors, if I
11 told them to disregard any statements they had to disregard
12 them and couldn't use them, I'll give them the charge about
13 the fact the Defendant did not testify, and instruct them and
14 emphasize that fact is not to be considered in their
15 deliberations in any way, presumption of innocence, reasonable
16 doubt, the kind of doubt that would cause a reasonable person
17 to hesitate to act, insanity, what I would do is read the
18 Section as I indicated, and then the Court's charge on that,
19 and then go to basically the -- looking at 17-24-20,
20 Subsections (A) and (B) of that -- (C) and (D) are really
21 instructions to the Court, so they do not apply to what the
22 jury could -- or would understand as the law in this case --
23 and then as to homicide or murder, obviously charge that law,
24 and armed robbery, to the jury, along with the Request to
25 Charge of the State that was -- just for the -- y'all's

1 information, it's Court's Exhibit 106 -- and then just give
2 them an explanation of the four possible verdict forms in the
3 matter, and obviously remind them that their decision has to
4 be unanimous in this particular matter

5 Anything further from the State?

6 MR HUMPHRIES No sir

7 THE COURT Anything further from the Defense?

8 MS WILLIAMS Yes sir I do think the -- the Court,
9 if I understood correctly, is going to give a charge on
10 reasonable doubt, but as far as the insanity -- in the
11 insanity statute (B) says, the defendant has the burden of
12 proving the defense of an insanity by a presumption of the
13 innocence

14 THE COURT Yes Ma'am

15 MS WILLIAMS I believe we need a definition of that,
16 and Your Honor, I'll ---

17 THE COURT Well, it's in the -- I'm sorry Let me go
18 to ---

19 MS WILLIAMS Just make sure it is in there and that
20 would be ---

21 THE COURT All right Just hold on Hold on one
22 second Let me read it to you, so I'll see if you've got --
23 okay, "By raising the defense of insanity the defendant does
24 not necessarily admit the crime was committed, the State must
25 still prove, beyond a reasonable doubt, that the defendant

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2017

1 committed the crime, however, the defendant must prove
2 insanity by a presumption of the innocence A preponderance
3 of the evidence simply means the greater weight of the
4 evidence, or more likely than not "

5 MS WILLIAMS Thank you

6 THE COURT Anything further?

7 MS WILLIAMS No sir That's it Thank you

8 THE COURT All right Very good

9 MR HUMPHRIES Your Honor, the -- let me just -- let
10 me comment briefly on that There is -- there is that
11 requirement that the defense raise the issue of insanity by a
12 presumption of the innocence The converse of that is then --
13 because that's not the end, obviously The end is that the
14 State must then refute that evidence beyond a reasonable
15 doubt

16 THE COURT Reasonable doubt Well, all right ---

17 MR HUMPHRIES I mean, you with me?

18 THE COURT Let me -- all right, why don't I just grab
19 the whole charge, read it to you

20 MR HUMPHRIES I just don't want to leave the jury ---

21 THE COURT I understand that

22 MR HUMPHRIES Yes sir

23 THE COURT Hold on Hold on a second All right

24 All right I'll just -- after reading the Section to
25 the jury, then I would charge to the jury, the Defendant has

1 raised the defense of insanity The criminal intent -- I'm
2 sorry -- criminal intent is required to prove that the
3 defendant is guilty of the crime charged A person who is
4 insane cannot have criminal intent, and therefore cannot be
5 found guilty of a crime In order to be found not guilty by
6 reason of insanity it must be shown that, at the time of the
7 crime the defendant had a mental disease or defect which made
8 him unable to distinguish moral or legal right from moral or
9 legal wrong, or to recognize the crime as morally or legally
10 wrong By raising the defense of insanity the defendant does
11 not necessarily admit the crime was committed The State must
12 still prove, beyond a reasonable doubt, that the defendant
13 committed the crime, however, the defendant must prove
14 insanity by a preponderance of the evidence A preponderance
15 of the evidence simply means the greater weight of the
16 evidence, or more likely than not If you find there is
17 evidence in the record that, at the time the crime was
18 allegedly committed it is more likely than not that, because
19 of a mental disease or defect the defendant did not know the
20 alleged crime was morally or legally wrong the State must then
21 prove, beyond a reasonable doubt, that the defendant was sane
22 It is for you to decide what the state or condition of the
23 defendant's mind was at the time the alleged crime was
24 committed

25 MR HUMPHRIES Thank you, Your Honor

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2019

1 **THE COURT** Any -- so there's no problem with that from
2 the State?

3 **MR HUMPHRIES** None from the State, Your Honor

4 **THE COURT** From the Defense?

5 **MR DIGGS** And you plan to charge that, Your Honor
6 I'm ---

7 **THE COURT** That's ---

8 **MR DIGGS** Yes

9 **THE COURT** ---Why I was reading it

10 **MR DIGGS** Okay Yes, no objection

11 **THE COURT** All right Very good

12 All right Closing arguments

13 **MR. HUMPHRIES** Yes sir

14 **THE COURT** How long did the State plan on, and how did
15 the State intend, if at all, to divide it's argument?

16 **MR HUMPHRIES** Your Honor, there will be one argument,
17 and it will be approximately twenty-five to thirty minutes

18 **THE COURT** All right And the Defense?

19 **MR DIGGS** Your Honor, we are going to do one
20 argument, and it may go about thirty to forty minutes

21 **THE COURT** All right I will leave it to you I say
22 that -- I mean, obviously if you go on excessively I will
23 probably say something I don't -- probably won't be so quick
24 as Judge Floyd, and start rapping my pen or my hand on the
25 bench, like he would, but I guess I ought to remind you just

1 like he did, that the jurors' seats can only absorb so much,
2 and when that limit is reached their brains tune you out
3 So -- he would say it differently but I just chose not to

4 All right Is the State ready for the jury?

5 MR HUMPHRIES State's ready I'm sorry

6 THE COURT Yes sir

7 MR HEMBREE Your Honor, the -- I didn't know if the
8 Court wanted to discuss with the Defendant his right to
9 allocute in this phase of the trial

10 THE COURT You are exactly right, and I had that out
11 but I put it to the side, and I did not stick it in front of
12 me

13 All right, Mr Stanko ---

14 DEFENDANT Yes

15 THE COURT Please stand

16 DEFENDANT I'm sorry

17 THE COURT Have your attorneys explained to you that
18 you have the opportunity and the ability to address the jury
19 at these -- stage of the proceedings?

20 DEFENDANT We have had some discussion about it, sir

21 THE COURT All right, sir Do you feel that you need
22 to discuss it further with them at this time?

23 DEFENDANT If only for a few minutes, and we can do it
24 right here We can ---

25 THE COURT I'd be glad for you to -- please, go ahead

JURY OUT/ON RECORD

2021

1 and y'all take what time that you would like Please go
2 ahead

3 (DEFENDANT CONSULTS WITH HIS COUNSEL)

4 DEFENDANT Thank you, Your Honor

5 THE COURT All right, Mr Stanko, have you had
6 sufficient time to discuss the issue with your attorneys?

7 DEFENDANT Yes sir, I have

8 THE COURT And did they answer your questions to your
9 satisfaction?

10 DEFENDANT Yes sir

11 THE COURT All right, sir Understanding then your
12 right to address the jury at this stage of the proceedings
13 what is your choice, sir?

14 DEFENDANT At this stage I will not address them

15 THE COURT All right Very good And you understand
16 that we will, again, raise that -- should there be a
17 subsequent phase of the trial we will, again, raise that issue
18 with you You understand that?

19 DEFENDANT If this goes to sentencing we will address
20 it again

21 THE COURT Very good, sir Thank you very much

22 DEFENDANT Yes sir

23 THE COURT All right Is the State now ready for the
24 jury?

25 MR HUMPHRIES The State is ready to proceed, Your

1 Honor

2 THE COURT Very good

3 Defense

4 MR DIGGS Yes sir Your Honor, we are ready I'm
5 going to step out and ---

6 THE COURT All right All right Step out And
7 again, what we are doing is, the State is not going to have an
8 opening, the Defense will start ---

9 MR DIGGS Your Honor, under this procedure the State
10 will go first

11 MR HUMPHRIES I'll go -- we go first, Judge

12 THE COURT All right, sir

13 MR DIGGS And then we will close

14 THE COURT All right Very good That was only in
15 the sentencing phase All right Very good

16 MS WILLIAMS Your Honor, while he's gone I'll do this
17 housekeeping on exhibit ---

18 THE COURT Okay Is that the photographs from
19 yesterday?

20 MS WILLIAMS Yes sir

21 THE COURT All right Very good And you are marking
22 those for identification? I mean, that's what we discussed
23 yesterday I don't know -- we -- if we are doing something
24 different then I need to know

25 MR HUMPHRIES They are marked for identification, I

JURY OUT/ON RECORD

2023

1 believe It was my understanding they would be available in
2 the record

3 THE COURT For the record

4 MS WILLIAMS Yes sir

5 THE COURT That's correct

6 MS WILLIAMS Yes sir

7 THE COURT Okay Very good Why don't you go -- let
8 Dixie have the photographs, since we know what we are doing
9 with those

10 MS WILLIAMS Well, that's the one you put down first
11 This is the PowerPoint, and that is -- these are the three
12 photographs from Sachy's PowerPoint

13 COURT REPORTER All right The photographs are being
14 marked Defendant's Exhibit Number 40, and the ---

15 MS WILLIAMS Your Honor, Defendant's Number 31, for
16 identification, are the three slides that were displayed
17 during Dr Sachy's testimony

18 THE COURT All right And ---

19 MS WILLIAMS They are just for identification

20 THE COURT All right Very good

21 MS WILLIAMS And it's three pages that will be number
22 41

23 THE COURT Okay

24 And 40, again, was what now?

25 MS WILLIAMS It is a print-out of the Power -- the

JURY IN
STATE'S SUMMATION (HUMPHRIES)

2024

1 PowerPoint that Dr Wu presented during his testimony

2 THE COURT All right Very good

3 (POWERPOINT PRESENTATION BY DR WU ADMITTED INTO
4 EVIDENCE AS DEFENDANT'S EXHIBIT NUMBER 40)

5 (SLIDES FROM DR SACHY'S POWERPOINT MARKED DEFENDANT'S
6 EXHIBIT NUMBER 41, FOR IDENTIFICATION ONLY, NOT TO GO TO THE
7 JURY)

8 THE COURT The Clerk has given me a copy -- not the
9 original, but a copy of the indictment Did y'all want to
10 look at that? We need to get that marked Just make sure
11 that there are no issues

12 THE COURT All right So we will mark that as a
13 Court's Exhibit then

14 (INDICTMENT NUMBER (05-GS-26-02927) MARKED COURT'S
15 EXHIBIT NUMBER 109, NOT TO GO TO THE JURY)

16 THE COURT Yes, so Court's Exhibit 109 is a copy of
17 the indictment as against the Defendant in this case for
18 murder and armed robbery, in (05-GS-26-02927)

19 All right Go ahead and bring the jury in, please

20 (THE FOLLOWING TAKES PLACE WITHIN THE PRESENCE OF THE
21 JURY)

22 THE COURT All right, ladies and gentlemen, we have
23 concluded the evidentiary portion the trial We are now going
24 to go into the closing arguments by the attorneys, after which
25 I will give you the law that you will apply to the facts as

JURY IN
STATE'S SUMMATION (HUMPHRIES)

2025

1 you so find them to be in this particular case, and then I
2 will submit the case to you for your deliberations and your
3 unanimous decision in this particular matter

4 I'll remind you as I did at the -- regarding the opening
5 statements, the closing arguments of the attorneys are not
6 evidence, cannot be considered by you as evidence in the case,
7 but they are important They are each side's summation to you
8 of what they believe the evidence has shown to you during the
9 course of the trial, and then, of course, ultimately what they
10 are going to be asking you to do regarding your unanimous
11 verdict in this particular matter

12 So I would ask that you give your close attention to the
13 attorneys as they give you their closing arguments in this
14 case

15 All right, Solicitor

16 MR HUMPHRIES If it please the Court

17 THE COURT Yes sir

18 MR HUMPHRIES Counsel

19 Mr Foreman, ladies and gentlemen of the jury, murder is
20 the unlawful killing of one human being by another, with
21 malice aforethought Malice is a term of art It means
22 wickedness, depravity of heart, to wrongfully do an act you
23 know is wrong Aforethought means that the malice must exist
24 in the mind of the killer an instant before the fatal blow or
25 shot He did that

JURY IN
STATE'S SUMMATION (HUMPHRIES)

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1 Armed robbery is the taking and carrying away of the
2 property of another, from the person of another, while armed
3 with a deadly weapon, and in this case it matters not whether
4 the victim in this case was dead or alive, as long as it was a
5 part of a continuous series of acts He did that

6 These are things about which there can be no argument
7 On all of these things we can agree There's one issue, one
8 issue, and it's really what this entire case is centered
9 around, and that is, by the law of the State of South Carolina
10 was this Defendant legally insane, and that's it That's it

11 We had the opportunity, such as it was, to hear from a
12 number of people qualified as experts in this case And the
13 Defense provided you a number of people qualified as experts
14 in this case Let's talk just a bit about Dr Albinak Dr
15 Albinak gave us quite a lecture about the structure and
16 function of the brain, but as an end result, as end result,
17 what did he really tell us? What he really told us was that,
18 absent a stimulus from the amygdala to the frontal lobe that
19 would trigger an aggressive response, there was no excuse for
20 shooting seventy-five year old Henry Turner in the back while
21 he was shaving

22 In fact, what he told you, based on the facts -- now,
23 listen, folks, here's what we've got to do We have to been
24 mindful of what we know, not what someone suggests could have
25 happened to him, but what we know, and what we know is that

JURY IN
STATE'S SUMMATION (HUMPHRIES)

2027

1 Defendant Stanko, after an incident, a prior incident, went to
2 a bank, took out a bunch of Laura Ling's money, and Laura
3 Ling's car, called Henry Turner, his old buddy, 3 22 in the
4 morning, told him, Henry, my daddy has died, do you mind if I
5 come over He goes there, arranged for a period of time,
6 Henry Turner goes and buys him breakfast, and then sometime
7 after that, while shaving, Defendant Stanko comes up behind
8 him, and with a pillow over the muzzle of the gun, shoots him
9 in the back, shoots him in the chest, gets some going-out-of-
10 town money, and steals his truck Those are the things we
11 know okay

12 When I asked Dr Albinak, under those circumstances,
13 Doctor, can you identify for me the stimulus that would have
14 provoked an aggressive response, an aggressive raged-filled
15 response in that Defendant, and he couldn't In fact I asked
16 him, I said, Dr Albinak, you said that this amygdala -- and
17 Lord knows, we've probably learned a whole lot more about the
18 brain than we ever wanted to -- but that doesn't just -- that
19 doesn't just, you know, provide an aggressive response It
20 provides responses that would lead someone to euphoria, or
21 happiness And I asked him, within the context of the things
22 we know about this case, isn't it more likely that those
23 things, taking him in, consoling him, providing him a place to
24 lay his head, buying him breakfast, wouldn't those stimuli
25 result in euphoria, or happiness, versus rage or aggression

JURY IN
STATE'S SUMMATION (HUMPHRIES)

2028

1 Yes sir Yes Ma'am That's Dr Albiniak

2 Dr Thrasher He's a Psychiatrist Primarily, with the
3 exception of the diagnosis -- this is important -- of Anti-
4 social Personality Disorder, he testified a bit about birth
5 records, and on direct, when he was talking to the Defense he
6 was talking about all sorts of terrible things that happened
7 to Defendant Stanko during his birth, but when pressed --
8 let's really look -- let's look at the records Isn't it
9 true, isn't it true, Doc, the most you can say about this
10 youn'un, when he was born, is he was throwing up, which
11 abated, which means it stopped, and that two days after his
12 birth he was a little jaundice, isn't that true That's Dr
13 Thrasher

14 Dr Einhorn He opined that Defendant Stanko has an
15 Anti-social Personality Disorder, and that
16 neuropsychologically, in terms of his assessment, he was
17 either normal, or above average, very high intelligence
18 Those are the kind of guys I can sort of line up with

19 Now, we get a little further away You go to
20 Pennsylvania and California then you start to see some
21 different things

22 Dr Gur Dr Gur takes results -- now keep in mind now,
23 he's taking results, not straight from M U S C -- they've
24 gone all the way across the Country, to California, and then
25 back over to Pennsylvania -- and he opines, based on a

JURY IN
STATE'S SUMMATION (HUMPHRIES)

2029

1 statistically analysis, that Defendant Stanko's brain is two
2 standard deviations below what his data base considers normal,
3 and in some cases four, four standard deviations That's in
4 the amygdala

5 And here's what we know about Dr Gur's statistical
6 analysis, it's interesting, that's it, it's interesting,
7 because it has absolutely no application and clinical
8 diagnosis, it's not medically accepted as a means by which you
9 clinically diagnose It's interesting, which is not to say
10 it's accurate, but it's interesting

11 Dr Wu Now, that's a smart man, I'll give you that,
12 but the thing that amazed me, really does, is that this, you
13 know, what, twenty-six hundred mile trip across the United
14 States, took a P E T scan that, when interpreted by the folks
15 who gave it -- and we ain't talking about all the data bases,
16 and the comparative things that they did, we are talking about
17 taking the pictures and looking at them, compared to nothing
18 but them -- took a normal P E T scan and went from normal to
19 a fifty percent reduction, fifty percent, which ain't subtle,
20 but you ought to be able to see, and it took twenty-six
21 hundred miles to get that, and, and, the methods by which he
22 did that analysis are not medically accepted in the community
23 in which they operate, and they are not clinically approved
24 for that purpose The F D A says no, and the medical
25 community, as a whole, says no

JURY IN
STATE'S SUMMATION (HUMPHRIES)

2030

1 And Dr Sachy Now there's a fellow, folks, who was
2 absolutely invested, invested in this Defense One of the
3 things that you are called upon to do as jurors is to
4 determine bias, that is, does someone have a reason to line up
5 with a particular side, and prejudice, they have something
6 against the other side Now, I don't know about y'all, but
7 honestly, wouldn't you want someone coming in here testifying
8 as an expert to give you the benefit of their knowledge and
9 experience, wouldn't you likely be just a touch more on the
10 impartial side, just a little bit?

11 Then, seems to me if I was going to come into a
12 courtroom, in South Carolina, and give an opinion as to
13 whether or not a particular defendant, in this case, Stephen
14 Stanko, was legally insane, I think I would be just a touch
15 more familiar with the law that determines sanity and
16 insanity I think that would be a good idea

17 You know, we could really end this analysis right here,
18 without ever having heard from the State's reply witnesses,
19 without having a word, because the end result is this We
20 know he's got an Anti-social Personality Disorder We've had
21 some interesting statistical analysis which are not clinically
22 approved for diagnosis of an individual We've got P E T
23 scan analysis which is not F D A approved or medically
24 accepted, and then we've got Dr Sachy who tells you, who
25 tells you that he's anti-social -- he's got an Anti-social

JURY IN
STATE'S SUMMATION (HUMPHRIES)

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1 Personality Disorder, and that that's based on this history of
2 repeated criminal conduct

3 Let me read something to you I ain't making it up
4 "Evidence of a mental disease or defect that is manifested
5 only by repeated criminal or other anti-social conduct is not
6 sufficient -- and the Court will charge you -- in and of
7 itself, to establish the defense of insanity That's the law
8 in South Carolina

9 And folks, that's what Dr Sachy said He was asked
10 directly, is that what you are saying, and directly he
11 responded, yes We don't have to go one step further, not
12 one, but we did, we did

13 Dr Pamela Crawford Folks, this one fact should not
14 escape your attention, and I know it's not Dr Pamela
15 Crawford was the Court's expert The State called her, we
16 did, but she's a Court's expert She was appointed by the
17 Court, she did her examination for the Court, she reached her
18 conclusions for the Court, she had no friends to reward, no
19 enemies to punish, and she rendered an opinion based on the
20 law in the State of South Carolina that Defendant Stanko was
21 not insane at the time he killed Henry Turner

22 Now, she said a lot of other things, but based on the
23 law in the State of South Carolina he didn't even come close
24 Now remember this, she gets called by the State, and she gets
25 called by the Defense, dependant on where her opinion falls

JURY IN
STATE'S SUMMATION (HUMPHRIES)

2032

1 She doesn't generate an opinion in favor of the State, or in
2 favor of the Defense, she generates the opinion for the Court

3 And in terms of her background and experience I submit
4 to you that there was no one else you heard in this case that
5 approached her qualifications in that regard For goodness
6 sakes, she was the Forensic Psychiatrist for the entire State
7 She performed hundreds of Forensic Psychiatric evaluations,
8 and supervised many more

9 Now what you do when you are sitting in the jury box is,
10 you watch witnesses because, folks, this is something that,
11 you know, seems like an onerous task the a juror when they
12 first start out, but we've been in this thing a long time
13 You know, we asked you to -- we asked you to assess and
14 determine the credibility of a witness, and that is something
15 that you do each and every day Sometimes it's entirely
16 unconscious, sometimes it's very purposeful When you meet
17 somebody new you listen to them, you don't just hear the
18 words, you watch how they say them to you, and you don't just
19 take them at their word, you compare it to things you know to
20 be true Now, compare the manner in which Dr Crawford
21 testified say to Dr Sachy That's not a hard job

22 This is important No less than five opinions, five
23 opinions were rendered regarding the mental status, the mental
24 state of Defendant Stanko as it relates to his mental
25 condition Without exception, without exception every expert

JURY IN
STATE'S SUMMATION (HUMPHRIES)

2033

1 to a person, whether Defense, the Court's, or the State's,
2 came up with one singular diagnosis, and that was Anti-social
3 Personality Disorder

4 As a result of a mental illness or defect the Defendant
5 must not know, or cannot be able to distinguish moral and
6 legal right from moral and legal wrong, as a result of a
7 mental illness or defect Folks, let me tell you something --
8 and Dr Crawford told you -- Anti-social Personality Disorder
9 ain't a mental illness, and it ain't a mental defect, it's not
10 a major mental illness, it's not

11 The D S M 4 -- everybody has been talking about the
12 D S M 4 Well, that basically tells you what is and what
13 isn't, okay It's not You don't get past the first phrase
14 in the definition If you don't have a maj -- a mental
15 illness or defect that's it, and he doesn't He's got a
16 personality disorder

17 You know, Dr Brannon, a very storied career, both in
18 the Navy and in private practice, was there at the inception
19 of M R imaging, and has done it his entire career, told you
20 that M R images of Defendant Stanko's brain are normal

21 Dr Spicer Dr Spicer testified -- and you know, there
22 may be a lot made, honestly, there may be -- and you know,
23 maybe there's some room for it -- there may be a lot made
24 about what data bases were used in the comparison against the
25 norm of these P E T scan images, but let's not forget this

JURY IN
STATE'S SUMMATION (HUMPHRIES)

2034

1 Before Dr Spicer ever put it in the computer program to
2 compare against any data base whatsoever he did what every
3 Radiologist does, and that is, he looked at them It doesn't
4 matter what the data base is

5 Now, I agree with him that they are the only F D A
6 approved methods by which you can do such a comparison They
7 are the only medically accepted ways by which you can do a
8 comparison, but just put that to the side This is a man,
9 since 1980, has been involved in brain imaging, he's a
10 teacher, he's clinician, and those P E T scans, until they
11 traveled twenty-six hundred miles, were normal

12 Let's talk just a bit about the facts, just a bit,
13 because this is -- this is -- this is one of the ways you
14 determine -- this is one of the ways Dr Crawford determined
15 whether or not Defendant Stanko understood the difference
16 between legal and moral right and legal and moral wrong She
17 did that by the conduct of the Defendant The second part of
18 that, the Court will charge you, is that he had to have been
19 unable to distinguish, or appreciate the moral or legal
20 wrongfulness of his acts Now that's important In order to
21 be not guilty by reason of insanity he had to have been unable
22 to appreciate the wrongfulness of his acts Well, we've
23 already established there was no rage

24 The crime scene -- you know, they had the fellow from
25 Alaska who came in and basically told us everything we already

JURY IN
STATE'S SUMMATION (HUMPHRIES)

2035

1 knew, and a few other things, which I appreciate There is no
2 prior conflict or assault between Defendant Stanko and Henry
3 Turner, none whatsoever Now, of course he wouldn't agree
4 with me that there was planning involved I think he tried a
5 little too hard there You know, he -- I think he gave
6 Defendant Stanko just a touch too much credit, because I think
7 he watches a lot of T V , to tell you the truth But we know
8 he did this, we know he did this We know that he took an
9 opportunity -- and I submit to you, the opportunity was when
10 he sent old Henry to get him some breakfast, but he took the
11 opportunity to arm himself He waited, he waited to the least
12 confrontational moment possible, when Henry Turner had his
13 back turned and was otherwise occupied in the task of shaving
14 He took a pillow -- now you know what, I'm familiar with
15 handguns, I know better, but we are going to give Defendant
16 Stanko that credit, that he knew that the sound wouldn't be
17 muffled by the pillow He had to get the pillow for some
18 reason, I mean, he did it for some reason It was planning,
19 folks, it was planning, start to finish

20 Now, I submit to you he probably was a bit surprised by
21 the noise, but he still used a pillow And it didn't work out
22 all that well because Henry Turner didn't have the common
23 decency to die with one shot, and he shot him again, and there
24 really is no reason to ask yourself why, why he did that, why
25 did he shoot Henry Turner, because he wanted his truck because

JURY IN
STATE'S SUMMATION (HUMPHRIES)

2036

1 it was less conspicuous than the vehicle that he drove up in,
2 he wanted his gun, which he had, wanted his money, which he
3 got, and he wanted to get out of town Now, are thee good
4 plans? There again, we are going to give Defendant Stanko
5 that much credit, but there were plans

6 And folks, let me tell you something, if you can plan to
7 do all that you appreciate the wrongfulness of your actions,
8 you appreciate them, and if you appreciate them you ain't
9 insane, not by the law in the State of South Carolina

10 There were -- and then after that, for goodness sakes --
11 you'd have to go some to try and be able to explain Defendant
12 Stanko's conduct after that unless you knew Defendant Stanko
13 I mean, it's galling, it's offensive to think about the things
14 he did afterwards, in a matter of hours, folks, in a matter of
15 hours, dressed himself up in his three piece suit, sat himself
16 down in a bar in Columbia, hit on women, threw money around,
17 went to another bar, stayed out till four o'clock in the
18 morning That would be bizarre if you weren't Defendant
19 Stanko

20 Leaves Columbia, goes to Augusta, the Master's
21 Tournament, gazillion of people up there, from all over the
22 world, and he's throwing money around again, making friends,
23 adopting new identities , That started in Columbia That
24 would be bizarre if you didn't know Defendant Stephen Stanko
25 Co-ops into this sweet woman, Dana Putnam, takes advantage of

JURY IN
STATE'S SUMMATION (HUMPHRIES)

2037

1 her That would be bizarre if you didn't know Defendant
2 Stephen Stanko

3 But here's what we know, here's what we know We know
4 not only that he has an Anti-social Personality Disorder, but
5 that he is highly narcissistic Do you know what that means,
6 really? It means that he's mean, and he likes himself that
7 way That's what it means He believes he's smarter than
8 everybody else, and he don't care He doesn't care But,
9 that is not a major mental illness It is not a mental
10 illness or defect, and he's not insane

11 You know, when we talked to you at the very beginning,
12 and the Judge gave you the initial charge, he said this to
13 you, your primary job, your primary obligation in this case is
14 to hear the evidence, find the facts, apply the law as he
15 charges it to you, and then find jury -- a verdict that speaks
16 the truth, that speaks the truth

17 He's tell you the State's, your State -- I ain't talking
18 about me -- your State is entitled to a verdict that speaks
19 the truth, the people impacted by this case, and his conduct,
20 deserve a verdict that speaks the truth, and, and Defendant
21 Stanko, he deserves a verdict that speaks the truth, and I
22 submit to you, he wants nothing approaching that

23 Thank you

24 MR DIGGS Your Honor, could we -- may we approach for
25 a second?

1 THE COURT Yes sir

2 (BENCH CONFERENCE TAKES PLACE OFF THE RECORD)

3 THE COURT Ladies and gentlemen of the jury, please go
4 to the jury room

5 Thank you

6 (THE FOLLOWING TAKES PLACE OUTSIDE THE PRESENCE OF THE
7 JURY)

8 THE COURT We'll take a short break Thank you very
9 much

10 (THE FOLLOWING TAKES PLACE AFTER A BREAK AND OUTSIDE THE
11 PRESENCE OF THE JURY)

12 THE COURT Is the State ready for the jury?

13 MR HEMBREE Yes, Your Honor

14 THE COURT Defense?

15 MR DIGGS Yes sir

16 THE COURT Very good Ask the jury to come in, please

17 MS WILLIAMS Your Honor, if I may ---

18 THE COURT I'm sorry

19 MS WILLIAMS ---If you will stop them Could I make
20 a motion for the record?

21 THE COURT Yes Ma'am

22 MS WILLIAMS Your Honor, we would like to object to
23 the continued references that Pam -- Dr Pam Crawford was a
24 Court expert in this case You know, we totally acknowledge
25 that she was an expert appointed for the purposes of the Blair

1 hearing to determine, you know, if he was competent to stand
2 trial, if he had the ability to assist us and understand his
3 charges, and we acknowledge in that instance she was, indeed,
4 a Court's witness, Your Honor, but we think that it is an
5 incorrect characterization to call her the Court's expert when
6 she was called by the State, she was here to testify on behalf
7 of the State, and we think it just creates an unfair bias, and
8 we would ask that that reference be stricken because her
9 purpose at trial was not as a Court's expert, but as a State's
10 expert

11 THE COURT So what would you have me do? I mean, the
12 proper time to have raised this objection is when it's said,
13 so that it can be cured at the time it's said, so now you want
14 me to say something to the jury after the fact, when it was
15 already done and you didn't object at the time that it was
16 made?

17 MS WILLIAMS Your Honor, we would -- the only cure we
18 are asking for is just a curative instruction

19 THE COURT To say what?

20 MS WILLIAMS That she was a -- a State's witness for
21 the trial, and a Court's expert at -- for a prior hearing

22 MR DIGGS And that status doesn't generate or ---

23 THE COURT Well, I'm not going to comment on her
24 status I'll comment on all expert witnesses' status, ---

25 MS WILLIAMS That's all we want

JURY IN
DEFENDANT'S SUMMATION (WILLIAMS)

2040

1 **THE COURT** ---But I'm not going to comment on her
2 status I might indicate that she was initially appointed by
3 the State -- I mean, appointed by the Court, and she was
4 called in this matter by the State Is that what you are
5 asking me to do?

6 **MS WILLIAMS** Yes sir

7 **THE COURT** All right I -- do you have an objection
8 to that, Solicitor?

9 **MR HUMPHRIES** Well, that's what I told them

10 **THE COURT** All right Well, I'll -- I'll be glad to
11 tell them that That's not a problem

12 All right Ask the jury to come in

13 **(THE FOLLOWING TAKES PLACE WITHIN THE PRESENCE OF THE**
14 **JURY)**

15 **THE COURT** All right, ladies and gentlemen, before the
16 Defense gives you their closing argument I want to tell you
17 one thing, and I'll -- just to make sure it's clear, as to Dr
18 Pam Crawford, that she was initially appointed by the Court,
19 and she was called in this matter by the State

20 Thank you

21 All right Mr Diggs

22 **MR DIGGS** May it please the Court

23 **THE COURT** Yes sir

24 **MR DIGGS** Good afternoon

25 I think that we have a lot in agreement with what the

JURY IN
DEFENDANT'S SUMMATION (WILLIAMS)

2041

1 Prosecution said in it's closing I don't think that we need
2 a lot of expert testimony in this case to tell us whether or
3 not Stephen Stanko is insane, because common sense tells us
4 that he is We have heard enough evidence in this case to be
5 able to determine that sane people do not behave in the way
6 that Stephen Stanko has, sane people do not do what Stephen
7 Stanko does Who is the person -- and think about this Who
8 is the sane person that attempts to kill people he loves, or
9 that love him? You've heard, just today from Dr Crawford,
10 the girl he was living with, he's trying to kill her with a
11 rag with some poison on it or something I don't know if you
12 heard her say this but we got her to admit yeah, she said
13 something about him singing and whistling during that process
14 And think about that, who was the person that does that, other
15 than an insane individual

16 About -- this issue about avoiding detection and getting
17 away, think about this as a practical matter -- and it was
18 kind of a disjointed question, and Dr Sachy didn't really
19 understand it yesterday, but remember when he was there and I
20 said, who are the most important people in an individual's
21 life, finally I got him to say, of course, your family Do
22 you think if you could recognize the rightness or wrongness of
23 your conduct you would certainly do it with your family
24 members You can have a man this man's age -- and see, I
25 apologize to him, he's a human being, but he doesn't even know

JURY IN
DEFENDANT'S SUMMATION (WILLIAMS)

2042

1 what it is that alienates his family, his siblings You heard
2 Dr Thrasher, I believe he said, isn't this the fifth birth in
3 this family, that his mom had He has four siblings Not one
4 of them is here His parents, his mom, I believe -- I
5 understand has passed away His dad is alive The family
6 live down in Goose Creek, not very far from here Who is the
7 person that lives that lives day, after day, after day that
8 alienates even their own siblings, all of them, not just one,
9 but every single member of his intimate family, his immediate
10 family, every single one has fallen to the side, they've given
11 up on him, they can't stand him Who was the per -- who is
12 the sane person that treats their family members in such a
13 way? Doesn't common sense tell you, there's a problem there,
14 and a real serious problem, not to mention starting to kill
15 the people that you live with, or that befriend you and do
16 nothing but try to help you, like Henry Turner did He kills
17 them, or tries Who is the sane person that does this?

18 Now the law requires us to present -- His Honor is going
19 to -- and Mr Humphries argument -- we can't just say, look at
20 these crazy things he's done, because the law doesn't allow us
21 to rely on that alone to show insanity, although we know in
22 our common sense that's enough, that's all it takes You are
23 going to say, that man is insane, you are going to say that
24 Who, what sane person does that?

25 Now, there's not a big distinction between Anti-social

JURY IN
DEFENDANT'S SUMMATION (WILLIAMS)

2043

1 Personality, which is all those people that Fran -- that the
2 Solicitor said was applicable to Mr Stanko There's not a
3 lot of difference in that and insanity, because remember,
4 insanity is a legal term, it's not a medical term Anti-
5 social Personality Disorder is the medical term, or the
6 Psychiatric term He has a severe case of it because it
7 manifests itself not only in terms of lying and deceit, but
8 killing See, all that personality disorder encompassing all
9 of that behavior, so there's not an either or, it's a matter
10 of degree So, really, in terms of Psychiatric terms there's
11 not any disagreement

12 In legal terms there's a disagreement We heard
13 testimony that at least in other -- in past times there have
14 been a couple of psychiatric opinions that Mr Stanko was
15 insane, okay How many times -- how many professional have to
16 opine on that? How many family members -- if he had fifty
17 immediate family and he alienated all of them would that make
18 it a little more convincing? No He has alienated all of the
19 family members based on his deceit, lying, inability to be --
20 to even have a relationship with those people That's a
21 manifestation every day of his mental disease, defect Okay
22 That's how it manifests itself

23 Aren't you curious about why that is? Why is it that
24 way? He's a smart man He was a good student He made good
25 grades Aren't we, in our society, in the Twenty-First

JURY IN
DEFENDANT'S SUMMATION (WILLIAMS)

2044

1 Century, aren't we capable of asking the next step, you know,
2 going to next step, asking the next question, well, why, Dr
3 Crawford, why is he like that? And she says, I don't know,
4 that's a really good question, but all he's got is an Anti-
5 social Personality Disorder, he's not insane, I don't know why
6 that is, but it's so

7 And you've got Dr Spicer and Dr Brannon saying, you
8 know, we don't know either, he's perfectly together, M R
9 scan, the P E T scan, they are normal, nothing shown there,
10 he just must be -- yes, he makes bad choices That's what
11 they want us to believe

12 I want to ask this question Does anyone really believe
13 that Stephen Stanko is in this courtroom because of some bad
14 choices, you know, choices that he made, an independent, free-
15 will, decision-making process, is that what brought him here?
16 That is incomprehensible He's got a personality disorder,
17 and it's caused by a defect, whether it's trauma, you know, an
18 injury to the head, or whether it was a depravation of oxygen
19 at birth He's got areas in the brain that don't function

20 What is it with Dr Spicer, with all due respect? The
21 man has accomplished a lot of things in his life He's gone a
22 long way, but he is the one -- our Doctor, or Dr Sachy sends
23 Mr Stanko down to M U S C for a P E T scan, and like a bull
24 in a china shop, Spicer and his associate come in to evaluate
25 the results They don't know anything about why Stephen

JURY IN
DEFENDANT'S SUMMATION (WILLIAMS)

2045

1 Stanko is there, what the conditions were under which the
2 P E T scan was being done, and for what purpose, what were
3 they looking for Maybe, unbeknown to Dr Spicer, they were
4 looking for a particular defect that they expected, that was
5 predictable because of this crazy, bizarre, bizarre, bizarre
6 behavior that Stephen Stanko was engaging in Maybe it set
7 off a red flag for them and they said, you know what, this
8 sounds like he's not processing information up here in the
9 right way, it sounds like he doesn't have any empathy, he's
10 got -- he's not making good decisions here, you know, for such
11 a smart man, maybe we ought to look to see if there's frontal
12 lobe defect here

13 And Dr Sachy says, I happen to know a man who's
14 publishing peer-reviewed articles in the literature who is
15 conducting this type of research, it's Dr Wu, out in
16 California, he's been doing it for ten years at a P E T scan
17 clinic at the University of California in Irvine, he's a
18 credible man because he helped make funding decisions for the
19 National Institute of Health, the very man that Dr Spicer
20 says is unethical because he's using an F D A -- unapproved
21 F D A software for his particular research And I would
22 suspect the next step is peer-review completion and F D A
23 approval How do things get F D A approved? Years and years
24 of research and testing, and finally they stamp It's because
25 of people like Dr Wu that things -- new technologies emerge,

JURY IN
DEFENDANT'S SUMMATION (WILLIAMS)

2046

1 and are approved, and that's what is happening here I suppose,
2 peer-review Remember, this is done in the context of a
3 criminal case

4 The State of South Carolina wants to execute this man
5 over here They want to kill him We are not talking about
6 taking somebody off the street to treat them ---

7 MR HUMPHRIES Your Honor, I'm going to object to this
8 line of argument It's not proper in the first stage

9 THE COURT Mr Diggs, that's not what we are here
10 about in this proceeding Do not argue that

11 Continue on

12 MR DIGGS I'm sorry I've been talking about F D A
13 approval

14 THE COURT No sir You were not Continue on

15 MR DIGGS Depending on where I was, that would be the
16 first step in seeking F D A approval We are talking about a
17 man in a criminal prosecution, not a patient that walks in off
18 the street who is seeking treatment Do you see the
19 difference? We are talking about research being done, and
20 results being published in peer-reviewed literature, in the
21 area of medical science, and medical technology Of course,
22 in that kind of setting there is nothing that's going to be
23 available that's F D A approved, for heaven sake, but it's
24 peer-review approved The doctors in the community know that
25 it's approved, or that it's reliable, and it's those opinions

JURY IN
DEFENDANT'S SUMMATION (WILLIAMS)

2047

1 that the F D A eventually will rely upon some day to make it
2 available to the general public, for everybody who has a
3 problem lying, being deceitful, and who are curious about why
4 they do these things

5 If -- I want you to -- I would ask what a parent would
6 do in South Carolina with an infant who was born with the
7 birth records that we have here with Mr Stanko Would those
8 parents go to the doctor -- they saw -- they saw something
9 that caused concern, and baby was throwing up, not a healthy
10 color, years go on, it beings to manifest different unusual
11 behaviors, and they want to get help for him They go to Dr
12 Brannon, they go to Dr Spicer, they go to Dr Crawford
13 There's nothing wrong with the M R I , there's nothing wrong
14 with the P E T scan, he's just making bad decisions but I
15 don't know why That's the advice you would get And I
16 didn't hear anything from any of those people that would
17 indicate there was any, not just hope, you know, for
18 improvement, but explanation for why this was happening, and I
19 would submit to you that it would be responsible to seek
20 second opinions, to go where people are doing research that's
21 leading the way for the development of medical technology, and
22 that's what we've tried to do in this case, go for a second
23 opinion, because he's just that way is not a good enough
24 answer He's alienating all of his family members They
25 won't even come to see him in his trial He tries to kill his

JURY IN
DEFENDANT'S SUMMATION (WILLIAMS)

2048

1 friends Why does he do this? Benefit -- for heaven sakes,
2 what is the benefit for that? Does it make any sense? No,
3 you know, think about it all -- all day, there's not going to
4 be an explanation for it, other than, that's insanity, that's
5 an inability to recognize that these actions that he is doing
6 are wrong, legally or morally, he can't -- my suggestion would
7 be, if you could recognize that you would change it He
8 doesn't recognize it, he doesn't change it It's like that
9 person with a limb that's not there, they can't change it
10 His brain doesn't function up there We've shown you that it
11 doesn't

12 And here's photograph -- and I would submit to you,
13 ladies and gentlemen, in terms of today's technology, that's
14 as close as we can come to showing you what insanity looks
15 like It's areas of the brain -- you see how this is lit up
16 here It's not working in Mr Stanko's brain That's how
17 insanity could look on a P E T scan at the time the incident
18 was occurring, but I would image that it would be even more of
19 a disparity, because you've got someone running on that
20 amygdala limbic system emotion Up here, in this part of the
21 brain, up in here, where the thought process occurs, to
22 analyze that, and you make moral judgments, you determine
23 whether it's legally right or wrong, you determine whether
24 it's morally right or wrong That limbic system impulse comes
25 out of there and it's suggesting certain actions If there's

JURY IN
DEFENDANT'S SUMMATION (WILLIAMS)

2049

1 not an analytical process up here, thought process, it's not
2 going to be held in check, and you are not going to act in a
3 way that a normal human being would act That's because you
4 fail to recognize that it's right or wrong, morally or
5 legally He lacks the capacity, not because of stupidity,
6 okay It's the intelligence, and stuff like that that's all
7 around other areas, but right here where this analytical
8 decision is made doesn't have the material in the head to make
9 that analysis, and that's why his conduct in this case meets
10 the legal test It's all right, I would submit -- well, let
11 me strike that We have a responsibility to apply the law as
12 it is in South Carolina We ask each of you, could you apply
13 the law to a particular verdict that was supported by the
14 evidence, and every one said yes, and a lot of times we would
15 say, even if you disagreed with the law, I don't recall anyone
16 saying that they would even disagree with the law Every one
17 of you said, I'll follow the law as the Judge explains it, or
18 charges it

19 And the Judge is going to charge you that, if he lacked
20 the capacity to distinguish moral or legal right from wrong at
21 the time of the incident you've got to return a verdict of not
22 guilty by reason of insanity That's just the law Where did
23 the analysis take place, ladies and gentlemen? It didn't take
24 place up here because the material is not there, and it's not
25 working well enough, even if it were there

JURY IN
DEFENDANT'S SUMMATION (WILLIAMS)

2050

1 Let's talk about the volume of matter Dr Gur came
2 down to testify This is a man who heads a department that's
3 getting Twenty Million Dollars in funding this year
4 Unethical man? No, I doubt it He heads part of some
5 Psychiatric Department at the University of Pennsylvania,
6 Philadelphia, for heaven sakes Here's what he says his
7 volumetric analysis shows Deviations in the frontal lobe,
8 two and a half on -- between two and two and a half standard
9 deviations below the normal size in a healthy brain That's
10 what Dr Gur says

11 Now Dr Brannon says, I don't -- we don't need that, I
12 don't even -- I've never even read an article about that, in
13 the papers, he can't even -- it doesn't serve any purpose, but
14 then Dr Spicer comes up and starts using software that uses
15 standard deviations, so Dr Brannon is from a different era,
16 and things progress, they advance, they change, and that is
17 the normal course of things

18 But down here, in the amygdala area, he's four
19 deviations smaller What was that syndrome he said people had
20 when that happens to the amygdala, and it's not properly
21 developed He said, there is a syndrome -- and people are
22 docile -- but all of a sudden strike out Do you remember him
23 saying that? I asked Dr Sachy about it He wasn't quite as
24 familiar, but Dr Gur -- I don't think I asked him about it,
25 it was Ms Williams, asked him about that -- and he explained

JURY IN
DEFENDANT'S SUMMATION (WILLIAMS)

2051

1 how you have these docile individuals with that kind of
2 standard deviation in the amygdala, that went along,
3 unemotional, and all of a sudden would strike out in rage
4 Now, that is what Mr Stanko has going for him in the area of
5 the amygdala But then the double whammy is, when that rage
6 goes out from the amygdala up into the frontal lobe area does
7 it meet an area up there that analyzes it and makes an
8 analytical assessment about what to do in terms of moral and
9 legal judgment, among other things There's nothing going on
10 up here and bang, there's the action, there's the death, there
11 is the intent to kill, there's Henry Turner

12 Now, Dr Crawford explained a confrontation One
13 question I wanted to ask her, and I forgot to ask her, was
14 what she heard from Stephen Stanko even remotely supported by
15 the physical evidence in the case No, not even close I
16 would submit it's because Stephen Stanko doesn't know what
17 happened Memories begin to be laid down when this area
18 processes and makes analytical judgments If that's not
19 occurring you have to lay your memory down

20 MR HUMPHRIES Your Honor, I'm sorry I'm going to
21 have to object May we approach?

22 THE COURT Yes sir

23 (BENCH CONFERENCE TAKES PLACE OFF THE RECORD)

24 THE COURT Ladies and gentlemen, the Court instructs
25 you that the last arguments of counsel are improper and I

JURY IN
DEFENDANT'S SUMMATION (WILLIAMS)

2052

1 order you to strike them and not use them

2 Thank you

3 You may continue, sir

4 **MR DIGGS** I can't remember where I was

5 I was talking about the analytical judgment that doesn't
6 occur because of the lack of brain material, and the lack of
7 function that's shown by the P E T scan

8 If you go back and look at the evidence that was
9 presented by the Defense, Dr Turvey -- I mean, Mr Turvey
10 comes in, and he goes through about twenty-five or twenty-six
11 examples of just plain bad judgment that was made by the
12 individual, Mr Stanko, at the time of the incident in this
13 case, starting with no attempt to conceal the incident that
14 had occurred He stole a -- or took a vehicle that would
15 certainly tie him to the scene where Mr Turner was left, he
16 drove around for three days with a suitcase in that car that
17 had blood on it, and he drove around with the gun in his
18 possession that was used to kill Mr Turner The word that he
19 used as a result of a question by the Solicitor was
20 delusional It's delusional conduct How else are we to
21 explain it?

22 If you are talking about being invested in the case, as
23 the State says, oh, we can't believe Dr Sachy because he's
24 invested in the case You've got Dr Spicer that stakes out a
25 position early on in the case with respect to the P E T scan

JURY IN
DEFENDANT'S SUMMATION (WILLIAMS)

2053

1 being a normal scan, and then accuses the Defense witnesses of
2 being unethical in their conduct I would submit to you, it
3 matters whether the data base that was used in Mr -- or Dr
4 Spicer's software consists of people who were at rest or who
5 were engaged in a Continuance Performance Test As Dr Wu
6 explained, it's just like someone taking an E K G at the
7 hospital with you seated in a chair as opposed to doing a
8 stress test on the treadmill It's going to matter Whether
9 you are seated in a chair or you are on the treadmill it's
10 going to matter And I would submit to you, it was an
11 unreliable and inappropriate use of the Hermes software That
12 software that he came in and went through on the screen, all
13 of the little diagrams, software was never designed to
14 interpret P E T scan results that were taken under the
15 circumstances and conditions of Mr Stanko We have to
16 question whether he's truthful We have to question or weigh
17 his veracity Is he trying to cover his own tracks by saying,
18 yeah, but they are the ones who violated the protocols, not
19 me, they are the ones who interjected these perturbations,
20 whatever the word was he used, it wasn't me, they are the
21 ones, they are the ones to blame You know, nobody is to
22 blame He was looking for a certain thing, based on the
23 information he had he was doing the best he could, he simply
24 made a mistake Ladies and gentlemen, I would submit to you,
25 this is not the place for mistake to be made We need to be

JURY IN
DEFENDANT'S SUMMATION (WILLIAMS)

2054

1 as careful and sure as we can be

2 Now, Dr Sachy was the Doctor who sent everyone over to
3 M U S C He is the one who said he didn't rely on himself
4 Contrary to what the Prosecution has argued, he's not the one
5 who is invested in this case He's the one who waited until
6 the docu -- or the supporting corroboration information is
7 back from the scanning technologies, from the likes of Joseph
8 Wu and Ruben Gur, and armed with that information, made --
9 entered an opinion based on, not just their analysis of the
10 technical data, but a lifetime of bizarre and strange behavior
11 on behalf of Mr Stanko

12 Whether we like it or whether we don't like it, the
13 State has this burden If the Defense has convinced you with
14 the -- by a preponderance of the evidence, meaning simply the
15 greater weight, fifty-one to forty-nine, if we have convinced
16 you just however slightly that Mr Stanko was insane then the
17 prosecution has the burden, as His Honor will charge you, of
18 proving sanity beyond a reasonable doubt Ladies and
19 gentlemen, there is a doubt -- when we look out there and see
20 an empty courtroom, with no family members here because of a
21 lifetime of deceit, lying, abuse with family members, and we
22 see the killing of a friend for no reason, that's insanity,
23 and I would submit for Dr Crawford to come in and say, well,
24 I think he was sane, he's Anti-social Personality Disorder,
25 but I think he was insane (SIC) That is not carrying the

JURY IN
DEFENDANT'S SUMMATION (WILLIAMS)

2055

1 burden, with all due respect, beyond a reasonable doubt This
2 case has with it presumption of innocence, and after all of
3 that weighing and analysis that I've just disgusted, the
4 bottom line is, the State has to prove, beyond a reasonable
5 doubt If you find insanity by a preponderance of the
6 evidence -- the State has to prove beyond a reasonable doubt
7 that Mr Stanko is sane, and I submit they've failed in that
8 burden, not because of their lack of effort, not because of
9 their slackness, but because the facts are as they are The
10 State didn't make the facts, we didn't make them, they are as
11 they are We didn't make the law, but His Honor will charge
12 you

13 When we started this trial we said we would try to not
14 take more time than necessary We've kept true to our word on
15 that, but at the same time, we wanted to take enough time to
16 show you what we believe the facts are in the case, and I can
17 tell everyone here, from my perspective the jurors have been
18 attentive and we appreciate it

19 I would submit to you, there is one verdict that's
20 justified by the evidence in this case, okay, not that Mr
21 Stanko is innocent, but he is not guilty by reason of
22 insanity That -- insanity is the only reasonable conclusion
23 when someone kills a friend with no reason, and that's what
24 happened in this case

25 Thank you very much, and I appreciate your attention

JURY OUT/ON RECORD
JURY IN/CHARGE BY THE COURT

2056

1 Ms Williams appreciates it Mr Stanko appreciates it

2 Thank you very much

3 THE COURT Ladies and gentlemen, if you don't mind,
4 before we start the charge on the law I would like for you to
5 take a very short break, so we'll just take a break for five
6 minutes, so go to your jury room for five minutes and we'll
7 come back and finish

8 Thank you

9 (THE FOLLOWING TAKES PLACE OUTSIDE THE PRESENCE OF THE
10 JURY)

11 THE COURT Counsel, could y'all come up here for one
12 second, please

13 (BENCH CONFERENCE TAKES PLACE OFF THE RECORD)

14 (THE FOLLOWING TAKES PLACE AFTER A BREAK, AND OUTSIDE
15 THE PRESENCE OF THE JURY)

16 THE COURT All right Is the State ready for the jury
17 to come back in?

18 MR HUMPHRIES Yes, Your Honor

19 THE COURT And Defense?

20 MR DIGGS Yes sir

21 THE COURT Very good Ask the jury to come in,
22 please

23 (THE FOLLOWING TAKES PLACE WITHIN THE PRESENCE OF THE
24 JURY)

25 THE COURT All right, ladies and gentlemen, it's now

JURY OUT/ON RECORD
JURY IN/CHARGE BY THE COURT

2057

1 my responsibility to give you the law that you are going to
2 apply to the facts as you so find them to be in this
3 particular case I told you at the very beginning that you
4 were going to be the deciders of the facts, and that I would
5 not give you any opinion about the facts, and I believe that
6 that has -- I've followed that, and in that same vein, if you
7 came into this courtroom with any preconceived ideas of what
8 the law is, what it ought to be, what it should be, what you
9 hoped it would be, you will disregard that You will take the
10 law as I now give it to you and apply it to the facts as you
11 so find them to be in this case One of your jobs, as I told
12 you, was to judge credibility and the believability of the
13 witnesses that have presented themselves to you in this trial,
14 and in doing so you can believe one witness against several,
15 several against one, you can believe a portion of what a
16 witness says and disregard the remaining portion of it, if
17 you've got a good and sound reason for doing so you could
18 disregard in it's entirety the testimony of a particular
19 witness You look at whether that witness has exhibited to
20 you any kind of interest, bias, motive, prejudice they might
21 have in giving you the testimony they gave you from the
22 witness stand, and obviously you consider the opportunity for
23 knowledge, how did they come about that information that they
24 gave you from the witness stand

25 Judging credibility and believability is something you

1 do every single day of your life When somebody tells you
2 something you are automatically judging whether or not you
3 believe them, and how do you do that? You use your good
4 common sense and your good judgment in conducting your own
5 affairs That's what we are asking you to do here today, use
6 your good common sense and your good judgment, find that
7 evidence which convinces you of it's truth, and you weigh that
8 evidence against the State's burden of proving the Defendant
9 guilty beyond a reasonable doubt

10 You don't have any friends to reward, you don't have any
11 enemies to punish, your verdict can't be the result of any
12 kind of passion, prejudice or sympathy It has to be an
13 examination of the facts of this case, finding that evidence
14 which convinces you of it's truth and again, weighing that
15 evidence against the State's burden to prove the Defendant
16 guilty of the crimes charges beyond a reasonable doubt

17 Two types of evidence presented in this case, and in
18 virtually every case that's tried It's called direct and
19 circumstantial evidence Direct evidence That's the
20 testimony of a person who asserts or claims to have actual
21 knowledge of a fact, what they saw, what they heard, that type
22 of evidence Circumstantial evidence is proof of a chain of
23 facts indicating the existence of a fact, and the law doesn't
24 make any distinction between circumstantial evidence or direct
25 evidence You weigh all the evidence the same in finding that

JURY OUT/ON RECORD
JURY IN/CHARGE BY THE COURT

2059

1 evidence which convinces you of it's truth

2 Now in this case I allowed you to take notes, but I want
3 you to remember that some people are better note takers than
4 other people A juror's notes should not be given any greater
5 weight than the recollection of the other jurors
6 Recollection of individual jurors should be considered just as
7 reliable as notes taken by someone else

8 If the Court directed you to disregard any kind of
9 statements or matters you must disregard it, and you may not
10 use such statements in arriving at your verdict in the case

11 Now the Rules of Evidence that we try cases under do not
12 ordinarily allow witnesses to give their opinion They've got
13 to testify about what they say, what they heard, what they
14 actually know about the particular matter, but sometimes,
15 because some witnesses who, by their education or experience,
16 their work in a particular field, have become knowledgeable in
17 some kind of art or science, profession, the Court can qualify
18 them to give their opinions Sometimes they are called expert
19 witnesses, but all we are doing is, we are just letting them
20 give you their opinion Now that designation by the Court to
21 allow them to give you their opinion doesn't give them any
22 greater weight than any other witness You treat all the
23 witnesses the same, you judge all the witnesses' credibility
24 and believability the same You look at all the evidence and
25 you find, from all the evidence, that evidence which convinces

JURY OUT/ON RECORD
JURY IN/CHARGE BY THE COURT

2060

1 you of it's truth

2 In this particular matter the Defendant did not testify
3 Now I tell you, and instruct you, and emphasize the fact to
4 you that this is not a factor to be considered by you in any
5 way in your deliberation or in your consideration of the
6 evidence or the ultimate verdict in this particular matter
7 It must not be considered by you in any manner whatsoever
8 Any Defendant has the Constitutional Right to remain silent
9 The assertion of this right cannot be considered by you in
10 your deliberation You are to draw no conclusions from this
11 You are not to talk about it You are not to consider it in
12 any way As I told you, a defendant is never required to
13 prove to you their innocence The burden of proof remains on
14 the State of South Carolina to prove, beyond a reasonable
15 doubt, the guilt of the Defendant of the crimes charged

16 Defendant pled not guilty to the charges against him
17 Now that plea puts the burden of proof on the State of South
18 Carolina to prove the Defendant guilty beyond a reasonable
19 doubt This is an important rule of law that applies to any
20 defendant in any criminal trial, no matter what the
21 seriousness of the charge may be The defendant is always
22 presumed to be innocent of the crime for which he has been
23 charged, unless that guilt is proven to you by the State
24 beyond a reasonable doubt And that presumption of innocence
25 didn't end at the start of the trial, it hasn't ended now, it

JURY OUT/ON RECORD
JURY IN/CHARGE BY THE COURT

2061

1 does not end until you find that the State has produced
2 sufficient evidence which you believe, and find to be true,
3 that satisfies you of the guilt of the Defendant beyond a
4 reasonable doubt

5 This presumption of innocence is not some mere legal
6 theory It's not just some legal phrase It's a substantial
7 right to which every defendant is entitled, and to which this
8 Defendant is entitled, unless you, the jury, are satisfied
9 from the evidence of the Defendant's guilt beyond a reasonable
10 doubt

11 Reasonable doubt Reasonable doubt is the kind of doubt
12 that would cause a reasonable person, reasonable, ordinary
13 person to hesitate to act Proof beyond a reasonable doubt is
14 proof that leaves you firmly convinced of the Defendant's
15 guilt Now, there are very few things we can know with
16 absolute certainty, and the law doesn't require the State to
17 give you that kind of proof What is required is that, if you
18 are firmly convinced, based upon your view of the evidence, of
19 the Defendant's guilt of the crimes charged, you are firmly
20 convinced the Defendant is guilty of those crimes you must
21 find the Defendant guilty On the other hand, if you are not
22 firmly convinced that the Defendant is guilty of the crimes
23 charged you must give the Defendant the benefit of the doubt
24 and find him not guilty

25 Now in this State it is an affirmative defense to the

JURY OUT/ON RECORD
JURY IN/CHARGE BY THE COURT

2062

1 prosecution of a crime that, at the time of the commission of
2 the crime the Defendant, as a result of a mental disease or
3 defect, lacked the capacity to distinguish moral or legal
4 right from moral or legal wrong, or to recognize the
5 particular act charged as morally or legally wrong The
6 Defendant has the burden of proving the defense of insanity by
7 a preponderance of the evidence, and I'll define that in just
8 a minute Evidence of a mental disease or defect that is
9 manifested only by repeated criminal or other anti-social
10 conduct is not sufficient, in and of itself, to establish the
11 defense of insanity

12 The Defendant, having raised the defense of insanity, a
13 basic principle is criminal intent is required to prove that
14 the Defendant is guilty of the crime charged A person who is
15 insane cannot have criminal intent, and therefore cannot be
16 found guilty of a crime In order to be found not guilty by
17 reason of insanity it must be shown that, at the time of the
18 crime the Defendant had a mental disease or defect which made
19 him unable to distinguish moral or legal right from moral or
20 legal wrong, or to recognize the crime as morally or legally
21 wrong In raising the defense of insanity the Defendant does
22 not necessarily admit the crime was committed The State must
23 still prove, beyond a reasonable doubt, the Defendant
24 committed the crime, however, the Defendant must prove
25 insanity to you by what is called a preponderance of the

JURY OUT/ON RECORD
JURY IN/CHARGE BY THE COURT

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1 evidence A preponderance of the evidence means the greater
2 weight of the evidence, or more likely than not

3 If you find there is evidence in the record that, at the
4 time the crime was allegedly committed it is more likely than
5 not that, because of a mental disease or defect the Defendant
6 did not know the alleged crime was morally or legally wrong,
7 the State must then prove to you, beyond a reasonable doubt,
8 that the Defendant was sane It is for you to decide what the
9 State or condition of the Defendant's mind was at at the time
10 the crime was committed

11 Another portion of our law states that a defendant is
12 guilty but mentally ill if, at the time of the commission of
13 the crime the defendant was able to distinguish moral or legal
14 right from moral or legal wrong, or to recognize his act as
15 being morally or legally wrong, but because of a mental
16 disease or defect the defendant lacked the sufficient capacity
17 to conform his conduct to the requirements of the law The
18 State still has the burden to prove, beyond a reasonable
19 doubt, that the defendant committed the crime The defendant
20 has the burden of proving that he is guilty but mentally ill
21 by a preponderance of the evidence, and again, preponderance
22 of evidence means the greater weight of the evidence, or more
23 likely than not

24 The State has charged the Defendant, Mr Stanko, with
25 the crime of murder The State has to prove, beyond a

JURY OUT/ON RECORD
JURY IN/CHARGE BY THE COURT

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1 reasonable doubt, that the Defendant killed another person
2 with malice aforethought Malice is hatred or ill-will, or
3 hostility toward another person It is the intentional doing
4 of a wrongful act without just cause or excuse, with an intent
5 to inflict an injury, or under circumstances that the law
6 would infer an evil intent

7 Malice aforethought does not require that malice exist
8 for any particular time before the act was committed, but
9 malice must exist in the mind of the Defendant just before, and
10 at the time the crime was committed, therefore, there has to
11 be this combination of the evil intent and the act

12 Malice aforethought could either be express or implied
13 Express malice is shown when a person speaks words which
14 express hatred or ill-will for another, or when the person
15 prepared beforehand to do the act which was later
16 accomplished Malice can be inferred from a conduct showing a
17 total disregard for human life Inferred malice may also
18 arise when the deed is done with a deadly weapon

19 A deadly weapon is any article, instrument or substance
20 which is likely to cause death or great bodily harm Whether
21 an instrument has been used as a deadly weapon depends on the
22 facts and circumstances of each case

23 If one intentionally kills another during the commission
24 of a felony the inference of malice may arise If facts are
25 proved beyond a reasonable doubt sufficient to raise an

JURY OUT/ON RECORD
JURY IN/CHARGE BY THE COURT

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1 inference of malice to your satisfaction this inference would
2 simply be an evidentiary fact to be taken into consideration
3 by you along with all the other evidence in the case, and you
4 give it what weight, if any, you decide it should receive

5 The State of South Carolina has also charged the
6 Defendant with the crime of armed robbery In order to prove
7 armed robbery the State must first prove, beyond a reasonable
8 doubt, that the Defendant took personal property from the
9 person or presence of another person Property is in the
10 presence of a person if it is within the person's reach,
11 inspection, observation or control so that the person could,
12 if not overcome by violence or prevented by fear, keep
13 possession of the property

14 The State must also prove, beyond a reasonable doubt,
15 that the Defendant carried the property away, intending to
16 permanently deprive the owner of the property, and to keep the
17 property for the Defendant's own use The slightest removal
18 of the property, or the complete possession of the property
19 even for an instant by the Defendant is sufficient to show a
20 taking and carrying away of the property, and this taking and
21 carrying away of the property must have been done with
22 violence or putting the owner of the property in fear of
23 violence

24 Finally, the State must prove, beyond a reasonable
25 doubt, that the Defendant was armed with a deadly weapon

JURY OUT/ON RECORD
JURY IN/CHARGE BY THE COURT

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1 during the robbery Again, deadly weapon is any article,
2 instrument or substance which is likely to cause death or
3 great bodily harm, and whether an instrument has been used as
4 a deadly weapon depends on the facts and circumstances of each
5 case

6 In order to be guilty of armed robbery, in conjunction
7 with a homicide, the State must prove, beyond a reasonable
8 doubt, the victim's death, and the taking from the person of -
9 - I'm sorry -- and the taking from the person, if the death
10 and the taking are so connected as to form a continuous chain
11 of events If the taking was made possible by an antecedent
12 assault the offense is robbery, regardless of whether the
13 victim died before or after the taking of the property

14 In this case there are four possible verdicts you may
15 return If you have any reasonable doubt as to the
16 Defendant's guilt after considering all the evidence you must
17 find the Defendant not guilty If you have no reasonable
18 doubt that the Defendant committed the crime, but you find
19 that it's more likely than not that, because of a mental
20 disease or defect the Defendant could not distinguish moral or
21 legal right from moral or legal wrong, or to recognize the
22 crime as morally or legally wrong, and the State did not then
23 prove the Defendant sane to you beyond a reasonable doubt, you
24 must find the Defendant not guilty by reason or insanity

25 Another possible verdict is guilty but mentally ill If

JURY OUT/ON RECORD
JURY IN/CHARGE BY THE COURT

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1 you have no reasonable doubt that the Defendant committed the
2 crime, and that the Defendant has the mental capacity to
3 distinguish moral or legal right from moral or legal wrong, or
4 recognize the crime as morally or legally wrong, but you find
5 that it is more likely than not, because of a mental disease
6 or defect, the Defendant lacked sufficient capacity to conform
7 his conduct to the requirements of the law you must find the
8 Defendant guilty but mentally ill As with insanity, the
9 Defendant has the burden of proving that he is guilty but
10 mentally ill by that preponderance or greater weight of the
11 evidence

12 The final possible verdict in this case is guilty You
13 may find the Defendant guilty if, and only if the State has
14 proved, beyond a reasonable doubt, that the Defendant
15 committed the crime, that the Defendant was able to
16 distinguish moral and legal right from moral and legal wrong,
17 and to recognize the crime as morally and legally wrong, and
18 the Defendant was able to follow the law

19 The Court has prepared for you a verdict form that sets
20 forth both counts, murder and armed robbery, and sets forth
21 all four possible verdicts I, by necessity, had to put one
22 before the other, and one first, one last, two in the middle
23 Don't assign anything to that I had to put them in some kind
24 of order, and I did So, for murder, on the charge of murder,
25 we, the jury, by unanimous consent, find the Defendant,

JURY OUT/ON RECORD
JURY IN/CHARGE BY THE COURT

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1 Stephen C Stanko, not guilty, or not guilty by reason of
2 insanity, or guilty but mentally ill, or guilty Once you
3 reach the unanimous verdict on that charge you go to the
4 charge of armed robbery On the charge of armed robbery we,
5 the jury, by unanimous consent, find the Defendant, Stephen C
6 Stanko, again, not guilty, or not guilty by reason of
7 insanity, or guilty but mentally ill, or guilty

8 Now, I have said unanimous I don't know how many times
9 in the opening, and in this closing It means exactly what
10 you think it means It means twelve zero It doesn't mean
11 eleven one, ten two, any combination thereof Whatever
12 verdict you reach must be the unanimous verdict of each and
13 every one of you

14 So, Mr Foreman, when you take this verdict form and you
15 check the appropriate block, whatever it may be, and you sign
16 your name to this verdict form, you are telling the Court that
17 each and every member of the jury agrees to that verdict, and
18 it is the verdict of each and every member of the jury
19 regarding that particular verdict for each count

20 What I'm going to have you do, Mr Foreman, is take the
21 twelve members of your jury to your jury room The four
22 alternates will remain with us

23 Do not begin your deliberations until the bailiff hands
24 to you the verdict form and the exhibits When you have the
25 verdict form and all the exhibits then you may begin your

1 deliberations, Mr Foreman

2 Please take your jury to the jury room

3 (THE JURY EXITED THE COURTROOM AT 4 10 P M THE
4 FOLLOWING TAKES PLACE OUTSIDE THE PRESENCE OF THE JURY)

5 THE COURT All right Deputy, I need for you to take
6 the four alternates to a separate jury room, not the jury room
7 where the twelve jurors are deliberating, but to a separate
8 jury room where they need to be kept, obviously, without
9 contact by anyone else

10 All right Please do so

11 (AT THIS TIME THE ALTERNATES LEAVE THE COURTROOM)

12 THE COURT Exceptions, deletions, additions to the
13 charge from the State

14 MR HEMBREE None from the State, Your Honor

15 THE COURT From the Defense?

16 MS WILLIAMS Yes sir We have two

17 THE COURT Okay

18 MS WILLIAMS The first one is to make sure that -- I
19 know initially Your Honor charged the jury that they would
20 consider only the evidence presented in this courtroom, and
21 bringing nothing from the outside I would like for that to
22 be -- we would like for that to be reiterated

23 The other issue, Your Honor, is the -- the Court alluded
24 ---

25 THE COURT First -- okay, I would appreciate it if

1 y'all had brought this to my attention when I asked you about
2 requests to charge Nevertheless, go on Go ahead What
3 else did you want me to do?

4 MS WILLIAMS The second issue, Your Honor, is basi --
5 the Court referred to earlier in the recent opinion of State
6 v Belcher In that case it was an affirmative defense of
7 self-defense, and the Court ruled that it was improper to
8 charge that, just by the mere presence -- you know, malice can
9 be inferred by the mere presence of the deadly weapon

10 Your Honor, we would assert that, in this case, that
11 insanity too is a self-defense, and we would think that that
12 same rationale would apply to this case, and we would ask that
13 that charge be deleted, and they be so instructed, that that
14 portion of that be deleted

15 THE COURT Solicitor

16 MR HEMBREE Your Honor, I'm afraid I fail to
17 understand the connection between insanity and the -- equating
18 insanity to self-defense I just don't follow the logic, and
19 would object to any sort of charge -- well, would -- not a
20 charge, I guess the request is that the charge be amended to
21 treat this as if there is a self-defense case There's no
22 evidence in this record whatsoever of self-defense

23 THE COURT All right I have -- I have read
24 thoroughly State versus Belcher, decided by the South Carolina
25 Supreme Court in October -- on October 12th, 2009 I find

1 nothing, absolutely nothing in the Supreme Court opinion that
2 would so indicate -- certainly doesn't direct, but even
3 indicate, in any way, that it would be proper under these
4 circumstances for the Court to charge -- or delete that as far
5 as the inference of malice The Supreme Court didn't indicate
6 that in the slightest Now -- so I respectfully decline to do
7 that

8 MS WILLIAMS Yes sir

9 THE COURT Now, you wanted me to call -- on the other
10 part, you wanted me to call the jury back in and tell them --
11 remind them that they have to decide this case based solely on
12 the evidence presented in this case, and from no other source

13 MS WILLIAMS Your Honor, one moment, please

14 Your Honor, before we do that can I ask you this If we
15 could look at the charge that you actually read, because you
16 addressed the two different types of evidence, and I'm
17 thinking that it -- it may have sufficiently covered it I
18 just want to make sure

19 THE COURT Okay Talking -- and I'm sorry -- you want
20 to -- you want me to read to you what -- what part of it? I'm
21 sorry

22 MS WILLIAMS I was wondering that you may have
23 actually said it when you said there would be evidence ---

24 THE COURT I mean, I don't have a problem with
25 bringing them back and telling them -- and reminding them that

JURY IN/ALTERNATES IN/COURT TO JURY
JURY TO DELIBERATE

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1 they have to decide this case solely on the evidence presented
2 in this case, and from no other source If you would like me
3 to do so, I'll be glad to do so

4 MR DIGGS Your Honor, we would ask you to do that

5 THE COURT All right Very good

6 Ask the jury to come back in for a minute, please

7 MR HUMPHRIES Yes We need to bring the alternates
8 back in too, Judge

9 THE COURT Yes The alternates need to come back
10 also

11 (AT THIS TIME ALL JURORS, INCLUDING THE ALTERNATES,
12 RETURNED TO THE COURTROOM)

13 THE COURT All right, ladies and gentlemen, I have
14 been asked to remind you, if I did not do so, that you must
15 decide this case solely upon the facts and evidence presented
16 in this courtroom, and from no other source

17 All right, Mr Foreman, take your jury to the jury room
18 You will be delivered the verdict form and the exhibits When
19 you get them you can deliberate

20 The alternates need to go back to the separate jury
21 room

22 Thank you very much

23 (THE JURY EXITED THE COURTROOM AT 4 20 P M THE
24 FOLLOWING TAKES PLACE OUTSIDE THE PRESENCE OF THE JURY)

25 THE COURT All right Any objections or deletions or

JURY IN/ALTERNATES IN/COURT TO JURY
JURY TO DELIBERATE

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1 additions from the State?

2 MR HUMPHRIES No, Your Honor

3 THE COURT From the Defense?

4 MS WILLIAMS No sir, Your Honor

5 THE COURT All right Very good

6 All right We will be at ease till the jury needs us

7 Please come forward to the Court Reporter, Mr Diggs,

8 Ms Williams Make sure we've got all the proper exhibits,

9 and the proper ones are going to the jury, please

10 Thank you

11 (AT THIS TIME EXHIBITS WERE REVIEWED AMONG THE COURT

12 REPORTER AND COUNSEL FOR THE STATE AND COUNSEL FOR THE

13 DEFENSE THE EXHIBITS WERE APPROVED BY ALL)

14 (COURT CONFERRED WITH COUNSEL OFF THE RECORD CONCERNING

15 COURT'S EXHIBIT NUMBER 109, THE INDICTMENT, AND ALL AGREED

16 THAT COURT'S EXHIBIT NUMBER 109 WOULD NOT GO TO THE JURY)

17 (THE EXHIBITS AND THE VERDICT FORM WERE THEN TAKEN TO

18 THE JURY ROOM BY THE BAILIFFS)

19 (THE JURY WAS INSTRUCTED TO BEGIN DELIBERATION AT 4 40

20 P M)

21 (THE JURY DELIBERATED AND THE FOLLOWING TAKES PLACE AT

22 5 10 P M OUTSIDE THE PRESENCE OF THE JURY)

23 THE COURT I understand the jury has reached a verdict
24 in this matter Is the State ready to receive the verdict?

25 MR HEMBREE State's ready, Your Honor

JURY IN/VERDICT
JURY POLLED

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1 THE COURT Defense

2 MR DIGGS Defense is ready, Your Honor

3 (AT THIS TIME THE COURT ADMONISHED THE AUDIENCE
4 CONCERNING ANY DISPLAY OF EMOTION OR RESPONSE TO THE VERDICT)

5 (THE FOLLOWING TAKES PLACE AT 5 10 P M , WITHIN THE
6 PRESENCE OF THE JURY)

7 (THE ALTERNATES WERE ALSO BROUGHT INTO THE COURTROOM AT
8 THIS TIME)

9 THE COURT All right, Mr Foreman, has your jury
10 reached a verdict in this particular matter?

11 FOREMAN Yes sir, we have

12 THE COURT All right, sir, could you hand the verdict
13 form to the Clerk, please sir

14 Madame Clerk, you may publish the verdicts

15 CLERK OF COURT (05-GS-26-02927), State of South
16 Carolina versus Stephen C Stanko, count one, murder, on the
17 charge of murder, we, the jury, by unanimous consent, find the
18 Defendant, Stephen C Stanko, guilty

19 On count two, armed robbery, on the charge of armed
20 robbery, we, the jury, by unanimous consent, find the
21 Defendant, Stephen C Stanko, guilty

22 Signed by Johnny Marvin Chestnut, dated November 16,
23 2009

24 THE COURT All right, Mr Foreman, ladies and
25 gentlemen of the jury, twelve members of the jury, if this is

JURY IN/VERDICT
JURY POLLED

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1 your verdict please so indicate by raising by right hand

2 (AT THIS TIME ALL JURORS AFFIRMED THE VERDICT AS
3 PUBLISHED BY THE RAISING OF HIS OR HER RIGHT HAND)

4 THE COURT Thank you very much

5 Does the State wish the jury polled?

6 MR HEMBREE No, Your Honor

7 THE COURT Does the Defense wish the jury polled?

8 MR DIGGS Yes sir

9 THE COURT Madame Clerk, if you would please poll the
10 jury, Ma'am

11 CLERK OF COURT When I call your name will you please
12 stand and answer when I say, is this your verdict, and is it
13 still your verdict

14 Johnny Chestnut, is this your verdict and still your
15 verdict?

16 MR CHESTNUT Yes Ma'am

17 CLERK OF COURT Thank you You may have a seat

18 Lakenya Jordan, is this your verdict, and still your
19 verdict?

20 MS JORDAN Yes Ma'am

21 CLERK OF COURT Thank you

22 Stephen D Williams, is this your verdict, and still
23 your verdict?

24 MR WILLIAMS Yes Ma'am

25 CLERK OF COURT Thank you

JURY IN/VERDICT
JURY POLLED

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1 Brandon Boyd, is this your verdict, and still your
2 verdict?

3 MR BOYD Yes Ma'am

4 CLERK OF COURT Thank you

5 Margaret Bartomeo, is this your verdict, and still your
6 verdict?

7 MS BARTOMEO Yes Ma'am

8 CLERK OF COURT Thank you

9 James Berry, is this your verdict, and still your
10 verdict?

11 MR BERRY Yes Ma'am

12 CLERK OF COURT Thank you

13 Linda Morrison, is this your verdict, and still your
14 verdict?

15 MS MORRISON Yes Ma'am

16 CLERK OF COURT Waverly Stanley, is this your verdict
17 and still your verdict?

18 MR STANLEY Yes Ma'am

19 CLERK OF COURT Johnny Causey, Jr , is this your
20 verdict and still your verdict?

21 MR CAUSEY Yes Ma'am

22 CLERK OF COURT Thank you

23 Beverly Pitman, is this your verdict, and still your
24 verdict?

25 MS PITMAN Yes Ma'am

JURY IN/VERDICT
JURY POLLED

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1 CLERK OF COURT Thank you

2 Ariane Joyce, is this your verdict, and still your
3 verdict?

4 MS JOYCE Yes Ma'am

5 CLERK OF COURT Bonnie Oguin, is this your verdict and
6 still your verdict?

7 MS OGUIN Yes Ma'am

8 CLERK OF COURT Thank you all

9 THE COURT The jury having affirmed the verdict in
10 this matter, anything further at this point in time from the
11 State?

12 MR HEMBREE No, Your Honor

13 THE COURT From the Defense ---

14 MR DIGGS No, Your Honor

15 THE COURT With the jury

16 MR DIGGS No, Your Honor

17 THE COURT All right Very good

18 Mr Foreman, on the original indictment there is a space
19 for you to sign on the back of the indictment The Clerk will
20 direct you If you would put the verdict and then sign your
21 name on the back of the original indictment, please sir

22 (AT THIS TIME THE FOREMAN SIGNED THE VERDICT PORTION OF
23 THE INDICTMENT)

24 THE COURT All right, ladies and gentlemen, the law of
25 the State of South Carolina mandates a twenty-four hour

JURY IN/VERDICT
JURY POLLED

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1 waiting period between the receipt of a verdict of guilty in a
2 capital case, therefore we will abide by the State Law It
3 being the time that it is, I hope you will find with me that
4 it would not make sense to bring you back tomorrow, five-
5 thirty, and have some short period of testimony My intention
6 is that we will start against Wednesday morning You will be
7 here by 8 30 and we will start as soon thereafter as possible
8 in the second phase, or the sentencing phase of this trial

9 As I have indicated to you, we will proceed with that
10 There will be instructions that the Court will give you at
11 that point in time, but as of now you will please accompany
12 the agents and I will see you back Wednesday morning

13 Thank you very much

14 MS WILLIAMS Your Honor, may we approach?

15 THE COURT Yes Ma'am

16 (BENCH CONFERENCE TAKES PLACE OFF THE RECORD)

17 THE COURT Deputy, can you see if you can catch
18 Special Agent Howser real quick for me, please Sheriff, if
19 you don't mind

20 SHERIFF THOMPSON I think he's gone Do you want me to

21 ---

22 THE COURT All right Well, whoever is in charge
23 right now All right

24 (THE FOLLOWING TAKES PLACE IN THE PRESENCE OF S L E D
25 AGENT ASSIGNED TO THE JURY)

1 **THE COURT** Yes Ma'am I know that y'all have been
2 very diligent in that If you will just -- with the
3 instructions of the attorneys, remind the jurors, obviously,
4 not to talk about this matter in any way, and they will
5 receive further instructions from the Court, but obviously not
6 to discuss this matter while they are gone, until they return
7 to the courtroom All right

8 **AGENT** Yes sir

9 **THE COURT** Thank you, Ma'am Appreciate it very much
10 All right, for the record -- and I have checked with the
11 Court Reporter to make sure her time reflects with mine, that
12 the jury returned their verdict of guilty on the charges of
13 murder and armed robbery this, the 16th day of November, 2009,
14 at 5 10 P M

15 All right, Mr Diggs, motions on behalf of the
16 Defendant

17 **MR. DIGGS** Your Honor, we would ask for -- a motion
18 for a new trial, based on the fact that the brevity in the
19 deliberation process, and I would -- in my opinion, and I
20 would respectfully submit, indicates that the juror -- there
21 was a juror on the panel, on the jury, that had prior
22 knowledge of the death sentence presently in effect in this
23 case from Georgetown, and I would submit, even in Georgetown
24 there was a four hour deliberation, it's my understanding, on
25 the guilt -- issue of guilt or innocence, and in this case

1 there -- by my count it was less than an hour, and it's not
2 enough time to undertake a deliberate deliberation --
3 deliberative process, and so I would ask for a new trial based
4 on the fact that there was a juror in the deliberation process
5 that had knowledge of the death sentence I would submit she
6 probably told everybody else about it, and they said, well,
7 why are we here, you know, let's just go ahead and affirm --
8 do a death sentence as well

9 I'm being told by co-counsel they were out -- they
10 actually deliberated for thirty minutes, roughly, and so we
11 would ask for a new trial on that basis, Your Honor

12 In addition to that, of course we renew the motions that
13 we made prior to the -- at the close of the evidence -- I'm
14 sorry -- at the close of the evidence

15 **THE COURT** All right Thank you
16 Solicitor

17 **MR HEMBREE** Your Honor, the argument that Mr Diggs
18 advances is based on nothing more than sheer speculation on
19 what a juror, after being instructed by the Court that she
20 would have to confine her -- her work here to the evidence
21 that was before this Court, even receiving an additional
22 instruction today to that effect, he speculates that she has
23 violated that oath, and all the other jurors have violated
24 their oaths by listening to her and taking that into account,
25 and I -- that's sheer speculation

COURT'S RULING

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1 Your Honor, I would submit that the short duration of
2 deliberation springs from the Defense's strategic decision to
3 essentially not fight the facts of the case, or fight about
4 the guilt, other than on a mental defense, that they -- they
5 essentially conceded and agreed that Stephen Stanko killed
6 Henry Turner, and strategically decided to basically make the
7 argument about insanity, and that was clearly rejected, so,
8 Your Honor, we would just ask that motion be denied

9 **THE COURT** All right As to the motion for a new
10 trial, or a judgment in arrest of verdict, the Court would
11 respectfully decline to grant your motion There is
12 absolutely no evidence of any kind of passion, caprice,
13 prejudice, sympathy, undue influence, anything that would
14 warrant this Court to grant your motion

15 Further, as I indicated in denying the motions for a
16 directed verdict, there was ample, and more than sufficient
17 evidence in the record, if that evidence was so believed by
18 the jury, and it must have been believed by the jury for them
19 to return their verdicts of guilty in this matter, to convict
20 the Defendant of the crimes of murder and armed robbery beyond
21 a reasonable doubt, and therefore I would respectfully decline
22 to grant your motions for a new trial, or a judgment in arrest
23 of verdict in this matter

24 Thank you very much

25 Further motions on behalf of the Defense

COURT'S RULING
JURY OUT/MOTION IN LIMINE

1 **MR DIGGS** Not at this time, Your Honor

2 **THE COURT** All right Thank you

3 All right, counsel, as I indicated to the jury, we will
4 have the twenty-four hour waiting period It did not make
5 sense to the Court to come back at 5 30 or 6 00 P M tomorrow
6 night and put up a witness and then send them back, so we will
7 start back Wednesday morning I will expect y'all to be here
8 by 8 30 A M

9 All right Anything further from the State?

10 **MR HEMBREE** No, Your Honor

11 **THE COURT** Anything further from the Defense?

12 **MR DIGGS** No, Your Honor

13 **THE COURT** Thank y'all very much

14 **(THERE WAS NO COURT HELD ON NOVEMBER 17, 2009)**

15 **(THE FOLLOWING TAKES PLACE ON NOVEMBER 18, 2009, OUTSIDE**
16 **THE PRESENCE OF THE JURY)**

17 **THE COURT** All right, Solicitor, is the State ready?

18 **MR HUMPHRIES** The State is ready to proceed, Your
19 Honor

20 **THE COURT** Are you ready, prepared, and -- to go
21 forward with your motions, sir?

22 **MR DIGGS** Well, Your Honor, it's a motion in limine
23 I don't know if it's ripe at this point It's going to depend
24 on what kind of evidence that the State intends to introduce

25 **THE COURT** What is the motion in limine about?

MOTION IN LIMINE

1 **MR DIGGS** It's about the specific details of the Ling
2 murder, and I think it's going to depend on whether the State
3 intends to introduce specific details about that offense and
4 if they do, then I would move to exclude it on the grounds
5 that it has already been the basis, been used by the State as
6 a basis to seek and obtain a death sentence against the
7 Defendant and it shouldn't be permitted by the Court to be
8 used for the same purpose again in a different setting It's
9 implications of the double jeopardy clause, and it's also, I
10 would submit, a violation of the Eighth Amendment

11 **THE COURT** In what respect?

12 **MR DIGGS** It would be cruel and unusual to use the
13 same evidence to include two separate death sentences And
14 secondly, it's also in the nature of being arbitrary

15 **THE COURT** All right What's the State's position?

16 **MR HUMPHRIES** This -- this phase, as the Court is
17 aware, allows the State to put into evidence, evidence in
18 aggravation That is not only evidence regarding the
19 aggravating circumstances, but evidence specifically relating
20 to the character and conduct of the Defendant That is the
21 basis upon which the jury will ultimately render their
22 sentence

23 As the Court is also aware, not only are we permitted --
24 and to providing evidence regarding specific acts of the
25 Defendant's conduct, the rules are somewhat -- somewhat

MOTION IN LIMINE

1 reduced in terms of admissibility in this stage In addition,
2 Your Honor, the argument that the Ling murder, rape, armed
3 robbery, kidnapping is -- is somehow precluded because it was
4 the basis of a prior case and a prior sentence is completely
5 without any kind of foundation in the law in terms of
6 excluding it

7 In fact, in the last case the State was prohibited -- we
8 objected, but the State was prohibited from introducing
9 evidence of the Turner murder because it was not the subject
10 of a conviction Of course, that's not the standard and the
11 Court is aware of that It's by clear and convincing
12 evidence

13 In this case, those acts were the subject of convictions
14 well beyond that standard There is no prohibition It is
15 essential, just as the Defense is going to have an opportunity
16 to present it -- to put in evidence of good character and
17 conduct, evidence in mitigation for this Defendant, it is
18 essential for the jury to have a complete picture regarding
19 this Defendant, his character, and his conduct, in order to
20 make a reliable decision regarding the sentence in this case

21 It is not prohibited under any standard, under any case
22 law It is the subject of a prior conviction and the State
23 intends to go into it There is absolutely no reason to
24 exclude for any reason and clearly not for the reasons
25 proposed by Defense counsel

MOTION IN LIMINE

1 **THE COURT** All right The Ling murder is proper It
2 sits within the statutory aggravating circumstances I reject
3 the arguments of the Defense as presented and do find it to be
4 proper to be presented to this jury as a statutory aggravating
5 circumstance

6 All right, is the State ready to proceed?

7 **MR HUMPHRIES** The State is ready to proceed, Your
8 Honor

9 **THE COURT** Defense?

10 **MS WILLIAMS** Your Honor, if I just may clarify I
11 want to make sure I understand the Court's ruling, that the
12 Court is going to allow the testimony regarding the Ling
13 murder to go toward character, and obviously you can put in
14 good character, you can put in bad character, and that's the
15 purpose of that, not as to be a statutorily aggravating
16 circumstance

17 **THE COURT** Well, it is a statutory aggravating
18 circumstance The murder was committed by a person with a
19 prior conviction for murder That's a statutory aggravating
20 circumstance He has a prior conviction for murder, ---

21 **MS WILLIAMS** And, Your Honor, ---

22 **THE COURT** --- so it's not only -- it not only is
23 evidence of character, it is an enumerated statutory
24 aggravating circumstance The murder was committed by a
25 person with a prior conviction for murder

MOTION IN LIMINE

1 **MR HUMPHRIES** Your Honor, and just let me -- let me
2 make sure for the record that the State's position is clear
3 I appreciate the Court's ruling and obviously concur with it
4 Purely for strategic reasons the State did not notice the
5 Defendant regarding that particular statutory aggravator
6 That has nothing to do with whether or not it's viable The
7 State absolutely believes that it is

8 It was purely for strategic reasons for future appellate
9 concerns, so he has not been noticed as to that specific
10 aggravator and we'll not rely on it before this jury It
11 clearly is an enumerated statutory aggravator We will not
12 ask the jury to make a finding regarding that particular
13 aggravator We rely on the general case law in sentencing
14 regarding the Defendant's specific character and conduct,
15 which is clearly admissible upon meeting the standard of clear
16 and convincing evidence Of course, that conduct has met the
17 level of beyond a reasonable doubt

18 **THE COURT** All right Thank you very much

19 **MR HUMPHRIES** Thank you, Your Honor

20 **THE COURT** All right, is the State ready to proceed
21 then?

22 **MR HUMPHRIES** Yes sir, Your Honor

23 **THE COURT** All right

24 **MR HUMPHRIES** Your Honor, we will have one argument
25 It will be brief

INFORMATION TO COURT RE ADDITIONAL DEFENSE WITNESS

1 **THE COURT** All right Yes Ma'am?

2 **MS WILLIAMS** I was just going to remind you of a
3 housekeeping, Your Honor The only other thing at this point
4 I need to make the Court aware of, we became aware of, I think
5 day before yesterday, that other than the witnesses we have
6 listed there's one other potential witness whose name is Frank
7 Shealy He's from the Charleston area, and I understand the
8 purpose of notifying the jury to make sure they have no, you
9 know, predisposed connection, or bias, or anything of that
10 nature, but he's from the Charleston area, but we just became
11 aware of him in like the last two days and confirmed that, but
12 his name is Frank Shealy, and he would be the only additional
13 witness who is not on our original list

14 **THE COURT** Do you have an address, because we need to
15 -- we did not question this jury about that particular person

16 **MS WILLIAMS** He's in Charleston, Your Honor He lives
17 in Charleston

18 **THE COURT** All right, and do you have his date of birth
19 and Social Security number for the State?

20 **MS WILLIAMS** No, sir, but we will have that -- I can
21 get that and provide that to him -- to them

22 **THE COURT** All right, and what is his name again?

23 **MS WILLIAMS** Frank Shealy

24 **THE COURT** And what does he do?

25 **MS WILLIAMS** He is -- my understanding is he is a --

INFORMATION TO COURT RE ADDITIONAL DEFENSE WITNESS
JURY IN/INSTRUCTIONS BY COURT TO JURY

1 he is an actual -- I think technically he is under the
2 umbrella of a Department of Parole employee Even though he
3 does not have a salary from them, he goes and ministers in the
4 Department of Corrections

5 **THE COURT** All right All right, anything else from
6 the Defense?

7 **MS WILLIAMS** No, sir

8 **THE COURT** All right Ask the jury to come in, please
9 Are y'all going to have an opening statement to the -- to
10 the jury?

11 **MS WILLIAMS** We're going to do one, and it will be me

12 **THE COURT** All right, very good

13 **MS WILLIAMS** Your Honor, may we approach briefly?

14 **THE COURT** Yes

15 (BENCH CONFERENCE TAKES PLACE OFF THE RECORD)

16 (THE FOLLOWING TAKES PLACE WITHIN THE PRESENCE OF THE
17 JURY)

18 **THE COURT** All right, good morning, ladies and
19 gentlemen As a result of your verdict, the Defendant,
20 Stephen C Stanko, was convicted on November 16, 2009, at 5 10
21 P M of murder and armed robbery

22 It is now November 18, 2009 It's ~~9~~ 10 A M The
23 statutory waiting period of at least twenty-four hours having
24 concluded, it therefore becomes necessary for us to engage
25 into the next stage of the proceeding which relates to the

INFORMATION TO COURT RE ADDITIONAL DEFENSE WITNESS
JURY IN/INSTRUCTIONS BY COURT TO JURY

1 penalty that will be imposed upon the Defendant

2 Section 16-3-20, South Carolina Code of Laws, 1976, as
3 amended, provides in part that in a capital case if a person
4 is convicted of murder and if the State seeks the death
5 penalty, then upon conviction the Court shall conduct a
6 separate sentencing proceeding to determine whether the
7 Defendant should be sentenced to death or life in prison
8 without the possibility of parole, so our purpose in
9 conducting this proceeding in which we are now engaged and
10 with respect to your particular role in this proceeding is to
11 determine whether the Court should sentence the Defendant,
12 Stephen C Stanko, to death or life imprisonment without the
13 possibility of parole Please understand that you, the jury,
14 will unanimously impose the sentence, and whatever sentence
15 you impose, the Court will then impose on the Defendant

16 During this sentencing proceeding, the State and the
17 Defendant will have an opportunity to introduce additional
18 evidence in extenuation, mitigation, or aggravation, and both
19 sides will have an opportunity to present arguments to you for
20 and against the death penalty

21 The only issue then that is left for you to determine in
22 this case is what sentence should be imposed upon the
23 Defendant, should it be a sentence of life imprisonment
24 without the possibility of parole or should it be a sentence
25 of death You are not concerned with the Defendant's guilt or

INSTRUCTIONS BY COURT TO JURY
SENTENCING PHASE - STATE'S OPENING (HUMPHRIES)

1 innocence because that has already been decided The
2 Defendant having been convicted of murder, we must now
3 consider what his punishment is to be

4 After evidence is presented to you and after the last
5 argument has been made to you concerning the punishment that
6 should be imposed upon the Defendant, the Court will give you
7 certain specific instructions and you will then retire to
8 deliberate and to unanimously decide whether a death sentence
9 or life sentence is appropriate

10 I will recognize the State for a brief opening statement

11 **MR HUMPHRIES** Please the Court Counsel

12 **THE COURT** Yes sir

13 **MR HUMPHRIES** Mr Foreman, ladies and gentlemen of the
14 jury, the Horry County Police Department charged the
15 Defendant, Stephen C Stanko, with the crimes that you've
16 convicted him of The State, that is the Solicitor's Office,
17 presented indictments on those charges to the Horry County
18 Grand Jury The Horry County Grand Jury true-billed those
19 indictments The Solicitor's Office noticed the Defendant,
20 Stephen C Stanko, of their intention to seek the death
21 penalty, and we're here

22 Now, that's the procedural mechanism by which we arrive
23 here today, but that's not the reason There's one reason
24 we're here today It's a place, quite frankly, folks, that we
25 were headed all along The reason we're here is because of

STATE'S OPENING (HUMPHRIES)

1 the conduct and the character of Defendant Stanko

2 In the penalty phase, as the Judge has told you, the
3 guilt of the Defendant is not an issue, clearly not an issue
4 The issue is what sentence, based on his character, based on
5 his conduct, this Defendant deserves

6 You'll hear from us first You'll hear evidence in
7 aggravation, and we've alleged that in this case the murder
8 was committed while in the commission of an armed robbery, or
9 while in the commission of a grand larceny with use of a
10 deadly weapon Those are the statutory aggravating
11 circumstances Those are the things we have to prove to you
12 beyond a reasonable doubt You'll have to make a separate
13 determination even having already found that he is guilty of
14 armed robbery I submit to you that that will not be
15 difficult, but that's not all we're going to tell you

16 We're going to tell you about Defendant Stanko We're
17 going to tell you that what you've heard in this courtroom in
18 the first few days doesn't nearly touch on the character and
19 conduct of Defendant Stanko

20 After we present our evidence, the Defense will then have
21 an opportunity to present evidence in mitigation if they
22 choose to do so They're not compelled to do so, but they
23 may At the end of that time, the Court will charge you and
24 you will take up what I know you appreciate to be an awesome
25 responsibility of returning a sentence

STATE'S OPENING (HUMPHRIES)

1 It's at this stage that often as a prosecutor I feel
2 compelled almost to apologize, to apologize to you, not for
3 why we're here, not for what you've already decided or for
4 what you will ultimately have to decide, but what you're going
5 to have to hear and what you're going to have to see

6 This stage is completely different than any other
7 criminal case, and Lord knows by this time you folks have
8 figured that out In this stage of the trial, you will see
9 things that you would have hoped throughout the course of your
10 life you would never have to see You will hear things in
11 this phase of the trial that you would have hoped through the
12 course of your life you would have never had to heard -- to
13 hear

14 I want to express to you now that it's important, because
15 not only do you meet Defendant Stanko, because that
16 presumption of innocence, that cloak of innocence, he wears it
17 no longer Not only do you meet him face to face in terms of
18 his character and his conduct, but you meet his victims

19 It will be difficult It will be trying At times it
20 will so far beyond the pale that you will be tempted to turn
21 your head You will be tempted to place your hands across
22 your ears, and again, there's one singular reason for that,
23 and that's because this is the character and this is the
24 conduct of Defendant Stanko

25 I ask you to commit yourself, to resolve yourself to that