

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA

1	TAMMY J. KITZMILLER, et al.,	:	
2		:	
3	Plaintiffs	:	
4	vs.	:	Case Number
5		:	4:04-CV-02688
6	DOVER AREA SCHOOL DISTRICT;	:	
7	DOVER AREA SCHOOL DISTRICT	:	
8	BOARD OF DIRECTORS,	:	
9	Defendants	:	

AFTERNOON SESSION

TRANSCRIPT OF PROCEEDINGS
OF BENCH TRIAL

Before: HONORABLE JOHN E. JONES, III

Date : September 30, 2005

Place : Courtroom Number 2, 9th Floor
Federal Building
228 Walnut Street
Harrisburg, Pennsylvania

COUNSEL PRESENT:

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For - Plaintiffs

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RICHARD THOMPSON, ESQ.
ROBERT J. MUISE, EQ

For - Defendants

Lori A. Shuey, RPR, CRR
Official Court Reporter

I N D E X

WITNESSES

<u>For - Plaintiffs:</u>	<u>Direct</u>	<u>Cross</u>	<u>Redirect</u>	<u>Recross</u>
John F. Haught, Ph.D.	3	98		

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1 THE COURT: We convene for our somewhat, as
2 I understand it, abbreviated Friday afternoon session.
3 And we are still on the plaintiffs' case.

4 MR. WILCOX: Your Honor, I'm Alfred Wilcox
5 from Pepper Hamilton, LLP, and I'd like to call the
6 plaintiffs' next witness, John Haught.

7 THE COURT: Nice to see you, Mr. Wilcox.
8 I've seen you but not in that chair. You may proceed.

9 JOHN F. HAUGHT, PH.D., called as a witness,
10 having been duly sworn or affirmed, testified as
11 follows:

12 THE CLERK: If you'll state your name and
13 spell your name for the record, please.

14 THE WITNESS: John F. Haught, H-a-u-g-h-t.

15 DIRECT EXAMINATION

16 BY MR. WILCOX:

17 Q. Professor Haught, are you married?

18 A. Yes, I am.

19 Q. Where do you live?

20 A. I live in Falls Church, Virginia.

21 Q. Do you have any children?

22 A. I have two boys.

23 Q. I understand you are officially retired now?

24 A. I'm officially retired.

25 Q. When did you officially retire?

1 A. At the beginning of this year.

2 Q. Do you have a current CV?

3 A. Yes, I do.

4 MR. WILCOX: May I approach the witness,
5 Your Honor?

6 THE COURT: You may.

7 BY MR. WILCOX:

8 Q. Professor Haught, I show you what's been
9 marked as Plaintiffs' Exhibit P315. Is that a copy of
10 your current CV?

11 A. Yes, it is.

12 Q. Your qualifications to testify as an expert
13 in this case have already been stipulated to, but I'd
14 like to just spend a few minutes calling out some
15 highlights in your career for the Court.

16 Am I correct that you received your Ph.D.
17 from Catholic University in 1970?

18 A. Yes.

19 Q. And what was that in?

20 A. In theology.

21 Q. And have you been teaching and writing about
22 theology ever since?

23 A. Yes, I have.

24 Q. You rose from being an instructor in
25 theology at Georgetown University to being chair of

1 the Theology Department?

2 A. Yes, I did.

3 Q. When was that that you became chair?

4 A. In 1990 through '95.

5 Q. And your CV contains a list of the various
6 books that you have published. How many books have
7 you published overall?

8 A. 13.

9 Q. Of those 13, some of them deal generally
10 with the subject of science and religion. Is that
11 correct?

12 A. That's correct.

13 Q. And some of them deal specifically with the
14 subject of evolution and religion. Is that correct?

15 A. Yes. Three of my books deal explicitly with
16 evolution and religion.

17 Q. I'm holding up -- and we're not going to
18 mark this at this point -- a book titled, *God After*
19 *Darwin*, by John F. Haught. Is that one of yours that
20 deals specifically with evolution and religion?

21 A. It deals with evolution and theology.

22 Q. And a book called, *Deeper Than Darwin*. Is
23 that another of --

24 A. That's a sequel to *God After Darwin*.

25 Q. And a paperback, *Responses to 101 Questions*

1 *on God and Evolution?*

2 A. Yes.

3 Q. The title is apt?

4 A. That's apt.

5 Q. And I'm holding up some others, one called,
6 *The Cosmic Adventure: Science, Religion and the Quest*
7 *for Purpose.*

8 A. Yes.

9 Q. Is that a broader --

10 A. That's a broader discussion, includes
11 evolution but goes beyond it, as well.

12 Q. And one, *Science and Religion: In Search of*
13 *Cosmic Purpose?*

14 A. That's a book that I edited.

15 Q. *Science and Religion: From Conflict to*
16 *Conversation?*

17 A. That's an introductory text for college and
18 intelligent laypeople on science and religion.

19 Q. In either your classroom work or your
20 academic writing have you encountered the notion of
21 intelligent design?

22 A. Yes, I have.

23 Q. Are you familiar with the writings of
24 intelligent design proponents?

25 A. Yes, I am.

1 Q. And have you heard them speak on the subject
2 of intelligent design?

3 A. I have, yes.

4 Q. In your opinion, is intelligent design a
5 religious proposition or a scientific proposition?

6 A. It's essentially a religious proposition.

7 Q. We're going to spend the rest of our time
8 together exploring your reasons for that opinion.
9 What do you understand intelligent design to be?

10 A. I understand it to be a reformulation of an
11 old theological argument for the existence of God, an
12 argument that unfolds in the form of a syllogism, the
13 major premise of which is wherever there is complex
14 design, there has to be some intelligent designer.
15 The minor premise is that nature exhibits complex
16 design. The conclusion, therefore, nature must have
17 an intelligent designer.

18 Q. You said this is an old tradition. Can you
19 trace the antecedence for us?

20 A. Well, two landmarks are Thomas Aquinas and
21 William Paley. Thomas Aquinas was a famous
22 theologian/philosopher who lived in the 13th Century.
23 And one of his claims to fame is that he formulated
24 what are called the five ways to prove the existence
25 of God, one of which was to argue from the design and

1 complexity and order and pattern in the universe to
2 the existence of an ultimate intelligent designer.
3 The second landmark -- incidentally, Thomas Aquinas
4 ended every one of his five arguments by saying that
5 this being, this ultimate, everyone understands to be
6 God.

7 And William Paley, in the late 18th and
8 early 19th Century, is famous for formulating the
9 famous watchmaker argument, according to which, just
10 as you open up a watch and find there intricate design
11 and that should lead you to postulate the existence of
12 a watchmaker, so also the intricate design and pattern
13 in nature should lead one to posit the existence of an
14 intelligent being that's responsible for the existence
15 of design and pattern in nature.

16 And like Aquinas, William Paley also said to
17 the effect that everyone understands this to be the
18 God of biblical theism, the creator God of biblical
19 religion.

20 Q. How does intelligent design build upon or
21 modernize this old tradition of natural theology?

22 A. Well, it simply appeals to more recent
23 findings about the complexity of the world by
24 contemporary science, for example, what are called
25 irreducible complexity and specified informational

1 complexity.

2 The irreducible complexity idea that the
3 intelligent design proponents, especially Michael
4 Behe, use refers to the subcellular intricacy that's
5 been made available by the electron microscope since
6 the 1950s and also such things as blood clotting
7 mechanisms, immune systems, and so forth.

8 And then more recently William Dembski,
9 especially, has talked about how the specified
10 informational complexity in the DNA at the nucleus of
11 cells consists of a specific sequence of nucleotides
12 which form a recipe or a template for the design of
13 the organism as a whole.

14 Q. It may be possible, if you drop that
15 microphone down a bit, that the "P" sound won't be as
16 pronounced here. With us?

17 Does intelligent design identify the
18 designer as God?

19 A. Intelligent design proponents stop short of
20 identifying the intelligent designer as God, but I
21 would say that the structure and history of Western
22 thought, especially religious thought as such, that
23 most readers, if not all, will immediately identify
24 this intelligent agent with the deity of theistic that
25 is biblically-based religion.

1 Q. Does intelligent design resemble creation
2 science from the 1960s and 1970s in America?

3 A. Well, both creation science and intelligent
4 design argue that the intelligence that runs the
5 universe, that guides the universe, is something that
6 has to be brought down to the level of scientific
7 explanation.

8 They both deny that natural causes alone can
9 bring about the complexity of life, so what they share
10 is the tendency to bring into scientific discourse a
11 category which I don't think belongs there, namely
12 intelligent design, to make up for what seems
13 impossible for nature to bring about by itself.

14 And they also share the idea of what's
15 called "special creation," according to which the
16 intelligent designer or the creator intervenes from
17 time to time to bring about specifically new and
18 distinct species of life, which could not have come
19 about for them by common descent but had to be created
20 individually by ad hoc acts of the deity.

21 Q. Have you read parts of or all of *Of Pandas*
22 *and People*?

23 A. I've read parts of it.

24 Q. At Page 85 -- this is P11, Your Honor,
25 Exhibit P11. At Page 85, *Pandas and People* is talking

1 about an analogy drawn on the structure of DNA and
2 says, "This strong analogy leads to the conclusion
3 that life itself owes its origin to a master
4 intellect."

5 Is that consistent with the explanation
6 you've just been giving about --

7 A. Yes, it is.

8 Q. And you reference the concept of special
9 creation. Starting at Page 99 and going over to Page
10 100, the text of *Pandas and People* says, quote,
11 Intelligent design means that various forms of life
12 began abruptly through an intelligent agency with
13 their distinctive features already in tact: fish with
14 fins and scales, birds with feathers, beaks, and
15 wings, et cetera. Is that an example of special
16 creation?

17 A. It's a very good example of what special
18 creation means.

19 Q. Is intelligent design in any way different
20 from creation science?

21 A. Intelligent design stops short of explicitly
22 identifying the intelligent designer with the Creator.
23 And also, in my opinion, in my reading of intelligent
24 design works, I would say that on the average, they
25 are less biblically literalists in their

1 interpretation of Scripture than those who call
2 themselves creation scientists. But substantively
3 they're very much the same.

4 Q. I'd like to shift gears, and we've talked
5 about intelligent design. Now let's talk about what
6 makes the subject religion or religious.

7 In your report that you've submitted here,
8 you identified three characteristics or qualities
9 where you equate with religion or religious. The
10 first of those is a devotion to an ultimate in
11 importance and explanatory power. Could you tell us
12 what you mean by that?

13 A. Well, there are different levels of
14 explanation. Science, I believe, works with near at
15 hand, available, observable natural explanations, but
16 the human mind also looks for ultimate explanations.
17 And it's at the level of ultimate explanations that
18 the -- what we call theological discourse is
19 appropriately located.

20 Q. *Pandas* -- we referred just a minute ago to a
21 quote from *Pandas* where it refers to a master
22 intellect. Is that consistent with this notion of
23 ultimate?

24 A. Yes. Clearly the notion of a master
25 intellect, which assumes that we can't go any further

1 than the master intellect, fits in the category of
2 ultimate explanation, as well as ultimate in the order
3 of being.

4 Q. I'd like to quote again from *Pandas*, Page 6.
5 Quote, In the world around us, we see two classes of
6 things, natural objects like rivers and mountains and
7 manmade structures like houses and computers. To put
8 it in the context of origins, we see things resulting
9 from two kinds of causes, natural and intelligent.

10 Does this shed light on whether *Pandas* is
11 religious in the sense we've just been talking about?

12 A. Yes, it does. If there are only two kinds
13 of causes, natural causes and intelligent causes, then
14 that implies logically that intelligent causes are not
15 natural causes. And I don't know where else one would
16 logically locate the intelligent causes except in the
17 space of an ultimate explanation.

18 Q. Another of your definitions of "religious"
19 is as a reference to a mystery that unfolds the
20 ordinary world but is not fully accessible to the
21 senses of those of us in that ordinary world.

22 Does *Pandas* reveal whether intelligent
23 design is religious in that second sense, as well?

24 A. If I could refer to a quotation here. The
25 authors of *Pandas and People* ask this question: "What

1 kind of intelligent agent was it?" And then it goes
2 on to say, the book goes on to say, "On its own,
3 science cannot answer this question. It must leave it
4 to religion and philosophy."

5 So that would lead one to conclude that only
6 a religious explanation is going to give a complete
7 explanation of life.

8 MR. WILCOX: For the record, Your Honor,
9 that quote was from Page 7 of P11.

10 BY MR. WILCOX:

11 Q. A third definition of religion you
12 articulate in your report is Western cultural theism
13 or a belief in a God who is good, powerful, and
14 intelligent. At the risk of belaboring the point,
15 does *Pandas* shed any light on whether intelligent
16 design meets this definition of religion?

17 A. Yes. The very idea of intelligence implies
18 that it resides somehow within a being that is at
19 least personal. And in the case of theistic religion,
20 God is seen as personal, so it's just automatic and
21 logical that one would identify this intelligent agent
22 with the personal God, creator God, transcendent God,
23 all good, all beneficent God of Christian and biblical
24 theism.

25 Q. For intelligent design to be coherent or

1 intelligible, does it require a particular religious
2 world-view?

3 A. In my view, the way in which intelligent
4 design is used in the discourse that's in dispute, it
5 does entail an essentially biblical and specifically
6 Christian view of the world and an ultimate
7 intelligence, ultimate reality.

8 Q. Do you have any information as to whether
9 the leading proponents of intelligent design are
10 themselves deeply Christian?

11 A. In my experience -- and I've read quite a
12 few of them -- I see no exceptions to what I take to
13 be the fact that all of them are deeply religious
14 people, deeply committed to the cause of the survival
15 of Western theism, and I see this as one of the
16 motivating factors behind the whole movement.

17 Q. Has your study of intelligent design
18 acquainted you with the motivations of its leading
19 proponents?

20 A. Yes.

21 Q. What have you observed?

22 A. Well, I've observed that, again, without
23 exception, their objective seems to me to get at the
24 heart of what they consider to be the source of moral
25 and spiritual decay. And they do this by using a

1 strategic tool or what they call a Wedge to combat the
2 materialistic world-view which they consider to be
3 inextricably connected to a Darwinian way of looking
4 at life or, more generally, to an evolutionary
5 biological way of looking at life.

6 Q. And by a materialist world-view or belief
7 system, what does that mean?

8 A. Materialism is a belief system that claims
9 that matter, lifeless and mindless matter, is the
10 ultimate foundation of all reality, and there's
11 nothing more ultimate than that. So it's kind of
12 religious in the first sense of my term, a belief in
13 something of ultimate importance.

14 For the materialist, matter is the ultimate
15 creator, the ultimate source of all being, and
16 therefore it excludes the existence of anything
17 supernatural, certainly the existence of God.

18 Q. Are you familiar with the work of William
19 Dembski?

20 A. Yes, I am.

21 Q. Who is he?

22 A. William Dembski is a leading proponent of
23 the intelligent design movement, if you want to call
24 it that. He's one of the top two or three
25 spokespersons for intelligent design today.

1 Q. Are you familiar with his introductory essay
2 in the book *Mere Creation*?

3 A. Yes, I am.

4 MR. WILCOX: For the record Your Honor,
5 that's Exhibit P340.

6 BY MR. WILCOX:

7 Q. Does Dr. Dembski's essay shed any light on
8 the question whether intelligent design is conceived
9 of as essentially a religious proposition?

10 A. Yes, it's very interesting what he says in
11 this introduction to this very important book in
12 intelligent design thinking. And I'd like to quote
13 this, because I think it's very important.

14 He says that one prong of the intelligent
15 design program is, quote, a sustained theological
16 investigation that connects the intelligence inferred
17 by intelligent design with the God of Scripture.

18 And after reading that, I don't think one
19 could have any doubt as to what is really going on
20 here, namely an attempt to promote a biblically
21 theistic way of looking at reality.

22 MR. WILCOX: For the record, Your Honor,
23 that's from Page 29 of P340.

24 THE COURT: Very well.

25 BY MR. WILCOX:

1 Q. Let's shift gears again and talk about what
2 you understand science is.

3 MR. THOMPSON: Objection, Your Honor.
4 There's no foundation that he is an expert in science.

5 THE COURT: Well, let's have a question, and
6 then we'll see what the point of the inquiry is.

7 MR. WILCOX: Specifically, I want to focus
8 on the natural sciences.

9 BY MR. WILCOX:

10 Q. What is your understanding of science?

11 A. I might just say --

12 MR. THOMPSON: Objection, Your Honor. He is
13 not a scientist, nor is he a philosopher of science,
14 nor is he a historian of science. And we are now
15 getting into the field of Professor Haught telling us
16 what's science. His only purpose here was to talk
17 about religion and its impact on the intelligent
18 design theory.

19 THE COURT: Are you saying it's outside of
20 the four corners of his report?

21 MR. THOMPSON: I can't say that because I
22 haven't --

23 THE COURT: Well, that's what the objection
24 has to be, I think. And if it's within his report and
25 you had notice and you stipulated as to his

1 credentials, then I think he's going to be able to
2 testify to it. Now, if you want to look at it, I'll
3 give you a moment to do that.

4 MR. THOMPSON: Thank you, Your Honor.

5 THE COURT: I don't want to do it under
6 duress, so let's take a moment and have you take a
7 look and see if you want to base an objection on the
8 report. And if there is an objection, I'm going to
9 need a copy of the report or be pointed to the exhibit
10 number so that I have it.

11 MR. THOMPSON: I saw a comment about
12 science, Your Honor, on the report, so I'll withdraw
13 my objection.

14 THE COURT: You certainly have an objection
15 if it goes beyond that. Then I'll consider the
16 objection with regard to that extent.

17 MR. THOMPSON: Thank you.

18 THE COURT: And you may proceed. You
19 probably should restate, I guess, the question. Do
20 you want it read back, or do you want to restate it,
21 Counsel?

22 MR. WILCOX: I'll restate it.

23 THE COURT: All right.

24 BY MR. WILCOX:

25 Q. Focusing on natural science, what is

1 science?

2 A. Science is a mode of inquiry that looks to
3 understand natural phenomena by looking for their
4 natural causes, efficient and material causes. It
5 does this by first gathering data observationally or
6 empirically. Then it organizes this data into the
7 form of hypotheses or theories. And then, thirdly, it
8 continually tests the authenticity of these hypotheses
9 and theories against new data that might come in and
10 perhaps occasionally bring about the revision of the
11 hypothesis or theory.

12 Q. You said that science seeks to understand
13 the natural world through natural explanations. Is
14 that important?

15 A. Yes, that's critical. The science, by
16 definition, limits itself self-consciously,
17 methodologically, to natural explanations. And that
18 means that anything like a supernatural reality or
19 transcendent reality, science is simply not wired to
20 pick up any signals of it, and therefore any reference
21 to the supernatural simply cannot be part of
22 scientific discourse. And this is the way that
23 science carries on to our present day.

24 Q. Would that mean this is the way modern
25 science is conducted?

1 A. Modern science we date from roughly the end
2 of the 16th to the 17th Century, in that period of
3 time. And it was at that time that the great
4 figurists of modern science, almost all of whom were
5 deeply religious men themselves, decided
6 self-consciously that this new mode of inquiry would
7 not appeal to anything that's not natural, would not
8 appeal to things like value, importance, divine
9 causation, or even anything like intelligent
10 causation.

11 These are not scientific categories of
12 explanation. And ever since the 16th and 17th
13 Century, modern science, as it's called, leaves out
14 anything that has to do with theological or ultimate
15 explanation.

16 Q. Who are some of the leading figures in the
17 development of modern science?

18 A. Well, we can go back to Copernicus. And, of
19 course, the figure that for me stands out is Galileo.
20 And Galileo is important because he told his accusers,
21 his ecclesiastical accusers, that we should never look
22 for scientific information in Scripture, we should
23 never look for scientific information in any
24 theological source.

25 So he placed science on the foundation of

1 experience rather than authority or philosophical
2 coherence. From thence forth to this day, science is
3 a discipline where testability is the criterion of its
4 worth.

5 Q. Does this make science at odds with
6 religion?

7 A. By no means. Science and religion, as I've
8 written in all of my books, are dealing with two
9 completely different or distinct realms. They can be
10 related, science and religion, but, first of all, they
11 have to be distinguished. The medieval philosopher
12 said, we distinguish in order to relate. And when we
13 have a failure to distinguish science from religion,
14 then confusion will follow.

15 So science deals with questions relating to
16 natural causes, to efficient and material causes, if
17 you want to use Aristotelian language. Religion and
18 theology deal with questions about ultimate meaning
19 and ultimate purpose. To put it very simply, science
20 deals with causes, religion deals with meanings.
21 Science asks "how" questions, religion asks "why"
22 questions.

23 And it's because they're doing different
24 things that they cannot logically stand in a
25 competitive relationship with each other any more

1 than, say, a baseball game or a baseball player or a
2 good move in baseball can conflict with a good move in
3 chess. They're different games, if you want to use
4 that analogy, playing by different rules.

5 Q. You've used another analogy in discussions
6 with me that might be illuminating. This is the
7 boiling water analogy. Could you give us that?

8 A. Yes. I think most of the issues in science
9 and religion discussions, most of the confusion that
10 occurs happens because we fail to distinguish
11 different levels of explanation. And so what I
12 advocate is layered or -- layered explanation or
13 explanatory pluralism, according to which almost every
14 phenomenon in our experience can be explained at a
15 plurality of levels.

16 And a simple example would be a teapot.
17 Suppose a teapot is boiling on your stove and someone
18 comes into the room and says, explain to me why that's
19 boiling. Well, one explanation would be it's boiling
20 because the water molecules are moving around
21 excitedly and the liquid state is being transformed
22 into gas.

23 But at the same time you could just as
24 easily have answered that question by saying, it's
25 boiling because my wife turned the gas on. Or you

1 could also answer that same question by saying it's
2 boiling because I want tea.

3 All three answers are right, but they don't
4 conflict with each other because they're working at
5 different levels. Science works at one level of
6 investigation, religion at another. And it would be a
7 mistake to say that the teapot is boiling because I
8 turned the gas on rather than because the molecules
9 are moving around. It would be a mistake to say the
10 teapot is boiling because of molecular movement rather
11 than because I want tea. No, you can have a plurality
12 of levels of explanation. But the problems occur when
13 one assumes that there's only one level.

14 And if I could apply this analogy to the
15 present case, it seems to me that the intelligent
16 design proponents are assuming that there's only one
17 authoritative level of inquiry, namely the scientific,
18 which is, of course, a very authoritative way of
19 looking at things. And they're trying to ram their
20 ultimate kind of explanation, intelligent design, into
21 that level of explanation, which is culturally very
22 authoritative today, namely the scientific.

23 And for that reason, science, scientists
24 justifiably object because implicitly they're
25 accepting what I'm calling this explanatory pluralism

1 or layered explanation where you don't bring in "I
2 want tea" while you're studying the molecular movement
3 in the kettle. So it's a logical confusion that we
4 have going here.

5 Q. I think you may have already explained this,
6 but just to be sure we see how it connects, one hears
7 it said that it's important to, quote, teach the
8 controversy, unquote. Do you agree with that?

9 A. Well, there really is no controversy between
10 evolutionary biology and intelligent design because
11 intelligent design simply is not a scientific idea.
12 To come back to my analogy, it simply doesn't fall on
13 the same level of inquiry.

14 But if there is a controversy at all, it's a
15 controversy between two groups of people, scientists
16 who rightly demand that intelligent design be excluded
17 from scientific inquiry and intelligent design
18 proponents who want it to be part of scientific
19 inquiry.

20 And I also think that it's certainly
21 appropriate in high school classes or wherever for
22 people to talk about the controversy. To talk about
23 what's going on at this trial, for example, would be a
24 good topic for a civics class or a social science
25 class or a cultural history class or something like

1 that.

2 But certainly there is no controversy,
3 logically speaking, between intelligent design and
4 evolutionary biology because intelligent design, just
5 to repeat, is simply not a scientific idea.

6 Q. Does that mean intelligent design doesn't
7 belong in a biology class?

8 A. Yes.

9 Q. In your report, you refer to the logical and
10 rhetorical respect in which intelligent design is
11 revealed as religious. Could you --

12 A. Yes. By "rhetorical," I mean persuasive. I
13 think what I see happening is intelligent design
14 proponents are trying to persuade students and the
15 public that intelligent design is something that
16 should be part of scientific discourse.

17 But rhetoric is not necessarily logical, and
18 the whole foundation of that rhetoric is a logical
19 confusion or alloy of proximate explanations with
20 ultimate explanations, and that's what makes the
21 rhetoric suspicious.

22 Q. You've said several times that you regard
23 intelligent design as being religious or rooted in
24 religion. Is intelligent design reflective of any
25 particular religion?

1 A. I see it, at least as it's being used in
2 this discussion, as reflective of the old natural
3 theology tradition of classic Christianity with its
4 postulation of an ultimate transcendent, all good,
5 beneficent, all powerful creator God.

6 Q. You have called intelligent design appalling
7 theology. Can you explain that?

8 A. Well, I think most people will instinctively
9 identify the intelligent designer with the God of
10 theism, but all the great theologians -- there are
11 theologians that I consider great, people like Karl
12 Barth, Paul Tillich, Langdon Gilkey, Carl Rahner --
13 would see what's going on in the intelligent design
14 proposal, from a theological point of view, is the
15 attempt to bring the ultimate and the infinite down in
16 a belittling way into the continuum of natural causes
17 as one finite cause among others.

18 And anytime, from a theological point of
19 view, you try to have the infinite become squeezed
20 into the category of the finite, that's known as
21 idolatry. So it's religiously, as well as
22 theologically, offensive to what I consider the best
23 theologians, for example, of the 20th Century.

24 Q. These theologians you've just named, are
25 they Catholic theologians like yourself?

1 A. Karl Barth is probably the most important
2 Protestant theologian of the 20th Century. Paul
3 Tillich is a close second or third. Carl Rahner is
4 the most important Catholic theologian of the 20th
5 Century. Langdon Gilkey, who taught at Georgetown
6 with me, testified in the Arkansas creation trial in a
7 way very similar to the ideas that I'm expressing
8 here.

9 Q. Did Pope John Paul, II, express a view on
10 evolution?

11 A. Yes. In 1996, he wrote a statement, an
12 authoritative statement, saying that the Catholic
13 thought is by no means opposed to evolutionary
14 science. Indeed, he says that it seems now that the
15 evidence for evolution is quite convincing, that
16 evolution is more than a hypothesis, it's more than a
17 guess. It's based in sound scientific research.

18 He only cautioned that we should not
19 associate the philosophy of materialism, which I was
20 talking about earlier, with evolutionary science, we
21 should keep them distinct, which is, of course, from
22 my point of view theologically, very, very sound
23 advice.

24 Q. Is the materialist world-view a scientific
25 conclusion?

1 A. No, materialism is a belief system, no less
2 a belief system than is intelligent design. And as
3 such, it has absolutely no place in the classroom, and
4 teachers of evolution should not lead their students
5 craftily or explicitly to have to embrace -- to feel
6 that they have to embrace a materialistic world-view
7 in order to make sense of evolution.

8 Evolutionary science can be disengaged from
9 ideologies of all sorts, and that's the way evolution
10 should be taught. So materialism, to answer your
11 question, has absolutely no place in the classroom.

12 Q. You concluded your report with an
13 observation that if a child of yours were attending a
14 school where the teachers or administrators propose
15 that students should consider intelligent design as an
16 alternative to evolution, you would be offended
17 religiously, as well as intellectually. Could you
18 explain that?

19 A. Yes. Let me talk first about
20 intellectually. What I mean by that is that I would
21 want a child of mine, in a science class, to really
22 feel and experience the adventure of open-ended
23 scientific discovery, the sense that there's an
24 exhilarating horizon of new discovery up ahead and
25 that the world is open to endless and indefinite

1 scientific scrutiny and inquiry. I think that
2 adventure is extremely important educationally,
3 pedagogically.

4 But the moment you bring in a category like
5 intelligent design into scientific discourse, it
6 functions, it seems to me, as a science stopper. In a
7 sense, it can give the child the impression, student
8 the impression, that, well, why should I bother
9 exploring in detail what's going on in life if it's
10 all going to come down to an intelligent designer did
11 it? So it kind of suppresses, it suffocates, I think,
12 the scientific spirit intellectually.

13 Theologically, I think it's inevitable that
14 a student or certainly a child of mine -- and I think
15 this is true of most students in our culture -- when
16 they hear this term "master intelligence" or
17 "intelligent designer" are instinctively going to
18 identify this with the God of their religious
19 education.

20 But, again, from a theological point of
21 view, to me, this is way too small a God, at least as
22 far as the religious education of my children would be
23 concerned. The God of intelligent design seems to
24 be -- or gives the impression to a religiously
25 sensitive kid or student of being a kind of tinkerer

1 or meddler who makes ad hoc adjustments to the
2 creation, whereas what I would want a child of mine to
3 think of when he or she thinks of God is something
4 much more generous, much more expansive, a God who can
5 make a universe which is, from the start, resourceful
6 enough to unfold from within itself in a natural way
7 all the extravagant beauty and evolutionary diversity
8 that, in fact, has happened.

9 To put it very simply, a God who is able to
10 make a universe that can somehow make itself is much
11 more impressive religiously than a God who has to keep
12 tinkering with the creation. So both intellectually
13 and religiously I find it extremely problematic,
14 intelligent design.

15 MR. WILCOX: Thank you, sir. No further
16 questions.

17 THE COURT: All right. Thank you,
18 Mr. Wilcox. Mr. Thompson, cross-examine.

19 MR. THOMPSON: Thank you, Your Honor.

20 CROSS-EXAMINATION

21 BY MR. THOMPSON:

22 Q. Good afternoon, Professor Haught.

23 A. Good afternoon.

24 Q. You remember me?

25 A. Yes, I do.

1 Q. My name is Richard Thompson. I took your
2 deposition several months ago.

3 A. Yes.

4 Q. This year. Now, one of the first things you
5 said, Professor Haught, was that intelligent design is
6 an old, an old theory, an old doctrine. Is that true?

7 A. I didn't put it in exactly those terms. I
8 said its --

9 Q. What were the terms you used?

10 A. I said that its foundation in history is the
11 natural theology tradition that's been part of
12 Christianity and Christian thought for centuries.

13 Q. Well, we could also trace evolution to
14 antiquity, can we not?

15 A. Evolution, as a scientific idea, is
16 something that's relatively recent. Evolution as a
17 fact goes back 13.7 billion years.

18 Q. I'm talking about people 1500 years ago that
19 were postulating evolution as a means that life could
20 have evolved.

21 A. If it was that long ago, it could not
22 possibly have been a scientific idea. There were
23 ancient philosophers like Heroclydes, for example, who
24 complained that things are constantly in motion. And
25 if you want to call evolution that, then yes, but it's

1 not a scientific idea.

2 Q. What about St. Augustine, didn't he
3 postulate that?

4 A. St. Augustine had the idea that the universe
5 has been seeded with what he called seminis ratsio
6 nales, rational principles, that over the course of
7 time can unfold very much in the way of the more
8 generous theology that I was talking about at the end
9 of my testimony.

10 Q. So merely because you trace a particular
11 idea to antiquity or to old tradition does not in and
12 of itself make that idea invalid, does it?

13 A. Well, if it's science that you're talking
14 about, then we have to go back to the 17th Century and
15 look at the methods that science was using and that
16 scientists still use. And that's really what's
17 distinctive about contemporary evolutionary theory,
18 that it employs a scientific method which Augustine
19 did not have.

20 Q. Please listen to my question. I didn't talk
21 about scientific theory, I talked about an idea. Now
22 respond to it with reference to an idea rather than a
23 scientific theory.

24 MR. WILCOX: Request that it be restated in
25 its entirety then, Your Honor, the court reporter,

1 please.

2 THE COURT: If you would read back the
3 question, please.

4 (Previous question read back.)

5 THE WITNESS: No, but one has to be careful
6 of what's called genetic fallacy in logic. That's the
7 fallacy that tries to understand any phenomenon in
8 terms of how it originated.

9 For example, you could say that astronomy
10 originated in astrology and that chemistry originated
11 in alchemy. But you can't evaluate, you can't reduce
12 the present understanding of chemistry, for example,
13 to what the alchemists were talking about.

14 BY MR. THOMPSON:

15 Q. So your answer to my question was no.
16 Correct?

17 A. Would you repeat the question? It was
18 quite --

19 Q. It was in this vein. Just because a
20 particular idea is old does not make that particular
21 idea invalid, does it?

22 A. No, no.

23 Q. Pardon me?

24 A. No.

25 Q. And just because an idea -- excuse me, just

1 because a scientific theory is based on the religious
2 motivations of its proponent does not make that
3 theory, in and of itself, invalid?

4 A. No.

5 Q. And just because a scientific theory is
6 propounded by an individual who happens to belong to a
7 particular faith does not make that scientific theory
8 invalid, does it?

9 A. No.

10 Q. And when you talk about genetic fallacy, it
11 would be a fallacy to claim -- a genetic fallacy to
12 claim that a particular theory is invalid because it
13 comes from a particular religious person. Isn't that
14 correct?

15 A. That's correct.

16 Q. Now, would you agree with this statement:
17 It is not helpful, however, simply to dismiss
18 intelligent design theory, IDT, as a product of
19 ignorance mixed with narrow religious biases? Would
20 you agree with that statement?

21 A. Yes. That's not enough of a foundation to
22 dismiss it.

23 Q. Would you agree with this statement: The
24 advocates of intelligent design theory are no less
25 intelligent than their Darwinian and theological

1 adversaries? Would you agree with that statement?

2 A. Yes, I agree with that.

3 Q. And would you agree with this statement:

4 They are often themselves skilled and highly educated
5 physicists, chemists, mathematicians, or biochemists?

6 Would you agree with that statement?

7 A. I do agree.

8 Q. They are neither stupid nor insane. Will
9 you agree with that statement?

10 A. Yes.

11 Q. Clearly, the current dispute between
12 biologists and intelligent design theory is not a
13 matter of who has the highest IQ. Do you agree with
14 that statement?

15 A. I agree with that.

16 Q. I hope you agree with that. I was reading
17 from your book. You slightly mentioned Professor
18 Michael Behe.

19 A. Yes.

20 Q. And you know him at least through his
21 writings, do you not?

22 A. Yes, and I know him personally.

23 Q. Okay. And he is author of the book *Darwin's*
24 *Black Box*?

25 A. Yes.

1 Q. Do you consider him a credible scientist?

2 A. As far as I can tell. I'm not one of his
3 scientific peers, so I can't make that judgment. But
4 it seems to me that he's a competent scientist.

5 Q. Well, have you read *Darwin's Black Box*?

6 A. Yes, I have.

7 Q. Okay. Could you just give me your view of
8 what it entails? What is *Darwin's Black Box* about?

9 A. It's an attempt to argue that Darwin's
10 theory depends upon gradual step-by-step change over
11 time and that certain biochemical phenomena,
12 subcellular mechanisms, could not have been selected
13 evolutionarily unless they had already been cobbled
14 together or put together so that all the parts are
15 working simultaneously and in harmony and therefore
16 could not have come about by Darwinian evolutionary
17 processes. That's the fundamental thesis of the book.

18 Q. Do you agree that Professor Behe discusses
19 the theory of intelligent design and his concept of
20 irreducibly -- irreducible complexity utilizing
21 scientific empirical evidence?

22 A. Empirical data that he has picked up as a
23 scientist, as a biochemist, certainly is the material
24 that he's trying to organize by way of the hypothesis
25 of intelligent design. That doesn't mean it's

1 scientific, but that's what he's doing.

2 Q. Well, he has postulated a theory, is that
3 correct, irreducible complexity?

4 A. I'm not sure whether he calls that a theory
5 or just an idea. It's part of a component of his
6 theory.

7 Q. Okay. A component. Now, I think you
8 touched on a good point. Data is different than
9 evidence, is it not?

10 A. Evidence and data, in the thinking of most
11 scientists, I don't think there's -- there's a
12 difference between hypothesis and data, yes.

13 Q. Now, will you agree --

14 A. But not evidence and data.

15 Q. Will you agree that in this book, Professor
16 Behe describes in detail what he has observed about
17 the bacteria flagellum?

18 A. His observations constitute material that
19 he's working with in the book.

20 Q. Would you consider that empirical
21 observation?

22 A. Well, part of it is. But as a member of a
23 scientific community, he has to take a lot of things
24 on faith by his reading of other scientists' work. No
25 scientist sees everything, in other words.

1 Q. I'm talking about the particular biological
2 system, the bacteria flagellum. Is he looking at that
3 bacteria flagellum through scientific instruments?

4 A. Yes.

5 Q. And he is describing the bacteria flagellum
6 in specific terms, is he not?

7 A. He's describing it, yes. Explanation is
8 different from describing, though.

9 Q. And he is also looking at other biological
10 systems in that book, such as the blood clotting
11 mechanism?

12 A. Yes.

13 Q. And he is describing in great detail the
14 data that he sees through his instruments?

15 A. Yes.

16 Q. And as a result of the observations that he
17 sees, he concludes that they are irreducibly complex.
18 Is that correct?

19 A. Whether the data are sufficient of
20 themselves to lead him to that notion of irreducible
21 complexity or whether, perhaps, some a priori patterns
22 of thought have also come to meet that data, that's a
23 question in my mind, anyway.

24 Q. Well, please then give me your understanding
25 of what you believe Michael Behe means by the phrase

1 "irreducible complexity."

2 A. Irreducible complexity refers to any complex
3 entity which is composed of a number of components,
4 the absence of any one of which would have made that
5 entity dysfunctional and, from a point of view of
6 evolutionary thinking, unable to be selected by nature
7 for survival.

8 Q. And his conclusions contradict Darwin's
9 explanation of complex systems having developed
10 through natural selection. Is that correct?

11 A. The contradiction does not lie in
12 observation, observation of the data, but in the
13 different levels of explanation at which Darwin and
14 Michael Behe are working.

15 If I could use the example of the three
16 levels. I think when Behe introduces his notion of
17 irreducible complexity and interprets that as the
18 product of intelligent design, he's working at a
19 different level of inquiry from that of which Darwin
20 and other scientists were.

21 Q. Well, I assume you've read Darwin's *Origin*
22 *of Species*?

23 A. I have never read the whole thing, just as
24 I've never read the whole Bible.

25 Q. Maybe you've --

1 A. I've read most of it, let's put it that way.

2 Q. Maybe you are familiar with this particular
3 paragraph that Darwin wrote in *Origin of Species*, and
4 I quote, If it could be demonstrated that any complex
5 organ existed which could not possibly have been
6 formed by numerous successive slight modifications, my
7 theory would absolutely break down, end of quote. Had
8 you ever heard that challenge?

9 A. Yes, I have. And Michael Behe quotes that
10 in every speech he gives.

11 Q. And so Michael Behe's experiments are
12 directly addressing that particular challenge that was
13 levied by Charles Darwin. Correct?

14 A. That's how Behe considers it, yes.

15 Q. And you don't?

16 A. Well, no, because there are other ways of
17 explaining this so-called irreducible -- irreducibly
18 complex entity, including Darwinian ways.

19 Q. Isn't that one of the controversies, though,
20 in science?

21 A. It's a controversy between Michael Behe and
22 most of the scientific community.

23 Q. So it is a scientific controversy?

24 A. Well, I pointed out earlier, when I was
25 asked about do I consider this a controversy, that I

1 don't consider the notion of intelligent design, which
2 is the ultimate explanatory category that Behe appeals
3 to, to be a category within which you can have a real
4 controversy, so no, it's not a controversy.

5 Q. Well, what I'm talking about is the
6 complexity of the -- let's say the bacteria flagellum
7 which Michael Behe says is irreducibly complex versus
8 other scientists who say it is not irreducibly
9 complex. That's a scientific controversy. Correct?

10 A. Okay, yes.

11 Q. Okay. And so it is being debated in the
12 scientific community. Correct?

13 A. It's being debated between Michael Behe and
14 maybe a handful of others and then 99 percent of the
15 scientific community on the other side.

16 Q. Well, you know, just because a particular
17 theory happens to be in the minority does not make
18 that an invalid theory, does it?

19 A. No, it doesn't.

20 Q. In fact, many of the great theories we have
21 today started out as minority theories. Isn't that
22 correct?

23 A. If they were scientific theories to begin
24 with, then they had some chance of survival. If
25 they're not scientific theories to begin with, then

1 they don't have any chance in principle of survival in
2 scientific discourse.

3 Q. Well, I didn't ask about the survival of
4 theories, but I said many scientific theories that we
5 hold today started out as minority positions. Isn't
6 that correct?

7 A. Yes.

8 Q. And they developed a majority position once
9 this debate between scientists took place and
10 empirical data led the consensus of the community to
11 one side or the other. Is that correct?

12 A. Testability is the criteria.

13 Q. Right. And so actually, Michael Behe's
14 concept of irreducible complexity is testable. Isn't
15 that correct?

16 A. I don't know.

17 Q. Well, are you aware of the argumentation
18 going back and forth between Professor Behe and
19 Professor Ken Miller about this particular topic?

20 A. Yes, I am.

21 Q. And Ken Miller says, well, we can explain
22 it -- we can explain this irreducible complex system
23 through natural selection.

24 A. Yes.

25 Q. And Professor Behe says, no, you can't.

1 Correct?

2 A. Yes. And I take the side of Miller there.
3 Incidentally, if I could just comment, it's not just a
4 matter of evolution or intelligent design involved in
5 bringing about complexity, there are also physical
6 processes which are not often mentioned in this
7 discussion, such as the self-organizing properties of
8 matter itself that we are just now discovering
9 scientifically, and they could be a major factor in
10 bringing about what Behe calls irreducible complexity
11 in a purely natural way.

12 Q. I was going to raise that at some point. Is
13 that a theory that Stuart Kauffman --

14 A. Stuart Kauffman.

15 Q. -- is advancing?

16 A. Among others, yes.

17 Q. Okay. And you use the phrase
18 "self-organizing."

19 A. That's the expression that scientists use.
20 It's a metaphor.

21 Q. Well, to me, self-organizing means some
22 intelligence is involved.

23 A. These are called autopoietic, to be more
24 precise. That is, they're self-making processes. But
25 all of the -- or many of the concepts we use in

1 science are metaphorical. The criterion is not the
2 word, the language, but the measurability of what's
3 going on.

4 Q. So when you're saying "self-making," does
5 that mean duplicating?

6 A. No, not at all.

7 Q. Self-duplicating?

8 A. No. It's simply that we're finding out
9 things that we didn't know scientifically centuries
10 ago or even early in the 20th Century, that matter,
11 that matter is much more resourceful and much more
12 spontaneously self-organizing than we had ever
13 thought, because we had had a wrong impression of what
14 matter is going back to the beginning of the modern
15 age.

16 Q. Well, could it be that this theory of
17 self-organizing will ultimately lead to a discovery
18 that actually matter does have some sort of
19 intelligence?

20 A. That certainly won't be a scientific idea,
21 because, as I said earlier, the category of
22 intelligence is simply not part of the explanatory
23 arsenal of scientific discourse.

24 Q. Are you saying intelligence is outside of
25 the natural sphere?

1 A. I did not say that at all. Intelligence is
2 just as much part of nature as rats and radishes.

3 Q. So that intelligence in a particular matter
4 can ultimately be found. Correct?

5 A. No.

6 Q. Well, science has not explored and explained
7 everything in the universe, has it?

8 A. Intelligence is related to the
9 complexification of the central nervous system of
10 primates and humans. It's not something that you
11 attribute to individual monads, individual atoms or
12 molecules. It requires a complex patterning in order
13 for it to emerge as an emergent property of nature.

14 Q. By the way, you referred to some pages of
15 *Pandas and People*. How many pages did you read?

16 A. I have no idea. I have perused the whole
17 book, but I only read selectively from passages that I
18 think had relevance to this particular case.

19 Q. Passages that your attorney pointed you to?

20 A. No. During my deposition, I had not -- I
21 mentioned to you that I had not read it, but since
22 then I have read -- paged through it, I should say.
23 But I have not read every word by any means.

24 Q. I mean, I think your evaluation of that book
25 was that it was not very sophisticated --

1 A. It still is.

2 Q. -- at the deposition. Is that correct?

3 A. Yes.

4 Q. I want to go to a couple of comments you
5 made about the creationism versus intelligent design
6 theory. Isn't it true that a creationist is a term
7 used to describe individuals who would interpret
8 creation stories using the Bible in its literary
9 sense?

10 A. Literary or literal?

11 Q. Literal, excuse me.

12 A. Yes, creationists take the -- when I say
13 "literal," though, I mean that they try to read into
14 it something that's scientifically accurate.

15 Q. So they're focused on the Bible. Is that
16 correct?

17 A. They are, but as products of the modern
18 scientific age, they tend to take scientific
19 assumptions to them when they read the text.

20 Q. And there's a difference between creationist
21 and creationism, correct, or is there?

22 A. Between a creationist --

23 Q. Creationist and creationism. Is there a
24 difference in your mind?

25 A. Well, a creationist is a person.

1 Creationism is an idea.

2 Q. And creationism is an interpretation of
3 nature which takes the biblical narrative of creation
4 and the sequence of days involved in the creation
5 story corresponding to the Bible literally and
6 factually and then come to conclusions based upon
7 their view of the facts in the creation story. That's
8 pretty compound.

9 A. Yes.

10 Q. If you can't understand it, I'll try to
11 repeat it again. Creationism is the interpretation of
12 nature?

13 A. It's a theological interpretation of nature.

14 Q. Which takes the biblical narrative of
15 creation?

16 A. Narrative or narratives?

17 Q. Narrative.

18 A. Because there are several narratives.

19 Q. Well, I'm talking about the Genesis -- okay,
20 we'll stay with Genesis.

21 A. Within Genesis there are two creation
22 stories.

23 Q. And then take that story or those two
24 stories, however you want to address it, and they take
25 it literally and factually and then come to a

1 conclusion about creation.

2 A. Yes.

3 Q. Intelligent design is different than
4 creationism, is it not?

5 A. Yes, in the same sense that, say, an orange
6 is different from a naval orange.

7 Q. Well, I'm going to go back to your
8 deposition, and you were pretty clear that there was a
9 difference, were you not, in your deposition?

10 A. Yeah, similar to the one that I just
11 analogized.

12 Q. You basically, early on -- I don't want to
13 test your memory. I'll show you the deposition. But
14 early on one of the first things you said was you
15 disagreed with Barbara Forrest and Pennock as to the
16 way they tied together creationism and intelligent
17 design?

18 A. Yes, from the point of view of strict
19 logical precision, because not all intelligent design
20 proponents are biblically literalists. I would want
21 to make them distinct from creationists logically
22 speaking. But as far as the substance of this trial
23 is concerned, there is really no major difference.

24 Q. Well, I'm asking the questions not just
25 focused on this trial, but focused on the outside

1 world as to what creationism is and what intelligent
2 design is. Okay?

3 A. Yes.

4 Q. And so there is a difference between
5 creationism and intelligent design, is there not?

6 A. Yeah, but when you say "difference," that's
7 not the same thing as to say "opposite."

8 Q. Correct, correct. But there is a
9 difference, is there not?

10 A. Yes, there's a subtle difference.

11 Q. Did you ever say there was a subtle
12 difference before?

13 A. I don't know. I'm sure I've said to it my
14 students.

15 Q. Does intelligent design have to focus on the
16 biblical stories of creationism -- of creation, excuse
17 me?

18 A. Not necessarily.

19 Q. But creationism does. Correct?

20 A. Creationists take the biblical story or
21 stories literally, or attempt to do so.

22 Q. Well, on previous occasions prior to this
23 trial, you actually accused Robert Pennock of
24 misleading the public when he conflated creationism
25 with intelligent design theory, did you not?

1 A. Yes, I said that.

2 Q. And what does "conflated" mean?

3 A. To confuse or to alloy, to bring together.

4 Q. To blend. Right?

5 A. To fuse or blend.

6 Q. To blend?

7 A. Yeah.

8 Q. Let me read to you and ask you if this is
9 your testimony today. And I quote from *Deeper Than*
10 *Darwin*, Page 125. "The only book on his list to which
11 Cruze gives unqualified approval is Robert Pennock's
12 *Tower of Babel*, an important critique of
13 anti-Darwinism, but one that I believe misleadingly
14 conflates creationism with intelligent design theory,
15 even though Cruze himself acknowledges that IDT
16 defenders like William Dembski and Michael Behe are
17 not Bible literalists."

18 A. Yes.

19 Q. Is that what you wrote?

20 A. Yes, it is.

21 Q. Is that what you stand by today?

22 A. Yes, I do.

23 Q. Okay. So it is wrong for the Court to get
24 an impression that creationism and intelligent design
25 are the same thing?

1 A. They're not exactly the same thing, but on
2 the issues that really matter, they both, as I said
3 earlier, are trying to bring an ultimate explanation
4 into the category of proximate explanations. So
5 substantively, they are identical as far as what is
6 really important in this particular case.

7 Q. Well, you're not the legal expert, are you?

8 A. No.

9 Q. Okay. So it's up to the Court to decide
10 what is legally important. But in your testimony
11 today, you will testify that there is a difference
12 between creationism and intelligent design, will you
13 not?

14 A. There's a difference, but not necessarily an
15 opposition.

16 Q. They're not the same thing, are they?

17 A. They're not exactly the same thing.

18 Q. In fact, in your deposition, you
19 specifically stated that you would have emphasized the
20 differences between creationism and intelligent design
21 more so than -- when you were comparing Pennock's and
22 Forrest's view, did you not?

23 A. Are those my words? Did I say I would
24 emphasize the difference?

25 Q. That you would have more emphasized the

1 difference.

2 A. Those are my words?

3 Q. Well, I don't want to -- I don't want to
4 misrepresent the record.

5 A. I would have done so more than Pennock does.
6 That's what I'm saying.

7 Q. What is that?

8 A. I would have emphasized the difference more
9 than, say, Professor Pennock does.

10 Q. And you accuse Professor Pennock of
11 misleading the public because he didn't. Correct?

12 A. It was an ingenuous thing on his part. I
13 mean I -- it was sort of an aside that I mentioned. I
14 was not making that a major point.

15 Q. Well, you used that word "misleading."
16 Correct?

17 A. Perhaps I -- is that --

18 Q. That was the word you used "misleading."

19 A. I'll take your word for it.

20 Q. And it was in your book. Correct?

21 A. Yes.

22 Q. I want to talk about genes for a while,
23 g-e-n-e-s. It's true that Darwinians talk about genes
24 having a mind-like character of survival. Isn't that
25 correct?

1 A. They use that kind of imagery as a popular
2 way of presenting their ideas, yes.

3 Q. Well, isn't --

4 A. Some of them do.

5 Q. Well, isn't it true that --

6 A. I'm thinking of Richard Dawkins in
7 particular.

8 Q. Isn't it true that this great dispute over
9 the theory of intelligent design -- that despite this
10 great dispute over intelligent design, Darwinians are
11 postulating matter that has a mind of its own? Isn't
12 that true?

13 A. Sometimes their materialist way of looking
14 at things leads them to that way of expression.

15 Q. You think it's just a form of expression?

16 A. By some. This is not by any means a general
17 judgment. This is something I find with followers of
18 Richard Dawkins.

19 Q. Well, the question I asked you, do you feel
20 that this idea of survival, this characteristic of
21 survival that Darwinists use is merely a form of
22 expression?

23 MR. WILCOX: Objection, Your Honor. He's
24 made it plain that he's referring to some Darwinists,
25 not all Darwinists, as the question implies.

1 THE COURT: Well, the objection is noted for
2 the record. I don't think it's necessary to sustain
3 or to overrule the objection. It's noted. We can
4 move on.

5 BY MR. THOMPSON:

6 Q. Let me put the question in another way,
7 Professor. There are Darwinists who believe that
8 genes have mind-like characteristics of survival?

9 A. No, they don't believe that literally.

10 Q. And my next question is, you just think that
11 this is a literary license that they take to use human
12 characteristics?

13 A. Yes. If you press any one of them, they
14 would say that they don't mean it literally.

15 Q. Let me read from your book *Deeper Than*
16 *Darwin*, Page 115. Quote, If we could be assured that
17 the idea of genes striving to survive was simply a
18 convenient way of speaking and one not to be taken too
19 literally, then we might have reason to be less
20 concerned about this dramatic displacement. However,
21 the new Darwinian projection of subjectivity into our
22 genes is more than an innocent literary device, end
23 quote. Is that what you wrote in your book?

24 A. Yes, but at that point I wasn't talking
25 about Darwinism, I was talking about certain

1 materialists' interpretations of Darwinism. The point
2 of that whole book, just to put it in context, is to
3 criticize not evolution and not neo-Darwinism, not
4 Darwinism, but materialists' interpretations of
5 Darwinism.

6 Q. Well, materialists are Darwinians. Right?
7 They're a group of Darwinians?

8 A. But Darwinism in no way logically entails
9 materialism. This is just by accident that some
10 materialists are Darwinians and vice versa.

11 Q. In fact, you go to great lengths to take
12 Darwinists to task because they are materialists, do
13 you not?

14 A. Materialist Darwinists to task, not
15 Darwinists.

16 Q. And some of the most prominent Darwinists
17 are materialists. Correct?

18 A. That's true.

19 Q. Richard Dawkins being one of them?

20 A. Richard Dawkins.

21 Q. Do you know who Matt Ridley is?

22 A. Yes.

23 Q. And you wrote about him in your book *Deeper*
24 *Than Darwin*?

25 A. Yes.

1 Q. Let me quote from your book, Page 116, and
2 ask you if this is still a true statement. Quote, It
3 is a mix of cooperation and competition among striving
4 and achieving genes that, accordingly to Ridley,
5 accounts for the evolutionary invention of
6 gender-based behavior. Sex, he says, is the outcome
7 of genes devising strategies to avoid their demise at
8 the hand of parasites, end quote. Doesn't that sound
9 like intelligence, as well?

10 A. Again, Ridley, especially, would want to
11 make it clear that he is not taking the striving as
12 something that's literal. However, I think there's a
13 way in which Ridley has himself at times conflated
14 Darwinian ideas with materialist ideas, and that's
15 what I'm criticizing, not the Darwinism, but the
16 materialist overtones or connotations of his modes of
17 expression.

18 Q. Well, I understand you're taking not only
19 intelligent design to task, but you're also taking a
20 lot of Darwinians to task who have sort of gotten into
21 the metaphysical world. Isn't that true?

22 A. Materialist.

23 Q. Materialist world?

24 A. Not Darwinians, but materialists.

25 Q. Okay. And in another section in your book,

1 Page 3, and I'm quoting again, quote -- this is you
2 writing again -- But enlightened evolutionists caution
3 us that religion and art are merely heart-warming
4 fiction. Our genes, they claim, have created adaptive
5 but essentially deceptive brains and emotions that
6 spin seductive spiritual visions in order to make us
7 think we are loved and cared for. But, in fact, it is
8 all illusion. Darwin has allowed us at last to
9 naturalize religion completely. You wrote that.

10 Correct?

11 A. I was talking about --

12 Q. End quote.

13 A. That's not my position. I'm describing the
14 position of materialist Darwinians.

15 Q. Correct, yes. And so again we have this
16 idea that these genes are somehow creating -- with
17 their deceptive brains are creating spiritual visions?

18 A. What the materialist Darwinians have to do,
19 since they deny the existence of God, is to come back
20 to the only kind of explanation that's available to
21 them, and that's a Darwinian explanation. So that's
22 another example of what I call refusal to accept
23 layered explanation.

24 They, like the intelligent design people,
25 share in common the conviction that there's only one

1 explanatory slot available. So if intelligent design
2 doesn't fit it, then material processes do and vice
3 versa. But I object to both approaches as not being
4 layered in their understanding of things.

5 Q. So according to many prominent Darwinists,
6 the philosophical message of Darwinism can't be
7 disengaged from Darwin's science. Isn't that true?

8 A. That's exactly what Steven J. Gould said in
9 several of his books.

10 Q. Okay. And he has made that statement, that
11 one can't disengage Darwinism --

12 A. He hasn't put it in those explicit terms,
13 but he as implied that Darwin comes along with a
14 philosophical message of materialism. And that's why
15 I object to Gould's whole approach, because he
16 conflates science with ideology too much. Not always.

17 Q. So there is really a significant group of
18 Darwinian scientists who are actually getting into the
19 physical -- excuse me, the metaphysical world.
20 Correct?

21 A. Yes, yes.

22 Q. And so --

23 A. Unconsciously most of the time, but they're
24 doing it, yes.

25 Q. Yes. And so you would have the same kind of

1 criticism of them as you would of your view of
2 intelligent design, would you not?

3 A. Yes. As I expressed to Mr. Wilcox, I would
4 not want a biology class to lead students toward a
5 materialist's view of life, either.

6 Q. Well, according to Gould, the message of
7 Darwinian science is that life has no purpose. Is
8 that a scientific claim?

9 A. No. And I think if you ask Gould, he would
10 have to admit that, also.

11 Q. Okay. Daniel Dennett, do you know who he
12 is?

13 A. Yes.

14 Q. He's a philosopher. Is that right?

15 A. He's a philosopher at Tufts University.

16 Q. Right. And he claims that Darwin is
17 incompatible with religious beliefs?

18 A. Yes. He's a philosopher, not a scientist.
19 That's a philosophical belief.

20 Q. Well, what about E. O. Wilson, who is a
21 biologist at Harvard, he puts Darwin's science in
22 direct competition with religion, does he not?

23 A. Yes, because he is one of these people who
24 unconsciously conflates his very good evolutionary
25 science with a very suspect metaphysical belief

1 system. Not always, but at times.

2 Q. Now, the *Origin of Species* written by
3 Charles Darwin, I believe it was 1859, something like
4 that?

5 A. It was published in 1859.

6 Q. Published in 1859. Throughout his book, he
7 discusses intelligent design, does he not?

8 A. He does refer to it, yes.

9 Q. Throughout the book?

10 A. He doesn't propose it, he doesn't promote
11 it, but he does discuss it.

12 Q. So he makes reference to design --

13 A. Makes reference to it, yes.

14 Q. -- throughout the book?

15 A. Yes.

16 Q. Not necessarily concluding that that's an
17 accurate theory?

18 A. Well, and I just might add that he always
19 understands intelligent design in terms of the way
20 *Natural Theology* of William Paley did, namely as a
21 theistic designer, creator.

22 Q. And --

23 A. And he looks for an alternative. The whole
24 point of his book was to say that we don't need to
25 explain what goes on in evolution by appealing to this

1 theological notion.

2 Q. Now, just because he mentions design in the
3 book, would you keep it out of science classes?

4 A. The *Origin of Species*? By no means.

5 Q. Okay.

6 A. But I just would not present it as an
7 alternative to evolutionary theory, and Darwin didn't
8 either. Certainly I would want students to read
9 Darwin, yes.

10 Q. So just because a particular book mentions
11 design does not mean that you personally would
12 advocate removing it from a science classroom?

13 A. The concept -- yeah, I would not advocate
14 that at all.

15 Q. Now, do you remember this famous phrase by
16 Darwin in the last paragraph of his *Origin of Species*:
17 There is grandeur in this view of life with its
18 several powers having been originally breathed by the
19 Creator, capital C, by the Creator into a few forms or
20 into one? Have you ever heard that?

21 A. I have, and I've also heard historians say
22 that later Darwin sincerely regretted that last
23 paragraph.

24 Q. Well, if that was in his original volume,
25 *Origin of Species*, and he mentioned the Creator with a

1 capital C and actually postulated that the original
2 form of life was breathed into by the Creator, would
3 that keep the origin of Darwin -- Darwin's *Origin of*
4 *Species* outside the science classroom?

5 A. Darwin would never have understood that last
6 paragraph as a scientific statement. So what's at
7 issue is what is truly scientific and what is not.
8 And a good science class will help students
9 distinguish between what is ideology, what is belief,
10 and what is scientific method.

11 Q. Well, the students that get Darwin's *Origin*
12 *of Species* aren't going to be able to talk to Darwin.
13 So with that language in Darwin's *Origin of Species*
14 referring to the Creator, would that cause you to
15 advocate removal of the *Origin of Species* from the
16 classroom?

17 A. No. In fact, whenever a science teacher
18 tries to define what is peculiarly distinct about
19 science, he or she has to refer to nonscientific kind
20 of discourse as an example by way of contrast that
21 will allow students to see what pure scientific method
22 is about.

23 So, no, there's no reason not to mention
24 nonscientific discourse when you're teaching science
25 so that your students can come to more clarity as to

1 just what is distinct about science. So that would be
2 a nice opportunity for a teacher to do that.

3 Q. Well, I wasn't talking about scientific
4 discourse, I was talking about the book. Would the
5 fact that the Creator was mentioned in Darwin's *Origin*
6 *of Species*, would that cause you to remove the book
7 from the classroom?

8 A. No.

9 Q. Going back to *Darwin's Black Box* by
10 Professor Behe, you actually provide that book to your
11 students in your religion and science class, do you
12 not?

13 A. Yes, I've had my students read either
14 excerpts from it or essays by Behe that recapitulate
15 the main argument of the book, yes.

16 Q. Okay. And you have stated publicly, and I
17 quote, I make sure my students become familiar with
18 its arguments and suspect that discussion of it has
19 enriched many science and religion courses in the last
20 few years. Do you remember making that statement,
21 public statement?

22 A. Yes. It helps by way of contrast, once
23 again, to be able to focus on what is good science and
24 what is not good science.

25 Q. So referring to *Darwin's Black Box*,

1 regardless of whether you believe in the theory or
2 not, enriches students' understanding. Correct?

3 A. Yes. I'm talking about a theology class,
4 not a science class. In a theology class, we talk
5 about a lot of things that you don't necessarily focus
6 on in science class.

7 Q. But there are a lot of different books you
8 could use to do that. You don't have to use *Darwin's*
9 *Black Box* to do that. Correct?

10 A. Oh, sure, yes. In fact, I didn't use it
11 until it was published.

12 Q. Until when? Now, you had three definitions
13 of religion in your reports. Could you give me the
14 first one again? And I'm not trying to test your
15 memory. Do you have a copy of your report in front of
16 you, your expert report?

17 A. I can tell you. In the broadest sense, Paul
18 Tillich, for example, says we can understand religion
19 as devotion to whatever you consider to be of ultimate
20 concern, and that can be anything. It can even be
21 science, for example. There are some scientists who
22 make science their ultimate, and that's religion in a
23 very broad sense of the term.

24 Q. And that's called scientism?

25 A. Scientism is the belief that science is the

1 only valid way to truth, yes.

2 Q. Now, under that definition, would atheism be
3 considered a religion?

4 A. Not atheism as such, but probably every
5 atheist has something that functions as an ultimate --
6 for example, materialism is a form of atheism in which
7 matter constitutes the ultimate foundation and ground
8 of all being.

9 Q. Well, could you give me your definition of
10 atheism? I should have asked that first. What is
11 your definition of atheism?

12 A. An atheist is someone who denies the
13 existence of the God of theism.

14 Q. And that would have some impact on that
15 person's world-view, would it not?

16 A. Of course.

17 Q. And that was one of the aspects that you
18 talked about in this general definition of religion,
19 you know, world-view kind of definition?

20 A. Well, I don't know whether I would call
21 atheism a world-view. No, it's not -- it's a negative
22 term. It's a denial of a world-view. But in itself,
23 atheism has to espouse some other ultimate for it to
24 be a world-view. But in itself, the word "atheist" is
25 simply a negative term. It's a denial of theism.

1 Q. If I don't believe in a God, if I don't
2 believe in God as an all powerful being, then that
3 could impact all kinds of decisions that I make, moral
4 decisions, family decisions?

5 A. Yes, it sure could.

6 Q. Define "human secularism" for me.

7 A. Define what?

8 Q. Human secularism.

9 A. Human secularism? Is that a term that
10 I've -- I don't recall ever using that term.

11 Q. Well, I don't think you used it, but as a
12 theologian and a philosopher, are you familiar with
13 the term?

14 A. I think you mean "secular humanism."

15 Q. Okay. Secular humanism. I'm sorry.

16 A. Secular humanism is a view that puts
17 humanity, you might say, in the position of ultimate
18 concern.

19 Q. And under your definition of religion, would
20 secular humanism be a religion?

21 A. In that first sense of my three meanings,
22 yes.

23 Q. Now, intelligent design is not a religion,
24 is it?

25 A. Intelligent design is a category within a

1 religious perspective, to be logically precise.

2 Q. Well, is the intelligent design movement
3 religion?

4 A. I would say that fundamentally it is, yes.
5 It's in search of or it presumes a certain ultimate,
6 namely an intelligent designer, and it has a whole set
7 of ideas and a kind of quasi-theology to support that
8 idea.

9 I would say, to be more precise, intelligent
10 design is closer to what I would call theology than
11 religion because intelligent design is a conceptual
12 attempt to clarify the ultimate that's spontaneously
13 believed in by a particular kind of religion.

14 MR. THOMPSON: Your Honor, may I approach
15 the witness?

16 THE COURT: You may.

17 BY MR. THOMPSON:

18 Q. Professor Haught, I would like -- I've
19 placed before you the deposition that was taken of you
20 on June 1st, 2005. I'd like you to turn to Page 181.

21 A. Okay.

22 Q. And just to put it in context, I was asking
23 you about certain characteristics of what a religion
24 would be in the previous pages. And if you want to,
25 you can read, you know, the pages before 181. And

1 then I was about to ask a question of you and I said,
2 If you, and then you responded spontaneously. Would
3 you read that out loud?

4 A. (Reading:) Incidentally, I don't
5 characterize -- I never have characterized the
6 intelligent design movement as a religion. All I've
7 said is that the appeal to the notion of intelligent
8 design is nonscientific and religious in nature. And
9 that was the reason for my qualification. It's more
10 theological than religious.

11 Q. What's the difference between religion and
12 theological?

13 A. Religion is the spontaneous and some
14 philosophers would say the naive pre-reflective
15 involvement of people in a life committed to certain
16 ultimates but not reflected upon.

17 Theology is a theoretical reflection upon
18 what goes on in religion, and theology usually uses
19 philosophical concepts in its attempt to articulate in
20 a theoretical level what's going on in religion.
21 That's why intelligent design is more theological than
22 religious.

23 Q. The big bang theory is a scientific theory.
24 Is that correct?

25 A. Yes.

1 Q. Does it have religious implications?

2 A. Yes. And I believe everything has religious
3 implications.

4 Q. In fact, all scientific theory has religious
5 implications?

6 A. I think so. Not everybody does, but I think
7 it does, yes.

8 Q. In fact, the big bang theory was first
9 postulated by a Belgian priest?

10 A. Well, he and several others, William di
11 Sitter, Alexander Friedmann, and George Lemaitre, yes.

12 Q. And Einstein thought that priest was a
13 buffoon, did he not?

14 A. At first he did, but then he humbly asked
15 pardon.

16 Q. Because at the time that this Belgian priest
17 postulated the big bang theory, most of the scientific
18 community felt that the universe had always existed?

19 A. I'm not sure that most of them. Certainly
20 materialists among them, by definition, had thought of
21 the universe as eternal.

22 Q. Well, did Albert Einstein think --

23 A. Yes, especially as a result of his exposure
24 to the philosopher Baruch Spinoza, who was a pantheist
25 and who believed that the universe is eternal and

1 necessary. And Einstein was very attracted to
2 Spinoza's thoughts since he was a young man.

3 Q. And what about Fred Hoyle?

4 A. Fred Hoyle never really gave up his idea
5 that the universe is somehow eternal.

6 Q. And who is Fred Hoyle?

7 A. Fred Hoyle was a British physicist who
8 proposed what he thought to be the only conceivable
9 alternative to the big bang hypothesis, and that was
10 the hypothesis of a steady state, according to which
11 the universe is eternal, but you can explain its
12 expansion by virtue of the introduction of new
13 hydrogen atoms in a certain unverifiable, undetectable
14 way throughout the history of the universe, and that's
15 how he explained the expansion of the universe.

16 Q. Switching over to another --

17 THE COURT: Let me just stop you for a
18 second. We've been at it here for quite some time.
19 If you think that you're -- and I don't want to cut
20 off your question by any means, but if you think
21 you're close to being finished, we can stay here.
22 Otherwise, our reporter has been at it for some time,
23 I would like to take a break.

24 MR. THOMPSON: Your Honor, it's probably
25 more prudent to take a break. I'm not sure how long

1 I'm going to go. It depends on the witness.

2 THE COURT: All right. Let's take a
3 relatively brief break, let's say no more than 15
4 minutes we'll break for. And we'll reconvene, and
5 Mr. Wilcox, of course, may have some redirect at that
6 point, as well. So we'll be in recess.

7 (Recess taken.)

8 THE COURT: All right, Mr. Thompson, back to
9 you.

10 MR. THOMPSON: Thank you, Your Honor.

11 BY MR. THOMPSON:

12 Q. I just wanted to go back to William Dembski.
13 You've mentioned him several times. Do you know
14 anything about his background?

15 A. A little bit. I think he was a
16 mathematician and then he went to Princeton to get a
17 master's degree in theology.

18 Q. So that it is quite logical that at times,
19 wearing his philosophical hat, he would wax eloquent
20 philosophically. Isn't that correct?

21 A. Yes.

22 Q. And there are also particular treatises that
23 he has written as a mathematician. Isn't that
24 correct?

25 A. Yes. I have never read any of them.

1 Q. There is one that's entitled, The Design
2 Inference. Are you familiar with that?

3 A. I've read parts of it years ago.

4 Q. And that was published by Cambridge
5 University?

6 MR. WILCOX: Press.

7 MR. THOMPSON: Or Press, excuse me.

8 THE WITNESS: I don't remember it.

9 BY MR. THOMPSON:

10 Q. And do you know what William Dembski's view
11 is mathematically on the theory of intelligent design?

12 A. The mathematics I don't know. I'm not a
13 mathematician.

14 Q. Have you ever read about -- maybe not the
15 book but read other articles about his idea that it is
16 highly improbable for these complex structures to have
17 intelligence even if you consider the earth four
18 billion years old?

19 A. Yes.

20 Q. Okay. And he has done mathematical
21 calculations to show it's virtually impossible for the
22 complex structures that we have today to have
23 developed based on natural selection. Isn't that
24 true?

25 A. That's his view.

1 Q. Yes. But it's based on his background as a
2 mathematician. Isn't that correct?

3 A. He uses mathematics in his reasoning, yes.

4 Q. Do you know what -- how would you define
5 mind, m-i-n-d?

6 A. Mind? Mind is the capacity to experience,
7 to ask questions about one's experience, and then to
8 criticize the ideas that we come up with to explain
9 our experience.

10 Q. Is mind a function of intelligence?

11 A. Well, there are different ways of
12 understanding mind. You can understand it as a
13 process or you can understand it as a concrete reality
14 from which mental processes emerge.

15 Q. Is there a real distinction between the two
16 that you just defined as far as being a part of mind?

17 A. Well, mind as a process unfolds in
18 cognitional acts such as being attentive, being
19 intelligent, being critical, and being responsible.
20 Mind as the foundation of that, we call it the desire
21 to know or you could call it the intellect.

22 Q. Both of those would require intelligence,
23 though, the processing and the desire to know?

24 A. In order to explain their existence, you
25 mean, the existence of mind?

1 Q. No, what mind is, the definition of mind.

2 A. They would entail what I would call
3 intelligence, yes.

4 Q. Is mind a part of nature?

5 A. Yes, it is.

6 Q. Now, you wrote in this book that was
7 referenced by your counsel, *Science and Religion*, you
8 talked about -- and I hope I get this right -- strong
9 anthro -- strong anthro --

10 A. Anthropic.

11 Q. Anthropic principle, SAP?

12 A. Yes.

13 Q. Would you define what you mean by that?

14 A. Strong anthropic principle maintains that
15 the universe that we live in, the big bang universe
16 that we live in, has been set up, as it were --
17 "structured" would be a better term -- from the very
18 first microsecond of the universe's existence in such
19 an exquisitely sensitive way that were any of the
20 conditions and constants that prevailed at the time of
21 the big bang absent, then neither life nor mind would
22 ever have arisen.

23 Q. And that is a scientific speculation -- I
24 don't want to call it a theory right now, but is it a
25 scientific theory or is it something less than a

1 theory at this point?

2 A. It's not a scientific theory, it's a hare's
3 breath from intelligent design argument.

4 Q. Are physicists discussing it?

5 A. Yes, they are, as philosophers --

6 Q. Credible physicists?

7 A. Yes. Physicists are more interested in the
8 weak anthropic principle than the strong anthropic
9 principle. The strong anthropic principle
10 tendentiously moves toward the positing of a cosmic
11 designer, whereas the weak anthropic principle is much
12 less controversial. And that simply maintains that
13 obviously the universe was set up for bringing about
14 beings with minds because we're here.

15 Q. And do these physicists that belong -- that
16 believe in the strong anthropic principle indicate
17 that it requires the existence of a transcendent,
18 orderly Providence with a capital P?

19 A. Some physicists jump to that conclusion as
20 the theologians, but there are other physicists who do
21 not make that conclusion. There are a wide variety of
22 interpretations of the strong anthropic principle.

23 Q. And in your book, you indicate that this
24 particular principle comes pretty close to the
25 intelligent design theory?

1 A. In some interpretations, yes.

2 Q. Yes. But this is being discussed in the
3 scientific world, is it not?

4 A. It's being discussed by scientists, but it's
5 misleading to say it's being discussed necessarily as
6 a scientific hypothesis. It is in some quarters, but
7 not in others.

8 Q. Okay. And the basis of this is that mind
9 basically developed from that big bang?

10 A. The basis of it is that the existence of
11 mind depends physically upon the universe having
12 certain properties.

13 Q. And these properties had to be, as you said,
14 so elegant that complexity of our universe would not
15 have occurred without that elegant mind or design. Is
16 that correct?

17 A. To use the term "design" I think begs the
18 question in a way, because the question is whether
19 it's the consequence of design or whether it's the
20 consequence of many, many, many universes, most of
21 which would not be set up for bringing about
22 consciousness. And the one that we live in, according
23 to the multiverse theory of people like Martin Reese
24 and many others, which is becoming an increasingly
25 popular idea in science today, the existence of our

1 universe with the properties that give rise to life
2 for many scientists -- and this is necessary for
3 scientists to do as scientists -- can be explained
4 naturalistically without appealing to supernatural
5 design.

6 Q. And as you indicated, theologians are
7 interested in this principle?

8 A. Yes. Theologically, it's quite appropriate.
9 And I, myself, strongly suspect that given the -- what
10 I consider to be given the existence of a God who
11 cares that consciousness come about, it would not be
12 surprising that the universe is so constructed as to
13 allow that to come about. But, see, that's a
14 theological jump, not a scientific --

15 Q. Right, I understand that. That's why I
16 wanted to say that. But also, aside from the
17 theologians' interest, scientists are interested in
18 it. Correct?

19 A. Yes, but scientists qua scientists or
20 scientists qua persons who are curious about ultimate
21 questions? There's a distinction that you have to
22 make.

23 Q. Scientists qua scientists. Physicists that
24 are talking in terms of physics, the laws of physics.

25 A. Oh, yes, physicists are the ones who gave us

1 this new picture of the universe as endowed with the
2 properties that are right for mind.

3 Q. And I don't recall where it's in the book,
4 but I remember reading it, that you said if the
5 universe was a trillionth off --

6 A. Yes.

7 Q. -- it would have collapsed on itself.

8 A. That's what Stephen Hawking says. Or he
9 wouldn't put it that way. He would say if any of
10 those values, like the expansion rate of the universe,
11 the gravitational coupling constant, and other
12 factors, ratio of electrons, proton mass, things like
13 that, if those values had been off infinitesimally,
14 then not only Hawking, but many, many astrophysicists
15 agree that life would not have been able to evolve and
16 mind would not have been able to evolve out of life.

17 Q. So would that be evidence, these physicists,
18 the claims of these physicists, would that be evidence
19 for a design?

20 A. It would be evidence for a very interesting
21 fit between the physical conditions and parameters of
22 the universe and the existence of mind. But that's
23 not -- they would not use the term "design" in the
24 sense of the product of some intelligence. That's for
25 theology and philosophy to speculate about, not

1 science.

2 Q. Well, that's a self-imposed arbitrary line,
3 is it not, that's for theologians to talk about versus
4 physicists?

5 A. Well, if you're saying that science imposes
6 arbitrary lines in order to distinguish itself from
7 other kinds of inquiry -- I think, as I said earlier
8 in my testimony, science is a self-consciously,
9 self-limiting discipline that leaves out any
10 explanation of things in terms of intelligence, God,
11 miracles, so forth.

12 Q. Are you saying then that only those
13 physicists who believe in the intelligent design
14 theory of Behe and Dembski are holding this anthropic
15 principle?

16 A. No, I would never say anything like that.

17 Q. Okay. So there are physicists who aren't
18 involved in the religious implications of the
19 principle that are actually studying the principle?

20 A. As scientists or as philosophers?

21 Q. As scientists.

22 A. There are many physicists who are studying
23 the physical conditions that make life and mind
24 possible.

25 Q. And, in fact, in your book you also say it

1 is such an infinitesimal chance that human beings were
2 able to be created by this process, did you not?

3 A. Yes. Physicists themselves remark at what
4 they call the remarkable precision with which the
5 initial conditions and fundamental constants are given
6 their mathematical values precisely such as to give
7 rise to life and mind, but they don't explain how this
8 precision came about. That's for theology and
9 philosophy.

10 Q. Again, that's a self-imposed demarcation
11 zone?

12 A. Well, in the sense that science deliberately
13 distinguishes itself from theology and philosophy by
14 limiting itself to efficient and material causal
15 explanation.

16 Q. Are you telling me that if these physicists
17 come with a theory that is accepted based on the
18 evidence, that they would not be able to posit
19 intelligent design because you say that's a
20 theological question?

21 A. They would not, as scientists, use
22 intelligent design as a scientific explanation.

23 Q. Based on the theory that we're talking about
24 held by these physicists, they don't believe that this
25 exquisite, elegant complex universe that is

1 responsible for human beings on this small planet
2 happened by accident, do they?

3 A. Many of them don't. They make that
4 judgment, though, not as scientists but as
5 philosophers and theologically-inquisitive people.

6 Q. And they basically posit the theory that at
7 the moment of the big bang, all of the laws of nature
8 had to be in place. Is that true?

9 A. That's not how they would put it. They
10 would say that the conditions and constants that give
11 rise eventually to life and mind had to have been in
12 place, yes.

13 Q. Has Darwin's theory of evolution explained
14 how that happened?

15 A. Darwin's theory of evolution talks about the
16 origin of life, not the universe.

17 Q. And has any evolutionist talked about how
18 that could have happened by natural selection?

19 A. Yeah, there are, in fact, among
20 cosmologists, there are those who have a kind of
21 Darwinian frame of mind, and they would explain the
22 existence of our universe, life giving -- life
23 producing mind producing universe, as a naturally
24 selected to survive phenomenon out of a whole
25 background of lives that are universes which would not

1 be able to give rise to life.

2 Q. And those scientists, I assume, believe in
3 the multiple universes?

4 A. Yes, many of them do.

5 Q. Okay.

6 A. It's not so much belief, it's a scientific
7 speculation.

8 Q. It's speculation, right. In fact, there is
9 some lawyer that kind of developed that theory.
10 Right?

11 A. A lawyer?

12 Q. A lawyer. Are you aware of that?

13 A. No.

14 Q. At least I read it in Time Magazine.

15 A. But I'm happy to hear that.

16 THE COURT: And, of course, you can't
17 believe everything you read.

18 MR. THOMPSON: Thanks, Your Honor.

19 BY MR. THOMPSON:

20 Q. You know, we were talking about the idea
21 that some -- that matter is self-organizing, Stuart
22 Kauffman's theory.

23 A. Yes.

24 Q. Okay. There's another name for that.

25 There's a name for that theory, right, the complexity

1 theory?

2 A. It's a combination of complexity theory,
3 chaos theory, yes. Autopoietic processes.

4 Q. And Kauffman speculates that intelligence is
5 an emergent property of matter.

6 A. Yes.

7 Q. Isn't that true?

8 A. Yes. And he's not alone.

9 Q. Okay. And that matter, as it becomes more
10 complex, develops more intelligence. Isn't that true?

11 A. Yes. And that's very close to the Jesuit
12 paleontologist Teilhard de Chardin's view that
13 consciousness increases in the universe in direct
14 proportion to the increase in ordered complexity of
15 matter.

16 Q. And it's also close to the intelligent
17 design theory, isn't it?

18 A. Not at all, because the way the scientists
19 explain intelligence is by looking toward what is
20 earlier and simpler in the process, whereas the way
21 theology would interpret intelligence -- and I think
22 it has every right to do so -- is in terms of final
23 causes and divine causation, which is not detectable
24 to scientific inquiry.

25 Q. But it's kind of astounding that matter

1 itself, as it gets more complex, would develop its own
2 intelligence. Would that be a fair statement?

3 A. Yes. That it would become alive is also
4 remarkable.

5 Q. Right. You indicated that theology is --
6 you indicated theology is one prong of intelligent
7 design.

8 A. That's what William Dembski says.

9 Q. Okay. Do you know what the other prong is?

10 A. The other prong, I suppose, for Dembski
11 would be a more empirical and mathematical inquiry
12 into intelligent design.

13 Q. Now, we were talking about, you know, this
14 idea that many Darwinists conflate the theory, the
15 scientific theory, with the philosophy or the
16 religious implications. Is that true?

17 A. Well, they do so not as Darwinists but as
18 philosophers.

19 Q. Well, they think they're acting as
20 scientists though. Right?

21 A. They do, sometimes they do, unfortunately.

22 Q. Can you give me the name of some of them?

23 A. I think that Richard Dawkins, E. O. Wilson,
24 Stephen Jay Gould, they're scientists who carelessly,
25 at times, conflate science with a materialist

1 ideology. For example, if you read Richard Dawkins,
2 sometimes on the same page he switches back and forth
3 three or four times between philosophical statements
4 and scientific statements without pointing this out to
5 the reader.

6 Q. That's a good point. Isn't it true that a
7 lot of times writers on evolution switch back and
8 forth in their -- the definition of evolution that
9 they're using in the same paragraph?

10 A. That's the whole point of my book *Deeper*
11 *Than Darwin*, to point out this possibility.

12 Q. Now, there's one part of evolution that you
13 would call a historical science. Correct?

14 A. Yes.

15 Q. And then there's this other part that is, I
16 don't know, neo-Darwinism that is going on right now?

17 A. Metric.

18 Q. And in the historical science of Darwin,
19 really we can't prove whether he was right or wrong,
20 can we?

21 A. What do you mean by "proof"? That's a word
22 that has many meanings.

23 Q. Well, we don't know, based upon the data
24 that we have, whether Darwin was right in his
25 postulation of life starting from one or two cells and

1 developing through a series of macroevolution through
2 natural selection?

3 A. We don't have present observational
4 sensitivity or sense awareness of things that are no
5 longer in the present, but you can make reasonable
6 hypotheses. For example, nobody doubts that the
7 Hawaiian Islands were brought about by volcanic
8 action, most of which nobody ever saw but which nobody
9 doubts takes place.

10 Similarly, evolutionists -- at least in
11 principle, evolutionary science is, in principle, able
12 to make reasonable conjectures -- or hypotheses,
13 rather, about how certain events in the fossil record
14 took place.

15 Q. We see the Hawaiian Islands, so we can at
16 least now that they exist. We see fossil records, so
17 we know that they exist. Will we ever see the first
18 cell or couple of cells that Darwin postulates life
19 began, from which life began?

20 A. Will we ever see them in the present?

21 Q. Yes.

22 A. No, by definition.

23 Q. In fact, this whole idea of man sharing
24 common ancestors is up for debate. Is that correct?

25 A. I don't think so, no. The record of hominid

1 evolution is among the strongest that we have from
2 what I've been told by evolutionary biologists.

3 Q. Have we ever found or identified our common
4 ancestor?

5 A. Not precisely.

6 Q. We don't even have an idea who that common
7 ancestor would be, do we?

8 A. I think we're getting closer and closer by
9 studying genetics, especially, to being able to make
10 more and more reasonable inferences.

11 Q. Well, genetics is not going to tell us who
12 the common ancestor is, is it?

13 A. Genetics is telling us more and more about
14 the story of evolution because as we read the human
15 genome, we can see almost chapter by chapter how
16 evolution came about. Genetics is now one of the
17 strongest -- you might say strongest pieces of
18 evidence for evolutionary science.

19 Q. Well, let me give you an analogy. I have
20 some nuts and bolts. I take some nuts and bolts and
21 make a car.

22 A. Yes.

23 Q. Okay? That's a car. Then I take some other
24 nuts and bolts and make an airplane. They have the
25 same parts, but does that mean that the airplane came

1 out of the car?

2 A. No.

3 Q. So that if there is a God, that God could
4 use the same kind of genetic material making, you
5 know, a monkey or an ape and making a human being.
6 Isn't that a possibility?

7 A. It's a possibility. And God could also make
8 a universe that makes itself.

9 Q. Correct. So that this idea that it's
10 already definitely set as a scientific fact that we
11 came from the same ancestors as the monkey or ape is
12 conjecture at this point?

13 A. I wouldn't say -- I'm not a scientist, so
14 I'm, perhaps, speaking out of turn here. But from
15 what I've read, "conjecture" would be certainly the
16 wrong term.

17 Q. Now, what is theology?

18 A. Theology is reflection upon religious
19 experience which seeks to understand the point, the
20 objective of what we call faith. We might even define
21 theology as St. Anselm did as faith seeking
22 understanding.

23 Q. Now, in theology -- excuse me. Does
24 theology require the study of, say, a supernatural
25 being?

1 A. Theology studies the divine as it's mediated
2 through finite beings.

3 Q. So as a theologian, you are studying
4 concepts of God in the Christian faith or in any one
5 of the Abrahamic faiths?

6 A. Yes.

7 Q. Which? All of them?

8 A. Yes. I think all of them have something to
9 teach each other, so a good theology would be
10 inter-religious.

11 Q. And you're a -- I forgot what they call it,
12 is it a process theologian?

13 A. I'm not a process theologian. People have
14 called me that, but I've never identified myself as
15 such. I use ideas from many, many different kinds of
16 theology, including process theology.

17 Q. Do you consider yourself a Catholic
18 theologian?

19 A. Yes, I do.

20 Q. Have you ever taken the mandatum?

21 A. No.

22 Q. Isn't that required by the church?

23 A. The local bishop has discretion about that,
24 and, fortunately, Theodore McCarrick has decided not
25 to exercise it, very prudently.

1 Q. What I have in front of me is the Catechism
2 of the Catholic Church. Do you recognize at least the
3 cover of it?

4 A. Yes.

5 Q. According to the Catechism of the -- the
6 Catechism of the Catholic Church was developed by the
7 heads of the Catholic Church. Is that correct?

8 A. It was supervised by, I guess, some office
9 of the Vatican. I don't know which one.

10 Q. And it is an official teaching document of
11 the church, is it not?

12 A. Yes. But official teaching documents have
13 various grades of authority. Catechism would not be
14 the highest.

15 Q. And you actually have a lot of problems with
16 this book, do you not?

17 A. Well, the reason that the new Catechism was
18 brought about was that people found the old Catechism
19 was inadequate. And likewise, there are people today,
20 including many theologians, who already find this
21 Catechism inadequate, also.

22 Q. So your answer would be yes to my question?

23 A. Yes.

24 Q. Now, you also have what I would consider,
25 and I'm not a theologian, but I would consider an

1 unusual concept of God. Would you agree with that?

2 A. What kind of concept?

3 Q. An unusual concept of God.

4 A. No, I thoroughly believe that my
5 understanding of God is completely and thoroughly
6 Christian.

7 Q. Do you believe God can be surprised?

8 A. I don't know.

9 Q. Didn't you say that in your deposition, God
10 can be surprised?

11 A. It's possible.

12 Q. Well, if it's possible for you to have said
13 that in a deposition --

14 A. It's possible that God can be surprised.

15 Q. Oh. Does God know everything?

16 A. Everything that can be known.

17 Q. What can't God know?

18 A. Things that can't be known.

19 Q. And what is that?

20 A. It's unable to be -- you can't specify it.
21 It's in the region of the unknowable, so therefore the
22 unspecifiable.

23 Q. So you put some limits on the ability of God
24 to know everything?

25 A. No, I don't want to limit God.

1 Q. You believe that God started the universe
2 and really doesn't know what's going to happen?

3 A. If you want me to get into the theology of
4 this, I can. It's very complex, and it requires going
5 back to some chapters in the history of theology where
6 this question was debated between Dominicans and
7 Jesuits to the point where the Pope told them both to
8 keep still and stop talking about it. And for that
9 reason, I don't think it's prudent for me to --

10 THE COURT: The logic there appeals to me.

11 MR. THOMPSON: I'll be very quick, Your
12 Honor.

13 THE COURT: I thought I'd note that.

14 BY MR. THOMPSON:

15 Q. Do you believe in the virgin birth of
16 Christ?

17 A. What do you mean by "the virgin birth of
18 Christ"?

19 Q. The fact that Christ was born from the
20 Virgin Mary.

21 A. You have to put this in context to make this
22 a real question. The stories of virgin births were
23 the ways in which ancient religious communities tried
24 to get across to their followers the specialness of
25 the one who is being born. And so the attempt to be

1 too literal about any of these teachings is, in my
2 view, not to take them seriously. So that question is
3 one that would lead only to a misunderstanding if I
4 were to say yes or no.

5 Q. So isn't that a doctrine of the Catholic
6 Church, virgin birth of Christ?

7 A. It's not in the creed. Well, yes, it is.
8 But it's -- there are lots of doctrines in all
9 religions that need to be interpreted in order to be
10 taken seriously.

11 Q. Well, that's a pretty serious dogma of the
12 church, is it not?

13 A. What the church said -- if you want to find
14 out what the church said, read Leo the XIII's
15 encyclical Providentissimus Deus published in 1893 in
16 which he said Catholics should never look for
17 scientific information in the biblical text. So if
18 you're talking about the virgin birth as something
19 that's scientifically true, Catholics, by instruction
20 of Leo the XIII, do not have to go that way.

21 Q. And you choose not to go that way?

22 A. Right.

23 Q. What about Adam as the first man?

24 A. Even the Hebrew Bible uses the notion of
25 Adam in the universal sense for mankind.

1 Q. Does the church believe that Adam was
2 actually the first man?

3 A. The church believes in these ideas only in
4 connection with the doctrine of original sin, and that
5 means simply that all of us are born into a world
6 that's pretty messed up and we are all contaminated by
7 that and we need redemption from.

8 The key point of the whole virgin birth
9 idea, Adam and Eve, is to emphasize, to make a place
10 cognitively to understand the meaning of what we
11 call the Savior or theme of redemption.

12 Q. So they're just --

13 A. Everything is focussed in that way. So to
14 ask atomistically questions like, do you believe in
15 the virgin birth, do you believe in Adam and Eve, is
16 to miss the whole point theologically.

17 Q. But the church believes that, does it not?

18 A. The church is primarily interested in
19 communicating to people the salvific significance of
20 the man Jesus. And throughout the ages it does this
21 in many different ways, and sometimes it has to revive
22 and revise catechisms in order to make that mission
23 something that can be accomplished.

24 Q. What about Eve, do you believe there was a
25 woman named Eve?

1 A. That's the same sort of question.

2 Q. So Adam and Eve to you are not individuals?

3 A. I don't look for scientific information. I
4 don't look for scientifically factual information in a
5 text which, by genre, fits in the category of what all
6 biblical scholars today call myth rather than history.

7 Q. I didn't ask you for a scientific
8 explanation. You're a theologian. As a matter of
9 faith, do you believe --

10 A. You're asking a historical question, and the
11 whole concept of history, as we understand it today,
12 was in many ways fashioned by the scientific
13 revolution with its concern for factual evidence. So
14 history is not able to be disassociated from the whole
15 scientific movement.

16 MR. THOMPSON: I've got one more question,
17 Your Honor.

18 BY MR. THOMPSON:

19 Q. In your deposition, you talked about the
20 resurrection of Christ, and you indicated that when
21 Christ appeared in the upper room after his
22 resurrection, if we had a video camera going, we would
23 never have captured Him.

24 A. Right.

25 Q. Captured His image.

1 A. Yes.

2 Q. Do you still believe that?

3 A. I believe this, and so does, for example,
4 Cardinal Avery Dulles, who is one of the most
5 conservative church people around. If you read his
6 book, *Apologetics and the Biblical Christ*, he says
7 just that, if people did not have faith, if his
8 disciples did not have faith, they would not have seen
9 anything.

10 Q. So it was really a matter of having faith
11 and spiritual vision?

12 A. No, the faith was evoked by the presence of
13 the sense that Jesus was alive.

14 Q. So it was not a fact, a historical fact that
15 Christ appeared in the upper room?

16 A. Well, this goes back to what I said about
17 Providentissimus Deus, don't look for simple
18 historical, scientific facticity when there's
19 something much deeper there to look for.

20 MR. THOMPSON: Thank you.

21 THE COURT: All right, Mr. Thompson. We
22 thank you. Mr. Wilcox, redirect.

23 MR. WILCOX: Thank you, Your Honor.

24 REDIRECT EXAMINATION

25 BY MR. WILCOX:

1 Q. Professor Haught, I'd like to just touch on
2 a few points that were brought up in the
3 cross-examination.

4 Do you regard intelligent design as
5 religious because of the religious views of some of
6 its proponents or because of the content of
7 intelligent design?

8 A. It's inherently religious, but in the
9 sense -- "religion" is a word that can encompass both
10 spontaneous religion and theology. As I clarified,
11 it's a theological concept, inherently theological.
12 That means, a fortiori, that it's a religious concept,
13 as well.

14 Q. You were asked whether Mr. Behe's notion of
15 irreducible complexity is or is not testable. Whether
16 or not irreducible complexity is testable, do you have
17 a view as to whether intelligent design is testable?

18 A. Intelligent design is, in principle and
19 forever, untestable.

20 Q. Mr. Thompson asked you several questions
21 about the materialist views of some evolutionary
22 biologists. Am I correct in understanding you that
23 you don't want evolutionary biology being used to
24 either prove or disprove the existence of God?

25 A. Precisely.

1 Q. Is the notion of a supernatural creator a
2 religious notion?

3 A. Yes.

4 Q. I'd like to read from the book *Pandas* at
5 Page 150, which is the glossary section. And the
6 definition of "intelligent design" is given as
7 follows: "Any theory that attributes an action,
8 function, or the structure of an object to the
9 creative mental capacities of a personal agent. In
10 biology, the theory that biological organisms owe
11 their origin to a preexistent intelligence." Is that
12 a religious proposition?

13 A. In my view, it is.

14 Q. Mr. Thompson asked you what other prongs
15 Mr. Dembski had in his essay that we referred to.

16 MR. WILCOX: May I approach, Your Honor?

17 THE COURT: You may.

18 THE WITNESS: A scientific and philosophical
19 critique of naturalism where the scientific critique
20 identifies the empirical inadequacies of naturalistic
21 evolutionary theories and the philosophical critique
22 demonstrates how naturalism subverts every area of
23 inquiry that it touches.

24 Second, a positive scientific research
25 program known as intelligent design for investigating

1 the effects of intelligent causes.

2 Third, another prong, a cultural movement
3 for systematically rethinking every field of inquiry
4 that has been infected by naturalism,
5 reconceptualizing it in terms of design.

6 And then fourth, the one that I mentioned, a
7 sustained theological investigation that connects the
8 intelligence inferred by intelligent design with the
9 God of Scripture and therewith formulates a coherent
10 theology of nature.

11 None of these are really scientific prongs,
12 they're philosophical.

13 BY MR. WILCOX:

14 Q. Mr. Thompson asked you about whether
15 scientists have found a common ancestor among
16 primates. Have scientists stopped looking for our
17 common ancestors?

18 A. Not at all.

19 Q. Should they?

20 A. That's a testable idea.

21 Q. Should they stop?

22 A. They should not stop.

23 MR. WILCOX: Thank you. No other questions.

24 THE COURT: Recross?

25 MR. THOMPSON: No other questions, Your

1 Honor.

2 THE COURT: All right. Professor, thank you
3 very much. That concludes your testimony. And I
4 understand, Counsel, that that will conclude our trial
5 week. Is that correct?

6 MR. ROTHSCHILD: That is correct, Your
7 Honor.

8 THE COURT: All right. We will then, with
9 the completion of this witness -- and let's take the
10 exhibits, Liz reminds me. We have the CV, which is
11 P315. Obviously you're moving for the admission of
12 the CV. Is that correct?

13 MR. WILCOX: Correct, Your Honor.

14 THE COURT: Any objection?

15 MR. THOMPSON: No objections, Your Honor.

16 THE COURT: That's admitted. P340 is the
17 book by Dembski, that is, *Mere Creation; Science,*
18 *Faith, and Intelligent Design.* Are you moving for the
19 admission of 340 in its entirety?

20 MR. WILCOX: In its entirety.

21 MR. THOMPSON: No objections, Your Honor.

22 THE COURT: All right. That's admitted, as
23 well. Any exhibits that I've missed?

24 MR. WILCOX: There was reference to P11, but
25 that's already in.

1 THE COURT: That's in.

2 MR. WILCOX: And there was reference to his
3 expert report, but we're not moving that.

4 THE COURT: No, I didn't think you were.
5 And 11 is in in its entirety. Mr. Thompson, I don't
6 think you referred to any exhibits on cross, to the
7 best of my recollection.

8 MR. THOMPSON: That is correct, Your Honor.

9 THE COURT: Our next trial day will be
10 Wednesday, October 5th, that is next Wednesday,
11 commencing at 9:00 a.m. I'll hear counsel if you have
12 anything further before we recess for the week.

13 MR. THOMPSON: None, Your Honor.

14 MR. ROTHSCHILD: Not from the plaintiffs,
15 Your Honor.

16 THE COURT: I thank all counsel for their
17 presentations and for keeping us moving this week.
18 This trial will stand in recess until October 5th at
19 9:00 a.m. Thank you all.

20 (Whereupon, the proceedings were concluded
21 at 3:17 p.m.)

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CERTIFICATION

I hereby certify that the proceedings and evidence are contained fully and accurately in the notes taken by me on the within proceedings and that this copy is a correct transcript of the same.

Dated in Harrisburg, Pennsylvania, this 2nd day of October, 2005.

/s/ Lori A. Shuey
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