



Is God Really the Creator?

Romans 1:20: (KJV) *For the invisible things of him from the creation of the world are clearly seen, being understood by the things that are made, even his eternal power and Godhead; so that they are without excuse:*

Special Guest: David Stein



Followers of Jesus today are bombarded on every side with agnostic and atheistic philosophies that erode faith. In science, the theory of evolution is embraced by many as the best explanation of man's existence on earth, of course without the necessity of a supposed mythical creator. However, in recent decades the scientific debate over the explanation of origins has taken a turn with the appearance of the theory of Intelligent Design. The result has produced a dramatic and often faith-strengthening debate. For a Christian, this comes at a perfect time, supplying us with additional reasons to accept the Bible narrative of God as Creator. So what's it about? Stay tuned for a

lively discussion of, "Is God Really the Creator?"

DAVID: I am an elder in the Allentown Bible Students' ecclesia and have been there for many years. I'm trained as an engineer. I have a degree in electrical engineering, so I'm not a biological scientist. But this question has been one that has fascinated me for over 40 years. In a discussion of this in the past with those who believed in evolution, it raised many questions in my own mind about how to answer them, especially from a Christian standpoint. It's been an ongoing study.



We've actually covered this subject a little bit about two years ago. *Please see the Christian Questions program from September 18, 2012, called, "Did God Create or Did WE Evolve?"*

We're going to take it in a little different direction by looking at the cell after some introductory material. With our theme, *Is God really the Creator*, you can go in a lot of directions with this. We're going to look at a very small section of biology. You could go to astronomy or physics...there's many things that indicate the creation of God and the intelligence of God.

For example, in physics there are a number of what they call "universal constants," like the value of gravitation or the value of the electric field. There are about 30 or 40 of these. They are known in science in some cases to 20 decimal places. That's real precision. And they have found that some of these, if you vary the strength or the value of them just by one place out in 20 decimal places, you'll make it impossible for life to exist on earth.

And one agnostic astronomer said, "It's almost like somebody monkeyed with the constants of the universe anticipating man's arrival."



RICK: What you're saying, David, is the whole idea of Intelligent Design can be approached from the biggest, biggest, biggest parts of the universe down to the tiniest, tiniest, tiniest mechanics of the cell.

DAVID: Absolutely.

RICK: And for the sake of getting through the discussion, we have to take just one little, little tiny piece of this and discuss it so we can put it on the table as thoroughly as we can.

DAVID: That's exactly what our objective is today.

RICK: We're going to be talking about small things today, not the big things. You'll come back another time; we'll do the bigger things. Folks, this is a discussion about creation. Is evolution scientifically factual? Is creation as we know it scientifically factual? What can we rely on outside of the Holy Scriptures to buttress our Christian faith?

What Is “Intelligent Design?”

We hear the answer to this question by Stephen C. Meyer in an interview by Eric Metaxas:

 **What is Intelligent Design, Stephen Meyer, Socrates in the City**

- *METAXES: What does intelligent design - the movement - mean?*
- *MEYER: Well, the theory of Intelligent Design is the idea that there are certain features of life and the universe that are best explained by the purpose of intelligence rather than an undirected material process such as the realm of biology: natural selection acting on random mutations.*

DAVID: From his explanation of it, what Intelligent Design is doing is looking at the facts of science. And as you start to look at life, specifically biological life down to the cell and all the way up to all the various creatures, you see design. Even evolutionists see design, but they won't call it “design.” It is something that is counterintuitive, as we will see in the evolutionary thinking. But when you see design, you think “designer.”

There was a Christian going back to the 18th century that gave an example. He said, “If you're walking along a seashore and you pick up a pocket watch, and you open it and you look at it, you think, well, there had to be somebody who put this together because it's so intricate. It works together and whatnot. You don't just think, well, it happened by itself.” That's the same principle Intelligent Design applies when looking at all the things in nature.

RICK: Somebody, something designed this. When you think about the design of the human body, what you're really saying is, “Well, there must have been something behind that design, because design pretty much by definition has to do with a designer.”

DAVID: Exactly. And this is what all scientists see. Now, it comes to a matter of interpreting it. And evolutionists have a little difficulty here.



RICK: They have a lot of difficulty. It's fascinating to see how they work with that difficulty.

Is nature the work of a designer or a natural consequence of random events?

Psalm 19:1: (BBE) *The heavens are sounding the glory of God; the arch of the sky makes clear the work of his hands.*

RICK: This is what I call a “duh” Scripture, because you see the magnitude of the world around us, of the stars, of the universe, and you say, “Did it happen just because it all sort of randomly rolled into place, or is there a God that created it to put it in order to create life, to sustain life, and to perpetuate life?” And to me that's “duh!”

DAVID: Darwin wrote his book, *On the Origin of Species*, the earth-shaking work he did that started to shift thinking in science away from what had been traditional. Scientists in the past had always seen creation as the work of God. They responded to this appearance of design in a very rational way. Darwin opened the door to say, “Here is a way these things can come about without the necessity of a designer.” But what Darwin did is he looked at pieces of evidence and said, “What's the best explanation for these things?” And the best explanation, he felt, was a development of life by random and undirected purposes. But as we'll see, as science has found out more and more about biology, the *best* explanation now is starting to shift to something else.

RICK: We are going to compare the biological facts that were available to Darwin with the biological facts that are available today.

Let's go back to the Stephen Meyer interview about the appearance of design, because you said that a lot of those who want to put away Intelligent Design say, “Well, design *appears* to be there. It really *isn't*, but it appears like it is part of life.”

DAVID: That is one difficulty for evolution because everything in nature seems so well designed. The appearance of design is there, so they have to wrestle with it on their side.

Appearance of Design, Stephen Meyer, Socrates in the City

- **MEYER:** *Intelligent design is challenging the third meaning of evolution, and that's the idea that there is an unguided, undirected process known as “natural selection” acting on random mutations that has produced all the forms of life we see but also has produced the appearance of design that all biologists acknowledge, or nearly all biologists acknowledge. Richard Dawkins, the world's foremost spokesman for so called Neo-Darwinism, the modern textbook version of Darwin's theory, says that biology is the study of complicated things that give the appearance of having been designed for a purpose.*
- **METAXES:** *How clever of them.*
- **MEYER:** *It is the counterintuitive nature of the Darwinian idea.*



RICK: So, the big thing on the anti-Intelligent Design side of this whole thing is that there is an *appearance* of design. It *looks* like it was designed. It really wasn't. But, it really does look that way.

DAVID: The appearance is so striking. It is one of the things we who believe in God as the Creator are awed all the time by the way nature puts things together.

It is interesting this problem they have. Francis Crick, the co-discoverer of DNA, said, "Biologists must constantly keep in mind what they see was not designed but rather evolved." In other words, ignore what seems to be the rational obvious conclusion of it, because that's not right.

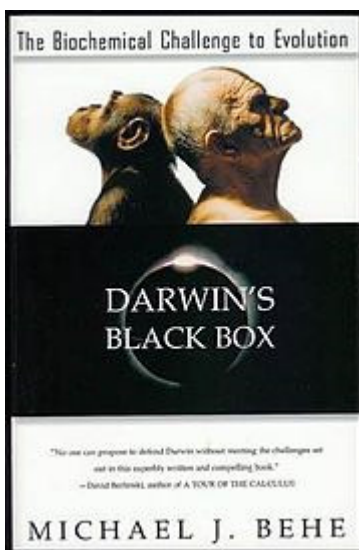
RICK: That really is the crux of the matter. It is interesting to me that much of the scientific community that wants to throw away the Intelligent Design idea is really basing their thinking on, "We can't give an inch on that side of the argument."

DAVID: That's right, because there's a philosophy involved here that leads or guides the interpretation of scientific thought.

RICK: Because people are going to call Intelligent Design "God!"

How did Intelligent Design actually begin to grow in popularity and begin to get attention within the scientific community?

DAVID: Within the scientific environment, there were scientists going back 20, 30 years who started to question things, because things weren't stacking up right. But it didn't come out in the popular awareness until about 1996. There was a book published by Dr. Michael Behe. He's a molecular biochemist at Lehigh University.



By the way, I met Dr. Behe a few years ago. I attended a small house lecture that he gave and had a nice chat with him afterward. He was very cordial and very interested in answering questions. He wrote and published a book called, *Darwin's Black Box*, in 1996. That was a simplified version of the problem that he as a scientist began to see when he was investigating the cell with the idea of Darwin's theory.

Remember, as we heard earlier, Darwin's theory proceeds on two grounds: random mutations and natural selection. Natural selection is the natural ability of all life - and natural selection is a real thing - where advantages of certain changes that occur naturally and randomly help a species to adapt and to live in this environment.

RICK: Does this have to do with survival of the fittest?



DAVID: Absolutely. It is a variation of that same theme there. So, if there is a change and it helps them to survive within their environment, then that change is naturally propagated along in a species. Natural selection really works. It is a real thing and you can demonstrate it and see it.

RICK: What you're saying then, as a Christian, is this idea of natural selection is factual. Is that what you're saying?

DAVID: Absolutely. If you think of it from a Creator's standpoint, God had to make life on earth with the capability to react to changes in the environment. If the creation was so inflexible that this is the way it is and no changes are allowed, if you have an external change now, it could wipe out that species or wipe out life in that environment.

RICK: Just to give an example of that natural selection, you go to Alaska and you see those who have lived there for generations, and you see they have a much thicker, more leathery type of a skin versus those who live in the very hot areas. That's what you're saying is natural selection. It is adaptation.

DAVID: That's exactly right. Darwin noticed this. He was studying finches and other things on his voyage back in the 1840's and 1850's. He noticed this and extrapolated out and said, "Well, maybe it can explain every change." And of course, as we found out (when I say "we," I mean not only Intelligent Design scientists but even evolutionary scientists), there are limits to that.

Michael Behe wrote a book later called, *The Limits of Evolution*, where he shows that natural selection does work, but it only works so far.

RICK: Folks, this is important because what we want to do as Christians is not ignore the facts. You can't ignore the facts. Evolution is not a fact. It is taught as a fact, it's assumed to be a fact, it's looked at as a fact; everybody thinks of it as a fact, but it is not a fact. The evolution we learn within the school system, for instance, is a theory. Correct?

DAVID: Not only that, it is taught as a fact, and many of the things of evolution that were presented as part of the evolutionary theory *which have been disproved* still occur in textbooks and schools today.

RICK: So, Michael Behe in 1996 really opens the door to this conversation. He begins the conversation heading toward what specific end?

DAVID: Here's the problem that Michael Behe encountered. If you have one small change that is an advantage, it will be propagated on. Natural selection works fine. But he looked at things within life, what he called "micromachines." We would call these "nano machines," devices that work within the cell to make the cell function and preserve life. He started to say, "How could this machine have come into existence in the stepwise fashion required by natural selection?"



The cell is like a chemical factory. Somebody said that one cell is more complicated than a GM assembly plant for cars. It's got more going on and more complicated than that. The principle Behe suggested is: There are certain machines that cannot work unless all the pieces are in place. He called the principle "irreducible complexity."

RICK: Irreducible complexity is the idea that you can't have a machine work unless all the pieces are in place. It's like a car. If one of the battery cables aren't connected, your car is not going to start.

DAVID: Exactly.

RICK: That's what you're saying has to do with all of biology. You have this irreducible complexity where you get down to a point where unless the pieces are all in place, it doesn't just like drag itself along - nothing works.

DAVID: Exactly right. It all has to be in place. And the stepwise growth required by natural selection is not met in this case.

RICK: Most of you listening are Christian. You believe in the Bible and you want to worship and honor God, and that's what we're looking to do in this conversation. We want to do it through a scientific approach in understanding how science works. Back to Stephen Meyer and the idea of irreducible complexity:

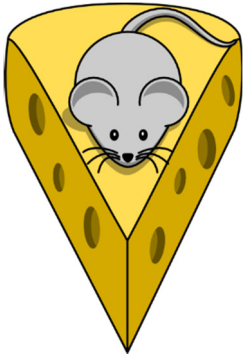
 **What is Irreducible Complexity, Stephen Meyer, Socrates in the City**

- *MEYER: Mike Behe has developed a second argument from the presence of a feature that engineers recognize. Engineers sometimes talk about "integrated complexity". Behe calls it "irreducible complexity," and that is a feature of systems wherein you have a great number of parts, and if you remove any one of those parts, the whole system ceases to function.*
- *METAXES: Right. So, it could not have evolved. It's not a gradual process. It had to be put together or it wouldn't work.*
- *MEYER: The intermediate stages - he makes famous this little, I kid you not - it's a rotary engine inside the cell wall of bacterium. It's called a "bacterial flagella motor." It's high tech and low life. It's made of 30 protein parts. It has "O" rings, bushings, a drive shaft, a hook-like protein that functions like a propeller. It rotates at a 100,000 RPM and can change direction on a quarter turn. It's an amazing machine.*



RICK: No, I can't. That small...and it has 30 different proteins that drive it. And all of those proteins have to be not only in the right amount, but they all have to be present. Otherwise, the whole thing doesn't work.

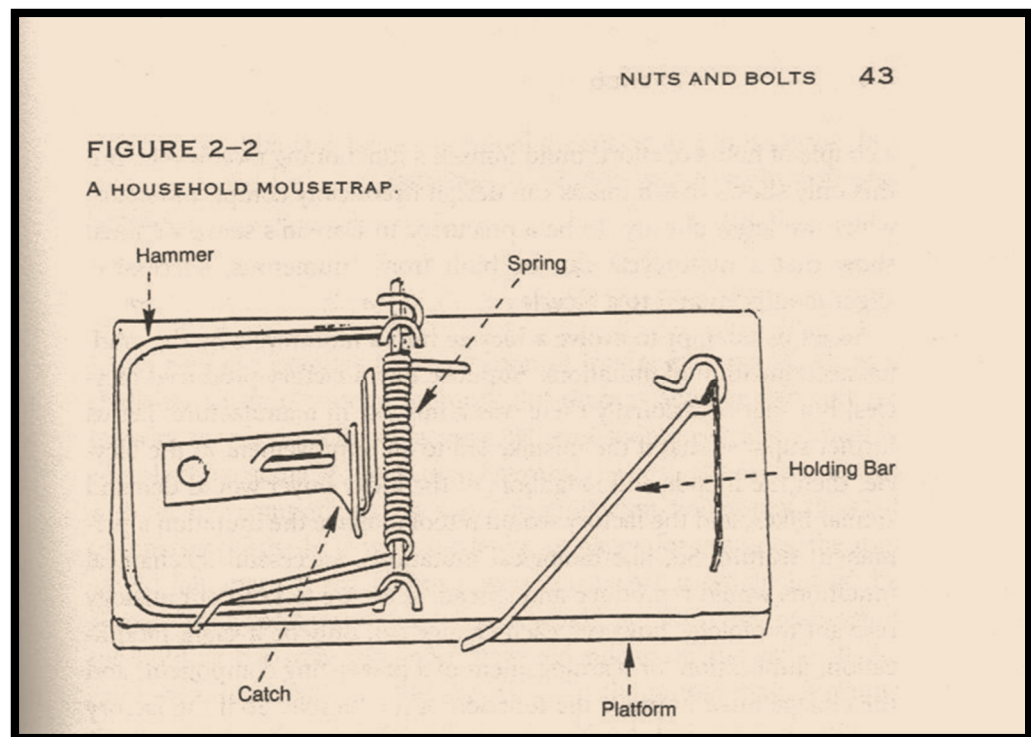
DAVID: I could go through the principle of irreducible complexity with this flagellum motor. But we're going to use something a little bit simpler that makes the principle a little bit easier to understand. Everyone has seen a mousetrap.



RICK: Yeah, the old-fashioned kind that smacks the mouse.

DAVID: They have some high-tech versions, but this is on a piece of wood. It has a spring, a holding bar, the catch and the hammer and all that. Now, what does it require for that to work? Well, number one, it's got to be set, *and all the pieces have to be there*. For example, would the mousetrap work if the spring was missing?

RICK: Of course not.



DAVID: No, it couldn't move. If you don't have the piece of wood on which to mount all of these, how would it work together? You need some type of bonding, some type of foundation. If you don't have the catch and the holding bar there - again, I think you get the idea that this mousetrap is an irreducibly complex machine.

RICK: So, in biology, if you don't have all the pieces together all functioning, then you have nothing working. And the theory of evolution says that things came into play step-by-step. Right?



DAVID: Yes. Let's go back to that bacteria once again. Let's start with the bacteria without a flagellum. He's just floating around. Let's say that just by weird coincidence he evolves just the tail end of it. What good does that do for him in his environment? The answer is nothing, because it doesn't work. It doesn't rotate. It doesn't move.

RICK: The bacteria, therefore, can't live.

DAVID: Well, it bestows no advantage on that bacteria. So, that strange mutation is not going to be propagated in the species because it does not affect survival.

RICK: So, in the scientific theory of evolution, you have this step-by-step process that says one small change builds upon what's already there, and then another small change builds upon it. You're saying unless all of these large changes happen simultaneously, the small changes are useless and would, therefore, according to scientific definition, be washed away because they don't provoke life.

DAVID: Yes, they would be lost in a noise because they just don't do anything.

RICK: Folks, understand how important this is in looking at the whole idea of science and the idea that there is intelligence behind this. Now, when we look at the mousetrap, for instance, which is a very, very, very simple machine versus a cell, which is more complicated than an automotive factory - what did Darwin think about the cell being so small and having all those things?

DAVID: Darwin lived at a time before they knew very much about it. They had microscopes at that time but they weren't sufficiently powerful for him to see what was going on. All he would see, whether it be a plant cell or animal cell, is this little box or little bag of protoplasm. What went on in it, he didn't know. It looked like a piece of gelatin. That's how they described it back in the 18th century - it is "life," "protoplasm with life." It was simple, so it was easy for evolution to work on it and go to the next step. Well, it wasn't easy.

RICK: Now, we're delving into the unknown. In Darwin's time, the functions inside of the cell were completely unknown. That's what you're telling me.

DAVID: Yes.

RICK: So, he would look at that and say, there's this unknown here. It must be -- and here's where you take a left where you should take a right -- it must be something so simple and so basic that it can be built upon.

DAVID: That was his assumption.

RICK: Because of that particular assumption, the theory develops - because something simple becomes slightly more complex becomes slightly more complex becomes slightly more complex. But what you're saying is the fact of science is exactly the opposite.

DAVID: Yes. Scientists knew up until the early 1950's the cell was complicated, but they still didn't even understand the basis of heredity. In other words, DNA hadn't been discovered or defined until the early 1950's.



Within life there are so many specialized functions. There are creatures that do things -- like the Bombardier beetle. Here's a beetle that demolishes its enemies by a flame thrower! It mixes two volatile chemicals together and produces a flame.

CARD 85 Strange Wonders **BOMBARDIER BEETLE**

CREATURE FEATURES
GENUS/SPECIES: *Brachinus*/various
SIZE: Length up to 0.5 in.
HABITAT: Grasslands in warm areas of all continents except Antarctica
PREY: Insects, worms, slugs and other invertebrates
LIFESPAN: About a month as a larva; a few weeks as an adult

JAWBREAKER: It may not look like one, but the bombardier beetle is a voracious predator, using two razor sharp jaws to slice into insects and worms. Two or three bites usually weaken a victim enough for the beetle to begin eating.

HEAVE HO! Once the beetle has bitten into a victim a few times, it vomits digestive juices into their wounds. This finishes the kill and softens the prey's innards so the bombardier beetle can slurp up a juicy meal.

The bombardier beetle looks like an easy target to many predators, but any threat to this insect can trigger a butt-bomb counter attack. If in trouble, the beetle fires a super-hot corrosive chemical from its rear in rapid fire that can burn skin and blind enemies. The beetle uses this chemical warfare only for defense. When on the hunt, it uses super-sharp jaws to slice up worms and insects.

DAVID: There are so many structures, both at the microscopic level and macroscopic level that just dazzle our imagination, which when it comes to evolution, you say, how could something like that come into existence in a stepwise fashion?

RICK: Let's touch a little bit more on Darwin.

DAVID: Darwin didn't know anything about these details of science of biology we have been discussing.

RICK: ...Because he *couldn't* know about them.

DAVID: It wasn't available. The technology wasn't there for him.

RICK: He wasn't ignoring something.



DAVID: No, that's right. He was doing the best he could with what he had. He did notice complexity of nature; for example, the eye. He said at one point the eye really boggled him. He didn't really have an idea.

(Source: Charles Darwin, Chapter 6, *The Origin of Species*) "If it could be demonstrated that any complex organ existed, which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down."

What would Darwin say if he read Dr. Behe's book or started to see some of the nanotechnology we've encountered in cells, what would he say about that? I think it would certainly make him shudder and think twice about things.

RICK: We need to have scientific integrity. I don't understand science at all, but the idea when you look at things and look at the facts of how things operate, the next logical question is: How did they get to operate that way? When an engine is built, we look at the person who designed it and the people who put it together. With great pride they say, "We made that. We designed it. Listen to how it purrs and look at how strong it is," and so forth and so on. We take great pride in the design of that engine. Yet we assume engines of much more vast complexity just happened *by chance* on a molecular level. They won't attribute it to intelligence.

DAVID: We live at a time, as Christians, when we have a lot of things battering our faith. But the advancing science of biology, the discoveries they're making looking into the cell at these nano levels and seeing what's there, this is a great time for a Christian because we are being awed by the complexity and wonder of what God has created, and we're finding more and more reasons to believe in that creation.

RICK: Science proves intelligence! It does not prove a lack thereof. It does not prove that things have an *appearance* of intelligence but actually happened on that step-by-step basis. When you break down all of the myriads of functions on the biological level - never mind the universal level - but the biological level, it proves there is not just intelligence, but massive intelligence.

When we look at the things that we create, we want credit for our intelligence. And yet we look at ourselves and don't give credit to our Creator.

Genesis 1:1: (KJV) *In the beginning God created the heaven and the earth.*



A caller from Connecticut suggests: What is the most important scripture in the Bible? Genesis 1:3: *Let there be light and there was light.* Jehovah God's interest in our planet - He is light. He became interested in our planet. Subsequently hence, the six stages of intelligent design, the creative days and on the seventh, He rested.

"Whoever it was who searched the heavens with a telescope and found no God would not have found the human mind if he had searched the brain with a microscope." (Quote by George Santayana, a Spanish philosopher, essayist, poet, and novelist. He is famous for the quote "Those who cannot remember the past are condemned to repeat it.")



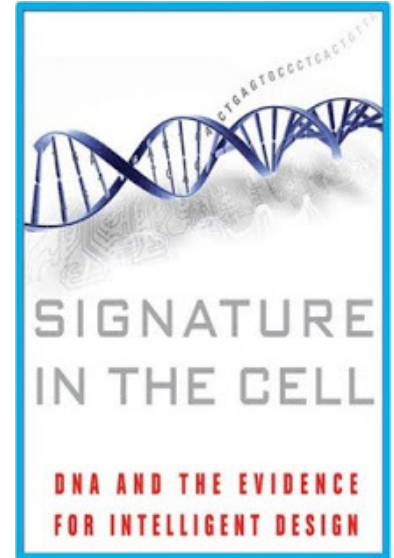
So how do we apply irreducible complexity to Intelligent Design?

RICK: Stephen Meyer wrote a book in 2009 entitled, *Signature in the Cell*. How is that going to help us in our conversation?

DAVID: This is a book I've read just recently that kind of inspired me to come to you with some of the information for our program today. You notice we've been quoting from Stephen Meyer quite a lot.

DAVID: He starts looking at irreducible complexity and some of the amazing discoveries that have been found in the cell. I mentioned it is like a GM factory. This book outlines it and I highly recommend it for those who want to get into it.

What is really interesting is that he came up with a new question regarding all of the scientific fact. He recognized that in order to have any Intelligent Design at all, you have to start with information.



REFRAMING THE QUESTION: So the new question he raised and he treats it in this book is: **Where did the information come from?**

 **The origin of biological information, Stephen Meyer, *Socrates in the City***

- I had become fascinated in the mid 80's with this problem of the origin of biological information. It turns out that organisms are chock full of digital codes stored in the DNA molecule and other forms of information stored elsewhere, and there's a complex information processing system that works inside organisms that allows them to function and survive.*
- So, if you want to build a new cell, if you want to build life in the first place, if you want to build an animal, you have to have the evolutionary process produce a great deal of information. But that was the very question that was bringing a lot of evolutionary theories to a point of impasse. So, I begin to think of this. What is the cause now in operation that produces digital code - that produces digital information? And I realized there's only one, and that causes intelligence of mind. In other words, what we know from our uniform and repeated experience, the basis of all scientific reasoning, is that intelligence produces information.*

RICK: That's amazing because we are, in the realm of the earth, intelligent. We realize that *our* intelligence produces information. We live in what's called the Information Age. How did that happen? It happened by intelligence building upon information and intelligence developing that information further and further and further step laddering up. But you start with intelligence.

DAVID: Yes. You notice Stephen Meyer made reference to what are causes in operation now that produce the effects we see? That was a principle Darwin used. He looked at life he was studying during his journeys on the HMS Beagle and he said, "What can I explain from what I see with things going on in operation?" This was actually a principle that Charles Lyell, the classical



geologist, used. Stephen Meyer said, "All right, what are the causes of information? Where can information come from?"

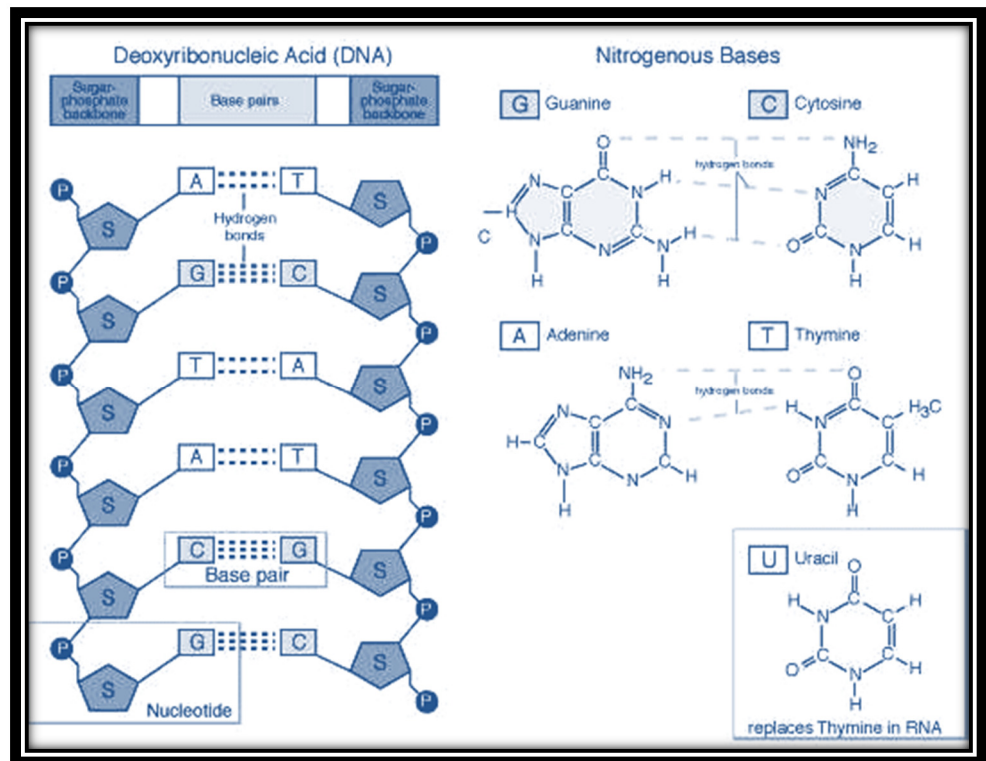
DAVID: We live in an age today where most people are computer savvy. They understand what computer code is and they have some rudimentary ideas of how information is handled.

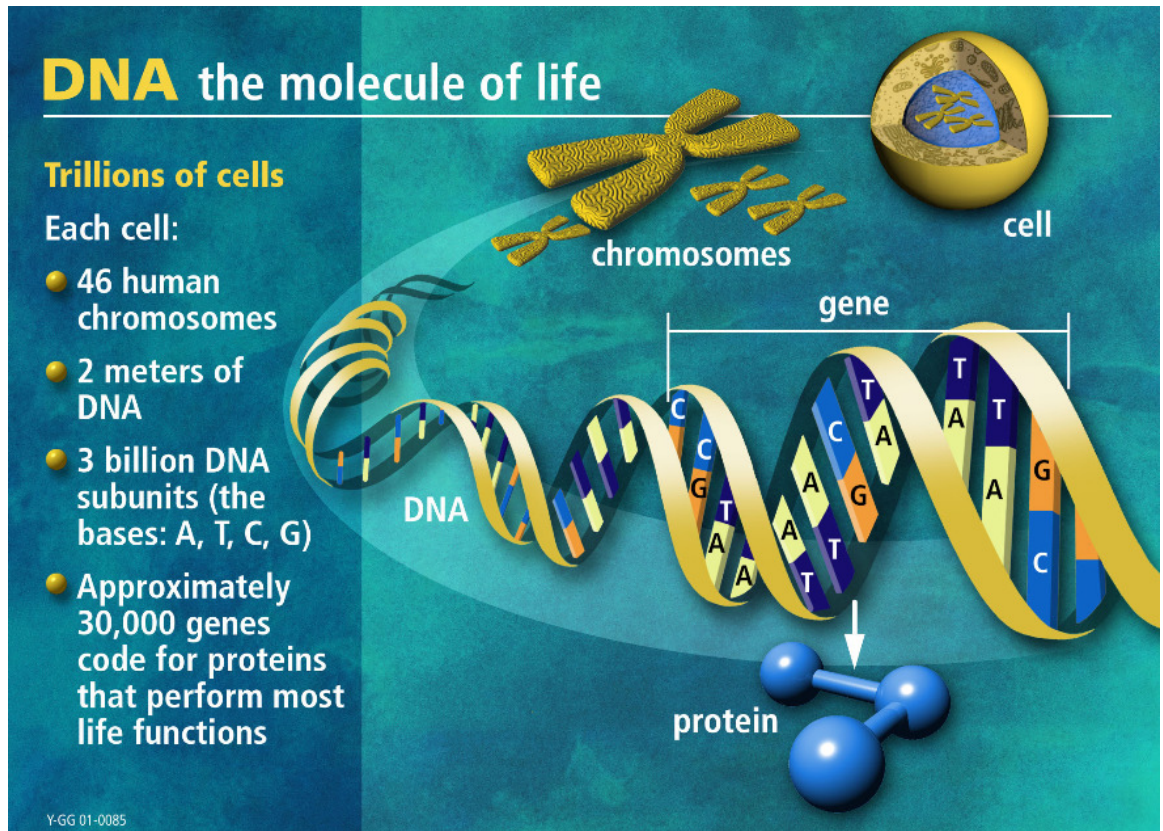
When you go into the human cell, DNA is code. It is computer code and is incredibly complex. It has very sophisticated sequences, and just about everything that the cell can do and does requires that DNA. By the way, DNA is short for a long term called Deoxyribonucleic acid.

We have digital code today. It's the result of years of computer science and yet every cell in every living creature and every nook and cranny on earth has DNA.

RICK: So, what you're saying is you have these long complex computer codes that are already built in to every soul, every cell in everything throughout the entire world. DAVID: That's the question.

RICK: Did that information just happen to roll into place? Evolution has to say the information just sort of arrived randomly. And the question is could you build just one single strand of DNA with information that just arrived randomly? The answer is no, you can't. It has to exist all assembled for it to function.





recap
recap

DAVID: We talked about Michael Behe's principle of irreducible complexity, meaning that there are certain aspects of life, machines that exist within life at the microscopic level, that cannot exist or could not have been created in a stepwise fashion required by Darwinian evolution. So irreducible complexity is an immediate challenge to the idea of natural selection. We looked at that.

RICK: And irreducible complexity basically means you have certain things that have to have all of the pieces in place in order for them to operate.

DAVID: Yes, coordinated changes that have to happen all at once, which evolution does not allow. It is contrary to the principle that Darwin laid out of natural selection - small minute changes over a long period of time.

RICK: ...Because the concept of evolution says things randomly happen because of pure chance, essentially.

DAVID: That's right. That rules out the coordinated changes. Coordinated implies you know what you have to do to put it together. This is a random, undirected, unintelligence motion forward. That is what evolution requires.

RICK: When you look at the cell, for instance, the cells we were talking about in the first hour have 30 different proteins that operate and drive these motors inside the cells that spin at 100,000 RPMs. It blows my mind as to how incredibly detailed it is. That could not have happened little step by little step because it wouldn't have functioned.

DAVID: Exactly.



RICK: And also the other thing about little step by little step, those little steps wouldn't be happening in rapid fire succession. They would take a lot of time because it's random.

DAVID: Darwin's theory requires a lot of time to get them. The second thing that we wanted to talk about is the new reframing of the question: Where does information come from? That was introduced by Stephen Meyer in his book *Signature in the Cell*, a book I highly recommend.

RICK: We're looking at the origin of information in this program in terms of understanding intelligence. Before we continue, I just want to throw out a question: Did God create the earth in six days?

DAVID: Of course He did; Genesis says that. But I know where you're going. It wasn't a trick question, but I understand. I am an "old earth creationist," meaning that I believe earth is quite old, probably in the realm of 4 billion years.

RICK: So six days and 4 billion years don't seem to match.

DAVID: No, they don't, but here we get into a matter of interpretation of the Bible. I think it's unfortunate that some of the young earth creationists, people for whom I have the highest esteem, want to interpret the word "day" in just one way. And, again, we don't have time for it here, but if you get your Strong's Concordance out and look up the word "day" in every scripture where "day" is used, you will see it simply means a defined period of time, but what that time is varies from one context to another.

RICK: We don't even use the word "day" as meaning 24 hours.

DAVID: "My grandfather's day," how long was that? It was probably 80 or 70 years, whatever.

RICK: It is a defined period of time when your grandfather lived. So, you believe God created the earth in these six *defined periods of time*, but in fact, you believe the earth is in the realm of probably billions of years old.

DAVID: Yes, probably.


RICK: Understand that is *not* an anti-biblical understanding. It is a logical interpretation of the words the Scriptures built upon.

DAVID: You know, some years ago I listened to a convention on Creationism, and they had both old earth creationists and young earth creationists on the panel. It was really interesting to see the interplay between the two. One of the things I really appreciated is there was respect on both sides for the other's interpretation - not agreement, but respect.



How does the information in DNA demonstrate design from an Intelligent Creator?

RICK: Now we're going to get back to the basics of DNA and the specificity of the code. To do that, let's go back to Stephen Meyer again.

 Specified Complexity → DESIGN, Stephen Meyer, Lecture by Dr. Meyer

- *Now interestingly Richard Dawkins, who brings such clarity to the debate, has also commented on this: he has pointed out that the machine code of the genes - the information in DNA - is uncannily computer like. Apart from the differences in jargon, the pages of a molecular biology journal might be interchanged with those of a computer engineering journal. In other words, what we have here in living systems is a strike at the very foundation of life. In the very simplest forms of life, we have very striking appearances of design.*

RICK: He mentioned Richard Dawkins, who is on exactly the opposite side of our discussion here.

DAVID: It's interesting. Do you notice the respect that Dr. Meyer shows for Richard Dawkins? They are as far apart philosophically as well as scientifically as you can get. **But** he says Dawkins brings clarity to the conversation. Dr. Meyer is a Christian. I really appreciate that respect for others; you don't always see that. In fact, you frequently do not see that on the side of Darwinian evolutionists. They have said some very nasty things about scientists who believe in Intelligent Design.

RICK: "He brings clarity to this debate." But he talks about striking "appearances of design." We have computer code that humankind has built over years and years and years of programming, thousands of programmers building on it. We look at that in awe and pat ourselves on the back and say, "We have designed something magnificent!" What is this design in DNA?

DAVID: I can especially appreciate that being an engineer myself. I used to design control systems for business equipment, both the hardware and software side. I know the precision required and I know the debugging you have to do to get it to work right the first time!

I'm going to take a quick detour here. One of the other new issues that is being presented to evolutionists these days is the discovery of what is called "epigenetic information." DNA is the genetic information that is inside the nucleus of the cell. But they have discovered that on the surface of cells is a whole other level of genetic information that has to do with embryonic development and cell specialization. And now you've got *two* areas where genetic information is included. How do you coordinate that in the Darwinian stepwise fashion? Two things have to happen simultaneously to get new information.

RICK: When you think about it, you're talking about cells. You can't see a cell. It is that small, and yet it has this immense complexity. How does DNA work?



DAVID: DNA is at the heart of everything living. When a cell works, it works at a biochemical level, and it has to do certain things. We mentioned it is like a factory. Just as in a factory, you have to have tools and coordination and things happening. All that happens in a cell. Let's get to the idea of tools. What is a cell tool? A protein. Proteins do various things.

Let me talk about a protein with which our audience probably has a lot of familiarity, insulin. Insulin helps break down sugar into energy. For those who are diabetics, they don't have the insulin necessary to be able to do it. Insulin is this tiny protein tool that does a specific thing. How does this insulin tool come into existence? The process is wonderfully complex and awesome.

The cell detects that it needs insulin. It needs to have that protein. So, we go back into the nucleus of the cell where the DNA is located, and along some stretch of that DNA, there is the instructions to make insulin. So the cell finds that.

Amazing

Please watch the video at www.signatureinthecell.com to watch a protein being made within a cell as David is describing to Rick in this segment.

RICK: So, you've got the manual just in the strand of DNA.

DAVID: That's right. The cell has to find it to locate it. Then there is a little machine called a "polymerase." It "unwinds" the DNA. DNA is a double helical structure with these rungs of a ladder in between. You have to unwind the DNA. The polymerase does that - just like you read code - and spits out a copy of what it reads. As it's reading, it is transcribing it into another molecule. And this molecule is called "messenger RNA."

RICK: It's like it is sending an e-mail.

DAVID: That's exactly right! It spits this out. Then the RNA goes through the nucleus of the cell, and it comes to a machine called a "nuclear pore complex." That is a door in the nucleus of the cell - an information reading device.

RICK: Like a different computer that opens an attachment.

DAVID: That's right. So the messenger RNA comes to the door. It recognizes it, opens it and lets it out into the cell. Now we're in the cytoplasm of the cell. It arrives to a two-part chemical factory called a "ribosome."

Take a softball and cut it in half so you have two hemispheres. Now this Messenger RNA comes to this ribosome and the two halves come together and it reads the ribosome and creates the protein that will become the insulin. It then spits the protein out of another port in the ribosome. Now you've got this raw insulin protein, but it can't quite work as insulin yet because it needs to be the right shape.



RICK: You had the e-mail that was sent to the other computer. The attachment's opened up. And now you're at the factory that has to produce something, so it takes the attachment, sends it out to the factory, and now the manufacturing process begins.

DAVID: It produces the raw protein. Now, that raw protein won't quite work yet because it's not in the right precise fold.

RICK: It has to go to a different department.

DAVID: It goes to another department. It goes to a barrel-shaped machine that takes this protein and folds it into the exact shape the insulin needs to do its work. Once it is done, it is released into the cytoplasm, the cell interior, to do its work.

RICK: It goes to that second department, gets folded properly so it can function. Then it is sent out to the shipping department.

DAVID: That's right, it's a factory. Exactly right. But, Rick, all of this has to happen in the very first cell that ever existed. Where did the information come to make all of these parts? The evolutionists will say, "Well, the first cell was simpler than that." But we're back to irreducible complexity. You can only get so simple to be able to make proteins.

RICK: When you look at the most simple cells, they still have these extraordinarily complex functions within them, and we know that because we can look at them!

How DNA works:

- Life runs on specialized proteins
- These carry out specific functions related to their shape!
 - o It's about tools in your toolbox
- So when the cell needs a tool – a protein – it has to make it!

Here's the process

- 1. The code for the protein needed is in the DNA**
- 2. A Polymerase, the machine unwinds the DNA, reads it, and spits out a transcript copy of the DNA called Messenger RNA into the cell nucleus.**
- 3. Then the RNA passes through a machine called the Nuclear Pore Complex, which is an information recognition device that controls the flow of information in and out of the nucleus.**
- 4. The Messenger RNA arrives in the cell to a 2-part chemical factory called a Ribosome. This is the site of protein synthesis.**
- 5. The Ribosome translates the RNA in an assembly line and constructs the protein**



Proverbs 20:12: (KJV) *The hearing ear, and the seeing eye, the LORD hath made even both of them.*

RICK: He also made those tiny, tiny cells with the DNA and the RNA and the manufacturing process that's all inside of all of them.

So the proteins are folded and ready to be shipped out. How do they get shipped out?

DAVID: Well, you notice there are a lot of things moving around here. There are even molecules in the cell that function like tug boats or taxi drivers that lead the necessary components from one place to the other. The cell has got everything that you would require in a factory.

RICK: So it even has a delivery system.

DAVID: Yes.

RICK: So, Jonathan, you and I years ago used to work together in a cabinet shop.

JONATHAN: That's right, we did.

RICK: We used to build kitchens. The fax machine would send us an order. We would process it, break it down, send it out, pieces would get put together on and on.

JONATHAN: Different people had different jobs, different responsibilities.

RICK: Then you get it to the point you load it on the truck and deliver to it a final destination.

JONATHAN: Instead of a tug boat, we used a truck.

RICK: Our lead time on manufacturing a kitchen was about six weeks. David, in all of this, you're talking about the cells doing this incredible amount of work. How fast does this all happen?

DAVID: The whole process we described in the last segment takes place in milliseconds. And that's just for *one* protein. There are tens of thousands of proteins, again, think protein's tools - tools that help the cell to function that are required all the time in cells. So, this process is going on multiple times with multiple instances of these things taking place, many ribosomes, so there's a lot of production going on.

RICK: When you think about the cell, think about your human body. You don't even feel a vibration. It's moving so smoothly and so efficiently thousands upon thousands of times per second with the billions of cells within your own human body...and we think that happened by *chance*?

DAVID: What would happen in the factory that you and Jonathan worked at if somebody pulled the plug?

RICK: It wouldn't be good.

JONATHAN: Trouble.



DAVID: You would need energy.

RICK: Yes.

DAVID: There are energy proteins and energy molecules that are all around the cell providing the energy to make this take place.

Psalms 139:14: (NIV) *I praise you because I am fearfully and wonderfully made; your works are wonderful, I know that full well.*

RICK: That Scripture resounds.

JONATHAN: There's a new meaning to that Scripture.

DAVID: Rick, the *fearfully and wonderfully made* is something that even resonates among those who are not believers. Francis Crick and James Watson were the ones that discovered the structure of DNA in 1950.

Crick is not a believer; he's an evolutionist. This is something he said about the advance of knowledge in 1980:

“An honest man, armed with all the knowledge available to us now (1980), could only state that in some sense, the origin of life appears at the moment to be almost a miracle.” – Francis Crick

JONATHAN: Wow.

RICK: The things that we do as human beings, the things that we create, we build our super structures, we build our computers and build our kitchens and whatever things that we build, it's like we're mirroring what happens within the human body.

DAVID: Being an engineer, I'm very familiar with a lot of engineering disciplines. Engineering design is often patterned after discoveries in biology. And engineers who study biology and want to apply it to things in the real world that they may find, they cut a lot of corners, they go straight to the best design by trying to mimic something they found in nature.

RICK: They go straight to the best what?

DAVID: The best solution.

RICK: The best solution, the best design. Intelligent Design simply says that the immense complexity of even the smallest cells must have happened because it was designed to work that way and not randomly approached to work that away. The random step-by-step approach, David, you've already established could not happen because it would not perpetuate life in the in-between stages.

We have some “anchor thoughts” for a Christian that you can really hold onto. They are stable and secure in this very volatile discussion because, again, unfortunately, there's not a lot of respect going back and forth on this. And as Christians we shouldn't approach the subject with a lack of respect.



DAVID: I think young Christians that are being exposed to the philosophies of this world like evolution probably find themselves developing a lot of doubts because evolutionists will present things in a very definite way, very positive way. "This is it. There is no other explanation."

One of the purposes of the program today is to try to instill faith in the Bible and show that there are good reasons, good anchors, if you will, for believing it. I've got five of them here.



1. Experts in biological science, in spite of a clear majority on the side of evolution **DISAGREE** about the facts.

These are the *experts* disagreeing about the facts. What does that tell you? That there are legitimate differences on it. You don't have to be way out in left field and say, "I'm the only one that disagrees with experts in science." Within science they disagree among themselves.

RICK: We don't necessarily see that with the evolution theory. It is presented with such veracity and force.

DAVID: That's a tremendous point. Stephen Meyer observed that the public face of evolution is monolithic: "We're right. This is the way it is. There are no weaknesses in this theory. It explains everything. There's no reason to reject it." That's the public face.

But now you go back and read the scientific journals. Somebody like Dr. Meyer does because that's his field. When you read the technical journals - and there is a lot written in technical journals about evolution - you find out there are a lot of disagreements about how things happened. There are a lot of challenges; there are a lot of uncertainties. In short, it is not so positive when the scientists talk among themselves - only when they come out in public.

RICK: So behind closed doors it's a different story than the public persona.



2. The current, state-of-the-art scientific thinking on the origin of life has **NO CONSENSUS THEORY** - they don't know how it happened!

DAVID: We saw that with Dr. Crick a moment ago. They look at it as "it's almost a miracle." They don't even have a *working* theory.

RICK: That's interesting. I have a theory. It's called **IT WAS DESIGNED!** There's something powerful...okay, we'll go with that.



3. There are many in diverse scientific disciplines that believe the **UNIVERSE GIVES WITNESS TO A CREATOR.**

DAVID: Among biologists, you probably have a very small minority of believers in God as Creator, but if you get into something like astrophysics or physics, you find there that the percentage of scientists who believe in a creator, not necessarily the Creator described in the Bible, but believe in an intelligent creator of the universe that put it together is much, much higher because there is evidence in their disciplines that show that as well.



4. There is nothing in most interpretations of the Bible that is contrary to known scientific facts.

This is an allegation you will hear from evolutionists: “The Bible is so off base when it comes to science, it's not funny.” That's *not* true and a study of the Bible will show that. In fact, a study of the Bible begins to reflect again and again principles that we are discovering in science.

RICK: And that's an important point. This is Christian Questions. We are Bible believing Christians and take the Bible as our textbook. But we don't take the Bible as our textbook and ignore the rest of the world around us. And I think that's an important part of the understanding. We need to look at scientific fact and ask if it is in correlation with Scripture. And you're saying yes, it is. Absolutely it is.

DAVID: If you love truth, whether it is biblical truth or truth found in nature, you'll always find it to be in harmony with each other.



5. Belief in a materialistic, atheistic view of the universe requires FAITH!

DAVID: In other words, you have to reject a lot of facts that suggest that there is a Creator, that there is an intelligence behind it in order to marshal your philosophy for an atheistic universe.

RICK: And again when you do that, you are really ignoring volumes of information and volumes of what now become unanswered and unanswerable questions asking where did information come from? How did it get stored? How does it perpetuate life? How does life develop? Those are the volumes of unanswerable questions you have when you have that materialistic and atheistic view.

DAVID: This faith in evolution explains some of the passionate emotion that they bring to it. It is a religious fervor in many ways that rejects anything that challenges it.

Psalms 53:1: (KJV) *The fool hath said in his heart, there is no God...*

RICK: David, that's a pretty strong statement because we just said we want to be respectful on all sides, and the Bible itself says *the fool has said in their heart there is no God.*

DAVID: We have to be so very careful when we address individuals in this way. But what this Scripture is giving as a principle, that there is a foolishness associated with the thinking that there is no God.

RICK: And, again, how do you determine that foolishness? When you look at the vast complexity of the bigness of the universe and of the smallness of the structure and function of DNA, you say, “There must be design. In all aspects of it all, there must be design.”

We take credit for designing and we take pride in our designs, and our designs pale in comparison to the designs inside even the molecular structure of everything.



JONATHAN: Idolatry is presented in the created theory taking away credit from God.

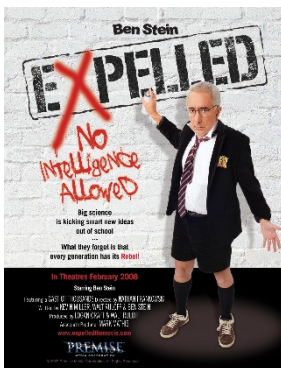
RICK: Right, because idolatry is worshipping the created rather than the Creator.

JONATHAN: Exactly.

RICK: We're really good at worshipping what we discovered when we discover something. We're so proud of ourselves. We discovered how to map out the strands of DNA. We are so proud of that! That's an incredible accomplishment. *All we're doing is mapping out what is already there!* We didn't like invent it. We just learned to map it out. But there is danger when you do that with the thought toward intelligence.

RICK: This is from the movie, *Expelled: No Intelligence Allowed*, with Ben Stein doing an interview with Professor Caroline Crocker:

 **Consequences, Professor Caroline Crocker and Ben Stein, *Expelled: No Intelligence Allowed* (2008 documentary)**



- **STEIN:** After Dr. Caroline Crocker simply mentioned Intelligent Design at her cell biology class at George Mason University her promising academic career came to an abrupt end.
- **CROCKER:** My supervisor invited me into his office; he said I'm going to have to discipline you for teaching Creationism, and I said I mentioned Intelligent Design on a couple of slides, but I did not teach Creationism. He said nonetheless you have to be disciplined. At the end of the semester, I lost my job.

RICK: There you go. You mention it and you're out. You mention what to me is the logical conclusion of the immense complexity that we've been talking about, and there is a militant religious fervor with which you get attacked.

DAVID: The intolerance is really incredible. It's like the "The Emperor's New Clothes." There is something so obvious here, but no one wants to bring it up because of the philosophical reasons. In this case of Professor Crocker, it cost her her job, and she is not by any means the first. This movie *Expelled* that has been out for a few years now documents several examples within the academic community of people's careers being brought to a halt simply because they exercised what should have been academic freedom to talk about a philosophy that is out there that is real.

RICK: Incidentally, the movie *Expelled* was produced by Kevin Miller. We had him as a guest on our program about a year and a half ago because of his documentary called *Hell Bound*.

Please refer to the Christian Questions programs, "Are Most People Really Hellbound?" Parts I (April 7, 2013) and II (May 12, 2013) for more on Kevin Miller's work.




A caller from Connecticut suggests: *Genesis 1:4: And God said, let there be light and there was light.* For centuries it has been noted that in Genesis God creates light before He creates the sun and the moon. We now know that the principles of creation and of life make the sun and moon possible. The principles come first. *Romans 1:20: Ever since the creation of the world, His invisible attributes of eternal power and divinity have been able to be understood and perceived in that He has made.* The universe is so fine-tuned for life that *not* to believe in a conscious Creator has become impossible. Consciousness itself is a miracle. We are aware that we are aware. The Christian knows that we are a gift of the mind of God.

RICK: I love that phrase, "We are aware that we are aware." And that in itself is an amazing miracle of design and creation.

DAVID: It reminds me of a quote from Rene Descartes, "I think; therefore, I am."

RICK: Yes. And, how did that happen in the evolutionary process? How did the thinking and the reasoning of humankind come from the things that just operate on pure instinct? It is a whole different question for a different program. But, David, let's get into the laryngeal nerve. There's a problem with the laryngeal nerve according to many that says it is a really foolish design and if there was an intelligent designer, he really screwed this one up.

 **Richard Dawkins demonstrates the "stupidity" of Intelligent Design, dissecting a giraffe**, http://youtu.be/gb_J-imkehU

- *DAWKINS: We get use to the idea that evolution is so good at producing beautiful and elegant animals that look as if they've been designed. We forget that sometimes they're not perfect and there are imperfections, and the imperfections are very revealing because they are exactly the kind of imperfections you'd expect from the accidents of history if there was no designer. There's a nerve called the recurrent laryngeal which runs from the brain and its end organ is the larynx. And you would think that it would just go straight there but in a human what it does is it goes straight down into the chest, loops around one of the main arteries in the chest, then goes straight back up again; obviously a ridiculous detour. No engineer would ever make a mistake like that.*
- *SPEAKER: So, this is a very important nerve. Interestingly where it ends is pretty close to where it started. It started here coming out of the brain. It really only needed to go about two inches.*
- *DAWKINS: Yes. Amazing.*
- *SPEAKER: But it went all the way down and came all the way back.*
- *DAWKINS: That's a beautiful example of historical legacy as opposed to design.*
- *SPEAKER: Exactly. This is not an intelligent design. An intelligent design would be to go from here to here. (laughter)*



RICK: They're looking at this laryngeal nerve in a giraffe and saying it should be 3 inches long but it is 15 feet long. How stupid could that be; there's no intelligence to that design.

DAVID: This belongs to a class of objections that say, "I think that I know a better way that it should happen." Another example of this is the location of the optic nerve. Probably everyone has had that example where you have a little blind spot in your eye that you can't see. It's a blind spot because of where the optic nerve comes.

The question comes back: Why did God design it this way if we believe God designed it?

Please refer to the Bonus Material in this Rewind for a full rebuttal to this objection by Dr. Jerry Bergman.

But I'm going to summarize just a couple of the things:

1. It assumes you know what the best design is and that you know why the Designer did things the way that He did. That's an assumption. You can't know that.
2. What it ignores is that in the development of bodies within organisms, like a giraffe or a human being (that laryngeal nerve does the same thing in human beings as well), the development in utero takes place in a period of time, and everything has to work while the fetus is growing. At the very beginning, that laryngeal nerve is real close, but there's the developing heart in between them.

The heart now moves into the chest cavity as the fetus grows and it pulls that nerve down. Now, you could say, well, why didn't they just stop it and reattach it again? You can do that in non-living things. In living creatures, you have to take into consideration the dynamic element of it. You can't just snip it and redo it.

3. As Dr. Bergman points out, there are other branches across this that even go into the cardiac tissue. There are other things going on that they don't mention in this audio clip.

The bottom line is it is an interpretation that it is bad design because they say it is a bad design in total ignorance of other things that might be involved showing it is actually a very good design.

RICK: And it has other functions - a lot of which we don't truly understand the full import of them. Typically people who want to pick on Intelligent Design will find something that looks like it is not designed perfectly and from the end result looking backward say, "Well, this is dumb." When, in fact, it had to work as the organism was developing. Can you imagine trying to build a computer while it's functioning?





DAVID: Exactly. That's a very good example of the issues here.

RICK: And for that to happen, things are not going to end up where you would put them optimally if you could just put the pieces of the puzzle together and say, "Oh, look, it was finished," because it was alive through the whole process.

What are the 'takeaways' from this program?

DAVID: If you are a Christian and you are having doubts because of evolution and you're saying, "Wow, there's a lot of things here that really, really sound appealing," you're looking at a philosophical package. As a Christian you want to ask yourself, do I want to buy the whole package? Well, what's in the package?

Here's just a few quick bullet points of what's in the package: no God, no higher purpose in life, no moral standards, no universal right or wrong, no absolutes - everything is relative, no universal direction, no accountability, no guiding force in the universe, no ethical standards, no obligations to anyone. Basically you become your own God. That's what you have to buy if you buy into this materialistic evolutionary philosophy.

RICK: I want to ask one sideline question here. Do you believe in any sense, in any form of evolution at all?

DAVID: I have a son that is in this field, and we have discussions on this all the time. One of the definitions of evolution is "change over time." I believe in change over time. We talked earlier about natural selection. God made the capability in every living creature of every species to respond to various changes in their environment with changes.

RICK: So that's why an Eskimo has different skin than someone who lives on the equator.

DAVID: Exactly right. You can multiply the examples. That's normal. What we're talking about is something very different. The definition of evolution that we're talking about - you may remember that Stephen Meyer mentioned a third definition of evolution we have a problem with - that all life came about by a random undirected process. That we deny. That evolution I do not believe in.

RICK: But evolution within a species, you are okay with.

DAVID: Yes, it doesn't change the kind. It just changes some internal traits.

RICK: Isn't it interesting God said in the evolution process, *let them bring forth after their own kind*.

DAVID: An example, Rick, of the variability God has built in, have you ever seen one of these dog shows on TV? What's the variability of those dogs?

RICK: It's amazing.



DAVID: You have big, little, shaggy, short, everything. They're still dogs. But that's the variability. In natural selection some of those traits would come out naturally as a result of either it's colder or hotter or whatever. But this is man-induced, taking advantage of the natural variability that exists.

RICK: So, again we look at the concept of evolution. We say you don't throw the baby out with the bath water. There *is* variability within species. There *is* the ability to adapt and develop. We're not denying that. As a matter of fact, the Scriptures embrace that. But we are saying it is all there by a purpose, with a purpose, and for a purpose from an Intelligent Designer.

Isaiah 55:8-11: (NKJV) ⁸*For My thoughts are not your thoughts, nor are your ways My ways, says the LORD. ⁹For as the heavens are higher than the earth, so are My ways higher than your ways, and My thoughts than your thoughts. ¹⁰For as the rain comes down, and the snow from heaven, and do not return there, but water the earth, and make it bring forth and bud, that it may give seed to the sower and bread to the eater, ¹¹So shall My word be that goes forth from My mouth; It shall not return to Me void, but it shall accomplish what I please, and it shall prosper in the thing for which I sent it.*

What does that tell us about the Creator and about Intelligent Design?

DAVID: It should give us some humility to say that God is doing a lot of things of which we are not aware. We see it in life, we see it in the universe, the structure of the universe. We even see it in the permission of evil in this world. God has things going on, and if we acknowledge God is higher, what we'll say is, "I don't understand it, but I'm going to accept it." That attitude helps a lot.

Remember you were talking earlier about the pride that comes up from discoveries in some people, "Oh, look what I discovered." There are two ways we can react when we look at new things, especially if we discover them on our own. We can either say, "Look at this paper I wrote on my discoveries! Aren't I great? Isn't this wonderful?" Or we can say humbly, "Wow, this is really amazing." And in the case of biology, God is an amazing God, and the more I discover about Him, the more I am in awe of Him.

RICK: That has been our objective this morning - to do some discovery and look into things that we don't see and to discover how they work and to discover the immense complexity and the immense intelligence behind the complexity. It is not by just the mere fact that this internal machinery works, but by the amazing amount of information that is not only stored inside of all these cells but that is delivered to the cells, interpreted within the cells, and then delivered to their proper functions - all within milliseconds - all happening everywhere in the world simultaneously and just keep going on and on and on.

DAVID: We have made repeated reference to Dr. Meyer. I recommend his book, *Signature in the Cell*, very much. And also a later book that was a bestseller last year, *Darwin's Doubt*, wonderful reading, very faith strengthening.



RICK: Thanks so much for being with us. This has been unbelievable. The whole point is to look at science with strengthened faith, because what it ultimately proves in our minds, in our eyes, based on the evidence that we see here today, is there is incredible intelligence behind all of it. And that incredible intelligence not only created us but created us for a purpose, for the purpose of glorifying God, for the purpose of the fulfillment of His plan for all mankind.

*So, is God really the Creator?
For Jonathan and Rick (and David!) and Christian Questions...
Think about it...!*



*And now even more to think about...
only in the **Full Edition** of CQ Rewind!*

1 Timothy 6:20: (KJV) *O Timothy, keep that which is committed to thy trust, avoiding profane and vain babblings, and oppositions of science [knowledge] falsely so called:*

"It is absolutely safe to say that if you meet somebody who claims not to believe in evolution, that person is ignorant, stupid, or insane, (or wicked, but I'd rather not consider that.)" - Richard Dawkins, Oxford biologist

"Darwin only had a couple of basic tenets...you have heritable variation, and you've got difference in survival and reproduction among the variants. That's the beauty of it. It has to be true – it's like arithmetic." - Paul Ewald, biologist

"Our willingness to accept scientific claims that are against common sense is the key to an understanding of the real struggle between science and the supernatural...we are forced by our prior adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counterintuitive, no matter how mystifying to the uninitiated... Moreover, that Materialism is absolute, we cannot allow a Divine Foot in the door." - Richard Lewontin, Harvard geneticist

2 Timothy 3:1-5: (NASB) *¹But realize this that in the last days difficult times will come. ²For men will be lovers of self, lovers of money, boastful, arrogant, revilers, disobedient to parents, ungrateful, unholy, ³unloving, irreconcilable, malicious gossips, without self-control, brutal, haters of good, ⁴treacherous, reckless, conceited, lovers of pleasure rather than lovers of God, ⁵holding to a form of godliness, although they have denied its power; Avoid such men as these.*

Psalms 94:9: (KJV) *He that planted the ear, shall he not hear? he that formed the eye, shall he not see?*

Proverbs 3:5-6: (NASB) *⁵Trust in the LORD with all your heart and do not lean on your own understanding. ⁶In all your ways acknowledge Him, and He will make your paths straight.*

Psalms 32:8: (NASB) *I will instruct you and teach you in the way which you should go; I will counsel you with My eye upon you.*

2 Timothy 1:7: (KJV) *For God hath not given us the spirit of fear; but of power, and of love, and of a sound mind.*



More thoughts about the fruitage of Darwinism:

Peter Singer, a professor of bioethics at Princeton, argued that human beings with severe physical disabilities should no longer be viewed as worthy of life.

“If we compare a severely defective human infant with a nonhuman animal, a dog or a pig...we will often find that nonhuman to have superior capacities...only the fact that the defective infant is a member of the species *Homo sapiens* leads it to be treated differently from the dog or pig. *Species membership alone, however, is not morally relevant.*”

- Lawlessness - man asserting his personal liberty to the point of licentiousness
- i.e. license to do whatever you want.
- Governmental abuse, “greater good” overshadowing personal rights and liberties.
- Abandonment of Personal Responsibility

Darwinist and Materialists alike understand the implications of Intelligent Design. If there is a designer, then the designer has designs. If this designer is God, as we believe, then there could well be accountability. And if there is accountability, then you cannot do whatever you want! Liberty cancelled! And they find that absolutely unacceptable.

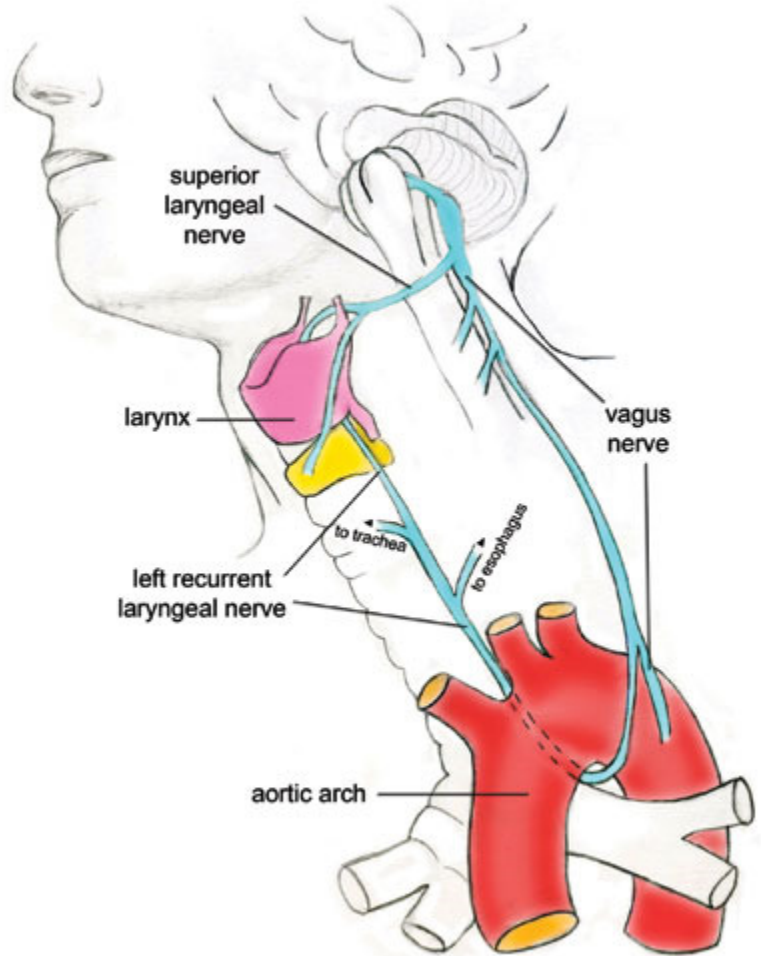
As Christians, we concern ourselves primarily with the preaching of the Gospel and the putting on of Christ. But we watch carefully the events on the world stage. This development of Intelligent Design is most exciting. We accept the truth from God’s Word whether it is popular or not. That is our faith. But where scientific truth rises, we rejoice because truth on any and all subjects is always consistent with itself. And a scientific study that illustrates the wisdom of God in creation is a most delightful development. It can contribute to the wiping away of error from the earth and a restoration of the right perspective of God and neighbor.



Recurrent Laryngeal Nerve Is Not Evidence of Poor Design, by Jerry Bergman, Ph.D., Adjunct Associate Professor at the University of Toledo Medical School in Ohio.

Introduction

A common claim by evolutionists is that the human body is poorly designed, which to them is evidence that it was not intelligently designed, but rather cobbled together by the unintelligent process of evolution. One of the most frequent examples of poor design cited by evolutionists today is the *recurrent laryngeal nerve* (RLN), which controls the mammalian larynx (voice box) muscles. Paleontologist Donald Prothero wrote that examples of "poor or at least very puzzling design can be accumulated endlessly," thus proving evolution, with one of the best examples being "the recurrent laryngeal nerve, which connects the brain to the larynx and allows us to speak."



In mammals, this nerve avoids the direct route between brain and throat and instead descends into the chest, loops around the aorta near the heart, then returns to the larynx. That makes it seven times longer than it needs to be.¹

Although the laryngeal nerve does not take the shortest route to the larynx, this is also true for many other nerves. The optic nerves do not take the shortest route to the occipital lobe of the brain (the lobe near the back of the head), but rather cross over at the optic chiasm (where the two tracts cross over in the form of an "X") for reasons now known to be based on good design. The nerves *from the right side of the brain go to the left side of the body* (except for the right and left frontal branches of a facial nerve, which are supplied by both sides of the brain) also for good reasons.



Likewise, the left RLN has a different anatomical trajectory than one would first expect, and for very good reasons. In contrast to Prothero's claim, the *vagus* nerve (the longest of the cranial nerves) travels from the neck down toward the heart, and *then* the recurrent laryngeal nerve *branches* off from the *vagus* just below the aorta (the largest artery in the body, originating from the left ventricle of the heart and extending down the abdomen). The RLN travels upward to serve several organs, some near where it branches off of the *vagus* nerve, and then travels *back up* to the larynx.²

This is the reason it is called the *left recurrent laryngeal nerve*. In contrast, the right laryngeal nerve loops around the subclavian artery just below the collarbone, and then travels up to the larynx. Of note is the fact that the longer left RLN works in perfect harmony with the right laryngeal nerve, disproving the faulty design claim.

Reasons for This Design

The most logical reason is that the RLN design is due to developmental constraints. Eminent embryologist Professor Erich Blechschmidt wrote that the recurrent laryngeal nerve's seemingly poor design in adults is due to the "necessary consequences of developmental dynamics," not historical carryovers from evolution.³

Human-designed devices, such as radios and computers, do not need to function until their assembly is complete. By contrast, living organisms must function to a high degree in order to thrive during every developmental stage from a single-cell zygote to adult. The embryo as a whole must be a fully functioning system in its specific environment during every second of its entire development. For this reason, adult anatomy can be understood only in the light of development. An analogy Blechschmidt uses to help elucidate this fact is the course of a river, which "cannot be explained on the basis of a knowledge of its sources, its tributaries, or the specific locations of the harbors at its mouth. It is only the total topographical circumstances that determine the river's course."⁴

Due to variations in the topographical landscape of the mammalian body, the "course of the inferior [meaning lower] laryngeal nerve is highly variant" and minor anatomic differences are common.⁵ Dissections of human cadavers found that the paths of the right and left recurrent laryngeal nerves were often somewhat different from that shown in the standard literature, illustrating Blechschmidt's analogy.⁶

Developmental Variations

The human body begins as a sphere called a blastocyst and gradually becomes more elongated as it develops. Some structures, such as the carotid duct, are simply obliterated during development, and some are eliminated and replaced. Other structures, including the recurrent laryngeal nerve, move downward as development proceeds. The movement occurs because the neck's formation and the body's elongation during fetal development force the heart to descend from the cervical (neck) location down into the thoracic (chest) cavity.⁷



As a result, various arteries and other structures must be elongated as organs are moved in a way that allows them to remain functional throughout this entire developmental phase. The *right* RLN is carried downward because it is looped under the arch that develops into the *right* subclavian artery, and thus moves down with it as development proceeds.⁸

The left laryngeal nerve recurs around the *ligamentum arteriosum* (a small ligament attached to the top surface of the pulmonary trunk and the bottom surface of the aortic arch) on the left side of the aortic arch. It likewise moves down as the thoracic cavity lengthens. The body must operate as a living, functional unit during this time, requiring ligaments and internal connections to secure various related structures together while also allowing for body and organ movement. For the laryngeal nerve, the ligamentum arteriosum functions like a pulley that lifts a heavy load to allow movement.

As a result of the downward movement of the heart, "the course of the recurrent laryngeal nerves becomes different on the right and left sides."⁹ These nerves cannot either be obliterated or replaced because many of them must function during every fetal development stage. Blechschmidt notes that "no organ could exist that is functionless during its development," an axiom that also applies to the nervous system.¹⁰ This movement appears designed to position the left RLN downward as the body elongates.

In addition, "the laryngeal branch splits up into other branches before entering the larynx at different levels."¹¹ These many RLN branches serve several other organs with both motor and sensory branches, including the upper esophagus, the trachea, the inferior pharynx, and the cricopharyngeus muscle, the lowest horizontal bandlike muscle of the throat just above the esophagus.¹² Neuroanatomists describe larynx innervation as "complicated" and they are still trying to work out the specific targets of its nerve branches. The fact that the left RLN also gives off some fibers to the cardiac plexus is highly indicative of developmental constraints because the nerve must serve both the larynx (in the neck) and the heart (in the chest).

As noted, after looping around the aorta, the RLN travels back up to innervate the larynx. The superior (meaning upper) and recurrent laryngeal nerves then innervate an area known as Galen's anastomosis. Other cases exist of one nerve splitting off early and providing direct innervations, and another taking what seems like a circuitous route. One example is the phrenic nerve that arises in the neck and descends to connect to the diaphragm. This is a necessary path, since the pericardium and diaphragm arise in the septum transversum (a thick mass of tissue that gives rise to parts of the thoracic diaphragm and the ventral mesentery of the foregut) in the neck area of the early embryo.

It then migrates caudally (toward the tailbone) as the embryo enlarges by differential growth of the head and thorax areas, taking the nerve with it. The diaphragm cannot have evolved step-wise, since a partial diaphragm results in an imperfect chest-abdomen separation. Even a small defect results in herniation of the gut contents into the chest--which either compresses the lungs or results in strangulation of the gut.



A complicated issue still being researched is how the incredibly complex nerve-muscle system, the component nerve fibers, and the laryngeal muscles arise from the neural crest (cells between the epidermis and the neural tube that develop into the brain and spinal cord) and dorsal somites (cells that develop into muscles and vertebrae) respectively in the early embryo, and then migrate anteriorly (towards the front of the body) into their final positions. Without explaining the nerve structure's design system, function, and ultimate connections, alleging that the RLN is a poor design is a meaningless assertion.

Thus, the claim that it has to loop up the distance from the ligamentum arteriosum for no reason is invalid. For all these reasons, Prothero's conclusions are incorrect and poorly considered:

Not only is this design wasteful, but...the bizarre pathway of this nerve makes perfect sense in evolutionary terms. In fish and early mammal embryos, the precursor of the recurrent laryngeal nerve [is] attached to the sixth gill arch, deep in the neck and body region.¹³

The Redundant Pathway Design

Some innervations to the larynx go directly to the larynx, including the sensory internal laryngeal nerve and the motor external laryngeal nerve. Other nerves, the left and right *superior laryngeal nerves*, branch off close to the larynx to provide this structure with direct innervation. The superior laryngeal nerve branches off of the vagus at a location called the *ganglion nodosum* and receives a nerve branch from the superior cervical ganglion (group of nerve cells near the neck) of the sympathetic nervous system (a branch of the autonomic nervous system).¹⁴

Aside from the developmental reasons for the circuitous route, certain benefits of overlapping sensory and motor innervations result when one of the nerves is slightly longer. One reason why laryngeal nerve branches are located both above and below the larynx (both branch off the vagus) is because this design allows some preservation of function if either one is interrupted. The redundant pathway also provides some backup in case of damage to one of the nerves.

Knowledge of the laryngeal innervation will help us to understand the necessity for the slightly longer route for a nerve, and a hint is provided from the fact that the two nerves regulate different vocal responses. Paralysis of the *superior laryngeal nerve* (the non-circuitous nerve) causes difficulty in increasing voice loudness, producing a high pitch, vocal fatigue, and an inability to sing because the vocal cords lack their normal tone and cannot sufficiently lengthen. In contrast, paralysis of the recurrent nerve results in a weak voice that sounds like Mickey Mouse.

In one patient, a traumatic rupture of the aortic arch in a car accident required an aortic graft that left him with a severed left RLN. Although his voice was slightly feeble, his articulation was unaffected. He speaks perfectly well, but cannot project his voice because the laryngeal muscles have multiple innervations and the set as a unit controls its function.



Finally, several studies found that the existing path occupies a relatively safe position in a groove that renders it less prone to damage or injury than a more direct route.¹⁵

Conclusions

Arguing that the left RLN is poorly designed implies that God should have used different embryo developmental trajectories for all the structures involved to avoid looping the left RLN around the aorta. One who asserts that the RLN is a poor design assumes that a better design exists, a claim that cannot be asserted unless an alternative embryonic design from fertilized ovum to fetus--including all the incalculable molecular gradients, triggers, cascades, and anatomical twists and tucks--can be proposed that documents an improved design. Lacking this information, the "poor design" claim uses evolution to fill in gaps in our knowledge. Furthermore, any alternative embryonic design pathway would likely result in its own unique set of constraints, also giving the false impression of poor design.

The left recurrent laryngeal nerve is not poorly designed, but rather is clear evidence of intelligent design:

- Much evidence exists that the present design results from developmental constraints.
- There are indications that this design serves to fine-tune laryngeal functions.
- The nerve serves to innervate other organs after it branches from the vagus on its way to the larynx.
- The design provides backup innervation to the larynx in case another nerve is damaged.
- No evidence exists that the design causes any disadvantage.

The arguments presented by evolutionists are both incorrect and have discouraged research into the specific reasons for the existing design.

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