## § 9. Excursus on Creation of Life and Biological Diversity
## Lecture 29
## Methodological Naturalism

Last time I argued that contrary to what you often hear on both sides of the creation-evolution debate that the contemporary theory of biological evolution does not assert that mutations are undirected or unguided and that therefore the evolutionary process is purposeless. Rather we saw that what evolutionary biologists mean when they say that mutations occur randomly is that they occur irrespective of the benefit that they might bring to the host organism. And that definition is not at all incompatible with the evolutionary process being directed or guided by God or even by God's miraculously intervening in the evolutionary process to cause key mutations that would bring about evolutionary advance.

This raises a related issue – methodological naturalism. Many philosophers and scientists would argue that science by its very nature is committed to a sort of methodological naturalism. It's important to understand that this is not synonymous with metaphysical naturalism. Metaphysical naturalism is a thesis about the nature of reality – that reality consists simply of space-time and its contents (the physical world). That's metaphysical naturalism. But methodological naturalism holds that science seeks only natural explanations for phenomena in the world. It's simply part of the methodology of science to seek natural explanations for various effects. Therefore supernatural explanations of some phenomenon would not even be permitted into the pool of live explanatory options. When you look at the pool of live explanatory options for some body of empirical data science would not even look at supernatural explanations because it is methodologically committed to the quest to find natural explanations of the data. So these supernaturalistic explanations wouldn't even come into consideration. Therefore even many Christian scientists would agree that they are restricted methodologically to seeking for natural explanations. This would of course then preclude appealing to God as an explanation of the origin of life and the evolution of biological complexity.

What might we say about methodological naturalism? I think what's striking about methodological naturalism is that it is not a scientific viewpoint but rather a philosophical viewpoint. It is not an issue to which scientific evidence is relevant. Rather, it is about the philosophy of science – the nature of science. As such we should ask ourselves: Why should we be committed to this philosophical thesis? As the intelligent design theorist William Dembski has pointed out, methodological naturalism would prevent us from inferring design even if we were to discover that every atom in the universe carried a label on it “Made by God.” You still would be prohibited methodologically from inferring that God has made these things. More seriously, suppose that life and biological complexity really were the result of creative, miraculous interventions at various points in

the past on the part of God. Suppose that we actually do live in a world like that – where God has intervened in the evolutionary process to bring about forms that would not have otherwise evolved. It would be a tragedy – wouldn't it? – both scientifically and personally if we were debarred from discovering the truth about reality simply because of a methodological constraint. Methodology is supposed to aid us in the discovery of the truth about reality not hinder us in it. So there are, I think, serious questions that can be raised about a strict methodological naturalism.

But leave that point aside. The more important point that I want to make is that we are not now concerned with what a scientist might infer as the best explanation of biological complexity. Rather, our question, as we've seen, is: How, from a theological standpoint, should we integrate what the Bible teaches with what we discover through empirical evidence? We are not trying to justify a design inference. Rather, we are trying to integrate our theology with the empirical evidence. We are trying to understand how these two bodies of truth fit together best. Even if the scientist works within the constraints of methodological naturalism, there is no such constraint on the systematic theologian who is free to craft an integrative or synoptic view of the world that takes account of both the data of modern science and the data of divine revelation.

So the systematic theologian could admit that the neo-Darwinian theory of biological evolution may very well be the best naturalistic theory that we've got. If, as a result of methodological naturalism, the pool of live explanatory options is limited to naturalistic hypotheses then (at least until very recently) the neo-Darwinian theory of biological evolution driven by the mechanisms of random mutation and natural selection was basically the only game in town. Rival naturalistic hypotheses just could not equal its explanatory power, explanatory scope, and plausibility. It was the best naturalistic account. No matter how improbable it might seem, no matter how enormously far its explanatory mechanisms have to be extrapolated beyond the testable evidence, no matter the lack of evidence for many of its tenants, it's still the best naturalistic explanation because there isn't any other naturalistic explanation that even comes close to it. Philip Johnson, one of the pioneers of the intelligent design movement, has said that he is quite prepared to agree to the evolutionary theorist’s claim that evolution is the best naturalistic hypothesis available for explaining biological complexity. It is the best naturalistic theory, he would agree. But what he protests is the claim that evolutionary theory is the best explanation *simplicitur*, or the best explanation period. Were we to admit into the pool of live explanatory options non-naturalistic hypotheses then he thinks it would no longer be evident that evolutionary theory is the best explanation of the data.

So we are going to approach our question from a theological standpoint and ask how, given the biblical data and the empirical evidence, we should best understand the origin of life and the development of biological complexity. As we do so I want to emphasize

that I approach these questions not as a professional biologist but rather as a theologian with a layman's interest in these scientific questions.

**START DISCUSSION**

*Student*: Do you think the bent towards methodological naturalism is a primary cause of why so many people appeal to the God-of-the-gaps explanation when somebody gives . . .

*Dr. Craig:* Let's define some terms. You mentioned the so-called God-of-the-gaps. This has become almost an aphorism in contemporary culture. If there's anything that is anathema – anything! – that must not be appealed to, it is the God-of-the-gaps. What is meant by that phrase? What that phrase refers to is using God to stop up the gaps in our scientific knowledge. If there's something that is at the present day scientifically inexplicable you can say, *A-ha! God did it. This is where God intervened.* The danger of this kind of God-of-the-gaps reasoning is that as science advances and closes those gaps God gets progressively squeezed out of the picture and becomes more and more irrelevant. Notice that that danger doesn't say anything at all about the truth of God's interventions or his activity in the world. In a sense, the person who is warning against God-of-the-gaps is just giving a little bit of evangelistic advice. He's saying it's best not to use arguments for God that are based on scientific ignorance because they might come back to bite you, and the Christian evangelist can say, *Well, thank you very much. Maybe that's good advice, and I'll heed that*. But this really isn't an issue about the truth of theism or how God brought about biological complexity. Maybe there really are gaps. Maybe there really have been divine miraculous interventions along the way. But it's just saying it's sort of impolitic to do this because it could be counterproductive. Well, thank you very much. Now, I do think this is related to methodological naturalism in that one of the motivations for methodological naturalism would be you're not going to be trying to use God as a stopgap measure to plug up scientific ignorance. If you have a methodological naturalism in play then you will always be seeking to find natural explanations for natural phenomena and therefore you cannot fall prey to positing a God-of-the-gaps because that won't even be permitted into the pool of live explanatory options.

*Student*: Would that not be why the person (in the context of a debate with somebody who has the methodological naturalistic perspective) . . . would that bias them more to say or just to throw that out as an explanation anytime somebody posits God being an explanation for anything at all.

*Dr. Craig:* If he thinks of it as a scientific inference then he will say this is methodologically excluded. One of the burdens of intelligent design theorists like William Dembski has been to argue that they are not in fact postulating a God-of-the-

gaps. Indeed, intelligent design theorists aren't positing God at all. They are very emphatic that they are not inferring to God as an explanation. Rather they are inferring to intelligent design. And they would say that this is an inference that is common in scientific pursuits. They will give many examples. For instance, cryptography where you're trying to decode a message and you can tell the difference between just random letters and an encoded message. Or insurance fraud where you see whether or not a fire is the result of arson – whether it has been deliberately set – or was this just the product of natural causes. You can infer to an intelligent designer who has set the fire. Or plagiarism charges – is it just an accident that someone reproduced word-for-word the writing of some other person or is this to be attributed to intelligent design? Or archaeology – when archaeologists are able to infer that certain objects they discover are in fact human artifacts like arrowheads and pottery shards rather than products of metamorphosis and sedimentation. So the ID theorist will say we are not in any way postulating a God-of-the-gaps. Number one, we're not postulating God to begin with but just some sort of intelligent designer, but secondly they would say we are making a principled inference to intelligent design not simply appeal to ignorance. We are not using design just to stop up the gaps in our knowledge any more than a cryptographer or a SETI researcher trying to find signals of intelligent life from outer space or an insurance fraud investigator is postulating design simply to plug up the gaps in our knowledge. So this is a very hot question that is discussed among intelligent design theorists. Fortunately, it needn't be settled by us in this class because, as I say, we're not adopting a scientific perspective. I think that the distinctive thesis of these intelligent design theorists is that they want to argue that the inference to intelligent design is a scientific inference. It's not a philosophical inference in their book. I, as a philosopher, am quite prepared to make philosophical inferences of that sort, but they want to say that the scientist can infer intelligent design and that therefore he is not bound by this sort of methodological naturalism. But, as I say, we are not approaching these questions as scientists in this class. I'm a theologian – a systematic theologian – and so what I'm asking is: Given the different sources of knowledge that we have as Christians (physical science, biology, literature, psychology, divine revelation) how do we integrate all of these into a coherent synoptic worldview that adequately takes account of all of these different sources of knowledge?

*Student*: I'm very excited about this next part that you are about to do. What I've always thought of is that those that do not believe in God at all have to have an explanation. So they are grasping for something out there that could have caused these things without God. It’s not that they're trying to find the best explanation, it's they need some explanation, and therefore I'm going to say that macro-evolution actually happened even

though there's no proof whatsoever that it did happen. So I'm very interested very much in this discussion.

*Dr. Craig:* Notice what he is talking about here. It is not methodological naturalism, but metaphysical naturalism – those who are atheists who don't believe that there is anything beyond space-time and its contents. I think, as you rightly say, for them it's the only game in town. It's got to be true because there isn't any sort of supernatural alternative. You'll remember last week I quoted from the naturalistic biologist Richard Lewontin when he says that no matter how absurd the scenarios, no matter what the evidence is, we have an *a priori* commitment to materialism and therefore this must be true. And we're not bound by that, I think. Certainly not metaphysically, and I think that it's worth asking: Are we even bound by that methodologically? But ultimately we don't need to decide that methodological question because we're not approaching this through the discipline of science.

*Student*: Science is: I postulate this and I test it and is there evidence? Is it repeatable? All that. As we look back over time, there's a different type of science. It's forensic science. I'm postulating what might have caused this to happen. It's not real science – I don't mean that to sound that way, but it's not: I do it and I have a hypothesis, I test it, it's repeatable, it's never falsified. There's no way to falsify a lot of the postulates of how the world was created and how . . . we say it must have gone from this animal to this animal – look at the bones. OK, well show me today. Show me any evidence of how that actually happened in macro-evolution.

*Dr. Craig:* I'm not at all ready to write off the historical sciences as pseudoscience. There are a number of sciences such as cosmogony (which studies the history of the universe), paleontology, geology, archaeology. There are historical sciences that don't just study the present (the here and now) but attempt to study the past as well. You're quite right. These sciences will be based upon postulating certain hypotheses to explain the observable data like fossil evidence, for example. It would be, I think you'd agree, absurd to say that these are not the remains of animals that actually lived – that maybe God put them in the sediments to deceive us. Something of that sort. I think any reasonable person would say that these are the vestiges of lifeforms that used to exist that now no longer exist. And so one will need to explain that – how did they come about, why did they die, how did they originate, and so forth. Immediately you're embarked upon a historical science. As to whether it can be falsified, someone, I think, has rightly said that these theories can be falsified. If you were to find, for example, a rabbit in the Pre-Cambrian rocks, that would be a decisive falsification of the scientific theory of evolution. I do think it's falsifiable, but that's not to say that it is the best explanation of the evidence. We'll need to look at that more down the road.

*Student*: I would say in defense of ID and in theism that it's a better explanation for what we do know, not for what we don't know. So I would say the onus on the methodological naturalist is the evolution-of-the-gaps not the God-of-the-gaps.

*Dr. Craig*: I think you are making a good point. Dembski, Stephen Meyer, and so forth have all said we are not inferring intelligent design based upon ignorance. It is based upon what we do know about the complex structure of proteins, for example, about the nature of biological complexity, that an intelligent design inference is warranted. Now, that is arguable, certainly. But I think it is far too facile to respond to ID theorists by just saying that's God-of-the-gaps reasoning. That is far too easy.

*Student*: I've been reading up on Dr. Bart Ehrman's stuff as a natural historian. Would you say that he ends up using the methodological naturalism for his naturalist ideals?

*Dr. Craig:* Yes. As you very perceptively noticed, this same methodological naturalism controls historical inquiry for many historians and even biblical scholars. If you adopt a kind of methodological naturalism in history (that only natural events can explain the phenomena) that immediately means the historian could never be justified in inferring miracles. No matter what the evidence you could never infer that a miracle has occurred. So when Ehrman comes to the evidence for the resurrection of Jesus, in his Teaching Company lectures he grants – even argues for – the historicity of the discovery of Jesus' empty tomb and his burial by Joseph of Arimathea. He agrees to the post-mortem appearances of Jesus to various individuals and groups. And he agrees that the original disciples suddenly and sincerely came to believe that God had raised Jesus from the dead. But he said we cannot make an inference that God did this. That kind of inference is not one that the historian as a historian can make. Therefore he says, *I simply remain agnostic about this*. That would be a perfect illustration of how in another field you have this analogical methodological naturalism at work.

*Student*: You were speaking of principled inferences – making inferences based on what we do know. But my question was what do you take to be the necessary and sufficient conditions for a principled inference? So, for example, I could see with respect to the *Kalam* cosmological argument how you can infer God because the other explanations aren't just improbable, they're completely impossible.

*Dr. Craig*: Yeah, that's kind of a special case.

*Student*: But with respect to this, we're more so dealing with inference to the best explanation.

*Dr. Craig:* Intelligent design theorists have developed different answers to this question. Dembski calls it "specified complexity." It would be when you discover this feature of some event – specified complexity – that you can know that it's neither due to chance nor

to physical necessity and therefore a design inference is warranted. This will be a combination of being able to establish the great complexity of some event or high improbability of the event plus an independently existing pattern to which the event conforms. It's called specified complexity. By contrast, the biochemist Michael Behe, who wrote the best-seller *Darwin's Black Box,* proposes a different feature of phenomena that would justify design inference that he calls "irreducible complexity." This is the complexity of a compound system which is such that if any one of the elements were removed it wouldn't function at all. The function would be destroyed. All of the elements need to be present and functioning. So that would be a different approach. Another approach would be by Robin Collins who avoids either of these proposals (of specified or irreducible complexity) and he argues on the basis of a Bayesian model of probability theory. He would say that the probability of, for example, the fine-tuning of the universe is much higher on theism and what we know of the laws of nature than it would be simply on the laws of nature themselves and non-theism. Therefore the inference to theism is justified on probability grounds. So it's a variety of approaches. Clearly these people, whatever you think of them, are not just saying, *Gee, we can't explain this scientifically so God must have done it*. That just is not an honest interaction with their work.

*Student*: Those of us who are trying to understand this, and the scientists included, shouldn't we divide the question of biological complexity into the origin part and then the development part? The development part would be the development or progress based on maybe common descent or design or whatever. But on the origin part, it seems to me that . . . at least I haven't heard, maybe you know of any credible scientific naturalistic theory to explain the origin of life. I know there were the experiments in the 50s of Urey and Miller that I think have been discredited. Would scientists admit that there is really no naturalistic explanation for the origin of life – the first cell? So there is really no game in town that they have to explain the origin of life.

*Dr. Craig*: You anticipate me. If you look at the outline, you'll see that the next point is going to be on the origin of life, and then we'll discuss the development of biological complexity after that. I think we'll see that what you just said is, in fact, correct.

*Student*: When a scientist uses methodological naturalism, when it gets to the point of the origin of the universe or the origin of life then they are left with such bizarre explanations like oscillating universes that never really had a beginning therefore we can't say there was a cause because there never was a beginning, or that there was an alien who came to Earth and that's how life started. It seems to me when they're pushed into a corner they don't have an answer so they come up with these really bizarre sort of explanations that can't be denied. I mean you can't go back and prove that.

*Dr. Craig*: I think you're quite correct in saying that when pushed to the limit they will often appeal to alternatives that are desperate, that are highly improbable. For example, with regard to cosmology you mentioned oscillating universes, or the idea that the arrow of time flips over and runs in the opposite direction at some point in the past, or even revising the laws of physics such as Roger Penrose is constrained to do in order to make his model – conformal cyclical cosmology – work. So one might be pushed to desperate expediences or, I think, one could simply remain agnostic at that point and just say, *We don't have an explanation but given my methodological constraints I can't infer a supernatural explanation. I am just left with no explanation*. I would say with regard to the resurrection of Jesus that would be the main response. These naturalistic resurrection theories like apparent death, conspiracy, these are almost universally rejected today. But scholars like Ehrman or Paula Fredrickson or Spong or others will simply say at this point: *Who knows? Something happened. Something incredibly powerful must have happened to birth this Christian movement in the middle of the first century, but what it was we don't know and we can't say.*

*Student:* I just wanted to make a comment. It seems like the general public seems very willing to accept an alien brought life to Earth or the oscillating or string theory rather than to be open to a supernatural explanation even though the evidence seems to be more in favor of that. I've heard people say there was an alien, and they don't have any trouble repeating that as if that has more credibility.

*Dr. Craig:* I think you're making a point there that I tried to make in the question of the week on our Reasonable Faith website with respect to the resurrection, namely that postulating a supernatural cause for an event like this carries with it all kinds of worldview implications that are going to affect you and how you live, your moral life, your spiritual life. All sorts of implications and ramifications are going to come with that that many people just are not willing to make. Therefore, as you say, desperate alternatives will be preferred like that Jesus of Nazareth was an alien from outer space and that the ship beamed him up or something like that from the empty tomb.

**END DISCUSSION**

Let's turn to the question of the origin of life. What does the evidence indicate about the origin of life? You'll remember in our discussion of the fine-tuning of the universe in our excursus on natural theology we saw that for life to originate and evolve on any planet anywhere in the cosmos there have to be finely tuned initial conditions present in the Big Bang itself in order for this to happen. But even given those incomprehensibly finely tuned initial conditions, there's still no guarantee that life will originate somewhere in the universe. These fine-tuned conditions of the universe are necessary conditions for the

origin of life but they are not sufficient conditions. In order for life to originate other conditions have to be in place on Earth which are astronomically improbable.

As was alluded to a moment ago, most of us were probably taught in high school or elementary school that life originated in the so-called primordial soup. By chance chemical reactions perhaps fueled by lightning strikes. Back in the 1950s a scientist named Stanley Miller was able to synthesize amino acids by passing electric sparks through a methane gas. Of course amino acids are not alive, but proteins are made out of amino acids and proteins are found in living things so the hope was that somehow the origin of life might be explained. You might think, wait a minute, that's a pretty big extrapolation. Amino acids constitute proteins, proteins are found in living things, therefore the ability to synthesize amino acids meant somehow that life can be originated chemically. And I would agree with you. I think that's a pretty big leap. But that is what most of us were taught, I think, in school. In the primordial soup that either covered the Earth in its oceans or else perhaps in warm pools on the land through lightning strikes and chemical reactions somehow primitive life was formed. Now, it could be that God set up these natural conditions that he knew would result in the origination of life. But is this the way he did it? Well, all of these old chemical origin of life scenarios have in fact broken down and are now rejected by the scientific community. This fact was documented in the groundbreaking book by Roger Olson, Walter Bradley, and Charles Thaxton called *The Mystery of Life's Origin: Reassessing Current Theories*. They point out that there probably never even was such a thing as the so-called primordial soup. For the natural processes of dilution and destruction would have prevented the chemical reactions that supposedly led to life. Miller's experiments were performed in a tiny glass-enclosed artificial environment in the laboratory where the natural processes of destruction and dilution would not come into effect. But of course in the primordial oceans of the Earth, these sorts of destructive processes could not be precluded and therefore they would have prevented the chemical reactions that would supposedly have led to the formation of life.

That's just Bradley, Olsen, and Thaxton's first point – that the natural destructive processes in the primordial oceans would have prevented these chemical reactions that supposedly led to life that allowed Miller to synthesize his amino acids. But they have much more to say about this, and that's what we'll look at next time.[1]

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[1] Total Running Time: 40:00 