

Five Questions Evolutionists Would Rather Dodge

By William A. Dembski

Evolutionists are masters at covering the flaws and weaknesses of their theory. Here's how you can clean house.

Most evolutionists give the impression that evolution is a settled fact of science, on the order of the Earth being round or revolving around the Sun. Evolution, we are assured, has been overwhelmingly confirmed. Only rubes and ignoramuses debate evolution. Any resistance to it is futile and indicates bad faith or worse.

For instance, Oxford biologist Richard Dawkins accuses those who refuse to accept evolution with being “ignorant, stupid or insane (or wicked, but I’d rather not consider that).” To this he recently added: “I don’t withdraw a word of my initial statement. But I do now think it may have been incomplete. There is perhaps a fifth category, which may belong under ‘insane’ but which can be more sympathetically characterized by a word like *tormented, bullied, or brainwashed.*”

Despite such bluster, evolutionary theory is in sad shape. Cambridge paleontologist Simon Conway Morris, writing for the premier biology journal *Cell*, recently remarked: “When discussing organic evolution the only point of agreement seems to be: ‘It happened.’ Thereafter, there is little consensus....” To the public, the evolutionary establishment presents a united front. But this illusion of consensus quickly evaporates once you know where to look and what questions to ask.

What follows are five key questions you can use to lay bare the inflated claims of evolutionists. Evolutionary theory is not a slamdunk. It is an exercise in storytelling that masquerades as a scientific theory.

1. The Fossil Record

According to Darwin, the absence of intermediate fossil forms “is the most obvious and gravest objection which can be urged against my theory.” What new fossil finds, if any, have occurred since Darwin wrote these words nearly 150 years ago? Do they overturn Darwin’s bleak assessment of evolutionary theory? If the absence of intermediate fossil forms holds as much today as it did back then, why should anyone accept evolution?

Dodge: Evolutionists have gotten quite good at sidestepping this question with what looks like an answer but really isn’t. Typically they’ll lay out a bunch of organisms or biological structures and say, “Look at how similar these are. They’ve obviously descended from a common evolutionary ancestor.” Evolutionists will then ply you with a mass of details about supposedly well-confirmed evolutionary transitions (like those supposedly describing the evolution of horses, whales, or reptiles into mammals).

Comeback: Don't get lost in the details. Yes, the fossil record contains organisms that can be placed in a progression suggesting gradual change. But most of these progressions result from arbitrary picking and choosing among the totality of fossils. With millions of fossils to choose from, it is likely that some gradual progressions will be found.

Also, such progressions invariably come from organisms with the same basic body plan. In the "evolution" of the horse, we are always dealing with horse-like organisms. And even with the "evolution" of reptiles into mammals, we are dealing with land-dwelling vertebrates sharing many common structures. What we don't see in the fossil record is animals with fundamentally different body plans evolving from a common ancestor. For instance, there is no fossil evidence whatsoever that insects and vertebrates share a common evolutionary ancestor.

The challenge that here confronts evolution is not isolated but pervasive, and comes up most flagrantly in what's called the Cambrian Explosion. In a very brief window of time during the geological period known as the Cambrian, virtually all the basic animal types appeared suddenly in the fossil record with no trace of evolutionary ancestors. The Cambrian Explosion so flies in the face of evolution that paleontologist Peter Ward wrote, "If ever there was evidence suggesting Divine Creation, surely the Precambrian and Cambrian transition, known from numerous localities across the face of the earth, is it." Note that Ward is not a creationist.

Evolutionists sometimes argue that the necessary transitional fossils are there but haven't been found or that they've all been destroyed. But this is wishful thinking. The challenge of the fossil record that Darwin identified 150 years ago has not gone away. To his credit, the late evolutionist Stephen Jay Gould conceded this point: "The extreme rarity of transitional forms in the fossil record persists as the trade secret of paleontology. The evolutionary trees that adorn our textbooks have data only at the tips and nodes of their branches; the rest is inference, however reasonable, not the evidence of fossils."

The point you need to press is whether this inference is reasonable at all.

2. Natural Selection

According to evolutionist Richard Dawkins, the "evidence of evolution reveals a universe without design." Yet he also states, "Biology is the study of complicated things that give the appearance of having been designed for a purpose." How does Dawkins know that living things only appear to be designed but are not actually designed?

Dodge: Evolutionists pretend that the design of living things is a dead issue. Accordingly, they tell us that before Darwin, scientists mistakenly viewed the living world as the product of design but that afterward they came to their senses

and rightly rejected it. For Dawkins and most evolutionists, Darwin's idea of *natural selection*, in which nature weeds out the less fit and allows the more fit to survive and reproduce, is supposed to be all that's needed to explain the appearance of design in biology.

Comeback: The great fallacy of evolution is that it claims all the benefits of design without the need for actual design. In particular, evolution attributes intelligence, the power of choice, to a fundamentally irrational process, namely, natural selection. But nature has no power to choose. Real choices involve deliberation, that is, some consideration of future possibilities and consequences.

But natural selection is incapable of looking to the future. Instead, it acts on the spur of the moment, based solely on what the environment right now deems fit. It cannot plan for the future. It is incapable of deferring success or gratification. And yet, so limited a process is supposed to produce marvels of biological complexity and diversity that far exceed the capacities of the best human designers.

There's no evidence that natural selection is up to the task. Natural selection is fine for explaining certain small-scale changes in organisms, like the beaks of birds adapting to environmental changes. It can take existing structures and hone them. But it can't explain how you get complex structures in the first place. That's why cell biologist Franklin Harold writes, "there are presently no detailed Darwinian accounts of the evolution of any biochemical or cellular system, only a variety of wishful speculations."

Remember the phrase "wishful speculations" whenever anyone starts touting the wonder-working power of natural selection.

3. Detecting Design

The search for extraterrestrial intelligence (SETI) is a scientific research program that looks for signs of intelligence from distant space. Should biologists likewise be looking for signs of intelligence in biological systems? Why or why not? Could actual intelligent design in biological systems be scientifically detectable?

Dodge: Evolutionists admit that intelligent design is scientifically detectable in many areas of science, such as archeology, forensics, and cryptography. They even admit that nonhuman intelligence could be scientifically detectable, as with SETI. But they reject out of hand the possibility of detecting design in biological systems. Any intelligence responsible for biological complexity would have to be an unevolved intelligence, and for evolutionists there is no such thing as an unevolved intelligence. For them, intelligence is always the product of evolution.

Comeback: The double-standard here is obvious. There are reliable methods for identifying the effects of intelligence. These methods apply in many areas of science already. They even apply to the search for extraterrestrial intelligence, in

which the intelligence detected would be nonhuman. It is therefore completely arbitrary to say that such methods of design detection apply only to evolved intelligences but not to unevolved intelligences.

Usually evolutionists attempt to get around this double-standard by saying that we have experience of human intelligence but no experience with the sort of intelligence that would be involved in the formation of life. That's why SETI is such a powerful response to the evolutionists' double-standard. If an extraterrestrial intelligence communicated with Earth via radio signals, we would have no more experience of the extraterrestrial intelligence than we do of any intelligence responsible for the formation of life. In each case, we would know nothing about the actual workings, motivations, and purposes of the intelligence. But we would still recognize the intelligence from its effects.

Recall the movie *Contact*, based on a novel by Carl Sagan. In that movie, SETI astronomers discovered a radio signal consisting of a long sequence of prime numbers (these are numbers divisible only by themselves and one). Because the sequence was long, it was *complex* and thus hard to reproduce by chance. Also, the prime numbers are mathematically significant and thus represent an objective, independently given pattern, or what is called a *specification*.

There is now an increasing scientific literature that takes the joint occurrence of complexity and specification as a reliable marker for detecting design. My books *The Design Inference* (Cambridge University Press) and *No Free Lunch* (Rowman & Littlefield) lay out such methods. These methods are very widely employed in science as well as in ordinary life. There is nothing to prevent their legitimate use in biology.

4. Molecular Machines

Do any structures in the cell resemble highly intricate machines designed by humans? Evolutionists claim that these structures evolved. But if so, how? Could such machines have features that place them beyond the reach of evolution?

Dodge: Evolution is a divide-and-conquer strategy. It tries to explain the complex in terms of the simpler. Thus, when confronted with a molecular machine or any other complex structure in biology, evolutionists merely point out that the structure has components that are simpler and thus could be the target of natural selection. Hard to believe, but from this unremarkable observation, evolutionists blithely conclude that natural selection is able to build all complex biological structures.

Comeback: You really need to hold the evolutionists feet to the fire here. The important thing is not to let them retreat into generalities. There are structures in the cell that don't just resemble humanly built machines—they actually are machines in every sense of the word. Don't focus on how such machines might

have originated in the abstract. Focus on a specific machine and force the evolutionist to try to explain in detail how it might have evolved.

Take, for instance, the bacterial flagellum, which is now referred to as the “Icon of Intelligent Design” by some evolutionists because it has been so effectively used to criticize evolution. The bacterial flagellum is a marvel of nano-engineering. Biologist Howard Berg at Harvard refers to it as “the most efficient machine in the universe.” The flagellum is a little bi-directional motor-driven propeller that sits on the backs of certain bacteria and drives them through their watery environment. It spins at 20,000 rpm and can change direction in a quarter turn. It requires approximately 40 protein parts for its construction. If any of the parts are missing or not available in the right proportions, no functional flagellum will form. So, how did it evolve?

Despite thousands of research articles that have been written about the structure and function of the flagellum, biologists don’t have a clue how it could have evolved. Evolutionists have only one straw at which they continually grasp when trying to explain how the flagellum might have evolved, namely, that the flagellum contains within it a structure similar to a microsyringe found in some bacteria. Having found this sub-structure, evolutionists merrily conclude that the microsyringe must have evolved into the flagellum.

Such pathetic lapses in logic are everywhere in the evolutionary literature. The challenge for evolutionary theory is not to find components of such systems that could be grist of natural selection’s mill. Rather, it is to provide detailed, testable, step-by-step scenarios whereby such components could reasonably have come together to bring about the marvels of nano-engineering that we find in systems like the flagellum.

What exactly had to happen to that microsyringe to transform it into a flagellum? To see what’s at stake, consider what exactly has to happen to a motor to transform it into a motorcycle. Sure, there are a number of steps that can transform a motor into a motorcycle. And there probably are a number of steps that can transform a microsyringe into a flagellum. But what are those steps? How gradual is the progression? And is it reasonable to think that those steps could be taken apart from design? Not having a clue about how these systems did or might have evolved, evolutionists never answer such questions.

5. Testability

What evidence would convince you that evolution is false? If no such evidence exists, or indeed could exist, how can evolution be a testable scientific theory?

Dodge: In the theory of evolution, organisms gradually transform as the result of purely material factors such as natural selection and random genetic changes. What would it take, therefore, to refute such a theory? Darwin sidestepped the

question as follows: “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. But I can find out no such case.” Although Darwin here seems to be opening evolution up to criticism, in fact he is doing the opposite. Indeed, he is protecting evolution from all effective challenges and rendering it untestable.

Comeback: To see this, consider the following reply to Darwin by University of Texas philosopher Robert Koons: “How could it be proved that something could not possibly have been formed by a process specified no more fully than as a process of ‘numerous, successive, slight modifications’? And why should the critic [of evolution] have to prove any such thing? The burden is on Darwin and his defenders to demonstrate that at least some complex organs we find in nature really can possibly be formed in this way, that is, by some specific, fully articulated series of slight modifications.”

It’s important here to see the big picture. The evolutionist J. B. S. Haldane, when asked what would convince him that evolution was false, replied that finding a rabbit fossil in pre-Cambrian rocks would do quite nicely. Such a fossil would, by standard geological dating, be out of sequence by several hundreds of millions of years. Certainly such a finding, if rigorously confirmed, would overturn the current understanding of the history of life. But it would not overturn evolution.

Haldane’s rabbit is easily enough explained as an evolutionary convergence, in which essentially the same structure or life form evolves twice. In place of a common underlying intelligent design, evolutionists invoke evolutionary convergence whenever confronted with similar biological structures that cannot reasonably be traced back to a common evolutionary ancestor.

So long as some unknown or unexplored evolutionary pathway might have led to the formation of some biological structure or organism, evolutionists prefer it over alternative explanations such as intelligent design. And since the unknown and unexplored allow for an infinity of loopholes, the committed evolutionist regards Darwinian and other materialist explanations of life’s origin and subsequent development as always trumping alternative explanations, regardless of the evidence.

Note that intelligent design does not stack the deck in this way. Unlike evolution, intelligent design is refutable. To refute intelligent design, it is enough to display specific, fully articulated Darwinian pathways for the complex systems that, according to intelligent design, lie beyond the reach of the Darwinian mechanism (systems like the bacterial flagellum in question four). Though evolutionists mistakenly charge intelligent design with being untestable, it’s their theory that in fact is untestable.

Why is it important to ask these questions? In his book *The Right Questions*, prominent evolution-critic Phillip Johnson shows how the pursuit of truth requires the unmasking of falsehoods. What's more, he points out that falsehoods are unmasked only by knowing where to probe and what questions to ask. Because the truth about biological origins is so important, ultimately defining our place in the universe, truth demands that we ask the right questions about Darwin and evolution.

Richard Halvorson, writing for the *Harvard Crimson*, has aptly remarked, "We must refuse to bow to our culture's false idols. Science will not benefit from canonizing Darwin or making evolution an article of secular faith. We must reject intellectual excommunication as a valid form of dealing with criticism: the most important question for any society to ask is the one that is forbidden."

Evolution has become an ideology, and the one thing that ideologies fear is exposure. That's why evolution forbids certain lines of questioning. But the questions need to be asked. Too much is riding on evolution for it to escape proper scrutiny. For a more thorough examination of the questions posed here, as well as many others, see my new book *The Design Revolution: Answering the Toughest Questions about Intelligent Design* (InterVarsity, 2004).