

# Has Evolution Buried God?

The claim that evolution has disproved God carries the assumption that God and evolution both compete as explanations, but this is not how I view God. Evolution is a biological mechanism and those who believe in God see him as the creator, who created and designed natural laws and mechanisms. On that basis, there is no conflict between evolution and theism. So what separates the theistic and atheistic worldview on this subject is that the theistic view suggests that *behind* materialistic processes there must be a mind if there is to be order like the design we see in life today. Contrary to this the atheistic suggests that all the complexity and life as we see it in our world today started and evolved to its state via a completely mindless; undirected; purposeless; ungoverned process, void of motive. In this view, our minds are ultimately nothing but the product of mindless matter and that natural causes and material factors alone are all that is necessary for life to begin and evolve to its current state. Therefore, the question which divides these two worldviews on this matter is simple: is the appearance of design in life real or illusionary? Is there an *intelligence* behind our existence or is the cause of the complexity of life simply *materialistic*?

## What is evolution?

Before we get into this, it's best we get a basic understanding of what evolution actually is. The simple term 'biological evolution' can be explained in the sense that all organisms display variations, and these variations have different impacts on survival. Those variations which favour survival will allow the organism to live and so reproduce, passing on their beneficial traits to future generations, in time causing the features of the population to change. This, therefore, creates a process by which the less helpful variation gets weeded out, leaving the better adapted to thrive, and this is what we call *natural selection*. But it's important to understand that natural selection is not creative, in the sense that the stronger variation must already be there, it's not produced by natural selection, selection means to be made from that which already exists. It deals with the modification of existing parts to keep the beneficial variations, but it doesn't explain or create the origin of parts. In other words, natural selection may only maintain or eliminate what's already there. The creative aspect of evolution, the innovation of biological development is believed to be caused by *mutations*, and mutations are changes in the structure of our hereditary information. Now our hereditary information is stored in packets called genes which make up our DNA, forming a long sequence of biological instructions. DNA is basically a source of instructions for building proteins. So at the core of life is a *biological code*, and *random* changes (mutations) to this code produce different instructions that can lead to change in biological structure and form, allowing organisms to vary more significantly. Once organisms vary in this way, natural selection can keep and maintain *beneficial* variations. This over time allows life to change in order to survive.

## A critique of materialistic evolution

Yet these mutations according to materialistic evolutionary theories can only occur by chance, a matter of probabilities, and this is the other aspect of materialistic evolution: natural selection depends on these random mutations before it can filter out the unfavourable ones. Evolution in this sense is therefore claimed as a combination of both aimless mutations and natural selection, chance and necessity. "*Chance alone*" the Nobel prize-winning chemist Jacques Monod once wrote, "*is at the source of every innovation, of all creation in the biosphere. Pure chance, absolutely free but blind, is at the very root of the stupendous edifice of creation.*" As David Berlinski noted: "*It is chance that lies at the heart of materialistic evolutionary theories.*"

Now I can imagine sceptics reading this proclaiming that evolution isn't reliant on chance as natural selection guides the process, but understand what's being said: natural selection is firstly dependent on random mutations which according to naturalistic evolution are a result of chance. It follows that even though natural selection constitutes a non-random process, the evolutionary mechanism as a whole depends precisely upon the element of randomness, namely, various mutational processes. Chance is primary in the entire process of evolution, so we must examine whether chance is capable of producing the simplest step in biological complexity for natural selection to then favour.

It is here that the door of doubt begins to swing. As David Berlinski notes: Chance and complexity are countervailing forces, they work against each other. We never attribute the existence of a complex artefact to chance, never. Yet from the perspective of materialistic Darwinian theory, it is chance that plays a crucial, nay THE crucial role in generating new biological complexity. To put things into perspective, the Australian biologist Michael Denton gives an illustration where he compares a 'simple' cell to a huge automated factory the size of a large city. He writes:

*"On the surface of the cell we would see millions of openings, opening and closing to allow a continual stream of materials to flow in and out. If we were to enter one of these openings we would find ourselves in a world of superior technology. We would see endless highly organized corridors and conduits branching in every direction away from the perimeter of the cell, some leading to the central memory bank in the nucleus and others to assembly plants and processing units. The nucleus itself would be a vast spherical chamber, inside of which we would see all neatly stacked together in ordered arrays, coils of chains of the DNA molecule. Yet the life of the cell depends on the integrated activities of tens and probably hundreds of thousands of different protein molecules which are complex pieces of molecular machinery in themselves."*

You can very quickly lose your mind in the complexity of just the cell, which is miles behind the complexity of the nervous system, and incomparable compared to the complexity of the human mind. It doesn't take a genius to realise that chance alone has no hope in creating such biological complexity; the law-like process of natural selection, therefore, is in effect able to break down a biological complexity into smaller steps in the process of evolution. Chance, therefore, does not have to scale a 'mountain' of complexity in one go, with the help of natural selection, it just has to make small steps in complexity until after long enough, that 'mountain' of complexity (like a cell, or nervous system, or mind...) has been reached. But what's a small step in evolution still remains a grand leap of faith for chance, as we shall see.

Philosopher of science, Stephen Meyer, in his book 'Darwin's Doubt', informs us that when you are trying to consider the creative power of materialistic evolution, you first need to consider what it takes to build life. For example, if you want your computer to acquire a new function you need to give it code, instructions, software, information, and thanks to discoveries in modern biology we know that something similar is true for life. Building a new form of life from a simpler pre-existing form requires new information and information which is *functional*.

For example, you could take a sequence of letters in the alphabet to convey a sentence in English which displays some meaning, while you could take them same letters and mix them around to convey a disorderly sentence of gibberish and this would be meaningless. Now both of these sentences contain the same number of letters, yet clearly only one of those sentences has captured something beyond, a communication function, something meaningful. Strands of DNA, just like natural languages and computer codes, also contain functional information: something which is meaningful in its effect.

DNA is a source of biological instruction for building the proteins of life. Within DNA the specific sequence of biological text determines the function, just like how the sequence of letters determines

the words to convey a language, yet random changes in sequence often only *destroy* the function or meaning. This means it's highly improbable that random mutations could generate new functional genes as opposed to degrading existing ones. And although there are various types of mutational changes such as duplications, insertions, recombinations, which are all at nature's disposal, the problem is that such changes inevitably degrade the function of information, especially when allowed to accumulate. In a similar way, if someone makes even a few random changes in a computer program, the modified program stops working, and the same problem appears to apply in DNA as any attempts to generate completely new sections of genetic text by random means are doomed to failure.

Therefore, clearly natural selection plays a crucial role in this process. Favourable mutations are passed on, unfavourable mutations are weeded out. However, the problem is that the probability of attaining a random favourable mutation of a single gene or protein is so unlikely it would roughly equal the mathematical probability of a blind spaceman finding a single marked atom by chance among all the atoms in the milky way galaxy, which isn't going to happen. So, if mutations themselves are truly random, that is, if they were not directed by an intelligence, then mutations virtually have no chance of producing helpful new genetic information. And it's not like the evolutionary process needs just a little bit of genetic information - the evolutionary process requires thousands, possibly millions of successive beneficial mutations to produce even the easiest complexities we see in life now. This means the overall chances that unguided mutations will be beneficial are practically non-existent.

Richard Dawkins has tried to answer the probability issues of materialistic evolution in his book, *The Blind Watchmaker*. In it, he describes how he had programmed a computer to generate a well-known Shakespeare phrase in order to simulate how random mutations and natural selection could generate new functional information. However, Dawkins' program was directed towards a target phrase, there was an element of *foresight* given to the computer program. He directed the program to compare the variant sequences of letters with the desired target, a complete and meaningful sentence, yet foresight is only derived from intelligence. These programs are directed by intelligence but naturalistic evolution never can be, and this is what scientist Douglas Axe stated as the "*glaring problem*." No one refutes natural selection, but the huge weakness of natural selection is that it only rewards good work after that work has been done. Natural selection only guides the process once whole complex arrays of functional mutations or 'complete sentences' (as in Dawkins' example) occur, but natural selection can do nothing to guide or fix a halfway complete but still meaningless sentence/ mutation. Natural selection itself, by definition, is neither guided toward nor given information about a desired outcome generations in the future. **The probability issues remain.**

Chemical engineer Douglas Axe, has pointed out that the probability of getting a new gene sequence that can code for a unique stable protein out of the vast number of different sequences possible is one in  $10^{74}$ . Now this is only the first step as a stable protein is not necessarily a functional protein, and only once a protein is functional can it possibly confer an advantage on a living organism, and only when that occurs can natural selection further refine the creature's lineage for survivability. Now it turns out that the probability of producing a functional gene is less than one chance in one hundred thousand, trillion, trillion, trillion, trillion. Good luck. And that's just one gene, it's just the beginning. Now for argument's sake, even if despite the highly improbable odds you had a mutation which produced a new functional gene coding for a new unique protein, this most likely will still not be enough to produce a beneficial change in an organism, and if not, there's no beneficial variation, and if no beneficial variation then natural selection is useless and evolution comes to a halt. Survival, rather than the arrival (innovation) of biological novelties is all that remains.

The reason that one new functional gene or protein doesn't really change things is because almost

any biological structure of interest: the inner ear, eyes, gills, lungs, feathers or the reproductive, circulatory, and respiratory systems possess multiple necessary components. Just as an engine requires multiple parts: a spark plug, valves, pistons, connecting rods, crankshaft etc, and these are all required for the engine to carry out its function. The same is true for living organisms. Organisms are composed of tightly integrated biological systems, parts which are mutually dependent on one another to function and work properly. Now to change any system requires altering each of the many independent parts that the system is made up of. For example, if an engineer changes the length of the piston rods in the car's engine, and does not adjust the crankshaft accordingly, the engine won't run. Now it's the same with biological systems and structures, for example, if you wanted to change any of the three bones of the inner ear, this will require corresponding changes in other bones and in other parts of the ear as well.

Complex biological systems depend for their functions on tens of hundreds of such independent, yet jointly necessary parts. As the number of necessary components increases, the required number of coordinated changes increases too. So if all the dependent parts do not come about or evolve simultaneously, it is not clear why they should come about at all, because any system that depends for its function on the coordinated action of many parts cannot be changed gradually without losing function. But in the Darwinian scheme of things, natural selection acts to preserve only functional advantages. Changes that result in reduced function will not be preserved.

Consider this illustration: when modifying the design of a machine, an engineer can shut down the machine to make the modification. But in evolution, the gradual improvement must be made while the machine is running. Not only must the end product – the final machine so to say – be feasible, but all the intermediates must be feasible also. Therefore, genetic change affecting any one of the necessary components, unless matched by many corresponding and vastly improbable – genetic changes in other biological components to match it, will result in functional loss and often death. So to get a beneficial variation for natural selection to select, you're not just relying on one favourable mutation, but a whole series of mutations to occur at the same time. However, when we take into consideration the combined probabilities required this all becomes astonishingly unlikely.

A series of biochemists assessed how long it would typically take to generate just two, three or more coordinated mutations. They found it would take far longer than the age of the earth. This means that material causes and natural factors alone are incapable of generating new genetic information for building complex adaptations.

To puzzle your mind a bit further, more recent discoveries have shown that genes alone do not determine the three-dimensional form and structure of an animal. This has come as a surprise to the scientific community. There are other sources of information in life that lie outside of genes that play a crucial role in the formation of animal development. In fact, DNA does not by itself direct how individual proteins are assembled into larger biological systems or structures, there are other sources of information in life that must help arrange individual proteins into systems of proteins, systems of proteins into distinctive cells types, cell types into tissues, and different tissues into organs etc.

These different sources of information (*known as epigenetic information*) pose an enormous challenge to the sufficiency of materialistic theories of evolution. This is because according to this mechanism, new information, form, and structure arise from natural selection acting on random mutations arising within the genetic text alone. But the genetic text alone, the DNA, isn't by itself fully responsible for the way life develops. DNA sequences can mutate all the time and still not produce a new body plan, regardless of the amount of time and the number of mutations available to the evolutionary process.

Building a new body plan requires more than just genetic information. It requires information that is not stored in DNA, and so cannot be generated by mutations to the DNA. So if new body plans can't arise by changes to DNA alone and one of the key aspects of the materialistic evolutionary mechanism works via mutations on the DNA, then the mechanism of evolution strictly within a materialistic framework is limited. **The origin of animal form, in general, remains unresolved.**

## What does this all mean?

The above analysis shows that *random* mutations (emphasis on 'random') are *not* capable of producing new biological complexity, rather to the contrary, mutations degrade genes and so impair the normal function of proteins. How then, does life evolve or adapt to its environment if *random* mutations cannot increase the genetic complexity of an organism, but ultimately degrades the 'complexity' at a molecular/genetic level?

Biochemist Michael Behe, in his book 'Darwin Devolves' explains that what comes as a surprise to evolutionary biologists is that the vast majority of helpful, positively selected genes are estimated to have suffered at least one damaging mutation. Consider a polar bear: the polar bear has adapted to its harsh environment mainly by degrading genes that its ancestors already possessed, for example, the effect of one of these degraded genes altered the bear's diet to provide a larger portion of fat, which is vital to the bear's survival due to scarce meals. Despite the impressive abilities of the polar bear, rather than evolving, it has adapted predominantly by devolving. But this is not just the case with polar bears, it has become evident that beneficial mutations can and are often ones that damage molecular machinery.

How can mutations that damage protein functionality be positively selected in nature? Well, if you consider, for example, Darwin's study on finches: over generations the beak of finches changed from large and sharp to shorter and blunter, helping the finch survive. If the normal activity of the protein during development helps make a beak sharper and more elongated, then hindering its activity could cause the beak to develop as less sharp and less elongated, in other words, shorter and blunter. If this type of beak helped a finch survive a drought, the mutant gene would be selected. Thus, a beneficial mutation can be one that damages molecular machinery.

Consider the following illustration: if you were on a sinking ship and had to keep it afloat until it reached shore to survive, throwing overboard any heavy unneeded equipment, no matter how sophisticated, like computers, radios, cargo, would be the winning survival strategy. You would survive by reducing complexity. Now it's not just a matter of excess weight: suppose there were a terrorist attack in a train station. In this emergency everyone needs to quickly evacuate from the station, but the ticket barriers are still active, hindering people from escaping. If the ticket barriers were disabled so that people could escape easier and quicker, lives might be saved. So to switch back to genetics, if an unneeded gene were active, breaking it would turn it off, which may increase chances of survival. In the biological world, there are many circumstances in which getting rid of something or breaking something at a molecular level can be helpful.

Take another example, the majority of variations behind the wide variety of dogs is largely degradative. Known genetic changes such as increased muscle mass of dogs, small size, short legs, tails and muzzles are all associated and driven by the degradation or blocking out of genes. But, if for argument's sake, the selection pressure in nature favours increased muscle mass of dogs, small size, short legs etc, then nature would select and maintain those dog variations which have been genetically degraded.

The apparent conclusion is that a beneficial mutation often turns out to be a degradative mutation. For example, Microbiologist Richard Lenski and his collaborators have done some of the most

groundbreaking work on evolving bacteria, and after fifty thousand generations of the most detailed, definitive evolutionary experiment *conducted so far*, the conclusion is that it's very likely that all the identified beneficial mutations of bacteria worked by degrading or outright breaking their respective ancestor genes. In other words, by way of natural-selection, the loss of a pre-existing genetic capacity improved the bacteria's survival.

Regardless of whether a mutation destroys a previously functioning system or not, whatever works at the moment is selected. The basis for variation, whether that be a degeneration of the organism's complexity, is irrelevant to natural selection, because it only cares about what does better in the environment for any reason.

Here's one hypothetical illustration: suppose a bacterium becomes resistant to an antibiotic. At first everyone's amazed as it seems the microbe has gained a new ability. But at the molecular level, this gain in capability could actually be caused by the loss of molecular complexity. For example, a control gene that normally selects one amino acid to defend against antibiotics breaks, causing the bacteria to instead use another kind of amino acid that ends up being more effective at blocking the drug from working; that would be classified as a modification-of-function through the breaking of a gene. These scenarios would yield a drug resistant microbe, but reflect very different events at a molecular level.

The great majority of beneficial naturally selected changes in micro-evolution experiments carried out in laboratories over the years are due to mutations causing a loss/degradation of molecular complexity, or mutations causing a modification-of-function. The unsurprising fact established by the diligent work of the scientific community in laboratory evolution over the last few decades is that the great majority of these favourable mutations damage an organism's genetic information, either by degrading or outright destroying functional coded elements.

The fact is that random mutation and natural selection both help evolution on a small scale and hinder it on a larger scale. Mutation supplies the variations upon which natural selection acts, but the greatest amount of variation comes from damaging or outright breaking previously working genes. In the case of an already functioning complex system, natural selection shapes it more and more precisely for its current role, making it less and less adaptable to other complex roles. This means that the neo-darwinian mechanism sharpens a system's function to its environment for survival, yet in the same way and by the same mechanisms it also breaks things, ceases the development of a system and greatly delays the appearance of a feature.

Therefore, the darwinian mechanism of natural selection and random mutations can wonderfully explain the variation within family groups of living organisms. Like the differences between the wide variety of dogs or the wide variety of cats, for example. But it does not explain the differences between the members of two separate families, like a cat and a monkey, because they are not of the same family tree. Natural selection and random mutations alone cannot create the biologically complex innovations that differentiate the different family groups of living organisms.

Random mutations and natural selection are simply inadequate for building complex structures; they can only break them or refine them through minor degradations. In many circumstances, the random damaging of genes can be helpful to an organism. The long term picture, however, is devolution. Darwin's mechanism is powerfully devolutionary and explains why unguided evolution is self-limiting. Random mutation and natural selection do help adapt species, but chiefly by promoting the loss of genetic abilities. The Darwinian mechanism of evolution explains how life changes, adapting to its environment, but natural selection and random mutation together do not explain the most fundamental innovations of biology.

The conclusion is therefore that devolution runs along a path of survival until after long enough, life is fully devolved and has no way of adapting any further. Natural selection is vital in biological adaptations for ensuring the robustness of the genome in the face of changing environmental pressures. However, its potential for innovation is inadequate as far as explaining the origins of the distinct coding sequences that contribute to the complexity of the organism and diversity of life. The origin of life forms and biological complexities remains a mystery within the darwinian narrative. In any case, an organism *will never* have significantly greater genetic order than it inherited. That, at least, is the picture painted by the very best, most sophisticated evolutionary experiments the biological revolution has produced to date. And the principles revealed by the work are so fundamental that we must search for an even more basic principle to account for the source of life's wealth. What accounts for the origin of molecular machinery and genetic complexity itself? In our uniform, unbroken experience, there is only one known explanation for the purposeful arrangement of these parts. We shall touch on this later.

## What about the fossil record?

Darwin believed that all forms of life which are and have lived on the earth have ultimately descended from a single common ancestor somewhere in the distant past, from some singular primordial form. And that this primordial form gradually developed by a process of modification into new forms of life, and after many millions of generations, developed slowly into all the complex life forms we see in the present world today. This suggests a view in which living creatures are spread smoothly over the great manifold of biological possibilities, like colours merging ever so slightly in a colour chart, each species trailing off into the next. The fossil record and life, however, is simply not like this. Yes, species and creatures do change over time, but certainly not as smoothly as Darwin expected.

To give an example, we find in biology certain organisms and biological systems that are irreducibly complex, meaning they have certain biological systems that cannot function unless everything in that system exists as it is. So an irreducibly complex system cannot be produced by slight successive modifications or precursor systems, because any precursor to an irreducibly complex system that is missing a part is by definition non-functional. And non-functional 'dies' off in nature. So an irreducibly complex system cannot be produced directly by "*numerous, successive, slight modifications.*" Gradual evolution as many understand it does not explain the origin of the numerous irreducibly complex biological systems in life today.

Darwin predicted that the fossil record would display a continuous distribution of animal forms. But contrary to this, a great number of species enter the fossil record apparently fully formed then depart unchanged, some millions of years later. Palaeontologist Robert Carroll noted that most of the fossil record really "*does not support a strictly gradualistic interpretation.*"

This is not to say that the fossil record does not contain intermediate forms. Transitions do exist among certain features of organisms, but there are also huge gaps in the fossil record, places where there should be intermediate forms but where there is nothing whatsoever. While organisms do change over time the degree of change is another matter. Whether there are biological limits or boundaries to that change and whether evolution really is one seamless whole or not I think is something yet to be fully understood.

When Darwin proposed his theory of gradual evolution he was quickly confronted by arguably the world's leading palaeontologist, Louis Agassiz of Harvard University, who puzzled Darwin by pointing out a pattern in the fossil record that seemed to document the sudden appearance of animal life in a remote period of history, a period known as the Cambrian. During this geological period,

many new and anatomically sophisticated creatures appeared suddenly without any evidence of simpler ancestral forms in the prior fossil record. In other words, there is an absence of transitional intermediate fossils leading to the Cambrian animal forms and this event is what palaeontologists today call the **Cambrian explosion**.

Darwin was concerned that this sudden appearance of animals so early in the fossil record was inconsistent with his new theory of gradual evolutionary change. He wrote, *“The abrupt manner in which whole groups of species suddenly appear in certain formations has been urged by several leading palaeontologists - as a fatal objection to the belief in the transmutation of species. I admit this fact would be fatal to my theory. To the question why we do not find rich fossil deposits belonging to these assumed earliest periods prior to the Cambrian system, I can give no answer... The case at present must remain inexplicable, and maybe truly argued as a valid argument against my views.”* In light of this, Darwin gambled that future discoveries would later find the evidence. Yet while time has passed, the sheer number of unique animal forms and new anatomical structures that arise suddenly with new Cambrian animals remains a fact of the fossil record, still presenting a difficulty for evolutionary biologists today. This sudden quantum leap in complexity from simpler pre-Cambrian organisms is too sudden to be explained by the gradual activity of natural selection and random mutations. Yet what makes the situation even more difficult is that the Cambrian period also reveals the appearance of arguably, more differing body plans than ever before or since. And this arose at the most unexpected time: namely, right at the dawn of animal life (according to the Darwinian theory of evolution).

The mystery at hand is where were the pre-Cambrian creatures which the Cambrian animals should have evolved from? With the development of offshore drilling technologies, oil companies began to drill through thousands of feet of marine sedimentary rock, and as geologists evaluated the content of these drill cores, they still did not find the predicted pre-Cambrian fossils. They're simply not there. Therefore, the fossil record is actually documenting the most intense burst of diverse animal life emerging suddenly in the Cambrian period, from which, it's claimed, many of our animal groups today are descended.

To conclude, the fossil record simply does not document the gradual emergence of the crucial distinguishing characteristics of the Cambrian animals. The expected Darwinian pattern of a deep fossil history of this Cambrian fauna, showing their gradual development, stretching hundreds of millions of years into the Precambrian, **has failed to materialize**. Darwin's doubt, his great gamble of hoping the evidence would later appear, has failed him. But this is not just the case with the Cambrian animals. In recent years, palaeontologists have uncovered a large number of fossils that demonstrate explosions of information at several points throughout history. Also, when Louis Agassiz first challenged Darwin, he also pointed out that in Darwin's tree of life representing the history of evolution, the connecting nodes, the transitional terminals, connecting major branches of life in the history of evolution, were absent in the fossil record.

The history of evolution is surprisingly unclear.

Palaeontologist David Raup of the field museum of natural history, housing one the greatest fossil collections in the world said, *“We are well over 100 years after Darwin and the knowledge of the fossil record has been greatly expanded. We now have a quarter of a million fossil species, but the situation hasn't changed much. The record of evolution is still surprisingly jerky”*. Simon Conway Morris of Cambridge University said, *“Biologists are much more impressed by the discreteness of organic form, and the general absence of intermediates.”* Colin Patterson who looked after one of the greatest fossil collections in the natural history museum confirmed that he struggled to find many convincing transitional records for watertight argument. Leading evolutionary biologists, Stephen Jay Gould and Niles Eldredge were initially baffled by the fact that most species seem to display no

directional transition during their tenure on earth, but that many species somehow seemed to arise rapidly and near to fully formed at once in the fossil record, without gradual transformation. In fact, they argued that the pattern of evolutionary history really shows long periods of evolutionary stasis (where not much happens) then short periods of rapid evolutionary change, which was a radical revision of the standard Darwinian narrative.

In summary of the above, I think it would be too early to be so conclusive on every aspect of evolutionary change and how this really plays out is still to be understood. On the basis of mathematical calculations, Sir Fred Hoyle, famous for his work on stellar nucleosynthesis concluded that *"Darwinian theory is mostly correct in the small, but not in the large. Where all came from in the first place is a problem yet to be solved."* The origin of life and complexity still remains very much unanswered within the materialistic (and so atheistic) view of evolution. It doesn't even come close to answering this. It would be reasonable to say that the mutation-selection mechanism enables an already existing organism to adapt selectively to changing environmental conditions, but it does not, however, appear to create anything radically new. Natural selection works on adaptations that concern only the survival of the fittest, not the arrival of the fittest. **The origin of species remains unresolved.** The fossil record simply does not document that all forms of life trace back to some common ancestry.

## **Do similarities in organisms prove that all evolved from a common ancestor?**

A more recently pushed argument is that similarities in living organisms, similarities in anatomy and in the sequences of DNA, RNA, and protein strongly suggest that all life shares a common ancestor.

Standard textbooks on the topic suggest that clues from the realm of genetics point to ancestral forms and to an evolutionary history that fossils have failed to document. Many palaeontologists now admit that the long-sought-after pre-Cambrian fossils, necessary according to the Darwinian account of the origin of animal life, are missing. They instead suggest that the common ancestor has been documented, not by fossil evidence, but by molecular or genetic evidence. It is argued that the extent to which genes differ in two or more animals represents the amount of time that has passed since those animals began to evolve and diverge from a common ancestor. A small difference would represent a short time since the divergence of genes and a big difference, a long time. Yet the issue is that these studies have generated widely deferring results.

A series of leading palaeontologists have pointed out that depending on which genes and which estimation methods you use, you can get results ranging over billions of years, leading molecular evolutionists Dan Graur and William Martin to conclude that this method often gives the illusion of precision but is in fact extremely uncertain. Sometimes even different studies of the same group of molecules have generated dramatically different times. This raises the question: if we don't have fossils documenting a common ancestor and if genetics studies produce such contradictory time estimates, how do we know when or if the first animals began to diverge from a common ancestor?

Stephen Meyer in his book 'Darwin's Doubt' points out that it's also important to understand that these studies do not establish a common descent of all animal forms. Instead, these studies assume the existence of such common ancestors and then merely attempt, given that assumption, to determine how long ago such ancestors might have lived. It assumes the conclusion beforehand and then bases the studies on that assumed conclusion which the study is thought to establish. So the reasoning behind this method is circular and does not prove that a single, original ancestor of Cambrian life-forms actually existed.

Neither the fossil record nor genetic studies establish that all forms of life trace back to some common ancestry. Maybe scientists will find some way to prove this in the future, but you shouldn't assume this, rather you ought to explain the evidence you have at hand, not what may or may not be discovered in the future.

## What's the future of evolutionary theory?

In summary, what modern science is telling us is that strictly materialistic theories of evolution have failed to identify a cause capable of generating the information necessary to produce new forms of life. Purely mindless, materialistic processes such as natural selection and random mutations cannot produce the intricate designed-like structures that we see in living organisms. For example, there is no publication that describes anything close to a testable hypothesis for how random mutations and natural selection could account for the sophisticated molecular machinery of, say, the cell, let alone experiments that demonstrate it. As Michael Behe wrote: *"The literature remains totally devoid of explanations, yet Darwinists remain incongruously smug."* As Meyer explained in his book 'Darwin's Doubt', *"Strictly materialistic theories of evolution don't explain the origin and complexity of all of life, especially the presence of coded information or other complex adaptations."* In fact, the evidence opposes such a view, something more is required.

This opens up (although does not confirm) the possibility that a mind could have played a role in designing, guiding and directing the unique animal forms that arose at the dawn of animal life. Would we consider that maybe certain features of living systems are actually best explained by the design of an actual intelligence - a mind, as opposed to an aimless, mindless, materialistic process? The possibility emerges that these semblances of design may not just be semblances after all. Our experience suggests a cause-and-effect relationship between intelligent activity and the production of information. The connection between complexity and design, and so between complexity and intelligence is reasonably understood. It's logical. Whether inscribed on paper or recorded in a computer code, a design is, after all, the physical outflow of intelligence itself, its trace in matter.

David Berlinski wrote: *"Molecular biology has revealed that a living system is a combinatorial system, its origination is controlled by an obscure text, one written in a biochemical code. It is an algorithm that lies at the heart of life, ferrying information from one set of symbols (the nucleic acids) to another (the proteins). We find that information passes from the genome to the organism. Something is given, something read; something is ordered and something is done. The triple concepts of algorithm, information, and symbol lie at the heart of life."* In every other sphere of our experience, these three features are only known to arise from the activity of intelligent agents. In fact, we have not identified a single materialistic cause that also generates large amounts of specific information, especially in digital or alphabetic form. Design from intelligence is the only known cause we are aware of that produces functionally specified digital information. Therefore the great infusion of such information found in life points more clearly to an intelligent cause.

Animal forms contain more than just genetic information. The development of an animal relies on tightly integrated networks of genes, proteins and other molecules to regulate development and produce different types of proteins at the right place and the right time. It's a series of biological networks programmed into our DNA, logically interacting with itself to form integrated machinery that collaborates to produce an adult animal form. It's an incredibly complex, computer-like system. Yet materialistic theories of evolution have been unable to identify a mutational mechanism capable of generating anything even remotely resembling a complex integrated circuit. But in our experience, complex integrated circuits are only known to be produced by intelligent agents - by engineers. In addition to this, human agents often design information-rich hierarchies and are the only known entity or process that has this capacity. When saying this it's worth noting that we

cannot consider examples of apparent complex informational hierarchies (e.g ant colonies) supposedly created by evolution in our consideration of materialistic evolution, as that would constitute a circular argument. Therefore we can scientifically suggest intelligent intervention as the best explanation for the origin of the organized layers of information needed to build the first animals. This suggests intelligence really did play a role in the origin of life, specifically the Cambrian example.

For the above reasons, the proposition of intelligent intervention is not an argument from ignorance, quite the opposite: it is an argument based upon observational effects. Now the idea of **intelligent design/intervention does not reject evolution defined as *change over time***, as organisms clearly do adapt, but it disputes the idea that the appearance of design is completely blind and undirected. It adds a twist to common ideas of evolution. Recognising the science, the theory of intelligent design states that the Darwinian narrative of natural selection and random mutation does not explain the origin of life forms. The mechanism does not invent things, rather, it merely tunes things. From our experience and scientific induction, the innovations of lifeforms would be best explained by the activity of intelligence, to which the 'evolutionary' mechanism can then act to further refine a living organism as its environment changes, through devolution. So, according to the theory of intelligent design, the *conception* and *construction* of life is credited to the activity of intelligence, which then hands over the *operation* of life to the mechanical guidance of random mutations and natural selection to tune that life to its environment.

This scientific conclusion seems logical and reasonable based upon the evidence at hand, so why do so many people get frustrated with the idea? I would say that the reason many do not consider intelligent design is that they hold a strictly materialistic/naturalistic philosophy which does not enable them to consider certain explanations that lie outside of strictly material causes. They are allowing their atheistic worldview to mix in with their judgement in science. That is what naturalism is. This means they cannot consider the activity of any intelligence even if the evidence points in that direction. This a priori bias is unethical and leads to bad science. A scientific explanation must not be constrained within the boundaries of materialism or naturalism, but should be broadly tested within the criterion of testability, falsifiability, observability, repeatability and the like. What matters is whether a theory is justified by evidence or not. Intelligent design is tested against our knowledge of the cause-and-effect nature of the world. We are attempting to explain prior events and causes in reference to current observation and causes, any rule that prevents us from considering such an explanation erases the rationality of science because it prevents scientists from considering a possibly true explanation. For this reason, the naturalist who confines his or her view to strictly materialistic processes is bound to reject possible true theories before even considering the evidence and following that where it leads.

If the evidence leads to the possibility that life may have been designed by an intelligent agent, then logically that draws us to the possibility of the existence of God. Maybe here lies the reason many reject anything other than materialistic/naturalistic worldviews, despite their inadequacy. People do not want to consider God and so forbid certain hypotheses right from the start. They want a conclusion to meet their own preconceived motives. Naturalism, with its rejection of intelligence in all but contingent causes, is simply bad science at the most fundamental level.