Christianity *vs* Evolution: A Deconstruction The myths, evidence and spirituality of Evolution *via* Natural Selection.

Jon Headley - February 1, 2019



Photo by <u>Umanoide</u> on <u>Unsplash</u>

As a kid, I was obsessed with dinosaurs.

Perhaps my passion started when I visited the model-dinosaur park with my Nan; or maybe it grew through repeatedly watching animated movies like 'The Land Before Time' and 'Fantasia'; but I suspect the *biggest* factor was the release of a little film known as '*Jurassic Park*'.

I was seven when that movie came out on top-of-the-range VHS cassette tape, and my brother and I were desperate to watch it. Unfortunately, when our parents eventually relented, they only allowed us to watch the first half of the film (right up until the velociraptor attack scenes) out of fear we'd have nightmares.

But one day, while Mum and Dad were busy upstairs, we snuck the cassette into the player, fastforwarded to the forbidden scenes, sat as close to the television as possible and finally watched the second half of the movie; and oh, it was glorious.

From that moment on, the only game I ever wanted to play at school was 'Velociraptors'. I mastered my impression of the beast, hooking my fingers into claws, screeching like some horrific demon bird, chasing my friends and pretending to chew their arms off. It was great! Something about the power and ferocity of these creatures sparked off a huge amount of imagination and curiosity in my seven-year-old self.

Not long after, a guest speaker came to our church. I grew up in a religious family, and sermons were usually a chance for drawing and whispering jokes to my friends; but this guy was different. He was an *archaeologist*. As soon as he started talking about dinosaurs, I was hooked.

He showed us photographs of skeletons that he'd found on his own digs, and sketches of dinosaurs I'd never even *heard of* before. He was instantly the most amazing person I'd ever met. He then began explaining that God had created the dinosaurs 6000 years ago (along with all the other animals), but that these mighty reptiles were sadly wiped out in Noah's Flood, a story I'd heard told in Sunday School many times already.

I listened with fascination, as he talked about how he had spent his entire life finding evidence of God's creative work all over the world, and how sad it was that most scientists had it *completely* wrong. They were unable to see the truth of the Bible, and were stuck in their human understanding; they turned their backs on God and came up with their own crazy theories instead.

I went home that day with a beautifully drawn picture book of dinosaurs, complete with research and evidence proving that the Bible is the true account of how the Earth, and all life, began.

I was still a kid, and there was a real life adult archaeologist *on stage*; and on top of that, he had pictures of dinosaurs. I didn't stand a chance.

As I grew up within that religious environment, I heard about many other ways that the Bible was literally true; that scientific theories like evolution, the Big Bang, and an Earth that was billions of years old were just rebellious attempts to ignore the truth of God's Creation. And so every time I heard anything related to those ideas, I closed my ears, turned my face away, and prayed.

It took me another 25 years to finally open myself up again.

In my youth as an evangelical Christian, there was no scientific idea more dangerous and contrary to our faith than the Theory of Evolution. We simply could not accept or listen to it; instead, we were taught straw-man arguments that enabled us to ignore and mock it. Even today, I still hear Christians using the same weak arguments and comments as if they were definitive evidence.

I've <u>written elsewhere</u> about two very different ways of understanding the Universe around us; one based on assumptions from an outside authority, and the other based on what we can discover, test, and prove through the scientific method.

<u>Faith is not about ignoring evidence</u>, and nor is it about holding onto a belief simply because it suits us; science is not about mocking faith, nor is it about trying to 'prove' any ridiculous idea that provides an alternative to religion.

In this article, as an illustration of how these two perspectives often interact, I'll take a closer look at the Theory of Evolution: what it tells us about the development of life on Earth, and why it was so threatening to my beliefs as a Christian. I'll break down some of my old arguments against the theory, and see what science has to say in response.

First off I want to make it clear that this article isn't written to make fun of anyone's personal beliefs, or to suggest that all religious people think in the same way. My stick-figure illustrations aren't meant as a reflection of 'cartoonish' beliefs; I'm just not great at drawing.

The truth is that many Christians fully accept and embrace science as a legitimate tool for understanding the world. But I have to be honest: in my own experience I believed that Science was the enemy, and was taught to repeat simplistic arguments that I heard at church; which left me with a completely warped view of how science actually works. Even though I no longer hold my old faith, I believe that Christianity would do far better in the world if it was able to embrace and work alongside scientific thinking.

To help illustrate my old views, I'd like to introduce you to 'Past Me', an energetic and passionate chap who's going to be taking us through a few of his points against the Theory of Evolution. I'll let him begin with his first argument:



Images by Jon Headley originally appeared at theallowed.com

This is something that I have both said and heard countless times, and so it deserves a close look. The argument says that [insert scientific idea] is 'just' a theory. For example: "*the Big Bang is just a theory, therefore it's not proven and I don't have to believe it.*"

This is actually a language problem, and I can understand why some people still get confused by it: in science, the word 'theory' doesn't mean what 'Past Me' *thinks* it means.

In daily life we think of the word 'theory' as an unproven idea that somebody holds. For example, in Sherlock or CSI (or something similar) there'll be a dead body found under mysterious circumstances, and the detective will exclaim: "I have a theory".



Actually, in science, a better word for *that* situation would be '**hypothesis**'. A hypothesis is a *starting point*: an idea that still needs to be explored, and proved or disproved by collecting further evidence.

A **scientific theory** is a hypothesis that has passed the test: it has been backed up by a wealth of evidence, and consistently makes accurate predictions about how the world works. So, we have the theory of gravity; heliocentric theory (the earth revolves around the sun); the theory of plate tectonics; cell theory; Big Bang theory; quantum theory; and the theory of evolution. On the 'Spectrum Of Science' [see next page] that I drew in a <u>previous article</u>, these theories would all lie towards the 'TRUE' end: we have enough evidence to effectively class them as facts.



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Of course, these theories are still open to evidence that may arise in the future, and they may need to be tweaked and adapted as time goes on. Science is not about certainty, and as our understanding shifts and grows, our theories will evolve.

An important thing to know about scientists is *they love to discredit each other*. That's part of the fun. Science is a group effort, and it takes a lot of evidence to get scientists to agree on anything.

So when new evidence for a hypothesis has been found by one group of scientists, you can bet that others will be trying to disprove what they have found as quickly as possible:

"Unlike the rest of us... [scientists] submit their ideas to formal peer review before publishing them. Once their results are published, if they're important enough, other scientists will try to reproduce them—and, being congenitally skeptical and competitive, will be very happy to announce that they don't hold up. Scientific results are always provisional, susceptible to being overturned by some future experiment or observation."—National Geographic Magazine, 'The War On Science', March 2015

For something like the theory of evolution, a vast majority of the scientific community agrees on its validity; and that is a *big deal*. It means that we have collected enough solid supporting evidence to safely put a large amount of confidence in the idea.

So, the 'just-a-theory' argument doesn't hold any water once you understand what scientists mean when they use that word. Still, Past Me wouldn't be fazed. He had indisputable evidence that the whole thing was a sham.

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If we evolved from monkeys, why are monkeys still here? And why are there no half-monkey, half-humans wandering round?



My point was simple: we have a beginning (monkey) and we have an end (human), but in the world today we see none of the *in-between* stages, while monkeys are still swinging around and loving life. This seemed like obvious evidence that evolution was a gigantic sham.

One small problem.

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Evolution tells us that humans and apes **both evolved from a common ancestor.** So, at some point, millions of years ago, there was another species that branched off into two separate evolutionary streams, one of which led to humans while the other led to modern-day apes.

It might be useful here to actually explain the mechanics of evolution via natural selection in a bit more depth.

What Is A Species?

I used to wonder about this a lot. If a scientist discovers a caterpillar that is slightly browner or longer than another caterpillar, how can he figure out if it's a new species, or just a longer browner version of an old species?

Scientists classify a species as a group of living organisms that *can reproduce with each other to pass on their genes*.

Genes are sections of DNA that are passed from generation to generation, the building blocks of all life. A strand of DNA is a blueprint for building a living thing. If genes are the words describing how to build something, then DNA are the individual letters making up those words.

Within any species, there's a lot of variation between individuals. Just take a look at the human race: even within your family, there are a lot of obvious differences between people. The amazing fact is that there is *nobody else in the Universe with the exact same DNA as you*.

When two creatures get together and make a baby, the DNA of those creatures is copied with extreme care. Half of each parents DNA is passed on to the child. But sometimes, a mistake is made: this is known as a **random mutation**. This mutation could be advantageous, neutral, or disadvantageous to the baby, depending on the environment it is living in.

Let's take bears as an example (because bears are incredibly awesome animals). Imagine a group of brown bears living in Siberia a long time ago. One day, a baby bear is born with a **random mutation** in the gene that controls fur color. Instead of having brown fur, this bear is born with *white* fur.

White fur is an obvious advantage in snowy Siberia: it's easier for this lucky bear to sneak up on potential prey, and get a tasty meal. The environment favors this particular random mutation, and so the white bear is more likely to survive and breed with other bears, passing on its white fur gene.

Over a long enough period of time, the group of white bears will grow larger and larger. Eventually the white bear population will have become so genetically distinct from the original brown bears that the two groups can no longer successfully mate, and you can now class them as two separate species.

Even over small time scales, we can see big changes occur in this way. Let's take a look at the famous **peppered moth** example (one of the few things I remember about evolution from high school).

The black peppered moth used to be a rarity. In the city of Manchester in England before the Industrial Revolution there were 10,000 light peppered moths for every one black peppered moth; the first live specimen wasn't caught until 1811.



Source: Martinowksy

Then everything changed. The Industrial Revolution caused chimney soot to cover the countryside between Manchester and London, and the trees were darkened. Suddenly, the darker colored moths were better camouflaged than their lighter relatives, and so were better suited to survival in their environment. The black moths were now *more likely* than the white moths to live long enough to pass on their genes.

By 1895, the dark moths made up 98% of the peppered moth population, an incredible difference in a very short amount of time.

Seriously though, this is an *incredibly* short amount of time: evolution is a slow process, and change happens over millions of years. If a moth population can change color within a single human lifetime, imagine what can happen in 4.5 billion years!

One important point to remember is that there is no *brain* or *purpose* behind evolution: it isn't aiming to create the 'best' animal or to achieve high intelligence. The process is completely random and automatic: if an animal has a genetic mutation that gives them an advantage in their particular environment, then they will be more likely to survive, and that new genetic trait is more likely to live on within the population.

This is what is meant by the term 'survival of the fittest'. It doesn't mean fittest in the sense of 'strongest' or 'best' or 'most healthy', but fittest as in 'who fits best' within their environment. The creature that *fits the environment* better than others will be more likely to survive *in that environment*.

So, to go back to humans and apes: a long, long, long time ago (as long as 13 million years in the past) a species that no longer exists experienced a genetic mutation that split its evolution down two separate paths, one that eventually led to chimpanzees, the other that eventually led to modern human beings.

This is why it's a misunderstanding to say that humans evolved *from* monkeys.

But Past Me wouldn't have given up yet.

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This is another classic line that I heard a lot from my church. The idea was that evolutionists were missing the crucial part of the puzzle: they had a beginning and an end, but no evidence of the inbetween phase.

Again, this is a misconception. The idea that scientists are lacking a key piece of evidence called the 'missing link' is based on a flawed understanding of evolution. In this understanding, evolution is like a ladder, with a series of big steps forward towards a goal.

Actually, evolution takes place so gradually, and over such a large amount of time, that evolution is more of a *complex web* than a simple ladder. To find every 'missing link' would mean finding fossil evidence for every tiny change that ever happened over millions of years.

Take this picture for example:



Like in any comic strip, there are gaps between the frames that make up this story. But it's still clear what the story is: the man gets dressed and feels happier as time goes on, until finally he puts his favorite hat on and reaches ultimate joy.

It's impossible for us to see *every frame* of *every moment* that adds up to this man having his clothes on; I'd be drawing crappy pictures for weeks. But we still have enough evidence to put the story together: we have the key points that tell us what is going on. Maybe we'll find more evidence one day (for example, maybe the man took a break halfway through to grab a drink), but that would be a *refining* and *sharpening* of the story, not a complete denial of the original evidence.

The same is true with the fossil record. Fossilization is an incredibly rare event: it takes a lot of crazy circumstances to occur, and it's only because of the *vast* amount of life that has existed on our planet that we have access to so many. The fossil record alone can help us understand the broad strokes of the story, just like the man getting dressed above; the more fossils we find as time goes on, the clearer the story may become.

The fossil record could never tell us the full story, because the full story is so hugely intricate and encompasses a vast amount of tiny changes over an enormous amount of time.

Fortunately, we don't need to rely on a complete fossil record to prove the theory.

The Main Proofs of Evolution

I'll be brief here, because there is a *lot* of material I could go into and this article is already long enough; but I hope that if anybody reading this doesn't believe evolution has been truly proven, these points will give you enough of a starting point to investigate.

1. The Fossil Record

I've already touched on this, but to be clear, the evidence we *have* found from the fossil record <u>is</u> <u>massive</u> and tells us that evolution really happens. (*By the way, that link intentionally takes you to a Christian website, just to prove that not all religious people are biased against scientific evidence*).

Surprisingly, one animal that we *do* have a pretty thorough fossil record for is <u>the horse</u>. All the main stages of the horse's evolution have been preserved in fossil form, going back 60 million years. Back then, it was a dog-sized creature that lived in rainforests.

I was always led to believe that the fossil record was weak, minimal and inconclusive. Actually, it was far more convincing than I ever realized.

One important development in our understanding was the ability to *date* fossils and place them in a specific time. This allows us to more fully understand how different species have developed, and to order the evidence appropriately. There was a lot of talk going around the Christian world when I grew up that dating methods were unreliable and unproven, but again this is simply a case of bad information.

<u>Dating methods</u> have proven <u>over</u> and <u>over</u> to be accurate and useful tools, and while we will <u>continue</u> to get better at it, we can trust it as a very reliable method of gaining evidence.

2. Fossil Layers

Sedimentary rock is formed in layers when loose material (such as pieces of rock, sand, soil, dead organisms, plants, insects, etc.) settles somewhere. Over an incredibly long period of time, layers of sediment get deposited on top of each other, and the top layers weigh down the layers underneath, compressing them into rock.

This kind of rock often contains many fossils; when we study them we find that the oldest (and lowest down) fossils are the *most different* from organisms we find alive today. The higher up in the rock you travel, the more familiar, and often the more complex, the organisms appear to be. For example, in rock over a billion years old, we only find fossils of single-celled organisms. 550 million year old rock brings us simple multi-celled life, and fish arrive at 500 million years ago. Mammals don't appear anywhere in the fossil record until we arrive at rock layers from 230 million years ago.

This is powerful evidence showing that life on earth has changed over vast amounts of time; through looking at the layers, we can watch species becoming extinct as other species rise up to take their place.

When I began to look into evolution for myself I found this evidence especially incredible, as I had never even *heard* about it as a Christian. The fact that we can physically look through layers of fossils and see the development of life over time is pretty amazing and tough to argue against (which could be why nobody ever mentioned it).

3. Rapid Changes

These are fast evolutionary changes that happen in such a short amount of time that we can easily observe and document them. For example, the peppered moths we talked about earlier, or microorganisms like bacteria that quickly evolve to resist antibiotics.

4. DNA

Modern science has methods that Darwin had no access to when he first proposed his theory. Before the study of genetics, there was already plenty of solid evidence to back up the theory of evolution; nowadays, we have a lot more to add to the pile.

If all species had originally come from a common ancestor, as the theory of evolution suggests, then it would make sense to hypothesize two things:

#1—Different species should share similar genetic traits, and

#2-The closer the relation between two species, the closer their genetic signatures would be to each other.

These two predictions have been observed to be true since we learned how to read DNA. As mentioned before, humans and chimpanzees (our closest existing relative) <u>share 98% of genes</u>. This is because we share a (relatively) recent common ancestor. If you compare human DNA to other animals, you see differing amounts of genetic similarity that relate to how far back our two species branched off. For example, we share 90% of genes in common with cats, 80% with cows, and 70% with mice.

DNA is the universal language of all life on Earth, and the more we map it out, the more connection and progression we can see between species. In fact, every single cell on Earth is capable of reading DNA from any other life form.

There is so much research I could go into here, but for time I'll just include <u>one</u> or <u>two</u> links if you want to learn more.

There are other forms of evidence for evolution, for example the study of the similarity of embryos between species. But all of this is to briefly show that the theory of evolution via natural selection has been backed up in multiple disciplines of science, provides highly accurate and testable predictions, and has been observed again and again.

Evolution is a scientific fact. Whatever our personal beliefs or religious background may be, we have to decide what to do with that fact.

I think part of the objection some people have to human evolution comes down to our sense of *special*ness. We humans like to see ourselves as somehow superior to, and separate from, the rest of nature. Many religions teach us that we *are* special: in Christianity we called ourselves 'children of God', talked about humans being 'strangers on the Earth', and believed that we had been given dominion over the rest of creation.

But the truth is, at our core, we are animals. We are not separate from nature: we *are* nature. We may be the most intelligent form of nature we know about, but we're still nature. It's written in your very genetic code: you share sections of DNA with oak trees, butterflies, chimpanzees, bananas, wolves, mushrooms, sharks, bacteria, sparrows and fruit flies.

We are all made of the same stuff. We are connected, in a real and meaningful way, to all other life on this planet. To me that's a pretty profound and spiritual thought.



God of the Gaps

For Past Me, the theory of evolution would not fit with my belief in a God who created the world, and everything in it, only 6000 years ago. I was taught a literal reading of the Bible, and that was non-negotiable. It's the classic dilemma of an unstoppable force (the thorough evidence for evolution) meeting an immovable object (my stubborn faith).

There are only two real options in this situation: ignore, or discredit, the evidence; or reevaluate your faith to fit the evidence within it. For Past Me, the idea that my faith could change and evolve was unthinkable. The Truth was solid and certain and set in stone. So, we had to go the other way: the evidence had to be thrown away.

There's one more argument that Past Me resorted to in this situation, one that I often used when faced with a scientific theory that seemed contrary to my beliefs. It's often described as 'God of the Gaps', and its point rests in finding a question that science has not yet answered, and using that *gap* in scientific knowledge as proof that God must be real.

For example:

"Where did life come from in the first place?", or

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"How did single-celled organisms make the leap to multi-cellular life?", or

"How did inanimate matter become conscious?"

The truth is, science doesn't yet have a clear answer to any of these questions; for now, they remain a mystery. The theory of evolution gives us an excellent understanding of how the variety of life on Earth came to be, but it doesn't explain how life began in the first place.

Where did life come from? There is no definite answer. We know that life has existed on Earth for at least 3.5 billion years, and the Earth itself is around 4.5 billion years old. Apart from that, there are <u>several competing ideas</u> for how life first began, but none of them have been proven. The same goes for the huge jump from <u>single to multi-cellular life</u>, or the <u>question of consciousness</u>.

Science is completely okay with this lack of knowledge. Scientists admit that we don't know right now, but that doesn't stop us looking for answers. What we don't know isn't a failure; it's an invitation. Answering these questions is an adventure, a challenge to learn and explore and understand the unknown.

The 'God of the Gaps' argument finds an area that science can't currently explain, and jumps on it instantly: "Ha! All your knowledge and learning isn't able to explain this, because it's all down to God; and He works in ways that humans can't possibly understand."

But when we resort to this argument all we're really doing is reducing God to some kind of magical answer, hiding away in the spaces our knowledge hasn't yet reached. This seems to me like an incredibly small and petty way to view God.

Dietrich Bonhoeffer, the German theologian and martyr, wrote about this while being held in a Nazi prison:

"[H]ow wrong it is to use God as a stop-gap for the incompleteness of our knowledge. If in fact the frontiers of knowledge are being pushed further and further back (and that is bound to be the case), then God is being pushed back with them, and is therefore continually in retreat. We are to find God in what we know, not in what we don't know."

People used to explain the sunrise by "God does it". People explained the weather as "God does it". People explained the incredible variety of life on Earth as "God did it". People explained healing and natural disasters and the movement of the planets in the same way: "God does it".

Over the last few centuries though, science has revealed the answers to many of these 'unsolvable' mysteries, and uncovered secrets that only God was privy to: deep and unfathomable questions of the past, like how sex resulted in childbirth, or why the body became sick, or how the planets moved themselves around the sky.

If we force God to live in the gaps, he's running out of places to hide. If our beliefs are built on a foundation of what science has yet to explain, we're on very shaky ground.

Religion has often become like a stubborn old man, refusing to progress or be open to new ideas, because he's already decided what he thinks about everything; and conversations with that stubborn old man can get kind of awkward and embarrassing.

Again, not every religious person thinks this way; but it is still prevalent. Just recently I heard a Christian leader telling a large group of young people that they should walk out of their classrooms if they were taught evolution. All this does is to advance an attitude of fear and tribalism, creating more small-minded and insulated people. I was part of that world for a large part of my life, and it was a hugely freeing experience when I finally left it behind.

There's a lot of debate about whether science and religion can co-exist, or whether they are completely incompatible views of the world. Personally, I think (and hope) that they *can* both complement each other. But I also think that it will take a different kind of religion to that stubborn old man; one that is more open-minded, honest, humble and ready to evolve. The kind of religion based on dogma and assumptions is *completely* contradictory to science. Those two ways of thinking just do not fit with each other. If science and spirituality can live together, they have to find a new arrangement.

I believe that we should hold any spiritual idea or religious belief very lightly. We should understand that many of our beliefs are personal, subjective, and unprovable. We should be open to what science and research tells us about the world, and allow the evidence to impact our personal views.

In my own life I've discovered that this is a bigger, more exciting way to live. It's been an awesome realization that there are an endless number of things I don't know; there is *always* more to learn. There are incredible truths about the world that generations of humans have uncovered, waiting for you to discover and experience for yourself, and so many more secrets still waiting out there for a curious person to find.

And if there really is a God in the Universe, I don't think he would be afraid of that.



[HisKingdom.Us Note: This is a very interesting and informative article that leaves the puzzling question of how the rate of passage of prehistoric time is measured for another discussion. I sincerely hope that the author has been able to discover and grow in a life-giving faith that doesn't depend on doctrinal legalism.]