

# The Evidence for a Creator

## 2.1 The Fine Tuning Problem

Believing in God is not very fashionable and if we are talking about the church's version of God it is hardly surprising. Let's go back to basics and look at the evidence.

First there is the "fine-tuning problem" - the observation that the laws of the universe seem custom tailored to favour the emergence of life. Tweak the laws of physics in just about any way and life as we know it would not exist. For example in chemistry generally two molecules combine because the resultant compound is more stable than the two constituents. Hydrogen and Oxygen combine to form water and if you want to split  $H_2O$  back into  $H_2$  and  $O_2$  you have to input a lot of energy. The DNA molecule - essential to life - is an exception to this rule. It is in the form of a double helix which is so finely balanced that it can easily "unzip" into two complimentary strands. Each strand then serves as a template for the production of its counterpart - the necessary elements attach themselves resulting in two identical molecules each composed of an original DNA strand as well as a newly synthesized strand. No energy appears to be involved.

Another example of fine tuning is the very nature of water absolutely essential to life. Professor Brian Cox [2.1.1] describes it as probably the strangest thing in the universe. It doesn't follow the normal rules of chemistry. It shouldn't really be a liquid but a gas as it is made of two very light atoms. The water on earth formed millions of years before water arrived - brought by comets and asteroids crashing into the earth. Other things contract and get more dense as they get colder and so does water until it reaches  $4^{\circ}C$ , but between  $4^{\circ}$  and  $0^{\circ}$  it expands which is why Ice forms on the top of water. If it froze from the bottom up life would have been wiped out by the ice ages and could not have evolved in our oceans the way it did. It has another strange property. Its molecules are sort of sticky which results in what is called capillary action. It will rise up a narrow tube unassisted. Water exhibits this ability more than any other liquid and it is essentially how plants suck water from the ground and get it to the top of the plant.

The position of the earth relative to the sun is critical 10% either way would not do. Likewise the rate at which it spins could not be 10% different from what it is. We need the moon about the size it is to stabilise us and we have Jupiter as a fielder soaking up things like asteroids travelling at high speed from reaching us [2.1.2]

Our sun is a medium sized star, it produces heat due to nuclear fusion. Essentially the simplest element of all and the most abundant in the universe is Hydrogen. In the sun hydrogen atoms are combining to produce Helium atoms, releasing heat in the process. When it runs out of Hydrogen, Helium atoms will combine to form Lithium atoms and so on. Essentially a star synthesises heavier elements out of lighter ones but this process runs out of steam and cannot create heavier elements. Science tells us that the heavier elements are produced when stars explode. Many elements which form the building blocks of life - the Iron in our blood, the Calcium in our bones, and the Carbon in just about everything have been produced in such an explosion and one can legitimately say that we are made of star dust. If there is no creator we have to assume that we exist due to a lucky accident whereby the right mix of elements floating through space - the result of ancient very distant explosions - ended up forming our earth just the right distance from the sun.

## 2.2 Evolution

Genetic mutation and natural selection result in living creatures changing, and adapting to their environment. **That evolution takes place there can be no doubt** but the assumption - and it is an assumption - that this simple mechanism can explain all changes needed to produce life on this planet does not stand up to reason or mathematical analysis. This has not prevented the theory of evolution being accepted as “scientific truth” – to be questioned only by fools. It is portrayed as a choice between evolution and fundamental Creationism as the latter is easy to dismiss.

There is no problem with Mutation/Natural selection modifying existing structure in an organism. The problem arises when an animal, believed to have evolved from an earlier prototype, has a novel feature not present on the prototype. What evolutionary scientists do is study the DNA of animals and conclude that B *must have* evolved from A because of the DNA they have in common. The problem is that “must have” is not scientific. Unless you can explain “how” B evolved from A the argument comes down to “... must have because we don't recognise any other mechanism for change” – a statement of faith.

The process of evolution is very simple – too simple. It works like this. When things reproduce errors occur – mutations – and the result is an animal which is different from what it would have been. This results in variations in a population. Evolution is simply nature's version of selective breeding. A breeder will select animals with good genes and breed from them thus resulting in more good genes in the population. Natural selection means that animals without good genes are less likely to survive which again results in good genes being more widespread in the population. Nature's definition of a “good gene” is different to that of a breeder but the idea is sound. While we appear to be able to breed a dog any shape we like, could we breed a dog with (say) horns? Something which would require a new gene rather than a modification of an existing gene. Now theoretically this is possible. There is a lot of junk DNA in the genome where random mutations can accumulate and the possibility exists that a gene may be produced by chance which provides a novel feature. This is where we have to look to mathematics. It is analogous to the idea that an infinite number of monkeys randomly typing will produce the complete works of Shakespeare or more realistically a very large number of monkeys randomly typing will eventually produce something which isn't nonsense. Intuitively, with a very long time scale - the evolutionary time scale is about 4000,000,000 years - the idea of a novel gene looks reasonable.

However Intuition is unreliable so let's try the monkey analogy with real numbers. Lets have 30 million, million monkeys. Give them a simple keyboard with only 30 keys to increase the chances. Have them hit the keys twice a second for a million million years and ask how much Shakespeare they would produce. Surprisingly the answer is they would produce no coherent sentence longer than “much ado about nothing”: in computer terms about 14bytes of intelligible information.

30 million, million monkeys is analogous to the number of breeding females in a population so would suggest a total population of say 80 million million - a factor of 4000 more than the human population.

Hitting 2 keys a second is equivalent to every female giving birth twice a second **and** every birth resulting in both a mutation and a viable offspring – many mutations are catastrophic and don't result in a viable offspring. The fastest reproducing bacteria takes 10 minutes and mutations are far less frequent than one per birth.

A “million million years” is a factor of 260 longer than the evolutionary time scale, and more than 70 times longer than cosmologists say the universe has existed. Obviously this is not an analysis of the actual situation, that is beyond the author, but it does give a good idea of scale of the challenge.

Even that is only a tiny part of the problem. Random mutations will occur randomly throughout the genome and not be concentrated in one place creating a potential new gene. Combining the massive improbability of producing something other than garbage and the massive improbability of mutations occurring where they are needed it would appear mathematically impossible – and it has to happen time and time again to explain the development .

Even that is not the end of the problem. There is still the problem as to how the first living cell came into existence as the simplest living cell is actually very complicated. Despite having an example to copy no one has been able to create a living cell from none living chemicals. If something is too complicated even to copy it is irrational to suggest it came about through chance.

Then are many other problems like the life cycle of the dragonfly. Two flying insects fly locked together and lay and fertilise eggs on reeds just under the water. The eggs hatch and tiny underwater predators take to the water. It has gills at its rear end. It eats things much bigger than it is, until it reaches a certain size. They it climbs up a reed - out of the water but with its rear end still in the water so that it can “breath”. Its internal organs break down and the genetic material completely rearrange itself into an elegant flying insect with two sets of wings neatly folded. It emerges: pumps blood into its wings to straighten them. They dry and stiffen and the dragonfly flies off to find a mate and start the process again. Evolution requires small changes building up over time. How on earth can such a life cycle possibly evolve in small stages? It defies reason. As I say “must have” won’t do.

The conclusion must be that the mechanism of random mutation and natural selection alone is insufficient to explain life on this planet. ***Evolution has been given a helping hand.*** It has been **initiated**, and periodically **tweaked** by a creator. For simplicity I will refer to the creator as God although I have reservations in doing so as the word carries with it rather a lot of baggage.

[3.1] <https://www.youtube.com/watch?v=mPpKhxtFf1Q>

[3.2] <https://www.youtube.com/shorts/O-A42NwnzeU>