

The end of the world is not very nigh

When one considers the vastness of the universe, it is surprising how confident physicists and astronomers are when it comes to calculating the age of the universe and the time it will last. This was brought home to me on reading a cutting from the *Daily Mail* of 22 August sent to me by a reader. It consisted of an article entitled, "How the universe will end", and it made the following statement at the beginning: "It is a modern paradox that although no one is able to forecast the weather for more than a week ahead, the laws of physics allow astronomers to peer into the almost unimaginable depths of future time and predict when, and how, the universe will die".

According to scientists, the solar system, of which Earth is a part, came into being about

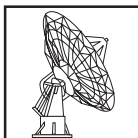
five billion years ago, an unfathomable length of time compared with the 4,000 years or so of man's recorded history. In about 800 million years' time the sun will have become so hot that all life will have perished from the earth. Eventually, however, so it is calculated, the stars, of which the sun is one, will all go out, and matter itself will gradually destruct, leaving only a void, but only after the universe has been in existence for a period of one-followed-by-a-hundred-noughts years.

Such lengths of time are surely meaningless to us puny, mortal humans, whose lifespans are at best limited to a hundred years or so. In truth we cannot begin to fathom either the immense distances involved in the universe or the immense periods of time involved in its history, even supposing that the calculations of scientists are cor-

rect. It is noteworthy that, though God is "from everlasting to everlasting" (Ps. 90:2), and though His purpose is that we might come to share His immortality, His revelation to us about our future is limited in practical terms to the thousand years of His millennial Kingdom. This is surely because we cannot in our present state of mortality comprehend what it will be like beyond that time, when sin and death are no more, and God will be "all in all" (1 Cor. 15:28). No doubt when we are made immortal we will have the capacity to receive instruction about what lies beyond the Millennium.

In the meantime, we can ignore the pointless theorising of men, in the sure and certain knowledge that God will not permit His universe to finish up as a cold, dark void.

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Irreducible complexity

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IT IS GENERALLY agreed that Darwin's 'survival of the fittest' is the only feasible mechanism for evolution, and random genetic mutations are the only inheritable sources of increased fitness. So those who believe the giraffe's long neck was acquired through evolution argue that this happened because every mutation that resulted in a longer than average neck conferred a survival advantage and was therefore passed on to the next generation. In a similar way, evolutionists maintain that our exceedingly complex eyes could have evolved by natural selection because even a very small increase in the percep-

tion of light would confer an advantage, and they postulate a series of advantageous mutations leading to the formation of the human eye.

In chapter 6 of *The Origin of Species*, Darwin dealt with "Organs of extreme Perfection and Complication". He wrote: "To suppose that the eye with all its inimitable contrivances . . . could have been formed by natural selection, seems, I freely confess, absurd to the highest degree". Darwin then proceeded to look at examples of increasing degrees of sophistication of eyes across the animal kingdom, and suggested that these represented the stages by which the human eye

had evolved. But he conceded that he felt the difficulty of the evolution of the human eye “far too keenly to be surprised at others hesitating to extend the principle of natural selection to so startling a length”. Notwithstanding this confession, Darwin made the uncompromising assertion that, “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”.

The mousetrap

Irreducible complexity refers to the fact that some organisms have mechanisms which comprise a number of elements, all of which must be fully functional and integrated in order to serve any purpose. This means that such mechanisms could not have evolved gradually, because any intermediate stage would be useless and would therefore be eliminated in the struggle for survival. A simple analogy is the mousetrap. For this to function there must be a bait, a trigger and a spring that is powerful enough to trap the mouse. Unless all three elements are in place at the same time, the trap is useless.¹

The Venus flytrap is an insectivorous plant which is even more complex than a mousetrap because it uses highly sophisticated enzymes to digest its victim. The trap consists of two thick, hinged leaves with bright red inner surfaces which secrete nectar and out of which protrude six trigger hairs. The fly is attracted to nectar, and when the fly bends a hair beyond a critical angle this activates a hydraulic spring that rapidly closes the leaves, which have interlocking ‘teeth’ along their edges to prevent the fly from escaping. The fly is crushed and digested into a soup that is absorbed into the plant. Because it would not be possible for the flytrap to be effective unless all these features were in place, and because none of these features on its own would serve any other useful function, an imperfect flytrap would almost certainly be eliminated by natural selection. In this connection we always need to bear in mind that the randomness of mutations means that they are purposeless and have no ability to anticipate future usefulness.

Sonar

Unknown to Darwin, there exists an even more complex structure than the human eye, namely, the sonar system of the bat, which uses ultrasound to catch flying insects in the dark. Bats are

the only mammals capable of powered flight (as distinct from gliding). Their ability to catch flying insects in total darkness requires a number of specialised features which must be present simultaneously. To attain the speed and manoeuvrability required to catch their prey they need a lightweight skeleton and very large wings. They also need the ability to use sound to locate their prey, and because the target is fast moving they need to use ultrasound.

Echolocation using ultrasound requires integrated circuits to coordinate output and receiver mechanisms, and also an on-off mechanism in the ear to prevent the bat from hearing the squeaks and echoes at the same time. It is obvious that insectivorous bats could not catch night-flying moths unless all these elements were in place. So why would an ineffective sonar system be retained while awaiting the remote possibility of the arrival of a favourable mutation to improve it?

From air to water

So far we have considered examples of irreducible complexity in which useless intermediate stages could possibly have survived because they would not be harmful. By postulating an accumulating series of harmless mutations, evolutionists could attempt to explain the origin of some irreducibly complex organisms. But there are other examples of irreducible complexity in which any intermediate stage of development would be lethal and would exclude any possibility of evolution by natural selection.

The water spider (*Argyroneta aquatica*) is air-breathing, but spends most of its life under water using a bubble of air which it holds beneath its belly adjacent to its breathing tubes. It also constructs a home under water by spinning a fine mesh that it attaches to plant stems. It then fills the mesh with air by releasing bubbles taken down from the surface between its hind legs. In this way it constructs a ‘diving bell’ in which it lives, mates and rears its family. Such a way of life would have to be safe from its inception. An inefficient diving bell would be lethal. It is extremely difficult to imagine how a diving bell could have been gradually developed by the accumulation of random, purposeless mutations.

1. The mousetrap analogy was conceived by Michael Behe in *Darwin's Black Box: The Biochemical Challenge to Evolution*, 1996, Simon & Shuster.

By common consent, evolutionists believe that whales and dolphins, which are both air-breathing mammals, evolved from land animals. If that were so, then in taking to the sea they would have had to solve the problem of giving birth and suckling under water. Whales have adaptations to ensure a watertight junction between the baby's mouth and a special receptacle through which milk is ejected into the baby. To prevent milk entering the lungs, the baby whale has its windpipe prolonged above the gullet. Once again, it is difficult to imagine an evolutionary change from land to sea by means of random mutations. Intermediate stages would surely have been too hazardous for the newborn to survive.

The mystery of metamorphosis

Perhaps the most significant omission in Darwin's *Origin of Species* is his failure to confront the irreducible complexity of metamorphosis. Butterflies and moths all begin their lives as caterpillars. When, after several moults, the caterpillar reaches full size, it turns into a chrysalis, within which it is transformed into a butterfly or moth. At this stage mating takes place, eggs are produced and laid on the correct plant to feed the emerging caterpillars, and so the life cycle is completed. It is evident that the process of metamorphosis is exceedingly and irreducibly complex, and there are no viable intermediate stages through which it could have evolved.

Dragonflies provide an even more remarkable example of metamorphosis. For several years the air-breathing dragonfly 'nymph' lives in ponds. When mature it emerges, turns into a chrysalis and changes into a dragonfly, which mates in the air and distributes its eggs on or near water. Having completed its reproductive role, this magnificent flying machine dies within a month. How could the blind forces of natural selection have resulted in such an irreducibly complex method of reproduction? Dragonflies, as well as moths and butterflies, are designed not only to reproduce their kind but also to distribute their species as widely as possible. Neither Darwin nor Dawkins nor anyone else can explain how metamorphosis evolved to accomplish this end.

Mutant genes

Darwin had no knowledge of the laws of inheritance, and he believed evolution could be

brought about by the inheritance of acquired skills. If that were so then each generation would be able to build on the experience of the previous one, and it would be very much easier to imagine how evolution might have produced a whale from a hippopotamus or developed the diving bell of the water spider. In nature, mutations are almost always disadvantageous. The advantageous genetic variations that are exploited by plant and animal breeders only result in *quantitative* changes, such as size, shape, colour, resistance to pests and chemicals, etc. No mutation that might be the beginning of a new structure or organ has ever been observed.

It is likely that, if Darwin had known that random purposeless mutations were the only source of heritable change, he would have admitted that natural selection could not have produced the irreducible complexity of many organisms, and would therefore have abandoned his belief in creative-evolution. Was it a Freudian slip that caused Darwin to name his book *The Origin of Species*—a title suggesting that the creation of new species is the limit of the power of evolution?

The fossils agree

In spite of the compelling evidence, Darwinian evolutionists refuse to accept that random mutations could not produce these irreducibly complex organisms, and so they invent 'macro-mutation', a theoretical concept allowing evolution by large jumps, which is really creation by another name! But it is significant that the fossil record of the history of these complex creatures reveals absolutely no evidence for their evolution by any mechanism.

In the Carboniferous period we find the earliest fossil spider, complete with spinnerets, and also the first dragonfly, with a wingspan of twenty-nine inches. In the Eocene period we meet the earliest known fossil bat, which has its stomach full of moths, and we also find the first whale, which is fully adapted by profound modifications of the basic mammalian pattern.

Darwin hoped that further exploration of the rocks would vindicate his theory of evolution. The fact that the fossil record reveals these amazing bursts of new forms of life strengthens our belief that, on the basis of present knowledge, Darwin would have accepted evolution for what it is—a *modifying* rather than a creating force.