A Life in two Worlds

Finding our way through science and faith

Compiled by Gerhard Nehls

The miracle of life

Have we lost the art to wonder? How often do we consciously stop to take note of the world around us? It is packed with incredible beauty and majesty, be it in nature around us, in the vast universe 'above', or in the microscopic world. How vast is it? Where and when did it all start? Why is there something rather than nothing? And what has that to do with you and me? Why are we here? It has always been a forgone conclusion that all there is, was created by someone incredibly more intelligent and powerful than we are.

In recent history an alternative explanation has largely displaced our former worldview. It is claimed in rather an aplomb fashion that the accumulated human knowledge and scientific reasoning explain convincingly that all there is, came about by chance, aided by limitless time to evolve. Knowledgeable people question faith, we are told. After all, is not what is *known*, more trustworthy than what is just *believed*?

A look at the big picture

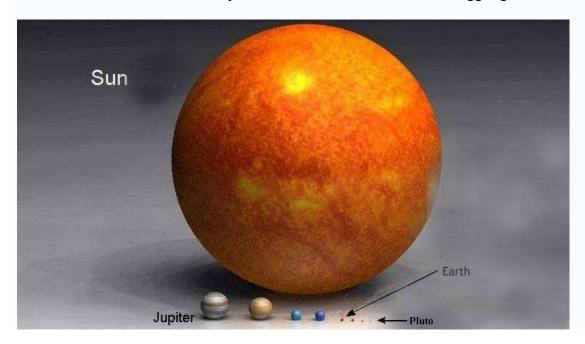
We look at the night sky. When the moon is in hiding, a huge cloud of distant light becomes visible. We call it the Milky Way. A telescope will reveal that this 'cloud' is composed of literally countless stars. The end of the universe – if there happens to be one – is not (yet) in sight, not even by the most powerful Hubbard Telescope in space. If you would attempt to count all the stars that are visible at one per second, it would take roughly 25,000 years of uninterrupted counting!

The Milky Way is the galaxy within which our solar system is just a tiny spec of dust. If it were the size of a coin, the Milky Way in comparison with the universe as we know it now would be the size of the North American continent! It is made up of around a trillion (that is a thousand billion, or one million millions) stars, and measures 27.000 light years from one end to the other. A light-year is a unit of length for astronomic distances. It signifies the length that a beam of light travels in one year, at 300.000 km per second! It would take that beam a second to travel eight times around the earth. A light year is the distance of 10 trillion kilometres. With the best of imagination we cannot fathom such a figure. To compare, it takes just 8 minutes for the rays of the sun to reach the earth.

The closest sun (star) to ours is *Proxima Centauri*. To get there the sun rays would have to travel about four and a half light-years, which is the average distance between stars in the Milky Way. *Andromeda*, the nearest galaxy somewhat similar to ours, is about two million light-years from us. Just try to think that!

The size of a galaxy is determined by the number of stars it boasts to accommodate. If it is made up of less than 1 billion, it is considered to be small. On the other hand, it would be

considered big, if it has more than a trillion, which is a thousand times as many. Of course only those galaxies are accounted for, that are visible by telescope. And these are in the region of 100 billion. Recently one galaxy was discovered that is 13.2 billion light years away. The largest star is in the region of 200 times the mass of our sun, which in turn would accommodate 1.3 million planets the size of our earth. Mind boggling, isn't it?



What do such figures mean in 'practical' terms, such as space travel? We already noticed that light travels at 300,000km per second. The fastest man-made object to date, *Pioneer 10*, achieved a top speed of twenty-five miles per second. Not bad at all. At that speed *Pioneer 10* would require 33,000 years to reach *Proxima Centauri*, the solar system closest to ours. It would need 744 million years to cross our galaxy, and 15 billion years to *Andromeda*. No astronaut would survive such a journey, I suppose. "We don't know enough about the unknown to know that it is unknowable", reasons G.K. Chesterton.

The Nobel Price Laureate and astronomer Arno Penzias comments: "Astronomy leads us to a unique event, a universe which was created out of nothing, one with the very delicate balance needed to provide exactly the right conditions required to permit life, and one which has an underlying (one might say 'supernatural') plan." ('Thoughtful Christianity', June 16th, 2010). This, of course, is contended by other scientists. "God made man small and the universe big to say something about himself", commented John Piper.

Some time ago William Paley offered his classical 'Watchmaker Argument' to account for the unbelievable order and interdependence of the Universe. After all, Cosmos means order. He came up with a metaphor. Someone found a watch somewhere in the wilderness. After an intense investigation as to its function and purpose, he concluded that such an intricate machine must have originated in somebody's mind, and subsequently a product of an intelligent design. "No ways", responds the scientist Richard Dawkins, a well known antagonist of an 'intelligent design' in creation. "The

only watchmaker in nature is the blind force of physics, albeit deployed in a very special way. A true watchmaker has foresight: he designs his cogs and springs, and plans their interconnections, with a future purpose in his mind's eye. Natural selection (the foundation of the Theory of Evolution), the blind, unconscious, automatic process which Darwin discovered, and which we now know is the explanation for the existence and apparently purposeful form of all life, has no purpose in mind. It has no mind and no mind's eye, it does not plan for the future. It has no vision, no foresight, no sight at all. If it can be said to play the role of watchmaker in nature, it is that of the blind watchmaker." Even the well known philosopher of the 'Enlightenment' and antagonist against faith in God, Voltaire, observed: "I cannot imagine how the clockwork of the universe can exist without a clockmaker".

Sir Julian Huxley, at the 1959 Darwin Centennial in Chicago, summed up the implications of evolution as he saw them: 'In the evolutionary scheme of thought there is no longer either need or room for the supernatural. The earth was not created, it evolved. So did all the animals and plants that inhabit it, including our human selves, mind and soul as well as brain and body. So did religion...' In Huxley's opinion evolution displaces God, giving us a purely naturalistic explanation of the origin, not only of life, but of the higher faculties of consciousness and thought. (John C. Lennox, God's Undertaker, a Lion Book, 2009, p. 87).

The information we get lets it appear as though all scientists worthy of that title would agree with that worldview. That, however, is not the case. Allan Sandage, widely regarded as one of the fathers of modern astronomy, discoverer of quasars and winner of the Crafoord Prize, astronomy's equivalent of the Nobel Prize, is in no doubt that the answer ... is positive: 'I find it quite improbable that such order came out of chaos. There has to be some organizing principle. God to me is a mystery but so is the explanation for the miracle of existence - why there is something rather than nothing.' (*ibid* p. 65).

John Lennox, Professor of Mathematics at the University of Oxford, concludes: "A remarkable picture is gradually emerging from modern physics and cosmology of a universe whose fundamental forces are amazingly, intricately, and delicately balanced or 'fine-tuned' in order for the universe to be able to sustain life. Recent research has shown that many of the fundamental constants of nature, from the energy levels in the carbon atom to the rate at which the universe is expanding, have just the right values for life to exist. Change any of them just a little, and the universe would become hostile to life and incapable of supporting it. The constants are precision-tuned, and it is this fine-tuning that many scientists (and others) think demands an explanation.

"The world of strict naturalism in which clever mathematical laws all by themselves bring the universe and life into existence, is pure (and, one might add, poor) fiction. To call it science-fiction would be mirch the name of science. Theories and laws simply do not bring anything into existence." (*ibid*)

Looking at the inexplicable and minute picture

When I attended school - sometime before the middle of last Century - I learned that the smallest existing object is the atom. The very name means 'indivisible', something severely contested by now. Ever stronger microscopes afforded scientist a 'deeper' look into a world that was inaccessible and by that token unperceivable until rather recently.

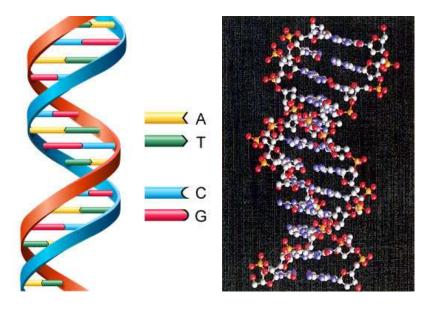
Even if the next few paragraphs appear rather technical, they afford us a glimpse into a microcosmic world that is unbelievably complex and intricate.

We all know that our body is made up of minute building blocks called cells. A cell is the basic functional unit of all known living organisms, be they plants, animals or humans. It is the smallest unit of what may be classified as life. All organisms are composed of one or more cells. Every one of them is an identical copy of a preexisting cell (!). Vital functions of an organism occur within cells, and all cells contain the hereditary information necessary for regulating cell functions, and for the transmission of information to the next generation of cells.

To illustrate the astonishing make-up of a living cell, we may look at the tiniest of bacterial cells. It weighs less than a trillionth of a gram, and is made up of 100 thousand million atoms. A living cell contains maybe 100 million proteins of 20.000 different types, and is a more complicated machinery than anything manmade.

Some organisms, such as most bacteria, are unicellular (consisting of a single cell). Other organisms, such as of humans, are multicellular. Humans have about 100 trillion or 10^{14} cells.

Large cooperatives of similar cells form tissues. These are linked to each other and form the organs, which in turn carry out the basic functions as, for instance, the human body.



Two models of the construction of DNA

Each cell is composed of 46 molecules of double-stranded DNA (Deoxyribonucleic acid that contains the genetic instructions used in the development and functioning of all known living organisms). These appear as two long, paired strands spiraled into a double helix (see picture). Each strand is made up of millions of chemical building blocks called bases. Genes serve as working subunits of DNA.

To be equipped for their functions, cells contain an indescribable amount of information, which is stored in each of them. This is coded with the aid of four chemical bases: (A) adenine, (G) guanine, (C) cytosine, and (T) thymine. The order, or sequence, of these bases determines the information available for building and maintaining an organism. DNA carries a vast chemical information database that incorporates the complete set of instructions for providing all the proteins a cell will ever need. The order in which these bases occur determines the formulated information that is needed for its operations, much as specific letters of the alphabet are composed to form words and sentences. Each gene contains its specific set of instructions. Think of amino acids and proteins as the twenty 'letters' of an 'alphabet'. Every particular protein is coded by a 'word' in that 'alphabet', in which every 'letter' must be in the right place. Just one letter amiss, and the 'word' would change its meaning, and the resulting message would not be legible. Human DNA is composed of about 3 billion bases (ibid. p.129). This reminds us of what the German writer and poet of the 19th Century, Matthias Claudius, suggested: "The sky and he earth may well be seen as a script, and all things surrounding us are letters thereof; and they are used by God to for our enlightenment."

Each molecule is made up of 50 to 250 million bases, all housed in a chromosome. The DNA in each chromosome contains a multitude of genes. A gene is any given segment along the DNA that encodes instructions or information that allows a cell to produce a specific product - typically, a protein such as an enzyme. Each gene carries the blueprints for making proteins, the building blocks of all life, in addition to all personal hereditary information that determines our physical appearance, character trait, talents and all that makes us 'like dad or mom'.

Like a computer hard disc, DNA contains the database of information and the program to produce a specified product. Every one of the 10 to 100 trillion cells in the human body (scientists do not agree on the number) contains a database larger than the Encyclopedia Britannica. (*ibid*, p.136).

The more the living cell is studied, the more aspects it appears to have in common with one of the most sophisticated high-technology products of human intelligence: the computer. The cell structure with its DNA, chromosomes and genes may well be likened to the hard-ware of a computer. The genetic information would be the soft-ware. 'Real' computers, however, are a far cry from the one that is installed in our brain and nervous system.

The cell's information processing capacity far outstrips anything present-day computers can do. The founder of the Microsoft Corporation, Bill Gates, said that 'DNA is like a

computer programme, but far, far more advanced than any software we've ever created.' ('The Road Ahead, Boulder, Blue Penguin, 1996, p.228).

In his book 'Godel, Escher, Bach - an Eternal Golden Braid' (London, Penguin, 1979, P.548) the mathematician Douglas Hofstadter writes: 'A natural and fundamental question to ask on learning of these incredibly, intricately interlocking pieces of software and hardware is: "How did they ever get started in the first place?"... from simple molecules to entire cells, is almost beyond one's power to imagine.

The nature of the cell in its complexity is such that even convinced evolutionary biologists such as John Maynard Smith and Eors Szathmary confess that: 'The existing translational machinery is at the same time so complex, so universal, and so essential, that it is hard to see how it could have come into existence, or how life could have existed without it.' ('The Major Transition in Evolution', Oxford and New York, Freeman,1995, p.81). In terms of their basic biochemical design, therefore, no living system can be thought of as being primitive ..., nor is there the slightest empirical hint of an evolutionary sequence among all the incredibly diverse cells on earth. ('Evolution – a Theory in Crisis', Bethesda Maryland, Adler & Adler, 1986, p. 250 as quoted in John C. Lennox, God's Undertaker, a Lion Book, 2009, p.136). We know of no 'stepping stones' that might suggest any evolution from primitive to complex.

The existence of these exquisitely constructed molecular machines is powerful evidence of a designing intelligence. The prominent biochemist Michael Behe, studies such machines ('Darwin's Black Box', New York, Simon & Schuster, 1996). One example he gives is that of the tiny acid-driven motor (discovered in 1973) that powers the bacterial flagellum, a propeller-like device that enables bacteria to move, and he shows that this motor, so small that 35,000 laid end to end would take up only 1 mm consists of some forty protein parts including a rotor, a stator, bushings and a drive-shaft. Behe argues that the absence of any one of these protein parts would result in complete loss of motor function. That is, the motor is irreducibly complex - it is a 'single system composed of several well-matched, interacting parts that contribute to the basic function, wherein the removal of any one of the parts causes the system to effectively cease functioning'. ('Darwin's Black Box', New York, Simon & Schuster, 1996, as quoted in John C. Lennox, God's Undertaker, a Lion Book, 2009, p.123).

It is hard for us to picture in our minds the seething, dizzyingly complex activity that occurs inside a living cell, which contains within its lipid membrane maybe 100 million proteins of 20,000 different types and yet the whole cell is so tiny that a couple of hundred could be placed on the dot in the letter 'i'. (John C. Lennox, God's Undertaker, a Lion Book, 2009, p. 123).

The DNA of an E-coli bacterium, for instance, is about four million letters long and would fill 1,000 pages in a book, whereas the human genome is over 3-5 billion letters long and would fill a whole library. As a matter of interest the actual length of the DNA tightly coiled in a single cell of the human body is roughly 2 meters. Since there are about 10 trillion (= 10^{13}) cells in the human body the total length of DNA is a mind-boggling 20 trillion meters (*ibid.* p. 137).

Dr. Werner Gitt,, emeritus Director and Professor of the German Federal Institute of Physics and Technology on Information Science, writes In his book 'In the Beginning was Information': "All living organisms require information to function. The basic principles of information are clearly established in terms of laws and theorems which are just as valid and applicable as those employed in the natural sciences (from the back of cover of his book).

"Information is a fundamental entity on equal footing with matter and energy. It should be noted that the activities of all living organisms are controlled by programs comprising information (p.9).

"Because information is required for all life processes, it can be stated unequivocally that information is an essential characteristic of all life. All efforts to explain life processes in terms of physics and chemistry only, will always be unsuccessful. This is the fundamental problem confronting present-day biology, which is based on evolution (p. 9).

"We therefore formulate the following fundamental theorem:

- ► Information only arises through an intentional, volitional act.
- ► A code is an essential requirement for establishing information.
- ▶ Only structures which are based on a code, can represent information.
- ► A code system is always the result of a mental process (it requires an intelligent origin or inventor).
- ► Any entity, to be accepted as information... must be meaningful.
- ► Every piece of information is intentional.
- ▶ It should be emphasized that matter as such is unable to generate any code. All experiences indicate that a thinking being voluntarily exercising his own free will, cognition, and creativity, is required.
- ► The information present in living beings must have had a mental source.
- ► Every piece of creative information represents some mental effort and can be traced to a personal idea-giver who exercised his own free will, and who is endowed with an intelligent mind.
- ▶ When its progress along the chain of transmission events is traced backwards, every piece of information leads to a mental source, the mind of the sender.
- ► If the information is to be understood, the particular code must be known to both the sender and the recipient.

- ▶ Any piece of information has been transmitted by somebody and is meant for somebody. A sender and a recipient are always involved whenever and wherever information is concerned.
- ▶ New information can only originate in a creative thought process."
- ► Information requires a material medium for storage.
- ► Any model for the origin of life (and of information) based solely on physical and/or chemical processes, is inherently false. (Pages 47-115)

Geneticist Michael Denton says that between a living cell and the most highly ordered non-biological systems, such as a crystal or a snowflake, there is a chasm as vast and absolute as it is possible to conceive. 'Even the tiniest of bacterial cells, weighing less than a trillionth of a gram, is 'a veritable microminiaturized factory containing thousands of exquisitely designed pieces of intricate molecular machinery, made up altogether of 100 thousand million atoms, far more complicated than any machine built by man and absolutely without parallel in the non-living world'. ('Evolution – a Theory in Crisis', Bethesda Maryland, Adler & Adler, 1986, p.250 as quoted in John C. Lennox, God's Undertaker, a Lion Book, 2009, p.122).

'We have always underestimated cells,' says Bruce Alberts, President of The National Academy of Sciences of the USA. 'The entire cell can be viewed as a factory that contains an elaborate network of interlocking assembly lines, each of which is composed of a set of large protein machines... Why do we call the large protein assemblies that underlie cell function, protein machines? Precisely because, like machines invented by humans to deal efficiently with the macroscopic world, these protein assemblies contain highly co-coordinated moving parts.' ('The Cell as a Collection of Protein Machines', cell 92, 1998, p. 291).

It is worth noting that DNA was discovered only in the 1970s (by Francis H. Crick and Leslie E. Orgel).

The complexity of life

After a brief look at the Macro Cosmos and the Micro Cosmos, we look at the world in and around us, which confirms the incomprehensible complexity of life.

We can walk and talk, hear, see, feel and taste. Our hands, marvels of engineering in themselves, enable us to perform the thousands of tasks that life requires from us. In association with our 'grey matter', itself an unequalled marvel of computation, and our body parts, particularly our hands and feet, we can till the land, build a house, repair a motor car or wrist watch, run a modern kitchen, or office, or production plant, drive a motor vehicle, read and write books – and caress our spouse or baby.

Besides our extremities let us pause to contemplate for a while on our metabolism, our integrated digestive system with contributories as the pancreas, the spleen, the liver and

gall bladder, the kidneys, and last not least the system that processes and extracts the various elements needed for our existence. Take your time to think on it! And then consider the aligned performance of our heart with its miles of veins to every part of our body, with the function of the lungs, our nervous system, our temperature control, our immune system, the detoxifying, and self-repair systems, and last not least our many-faceted reproductive system. Well, obviously we are normally not conscious of this self-propelled, automatic, extremely complex and interrelated 'machine', which gets our attention really only when it malfunctions.

But then we should think of our five senses: sight, hearing, taste, smell, and touch, each on its own merit is a functual wonder. And what about the brain and all that happens therein? That all these faculties and functions are integrated in one body is indeed aweinspiring. If we assume that this all developed from nothing by chance, we will have to do some honest assessment to investigate the sources of our information and the deeper inner reason for choosing such unrealistic worldview.

To clarify the point: The argument does not major on a process of development, generally termed evolution. The ultimate question is whether the origin and development of life in all its forms happened without any intent, plan, purpose, or meaning by pure chance, or whether a higher intelligence provided the means and purpose of all life.

Reflections on the beginning of life

"Nobody has any justified idea what makes chemicals start living. The origin of life is perhaps the leading unknown of contemporary science." ('The Atlantic Monthly', August 1988, by Gregg Easterbrook)

A basic fact of life is that it can only occur where proteins, amino acids, provide the necessary 'food' for it. It could not possibly have been generated on an earth that was purely mineral, and such it was in the beginning. There is no doubt about it.

Darwin's Theory of Evolution tells little about the genesis of life, since its logical precepts concern organisms that already existed.

In his search for an explanation of life on our originally purely mineral planet without a divine cause, the famous Physicist Stephen Hawking, conscious of the inexplicable beginning of life on earth, postulated that the only viable possibility for this was that somehow forms of life had come to earth from outer space. This was not a new idea.

The late Nobel Prize winner Professor Francis Crick, who, along with Leslie Orgel, discovered DNA, had already proposed the hypothesis that seeds of life may have been purposely spread by an advanced extraterrestrial civilization. (F. H. C. Crick and L. E. Orgel, p 341-346 v 19, Icarus, 1973). Crick arrived at his view because, he says, DNA is just too complicated to have evolved unassisted in a mere 3.8 billion years, the assumed age of our planet ('The Atlantic Monthly', August 1988, by Gregg Easterbrook)

According to Gerald Soffen, a NASA biologist, who directed the life-seeking experiments of the *Viking* probes, the early milestones of life are these: the development of organic compounds; the self-replication of those compounds; the appearance of cells, to isolate the compounds from their chemical environment; photosynthesis, to enable cells to use the sun's energy for motion and growth; and the assembly of DNA. "It's really hard to imagine how these things could have happened," Soffen said at a recent conference. "Once you reach the point of a single-cell organism with genes, I am comfortable that evolution takes command. But the early leaps -- they're very mysterious." (*ibid*).

It is generally accepted, that with the exception of our planet there is no life of any consequence in our solar system. We already were informed that "the fastest man-made object to date, *Pioneer 10*, achieved a top speed of twenty-five miles per second. At that speed *Pioneer 10* would require 33,000 years to reach *Proxima Centauri*, the solar system closest to ours." (as we already learned on page 2). All the above facts demand from us to be realistic and honest.

Science and worldview

If science would indeed be able to empirically prove the origin of the universe and life as such to be accidental and consequently without plan or purpose, the debate would be over. However, the situation is not quite that simple. The proponents of the Theory of Evolution as well as their opponents are rooted in differing world views. "A world view is a comprehensive way of viewing reality, which tries to make sense of its various elements within a single, overarching way of looking at things. Every world view – religious or secular – ends up falling into the category of »belief systems«, precisely because it cannot be proven. That is simply the nature of world views.

"The great questions of life (some of which are also scientific questions) cannot be answered with any degree of certainty. Any given set of observations can be explained by a number of theories... There can be no question of scientific 'proof' of ultimate questions. Either we cannot answer them, or we must answer them on grounds other than the sciences...

"Scientific theories cannot be said to 'explain the world' - only to explain the phenomena which are observed within the world. Furthermore, scientific theories do not, and are not intended to describe and explain 'everything about the world' - such as its purpose. There are many questions that, by their very nature, must be recognized to lie beyond the legitimate scope of the scientific method, as this is normally understood. For example: Is there purpose within nature?" ('The Dawkins Delusion', Alister and Joanna C. McGrath, 2007).

In the light of this debate one is justified to question the underlying worldview of the proponents of the Theory of Evolution. It entered the world stage at the time when a second Renaissance, the 'Enlightenment Philosophy', captured the imagination of many. Marx, Freud, Darwin and others sought to 'liberate' the world from what they perceived to be crippling superstitions, including the existence of a Higher Power. Religious ethics and the

idea of accountability to a Higher Authority stood in the way of 'self-realization'. This led to many seemingly liberating philosophies, such as Marxism, Freudianism or Darwinism, as they are called today. Darwin and his later disciples provided an appealing system that claims to explain the beginnings and development of life, and that it just happened randomly by chance. The logical consequence of such worldview is that there is neither meaning nor purpose in life other than personal enjoyment and fulfillment, whatever that means to an individual.

Evolution – or creation

Fact is that already by conducting a breeding process one can effect changes in the form or size of plants and animals. We know of vastly different breeds of dogs, cats, horses and many other species that have undergone measurable physical changes. We also know of species that are seemingly in the process of change. Who knows what is still to come when gene manipulation will be in full swing? However, most of this was and is effected by human intervention, in other words by monitored and intelligent outside influences.

Unaided development or evolution is largely determined by adaption to changing circumstances like climate. To project such changes into the past with the assumption that the countless species on earth ultimately evolved from a single cell is speculation and a statement of belief and not a scientific statement.

To accommodate the absence of the much discussed missing links – the missing fossils in between two species to prove that one evolved from another – mutations had to stand in the gap. A mutation is 'a change in the chromosomes or genes of a cell, which may affect the structure and development of the resulting offspring' (Collins Dictionary). This is a rare mishap in nature. It is a simple and established fact that such changes hardly ever improve an affected plant or animal, and often causes sterility. The most beautiful or useful garden, when left untended for decades, never mind millennia, will neither produce superior flowers nor fruit or vegetables. There is a plausible cause for this, a physical law:

"The Second Law (of Thermodynamics) states that every system left to its own devices always tends to move from order to disorder, its energy tending to be transformed into lower levels of availability, finally reaching the state of complete randomness and unavailability for further work." (Henry Morris)

"The implications of the Second Law of Thermodynamics are considerable. The universe is constantly losing usable energy and never gaining. We logically conclude the universe is not eternal. The universe had a finite beginning -- the moment at which it was at "zero entropy" (its most ordered possible state). Like a wind-up clock, the universe is winding down, as if at one point it was fully wound up and has been winding down ever since. The question is who wound up the clock?" (All about Science: Second Law of Thermodynamics)

"The Second Law of Thermodynamics describes basic principles familiar in everyday life. It is partially a universal law of decay; the ultimate cause of why everything ultimately falls apart and disintegrates over time. Material things are not eternal. Everything appears to change eventually and chaos increases. Nothing stays as fresh as

the day one buys it; clothing becomes faded, threadbare, and ultimately returns to dust. Everything ages and wears out. Even death is a manifestation of this law. The effects of the 2nd Law are all around, touching everything in the universe." (*Emmett L. Williams*). With all these facts in mind, it should be quite simple to conclude whether blind forces of purposeless chance or an intelligent design* are the causes for the world as it is.

The well known newspaperman and author G.K Chesterton noted: "It is absurd for the Evolutionist to complain that it is unthinkable for an admittedly unthinkable God to make everything out of nothing, and then pretend that it is more thinkable that nothing should turn itself into everything". Perhaps more strongly verbalized, Oswald Chambers said: "As soon as a man becomes responsibly intelligent, he comes to the conclusion that there must be responsible intelligence not less than his own mind behind everything there is, and God holds every man responsible for knowing that."

*Two ways to perceive Creation

Some Christians hold that one should reconstruct the date of the creation of the universe from the creation account in the book of Genesis. That brings us to about BC 4.000. This position takes the six days of creation as literal days of 24 hours each. The vast majorities of Christians, however, view the creation narrative as a symbolic exposition, recognizing its reality by the obvious signs of an intelligent design in creation.

Who is Nature?

Is it thinkable that our Cosmos, with its natural laws, and all life with it, happened by coincidence, by chance? At first sight one may be inclined to think 'why not?' The word 'nature' today is commonly used when explaining the inexplicable. 'Nature' heals, we hear, or 'nature' formed, developed, or created. Who is 'nature'? When speaking of supernatural attributes like this, one does not have an inanimate something in mind. In real terms it serves as a euphemism for God. It is indeed revealing how the philosopher Jean-Paul Sartre puts it in his own way: "I do not believe in God; his existence has been disproved by Science". He does not tell us, however, how science can prove or disprove the existence of God. "The tragedy of his philosophy finds expression when he says: "that God does not exist, I cannot deny, that my whole being cries out for God I cannot forget." Francis Schaeffer explains: "We should note this curious mark of our own age: the only absolute allowed is the absolute insistence that there is no absolute".

Instinct

Instinct is, what has rightly been described, knowledge without learning. A newly born goose or duck will without hesitation or fear run into a nearby pond and swim. A chicken is not likely to do the same. When a kid living in Germany, I remember observing a stork family nesting on top of a farm house. They left every autumn for their long journey to South Africa, faithfully returning in spring. They never seemed to have missed their nest. I'm sure they also did not miss their domicile down south, when they got there. What urges them to undertake such long journeys? How could they possibly find the way, the right country, even the right village where their nesting place was? What makes freshly hatched turtles dash for the Ocean? What makes a Cuckoo lay her eggs into someone else's nest? How do eels find their way across the Ocean to a certain river, maybe

'climbing' up waterfalls, to the very spot where they were hatched? One could fill volumes with similar occurrences. The answer is not simple. We call it 'their instinct'.

Consider the swallow. It flies 12,000km each year, leaving Europe in autumn to spend their summer in sunny South Africa. On their migratory journey they fly an average of 400km a day.

A certain specie of Godwit migrates annually from Alaska to New Zealand in a nonstop flight of over 11,000 km, the longest continuous journey that has ever been recorded for a land bird (Bird Life International). Over half its body weight is fat and is used up when it flies for over 190 hours (eight days) nonstop! It flies more than 460,000 km during the course of its lifespan.

Consider the salmon which can swim thousands of kilometers across the ocean to return to the stream where they had hatched, much like the eel. Sea turtles are recorded to have made incredible journeys. One that nested in Indonesia was later tracked 20,000km to the coast of Oregon in the United States.

Perhaps you have had the problem of finding your way across an unfamiliar town. Even with maps and directions you can easily get lost. So, how do birds or fish navigate their way over or through featureless oceans? Merely having a compass does not help unless the navigator knows his position in relation to his destination. Not until the invention of the sextant and the marine chronometer in the 1730s could navigators determine their location and plot their course on a map. Each fix required hours of calculation.

The navigator in my car (GPS) is a marvel of computer technology. The device can show us our exact location on the screen and guide us to the address we want to reach. Once it has established contact with three satellites, it accurately measures how long a signal takes to travel from the satellite to your receiver. This requires complex calculations. How long might it have 'evolved'? Well, not much more than 50 years, I guess. But not unaided and on its own!

Biology professor James Gould wrote: "Animals whose lives depend on accurate navigation are uniformly over engineered ... They usually come equipped with alternate strategies - a whole series of backups, between which they switch depending on which is provided most reliable information." But still the sophistication of animal navigation continues to confound scientific investigators. (Peter Hammond)

It would confound me too, if I were to assume that these 'skills' just came to these simple animals by chance over the millennia. Frankly I lack the faith to believe such speculation. I rather tend to believe that they all, like the Milky Way and every star in its set course, every gene, DNA, chromosome, living cell and everything that is made up of these, has been intricately and purposefully designed and created accordingly.

The problems and limits of abstract thought

We are to a high degree able to comprehend abstract thought. I could well picture myself to be a member of an Antarctic expedition, standing on the rear end of a dog-drawn sledge, sleeping over in a tiny tent and wrapped in a thick and yet light sleeping bag. There are limits, though. I cannot imagine how I would feel and think as a cockroach, for example. Since the media present us with data on just about every topic, we can imagine situations much more easily and realistically than maybe 100 or 1000 years ago. Yet certain limits remain.

When we contemplate on the causes of the development from primitive to advanced life over time, we will have to conclude that there must be some dynamism that caused it. We will agree that environmental circumstances alone would not suffice to cause and facilitate the development of vision, for argument's sake. How come do we have two eyes that enable us to see our environment? Why not just one, or three? When was vision first experienced? How long were eyes 'in the making'? My school teacher many years ago explained that it was a lengthy process. First light sensitive skin formed, and eventually out of that the first eyes developed. The question is what kind of dynamism could have caused this to happen. Was there, perhaps, an inner urge within that creature that caused the development over the many millennia? This could only have been possible, if the respective creature would have been able to imagine what eyesight actually is. Such an abstract thought would simply be beyond a primitive creature. There remains only one reasonable cause for eyes to exist. They must have been planned, thought out, and affected by a higher intelligence and power. Ultimately it originates with our Creator.

Let us consider some other marvels in the same vein. It is apparent that the physical structure of birds is designed for flight, even when some later preferred to stay on the ground, eventually loosing the ability to fly. The plumage is part of the outfit of every bird. Feathers (as well the bones of birds) are extremely light, and tremendously strong with an optimal design for the purpose of flying. Feathers are structural masterpieces in their own right.

A typical feather consists of a main shaft that is structurally unequalled for its purpose. Fused to it are a series of 'branches', which again extend to form sub branches, not unlike palm fronds. All these are fitted with minute hooks, in the fashion of Velcro fasteners, for cross-attachment to form a sturdy miniature wing by itself. Some feathers are fluffy, as we can see when the downs of a pillow are spilled! Some are long and firm. The different feathers have grown to serve different purposes. Those on the wings and the tail are perfected to fly, sometimes with great speed. These feathers enable a bird to find the way swiftly and safely even through the branches and twigs of trees. Feathers also provide the buoyancy for ducks, geese and seagulls. If you let a duck go to water 'softened' by a detergent, it will sink.. In addition feathers are a formidable protection for the body. The down feathers serve to control the body temperature. Last not least, each specie of bird has its own colour design worked into its plumage.

Engineers had no better model than birds when designing aircraft. Pilots balance modern aircraft by adjusting flaps on the wings and tail. The average bird uses some 48 muscles in its

wings and shoulders to change the configuration and motion of its wings and individual feathers. Birds can make multiple adjustments several times a second. Eagles and falcons are the model for and envy of aircraft designers. (Peter Hammond).

We all know that a chameleon can change its colour to match its background. Is the brain of a chameleon really able to design and eventually create the ability to camouflage itself as it does? This colour assimilation is obviously done to avoid recognition by predators and camouflage to approach its prey without being detected. The skin of a chameleon is transparent and the cells in it are made up of melamine. Beneath the skin are layers of cells that contain yellow, red, blue, and black pigment that can be activated to assimilate its colour to the environment. Because the cells in the chameleon's skin expand or contract, melanin produces the differing looks.

Consider the eyes of a chameleon that can move their eyes independent of one another. For example one eye can be looking forward while the other looks backward. To enable a chameleon to do that, their eyes are fitted into little turret-like sockets that can turn around 180° when necessary.

Also consider the length of its tongue that may exceed its body length and can be 'shot' out to an insect and be retracted faster than our eyes can observe. The prey is fastened to the tongue by a suction cup at the tip. Is not all this well designed? Of course it is, but hardly by the reptile itself.

Have you ever wondered where we may find the 'brain' of a tree or flower? Never mind the way the roots penetrate even rock-like soil or the forming of the foliage with its photosynthetic function, or the logistics of the nutrients and water that are pumped up the trunk into the leaves. Think about its highly complicated reproduction system. Have those clever plants thought of and developed the stamen and pollen and their colour or fragrance in the centre of the flowers by themselves? They are constructed to attract insects, which form part of a unique symbiosis by acting as agents for pollination. Many seeds seem even programmed to be eaten by birds, to distribute their posterity. They possess a built in resistance against their digestive fluids. To ensure the dispersion and initial nourishment of the seeds, they are well stacked in good manure. But where would we look for the brain, the 'computer' in plants that facilitate all this?

On a different level let us consider a dandelion with its lovely yellow flower that later turns into a dainty, perfectly round cluster of seeds, each with its own little paraglider for efficient propagation. Could one seriously assume that this all developed by chance?

When walking in a forest or garden, sticky spider webs might rap themselves across our face or body. That is annoying, but a closer look leads us to discover the seemingly astounding mental and physical skill of a spider. Examining a web, we find it consists of delicately spun, extremely tough and elastic threads. One kind stretches from the centre of the web, spreading like rays from the sun, and is anchored on some branch or other. The other kind is strung in circles around the centre, each ring at a distance from the other to form a net to catch the needed food in the form of insects. On the first, the spider can

move swiftly to deal with any insect that happens to be caught. The second is very sticky and is to hold the trapped insect until the spider arrives to inject its anesthetic. It does not kill its prey, but immobilizes it. This way the victim does not turn bad as a food source, and can be consumed by the captor when needed later. All this sounds very clever to me. I just wonder how a tiny brain, as that of a little spider, can develop the rather complex mechanism it needs to survive. Where is the needed information stored and processed? How could a spider plan and develop the skills, the necessary tools and resource materials to produce such an engineering marvel? And how did it generate the idea of designing and producing such a trap in the first place?

Summing up, we take note that the 'natural development' theory fails to explain, how a fish, bird, tree, spider or whatever, can use its mental and physical capacity to design, produce and utilize.

We really have to stretch our imagination beyond limits to simplistically account all these facts to the category of pure chance with no purpose in mind, as Richard Dawkins wants it to appear, when he postulated that "the universe we observe has precisely the properties we should expect if there is, at bottom, no design, no purpose, no evil, no good, nothing but blind, pitiless indifference."

An inexhaustible list of examples from nature in this vein leave no other option but to conclude that there is a monumental, cleverly designed, subtle, clandestine deception in progress to ridicule and eliminate the worldview that points to a Creator. This goes hand in glove with the parallel developing 'new morality', which the mass media are so successful in propagating.

The essential consequence

As we already intimated, the point of departure and the actual issue of this debate is philosophical rather than scientific. While Jean-Paul Sartre without any inhibition declared that "God's existence has been disproved by science", it is by the very nature of science that one cannot empirically 'prove' the existence of a creator, or his non-existence. This is undergirded by a statement of Blaise Pascal, the French mathematician - physicist, inventor, writer and philosopher of the 17th Century, who bids us to consider that "it is incomprehensible that God should exist, and it is incomprehensible that he should not exist." Dietrich Bonhoeffer, who was martyred for his faith by the Gestapo in 1945, put it differently: "A god who lets us prove his existence would be an idol."

Such type of reasoning reminds me of the time when one of our children were still toddlers. To hide herself in a hide and seek game, she would cover her eyes, obviously assuming that if she was unable to see anything, those that sought her would also be unable to see her.

While the actual work of Charles Darwin and others may have been purely biological, later proponents of the Theory of Evolution gave it decidedly a philosophical twist, and promoted this theory as scientifically secured fact, which, as we showed, it cannot sustain. Their vociferous thesis is that science has proven that God is an illusion.

Consequently, the Bible and other religious writings are declared manmade and irrelevant for modern, enlightened man.

On the Way

Each life is essentially a journey into the unknown. General preconditions are outlined by cultural, economic and religious influences, but most other developments remain unknown until they happen. One should wisely ponder on a statement by the German philosopher Friedrich Nietzsche, who warned: "Convictions are more dangerous foes to truth than lies."

When we plan a journey to an unknown place, we do sit down and plan the route. We may have to rely on traffic indicators directing us, which is not the best choice. We are better off with a good road map. But this will be of no help either, if we do not know where we intend to go. Any guesswork is useless. But even if we know where we want to go, a map will be of no help, unless we know our standpoint. To transfer this situation on life's journey, it is critical to be aware of our point of departure as well as our aim or target. Equally important is a close watch of the map while we are moving. One false turn may lead us astray hopelessly. Philosophy and religion have molded our perception of who we truly are, and where we aim to go. And these do by no means yield the same results.

The general perception on Christianity as a whole has turned to be negative. It is molded more by its visible appearance rather than by the virtue of its tenets. It is perceived as irrelevant, formal and ritualistic, divided and exclusive, with a focus on special places and special people. History keenly reminds us that Christianity at times was striving for power and influence, even causing dissention, murder and bloody wars. More recently reports of misappropriation of funds and infidelities by clerics and tele-evangelists discouraged faith in its message.

Modern society claims that religion essentially oppresses its followers by inhibiting the full development of man's potential for freedom, implying this to be the liberation from ethical and moral constraint.

"Religion is the impotence of the human mind to deal with occurrences it cannot understand", Karl Marx claimed to know, but Fyodor Dostoyevsky warns: "If there is no God, everything is permitted."

We all are witnesses of how the worldview of Western society has been morally dramatically changed within less than a Century. It can easily be observed how atheism combined with faith in 'philosophical science', has adopted an almost religious fervor. We already mentioned some of the more blatant manipulations or omissions that have been used to discourage religion. This took its toll. The Jewish Holocaust survivor Psychiatrist and Neurologist Viktor Frankl touches a relevant truth when he states: "Ever more people today have the means to live, but no meaning to live for."

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