Evolution

by Roy Goodman

Since the rise of socialist secular humanism with various 'philosophers' in the 18th and 19th centuries and the discovery of natural selection by Lamarck and Darwin, most (but not all) scientists have become agnostic if not outright atheists. The pantheon of 'gods' of the woods, the streams, the sea, the sun and the moon have been (correctly) relegated to the dustbin. Their new dogma is the ascension of man to god-like status, their religion is the belief that man has pulled himself out of nothing through evolution to be the highest form of life, their high priests are the Marxist gods and leading academics who preach that science can explain everything, their punishments are ostracism for those who disagree. Their hatred of Yah is such that they will willingly accept any lie, any twisted reality, reason and logic to find some explanation for what is around us that doesn't involve the G or c words. They laugh at those who hold the Torah to be the word of God describing those who hold those ideas as, at best, deranged and, at worst, dangerous and in need of incarceration and even death. Academics lose their jobs and students fail if they don't adhere strictly to the received wisdom.

Prior to this degeneration, at least in the west, the God of the Hebrews was generally accepted as the author of creation. Many religions exist but none are either reliable or true. As has been shown in the pages of *Yada Yah*, there is only one God and only one way in which He can be known. Many famous scientists such as Sir Isaac Newton were theists – as was Charles Darwin, the most famous of the evolutionists. (Lamarck was the first to propose evolution as we understand it today.) In reality Yahowah – the God of the Hebrews - was (is) the first evolutionist. This may seem a strange statement but one backed by a lot of evidence.

The extent of the universe as we currently understand it has been known for roughly 100 years. Up until about 60 years ago the universe was considered steady state i.e. essentially unchanging with time so that what we see now would be more or less the same at any time in the future.

Then Hubble discovered the red shift in the light from distant stars[1]. He discovered that no matter where he looked all the stars (and hence galaxies) were moving away from us. That meant that if we ran the clock backwards, all the galaxies would appear to be moving towards us and if the clock was wound far enough back the universe would arrive at a point – a singularity later called the big bang[2].

Since Hubble's time, Penzias and Wilson discovered the cosmic background radiation (the remnant radiation from the Big Bang) which has enabled the relativistic confirmation of the six days of creation (see Schroeder's book: The Science of God), the extent and age of the universe (about 14.7 billion years – though some scientists think it is only 13.7 billion years old)[3], the 'discovery' of dark energy that appears to be accelerating the expansion of the universe and multiple experiments that show that the Relativity Theory is really Relativity Fact (gravitational lensing, disintegration of muons in the upper atmosphere showing time dilation,

slowing of clocks in aircraft flying in opposite directions around the earth, the relativistic corrections required to enable the GPS system to work and so on). Geologists together with cosmologists have confirmed the age of the earth to be about 4.5 billion years; physicists have confirmed quantum mechanics describes matter on the very small scale while relativity describes matter on very large scales.

Of all the laws that govern the universe, the laws of thermodynamics are perhaps the most significant. They exist as laws because our universe had a beginning, has a limited (but very large) amount of energy, and is expanding. Thus, the limited amount of energy is always being diluted by the expansion and is fading away into the void, and since matter is condensed energy, and both energy and matter are information, then every ordered structure in the universe fades away like a cooling piece of heated iron. This accounts for everything from the aging of our bodies to the disintegration of matter, the efficiency of engines, the ability to extract work from energetic compounds, the need to eat and reproduce, the direction of the arrow of time, and is one of the main reasons why time can't be reversed, and we can't live forever in our 3D universe. So Sha'uwl's idea that we would be bodily resurrected and then live forever in this universe was wrong.

They were called the laws of thermodynamics because their significance was first realized when heat engines were being developed and much thought was being given to increasing their efficiency. The first law, in paraphrase, states that energy is neither created nor destroyed. This is the law of conservation of energy. The second law, again in paraphrase, states that, when changing energy from one form to another, some energy is lost to us (but not universally) and cannot be retrieved. The energy is 'degraded' and is no longer able to perform useful work. This is called entropy. The second law states that globally entropy is always increasing. Another way to put it is that randomness and disorder is always increasing. The word, global, is important because, in fact, it is possible locally to reduce entropy (such as with air conditioning) but the overall effect of the energy required to bring this about is that entropy increases on the whole. This is of immense importance for evolution.

I shall divide the discussion of evolution into macroevolution (or abiogenesis) and microevolution.

The idea behind evolution as proposed by Darwin in his Origin of Species was that, given enough time, one type of creature (species) could change, step by step, into another from adaptation by natural selection in a changing environment. So starting with a very simple single-celled organism, progressive changes eventually gave rise to mankind, other animals and plants. An immediate consequence of the theory is that there should be a myriad of intermediate stages so that changes from e.g. a lizard to mankind by fossils in the rocks could be traced. The crucial underpinning of the theory is that there is plenty of time in which these changes can occur. Neither requirement has been met.

For the purposes of taxonomy, life on earth is divided according to the following hierarchy: domain, kingdom, phylum, class, order, family, genus, and species. Animals are separated from plants at the level of kingdom. (There is still some disagreement in the scientific

community about this classification, but generally it is accepted. Interestingly, the basis of this classification goes back as far as Aristotle.) There are approximately 35 animal phyla, 10 land plant phyla, 6 fungal phyla and 29 bacterial phyla.

MACROEVOLUTION

Without a creator, carbon-based life as we know it must have begun from small 'organic' molecules. Logically then life 'sprang into existence' either on earth or somewhere in space - if on earth then from the earliest times of the earth when such molecules could exist.

One theory proposed by Fred Hoyle (a British cosmologist) was that the earth was 'seeded' from outer space by already formed macromolecules or even bacteria-like organisms that were generated elsewhere in space. This theory was developed in an attempt to avoid God as a creator and at the same time explain an obvious hole that appeared in the evolutionary theory as a result of Elso Barghorn's and others' work on microfossils[4,5].

Some evidence supported Hoyle's view since meteorites such as the Murchison meteorite[6] were found to contain microfossils of archaebacteria (very old bacteria). However, the presence of microfossils in meteorites does not prove they came from outer space[7]. An additional difficulty with Hoyle's hypothesis is: how and where did the 'seeding' microorganisms come from in the first place? His argument is simply placing the problem of spontaneous generation of life from inert matter to a different time and locality[8]. (Interestingly the black rock of the Ka'ba is an asteroid that is supposed to be the home of Allah (Satan). He must have been developed by abiogenesis and maybe is a microfossil.)

Even assuming Hoyle's hypothesis has legs, consider the following: the earth has been in existence for about 4.5 billion years. Immediately after its formation, a cometary bombardment erased any original crust by turning the young earth into a molten ball of rock. This state lasted for millions of years until the bombardment ceased and the crust had cooled enough to support liquid water. It would then be possible for life to exist on earth and to spontaneously appear for those who believe in abiogenesis. This was about 3.8 billion years ago. So, if life occurred on earth in the manner desired by macro evolutionary theory, microbial organisms such as cyanobacteria and other species appeared from nothing within a period of at most 400 million years. This is insufficient time for the hypothesis of Richard Dawkins (a British evolutionary proponent) who claimed that tiny gradual changes could jump huge chasms in evolution in a direction of ever greater complexity using natural selection as the filter if there was an abundance of time. However, cyanobacteria are not simple in terms of their structure and biochemistry. They are orders of magnitude more complex than any inorganic molecule. On the other hand, proponents of abiogenesis have (taking into account the age of the universe and its various eons)[9] 5 billion years in which to claim inert molecules could have become living creatures so their claims may seem plausible. However, as I will show later even 5 billion years is not enough time.

The theory behind abiogenesis (or macroevolution) is that an appropriate environment stocked with appropriate chemicals and irradiated with UV light and/or lightning produces life over a very long period of time. The young earth was considered to have a reducing atmosphere. This means there was little or no oxygen; constituents were thought to be water, carbon dioxide, nitrogen, methane, ammonia and some hydrogen cyanide. Stanley Miller in 1952 designed an experiment to simulate this environment and succeeded in producing many amino acids and adenosine (a constituent of DNA). Subsequent experiments in which sulphur compounds and oxides of nitrogen were included produced all the known amino acids and most of the constituents of DNA including sugars[11]. Noteworthy is the absence from these experiments of larger molecules such as large peptides or proteins and unstable chemical intermediates[12] which are known to exist in the biochemical pathways of living organisms. As usual, the devil is in the detail – which is appropriate since we are dealing with a satanic concept.

Abiogenesis proposes the following:

- A chemical 'soup' in a reducing atmosphere at the right temperature and with energy provided by UV radiation and/or lightning
- Organic molecules that self-organize
- Organic molecules that are joined in the right sequence by covalent bonds brought about by UV light and/or electrical discharges.
- The selection by natural forces of these growing compounds with
- Eons of time until
- Life spontaneously appears.

The **chemical soup** we have already considered.

Self-organizing molecules:

A salt crystal is made of molecules of sodium chloride in a crystal lattice. Each cell of the crystal lattice is identical to the next and forms naturally from a watery solution. Ice is water in a crystallized form and likewise forms naturally. A diamond is a crystalized form of carbon atoms formed under extremes of temperature and pressure. Even organic molecules can be crystalized. In fact, one of the first to be crystalized was myoglobin – a large protein. The lenses in your eyes are made of a protein called crystalin, a tetrameric (made up of 4 parts) protein.

At any position in the crystal lattice of salt, there is a sodium chloride molecule indistinguishable from any other surrounding it. Thus, taking a pile of sodium chloride molecules (using a thought experiment of course) and placing them in the lattice to build up a crystal, it doesn't matter which molecule is chosen first, second, third and so on since all the molecules are identical. Therefore, this crystal is a low information crystal. It can form in the way described simply by the addition of atoms taken in any order. Starting with a small crystal, a large crystal can be built simply relying on the laws of physics. Each additional part of the crystal added gives no further information about the crystal. Some organic molecules can be self-organizing but

again are low information. DNA will spontaneously form a helix, but the information the DNA carries is not found in the helix itself but in the sequence of the purines and pyrimidines that make up the rungs of the ladder in the helix. Double helix DNA and RNA will fold into various shapes spontaneously, but this folding is the result of *information* carried by the order of the bases found in both DNA and RNA and by the order of associated proteins[22]. In other words, the association and folding is related to the *information* that the molecules carry not simply because they are a particular type of molecule. (In fact, for DNA to form a helix, it must have a sense strand with a *particular sequence* and an anti-sense strand containing the *mirror image* of the *particular sequence of the sense strand*.) As an aid to understanding the words on this page and the order they are written carry the information. The page is merely the medium of carriage of the information.

Proteins likewise will self-organize, but again this is the result of the sequence of the protein which itself is the result of the *sequence* of the DNA that produced it. The folding of proteins can be a tricky business. Many have to be folded in a special way to get the final thermodynamically stable and functional form. This is accomplished by special machinery in the cell. (Proteins are crystalized in the laboratory for structure determination by Xray crystallography. However, this process involves the formation of crystals from the completed molecule. It is not forming complex protein molecules by a process of self-organization.)

Fatty acids can join together in a watery environment to form myceles since they are hydrophobic. The charged end will face the water hiding the fatty interior from the water. These myceles form spontaneously and, being a soap, form in the same way soap does when in contact with water. They are likewise low information states and do not carry a code. The structure of a mammalian cell wall is somewhat like this, but is much more complex, containing proteins and other structures necessary for the functioning of the cell. The proteins in the cell wall are *high information* molecules, have folded in a particular way because of the *information* in their *sequences* and are placed there by a complex cascade of transport and docking proteins pre-programmed by *information in the DNA*.

Delving deeper into high information molecules, the grand-daddy of them all is DeoxyriboseNuleicAcid. Ribose is a 5 carbon sugar molecule. Each carbon has been assigned a number. The carbon in the number two position instead of a hydroxyl (-OH) group is missing the oxygen and is replaced by hydrogen. The next position at number three carbon atom is where the linkage to the preceding ribose molecule through a phosphate group occurs. The absence of the hydroxyl group at position 2 gives the DNA molecule greater flexibility than RNA and helps folding into a eukaryotic cell nucleus. (Interestingly, some drugs that intentionally interfere with the formation of DNA prevent the chemical bonding of one ribose to another by making both 2 and 3 positions deoxy so that the DNA cannot be made.)

DNA consists of a sugar/phosphate double helix with crosslinking rungs made up of 4 bases: Adenine, Guanine, Cytosine and Thymine. Uracil replaces thymine on RNA. The arrangement of the helix is such that adenine can only mate with thymine and guanine with cytosine. Each pair forms a rung on the ladder and is one digit. The information carried by the DNA is in the form of a *three digit* code (like the Morse code). For example**,** AUG codes for the

amino acid methionine. In most codes the first two letters are constant for the amino acid with some variation allowed for the third position e.g. AUU, AUC and AUA all *code* for isoleucine. UAA, UAG and UGA all mean 'stop' reading the *code*. One strand of the helix is the 'sense' strand and the other the 'anti-sense'[23] strand. Thus AUG which *codes* for methionine on the sense strand becomes UAC which *codes* for tyrosine on the anti-sense strand. RNA, unlike the double helix of DNA has only single strand. The single strand thus has bases that are not paired with bases on an opposite strand and so can fold into a large number of possible shapes. This allows them to perform useful functions within the cell when associated with proteins – such as transfer RNA. Double helix RNA occurs in some viruses. There are specialized proteins in our cells designed to recognize double helix RNA and to cause the cell to self-destruct when this structure is detected by a *complex sequence of signaling*.

A gene is a sequence of three digit codes built up one after the other on the DNA helix. There is a start codon (a three digit group), a stop codon at the end of the open reading frame and the *message* in between which usually (but not always) *encodes* for a protein. (It can be seen that a displacement by even one rung of the ladder may *corrupt the message* of the open reading frame.) The gene is frequently broken into exons and introns. An exon is a part of the gene. An intron is what used to be called *non-coding* or 'junk' DNA between one exon and the next. The DNA helix is usually coated with proteins such as histones which are very important and are *highly conserved*. The presence of exons give a multi-function flavor to the gene in that exons can be left out, *rearranged* or even *read backwards* to give entirely different products. The introns may be related to reading the DNA in 3 dimensions and may play a role in 'noise' suppression, reducing mutations.

A switch called a promoter is present somewhere upstream of the gene and is modulated by proteins that cover the code when not in use.

Reading the *code* is by *specialized proteins* called polymerases. When the cell divides, both strands of DNA are read by a special polymerase but since the strands, for chemical reasons, can only be read in one direction, the anti-sense strand has to be read 'backwards' in jumps.

When a protein is needed, the relevant DNA is uncovered, unwound, an RNA polymerase locks onto the promoter and then starts *reading the gene*. (This is an excellent description of the process for those interested in digging deeper: http://www.ncbi.nlm.nih.gov/books/NBK22085/ .) As it does so, it joins RNA bases together chemically to form a single-stranded messenger RNA which is later read by another *specialized* RNA called tRNA or transfer RNA. Each tRNA carries an amino acid which is specific for the codon being read. All the tRNAs are lined up on the messenger RNA where the amino acids are joined into a protein.

The fate of the protein is then determined by its function. If structural, it will carry a tag telling *transport proteins* within the cell where it is to go. If it is an enzyme or a hormone for secretion, it is passed on to a *special protein complex* for further modification and folding into its final shape which determines its function. The first folding is determined by the *sequence and the chemical composition* of the amino acids which then form either alpha helices, beta-pleated sheets, nonspecific structures or bends as the secondary structure. The tertiary structure is the

fully folded protein in its final form and, if there is a quaternary structure, associated proteins are linked to it by hydrogen bonds. Some proteins such as mucoproteins are modified by the attachment of sugars. Folding occurs inside a special protein jar with its own protein lid. When the folding is complete, the lid pops off and the functional protein is released. Improperly folded and hence non-functional proteins are recycled. (Jakob-Creutzfeldt disease is a central nervous system disease in which improperly folded, non-functional proteins cause the same but correctly folded proteins to misfold in an auto-catalytic cascade. This is called a prion disease.)

The folding occurs not because the protein will inherently self-organize into the correct shape but because the correct shape is built into the *sequence* of the protein, a sequence that is *coded* by DNA.

Each cell in the body (with the exception of red blood cells) carries all the genetic information, but not all that information is used in each cell. As the cells develop from the fertilized egg, they undergo spatial and temporal specialization. Master genes control other genes which may control even more genes. Some genes are switched off while others are switched on, producing the heart, lungs, kidneys, limbs and so on until the final body form takes shape.

The significant chemical reactions which occur in the body usually involve what are called covalent bonds. (Hydrogen bonds and van der Waal's forces also form bonds, but these are weak and are easily broken at low thermal levels such as very hot water or cooking. That is why meat changes its texture and appearance when cooked. The thermal bonds have broken, denaturing the protein but not breaking the much stronger covalent bonds that hold proteins and amino acids together. A first degree burn is caused by the unravelling of enzymes held in their functional configuration by hydrogen bonds.) Covalent bonds usually require a protein catalyst to speed up the reaction and associated molecules that support the reaction by providing energy or assisting the enzyme such as ATP for energy and vitamins and cofactors for the enzyme. The chemistry works in an environment of constant temperature and with the correct pH and electrolyte composition.

The DNA code is the same across all phyla. Many of the genes are shared for the obvious reason that they perform the same or similar functions.

This brief and by no means complete introduction to genetics shows the complexity of the cell. The additional complexity of the next step which is the development of multicellular organisms is found in many texts and in the reference books at the end of this work. I have not attempted to go into further detail as it would easily treble the size of this tome and as I have concentrated on the impossibility of the spontaneous evolution of single cells which necessarily precedes multicellular organisms it is not necessary.

It should be apparent that self-organizing molecules have either a low information state such as a crystal of water or salt and so cannot code for anything, or high information molecules that can carry a code of enormous complexity but being a code and considering the laws of probability cannot spontaneously appear. The type of difficulties the proponents of abiogenesis face is shown by the simple protein example given below. The enormous number of hypotheses

to explain in a plausible way abiogenesis shows the difficulties these people face and the knots they tie themselves up in trying to explain it. For example:

Eugene Koonin said: **"Despite considerable experimental and theoretical effort, no compelling scenarios currently exist for the origin of replication and translation, the key processes that together comprise the core of biological systems and the apparent pre-requisite of biological evolution.** The RNA World concept might offer the best chance for the resolution of this conundrum but **so far cannot adequately account for the emergence of an efficient RNA replicase or the translation system.** The MWO (Ed.: "many worlds in one") version of the cosmological model of eternal inflation **could suggest** a way out of this conundrum because, in an infinite multiverse with a finite number of distinct macroscopic histories (each repeated an infinite number of times), emergence of even highly complex systems by chance is not just possible but inevitable." (author's bold font)

To avoid the simple but repugnant idea (to them) of a creator, this man conjures up a science fiction fantasy of an infinite number of universes eventually producing the life we see about us. His hypothesis claims that our particular universe is (at least) one that has produced what he wants to be true. The others have missed out and cannot be known by us. None of this is, of course, scientifically testable and will therefore always remain in the realm of science fantasy.

Then there is the pre-RNA world: **"It is possible** that a different type of nucleic acid, such as PNA, TNA or GNA, was the first to emerge as a self-reproducing molecule, only later replaced by RNA." Larralde et al., say that "the generally accepted prebiotic synthesis of ribose, the formose reaction, yields numerous sugars without any selectivity," and they conclude that their "results suggest that **the backbone of the first genetic material could not have contained ribose or other sugars because of their instability." The ester linkage of ribose and phosphoric acid in RNA is known to be prone to hydrolysis.** (author's bold font)

And: The Iron-Sulphur world theory: "The energy released from redox reactions of these metal sulfides is not only available for the synthesis of organic molecules, but also for the formation of oligomers and polymers. It is therefore **hypothesized** that such systems **may be able** to evolve into autocatalytic sets of self-replicating, metabolically active entities that would predate the life forms known today. The experiment produced a **relatively small yield of dipeptides (0.4% to 12.4%) and a smaller yield of tripeptides (0.10%) although under the same conditions, dipeptides were quickly broken down."** (author's bold font)

Dipeptides are two amino acids joined together by a covalent bond a tripeptide is three. Redox stands for reduction/oxidation, a reaction which may produce a lot of energy. An oligomer is a short chain of identical units a polymer is a very large (theoretically unlimited) number of identical units. It is worth noting that as the number of amino acids in the peptides increased there was a significant decrease in the amounts produced e.g. between 0.4% to 12% for dipeptides to 0.1% for tripeptides. Would quaternary peptide yields be 0.01%? Were any produced? What would be the yield of a protein of, say, 100 amino acids even without considering the sequence of amino acids in the protein? The authors also noted that the dipeptides were unstable.

And so on…

It is obvious by now that biology is immensely complex, and its sheer complexity screams out the need for a creator. Yet, we are told that even 'simple' organisms like cyanobacteria sprang into existence all by themselves. These people, getting around in drag with their PhD bonnets placed firmly on their heads to show their rabbi status, must be some of the most deceptive people on the planet. They claim to be scientists with open minds, willing to go where the evidence takes them, but instead they thrash around looking in the most fantastic and grotesque corners for pantomime explanations while the obvious explanation, though staring them in the face, is studiously ignored. Occam and his razor have fallen out of fashion it would seem.

This site summarizes the enormous amount of mental masturbation enjoyed by those trying to prove abiogenesis: https://en.wikipedia.org/?title=Abiogenesis

To finish this section, I will provide a quote from Sanford[18] (Genetic Entropy page 3).

"A complete human genome consists of two sets of 3 billion individual 'letters' each. Only a very small fraction of this genetic library is required to directly encode the roughly 100,000 different human proteins and the uncounted number of functional human RNA molecules which are found within our cells. Each of these protein and RNA molecules are essentially miniature machines, each with hundreds of component parts, each with its own exquisite complexity, design and function. But the genome's linear information is not enough to explain the complexity of life.

As marvelous as all this linear information is, it must only be the first dimension of complexity within the genome. The genome is not just a simple string of letters spelling out a linear series of instructions. It actually embodies multiple linear codes, which overlap and constitute an exceedingly sophisticated information system, embodying what is called 'data compression'.

In addition to multiple, overlapping, linear, language-like forms of genetic information, the genome is full of countless loops and branches – like a computer program. It has genes that regulate genes that regulate genes. It has genes that sense changes in the environment, and then instruct other genes to react by setting in motion complex cascades of events that can then modify and methylate other gene sequences – basically changing portions of the instruction manual!

Lastly, there is good evidence that linear DNA can fold into two and three-dimensional structures (as do proteins and RNAs), and that such folding probably encodes still higher levels of information. Within the typical non-dividing nucleus, there is reason to believe there may be fabulously complex three-dimensional arrays of DNA whose 3D architecture controls higher biological functions."

Selection by natural forces reveals a big problem for macro-evolution.

As shown above, for a strand of DNA or RNA or protein to form that has a useful function, it must have a *particular sequence*. Some variation of this sequence could occur with some loss of function but one iron law of natural selection is that only the fittest survives. Therefore a less functional sequence would be eliminated unless it could provide some other survival benefit. Since we are discussing a single molecule in a soup kitchen with an entropic environment and with the inability to replicate itself (see later) it is difficult to see what this benefit could be.

When working in molecular biology, I produced a protein called apolipoprotein C1 which is a small protein of 57 amino acids. In the human body, it helps regulate lipid transport. To be functional, it had to have the right sequence (though the restriction points were allowed a little variation to allow for the restriction enzyme). Now consider the primordial soup in the production of this tiny protein. The first amino acid might be a serine, followed by a glycine and so on. The soup will have a very dilute mixture of the relevant amino acids, some of which may be relatively abundant, some relatively rare.

The first amino acid is chosen at random (remember natural selection means there is no one to give it direction – it is merely a chance event - or first come, first served). Since living organisms with a few exceptions use L amino acids (levo rotating i.e. a left handed isomer since amino acids can be mirror imaged), half of the soup of amino acids is not usable. So the soup is even more dilute before we even start.

Twenty different amino acids are available, so there are twenty ways of picking the first position. The next position also has 20 ways of choosing an amino acid since any can be chosen for each position and there is a soup with multiple copies of all amino acids. Now we have a problem: how to join the two AAs (amino acids). In biological chemistry, the two are joined with an enzyme which forms a covalent bond by joining the amino group of one AA to the carboxyl group of the second with loss of a water molecule. Energy is needed to do so. But this is the first protein to be made (the same construction problems occur for all proteins in the soup so which came first doesn't matter). We could envision a helpful UV photon or a bolt of lightning coming along at just the right instant when the two AAs are lined up to somehow form the covalent bond. Since we have 20 AAs to choose from, then for just a tiny peptide of 2 amino acids we have 20 by 20 ways the AAs could be chosen from the soup. The probability of getting it right is 1 divided by 20 squared or 1 in 400. So on average, to get to just 2 particular AAs covalently joined 400 tries must occur.

A protein of 57 amino acids can be made in 20x20x20x20….x20 or 20^{57} ways. Rearranging, this results in 10^{74} ways. This is a number greater than the known number of fundamental particles in the universe. There are 31557600 seconds in a year. So, if 100 random trials per second occur in 10000 soup kitchens around the planet (10^6 completed proteins per second) with suitable ingredients and lightning/UV, the time taken to complete all possible protein combinations is about 10^{68} seconds. The age of the universe is approximately 4.7×10^{17} seconds!!! The probability of choosing any particular protein (in this case apolipoprotein C1) from 10^{74} possible different proteins in our example is the reciprocal of this number and is vanishingly small. This calculation assumes each random trial produces a unique protein with

each trial. In fact, for chemical and thermodynamic reasons it is likely that some versions would be produced in greater numbers than others and some may be so unstable they fall apart almost immediately. So the above figure is a lower limit for the time needed. The above argument is full of positives and negatives for a macro evolutionist. The target protein may be made very quickly simply by chance but then it has to actually do something. By itself it has no function, no reason for being. On the other hand the macro evolutionist may argue that many possible proteins with other uses may be made by chance and could be co-opted into a useful structure or chemical pathway. This is certainly plausible but there has to be a mechanism whereby co-option could occur. Self-assembly into a larger dynamic complex assumes the simultaneous creation of the right proteins in the same locality, all with the correct sequence. The size of apolipoprotein C1 is small when compared to most proteins in the body. Most are very much bigger. Many require associated ligands to have a function. As can be seen from the Iron-Sulphur world theory above the law of diminishing returns is implied by the peptide yields. So, taken together the probabilities of the spontaneous formation of any useful protein happening by chance – for chance it must be – become prohibitively small. Even increasing the number of proteins produced per second by a million million fold would not touch the sides.

Similar arguments as described above apply to DNA and RNA. In fact for them it gets even worse. A similar analysis requires that we also have to take the 4 bases of DNA and the formation of codons into account. Imagine the probability of making the p53 gene (a major human tumor suppressor gene) of 53000 daltons or 393 amino acids or better still a cyanobacterium[14] which has a genome, depending on the strain, of about 2×10^9 base pairs. (The human genome is 3.5×10^9 base pairs.)

The above analysis is based on the assumption that the entire amino acid sequence of a protein is required for the function of the protein. This is not necessarily true. In many proteins, there are highly conserved areas and areas in which greater variability is allowed. An example is, again, p53 which has a number of highly conserved sequences, one being 1 to 44 of the AA sequence and another 102 to 292 of the AA sequence[15,16]. Any change (e.g. mutation) to these regions degrades the function of the protein or it loses its function altogether. Evolution requires that less fit organisms (with less fit genes and hence proteins) do not survive to pass on their genes. Further, the above analysis is fatal to Fred Hoyle's panspermia hypothesis. No matter where the process occurs in space, the same probabilities and laws of physics limit what can occur in the time available. Since we have shown that the time taken to form even a small protein, let alone a fully functional organism, is greater than the age of the universe, statistically it is impossible for panspermia to have occurred.

But wait, there's more. Assume DNA has somehow stitched itself together and has come up with the correct sequence to be functional. Remember 3 bases are required to make one codon which represents one AA and there are 4 bases (two purines and two pyrimidines). So there are 4x4x4 or 64 ways of choosing the bases to make one codon. Considering apolipoprotein C1, when the DNA that codes for it is taken into account, the very large number we derived above must be multiplied by 64.

But wait, there's more. Once the DNA has formed, how is the code read to express the protein? How is a copy made of the DNA? (See above under Eugene Koonin.) In biology, these functions are highly directed and require multiple protein hand maidens to enable them to occur. The complete repertoire of these hand maidens would not have been present in the soup kitchens since they would have had to be made from scratch as well.

Let's not forget thermodynamics. Entropy tells us that globally randomness and disorder is everywhere increasing. A highly ordered structure with time becomes disordered. We see that around us all the time. We do not see locally the spontaneous increase in order (or decrease in entropy) unless there is an input from an intelligent being. Even then disorder globally is still increasing in our 3D universe. The heat equation gives an example of this progressive degeneration. A cup of hot water cools with time. Even though the water may have been boiling to begin with, energy dissipates from the cup, the heat (being electro-magnetic radiation) loses its higher and more energetic frequencies which can do useful work trending towards low energy, long wavelength electromagnetic radiation which below a certain practical level can't perform work for us at all[13]. An example for understanding at a more practical level is the 3 stage steam turbine. High energy steam is able to turn the first set of blades easily even though they are small. By the time it reaches the last set, most of the available energy is gone so the blades have to be much bigger in diameter to gather all the available remaining energy.

So the proteins, DNA and RNA once formed in the soup kitchens will just sit around doing nothing until a photon of UV light or a lightning bolt or hot magma breaks the covalent bonds and the protein/DNA/RNA falls apart. Basically, they are unstable. (See above under pre RNA world.) Then we have to start all over again.

A more detailed discussion of some of the chemical hurdles the macro-evolutionary theory has to overcome can be found in Michael Behe's *Darwin's Black Box*[12].

When the above is considered with all the known facts of chemistry and biology an obvious question arises: The Miller experiment and subsequent experiments produced basic molecules found in all life forms but have any experiments shown the formation of macromolecules that have the ability to self-assemble and that are made up of random sequences of DNA, RNA or proteins? Not only would this be the next logical step but would also be a necessary step to proving that life could self-assemble from nothing but basic chemistry. I know of no experiments that have been performed resulting in the random production of fully formed proteins, DNA or RNA or, if they have, no results have ever been published.

A 'simple' experiment would be to place a single strand of DNA of known sequence in solution with DNA bases produced by modified versions of the Miller experiment and provide energy in the form of UV radiation or electrical discharges. PCR technology now allows us to amplify even tiny amounts (down to one molecule) of DNA. If DNA self-assembles under those conditions such that a *complimentary* copy of the template DNA is produced, it would be strong evidence that production of life in that way is possible – even allowing for the question of where the template DNA came from. That such an experiment has not been attempted (or has failed) is

telling. My bet is it would not work. A more likely outcome would be degradation of the template DNA.

A further problem for Richard Dawkins in macroevolution is the concept introduced by Michael Behe of irreducible complexity. He uses the example of a mouse trap to show that if anything is missing from the device it will not work. The result is that it is not possible to build a mousetrap by small progressive steps, each step along the way being functional in its own right to catch a mouse. The mouse trap is analogous to a biological machine that carries out a particular function and is irreducibly complex. The concept has been criticized successfully but only in the realm of microevolution where a large assemblage of similar component molecules could be pressed into service. (This is well explained in Mike Gene's book *The Design Matrix* page 220. In fact the criticism of Behe's thesis ironically lends weight to the concept of front-loaded evolution.) Cooption of function was the successful method of criticism. Cooption occurs where there are a number of proteins carrying out different functions in the cell which when co-opted together act as an irreducibly complex machine in making their new product.

In the realm of abiogenesis this argument fails since it is climbing mount impossible to make just one protein let alone a whole swag of proteins capable of being co-opted to another function.

Eons of time are something evolution does not have as has been shown above. Richard Dawkin's concept of *Climbing Mount Improbable* by gradual random changes over long periods of time has been shown to be impossible as, at most, he has had only about 400 million years in which to bring about abiogenesis. Most of the documentaries I have seen concerning the beginnings of life either ignore abiogenesis altogether (such as a recent documentary by David Attenborough which starts with the Ediacaran fossils – found in the ancient rocks of South Australia – just before the Cambrian 'explosion') - or treat it superficially, sometimes quoting Miller's experiment or with hand-waving and vague references to pseudo-science skip over the beginnings. Details of the changes and complexity of the earliest organisms are missing.

The time of creation of the archaebacteria to the Cambrian Explosion is of the order of 3 billion years. (Many of these organisms lived in rocky colonies called stromatalites, fossils of which exist in Greenland and which can still be seen as living colonies in Shark Bay Western Australia.) During that time, these organisms produced oxygen by chemically fixing the atmospheric carbon dioxide as plant material. Oxygen is dissociated in the upper atmosphere by incoming cosmic rays and UV forming ozone which acts as a shield against the most lethal of the sun's ultraviolet radiation, thereby allowing life to flourish. The early atmosphere was almost certainly like that of Venus today – full of (to us) poisonous gases, oxides of sulphur and nitrogen, carbon dioxide, the combination of which made the atmosphere opaque. Were it possible to stand on the surface of the earth in those days, the sun and the moon would not have been visible though the presence of the sun would produce a uniform light, the origin of which could not be seen. Through natural processes and the actions of archaebacteria the atmosphere gradually cleared until the sun, moon and stars became visible as distinct objects.

(The origin of the moon is uncertain. There is some evidence it may have resulted from an impact by a planetoid big enough to eject material down to the earth's mantle. This debris then accreted into the moon which in early times was much closer, producing massive tidal forces in the oceans and earth's crust which would have resulted in extreme tide heights, earthquakes and volcanic eruptions with associated tsunamis.)[20]

The difficulties of the macro-evolutionary theory as described above can be found in many publications. An example is: http://creation.com/why-the-miller-urey-research-argues-against-abiogenesis

MICROEVOLUTION

Microevolution assumes the prior creation of life by a sentient being (as we have shown macroevolution is impossible) and involves adaptation of the individual to the environment through modification of the genome. It is obviously true by simply observing adaptation all around us. The Cambrian Explosion is one possible boundary between macro and microevolution, though arbitrary, as microevolution had already occurred at the time Yah created the archaebacteria. However, since not much change occurred for billions of years, we didn't see multicellular organisms (the next major step that allowed rapid species change) until the time of the Ediacaran fossils just before the Cambrian explosion. All the current phyla appeared at the beginning of the Cambrian period about 550 million years ago. The time this took has been estimated at about 5 million years. From Yah's perspective this would have been less than 3 minutes (5 million divided by 15 billion, multiplied by six 24 hour periods). This was a time when Yah found it necessary to intervene in earth's history to produce the outcome He wanted.

Microevolution, as proposed by Darwin, is not just a fact of life but a necessary mechanism for continuing life on earth. The universe is quantum mechanical and hence chaotic. The earth's weather system is chaotic and cannot be predicted more than a few days in advance and even then the forecasts are frequently wrong. The equations that govern fluid dynamics are called the Navier-Stokes equations. Coupled with boundary and initial conditions they are non-linear partial differential equations which have poles and zeros (the solutions tend to get infinitely large or infinitely small) and can't be solved in closed form. Hence wind tunnels are needed to simulate aircraft dynamics or massive supercomputers give approximate solutions good enough to enable us to fly. Traffic flow is modelled using simplified versions of these fluid dynamical equations.

Heisenberg's uncertainty principle sets a limit on what we can know at very small scales, so that we can't know where a subatomic particle is if we know its momentum and vice versa. This is really part of quantum mechanics which tells us that simple yes-and-no answers are not possible: that there is a maybe in between; that events occur as the roll of a dice. (Einstein is reputed to have found this idea very unsettling.) The stock market is an unpredictable chaotic system. Human behavior likewise.

All mass has a de Broglie wave associated with it (including us) so that we can't be absolutely certain of the position of anything down to infinitesimally small levels. At our scale this is not apparent but is there nonetheless and globally this adds to the physical uncertainties. Other strange things are the two slit experiment and entanglement. The first is a famous experiment that shows light can act as a wave or a particle depending upon how it is viewed. Entanglement is the apparent transmission of information faster than the speed of light for when two particles are separated by even large distances a change in the spin (a physical quantity) of one immediately produces a change in spin in the other.

The universe is stranger and more complex than we could ever imagine.

The consequence of this discussion is we can't predict any outcome with clockwork precision as Newton assumed. It is possible to have a generally correct answer but there are always surprises. Chaos theory and some experiments in the chaos of fluid dynamics suggest there are areas of order and partial stability within the chaos in which we exist.

I believe Yah has created the universe in this way so that free choice is available. Even He can't predict the outcome from the beginning but He can maneuver in time to intervene when necessary. If He can't see the outcome of our actions and chooses not to He won't be able to see our transgressions and so when the universe is folded up and destroyed those in the covenant will appear to Him pure and white. (A perfect conjugation in Hebrew corresponds to Newton's clockwork universe and an imperfect conjugation to Yah's.)

Returning to microevolution, it is apparent from this discussion that the designer of any machine in this universe is confronted by two problems. One is the unpredictably changing nature of the environment in which the machine must function and survive; the second comes back to thermodynamics in that all machines, no matter how well made eventually fall apart. If the DNA code has front-loaded variability[17] so that it can adapt to the environment, each successive generation can change when necessary. In other words thermodynamic problems are overcome by reproduction. Reproduction occurs either sexually or by parthenogenesis (non-sexual reproduction from Parthenos 'virgin' and genesis 'origin'. Yahowsha' was born in this way).

Sex has many advantages over parthenogenesis. The latter does not allow variation as it is simply the same genetic code and hence cannot adapt. People see sex as fun and excitement. We all like romance (well, most of us do). With sex, random gene shuffling can occur, producing in the next generation small changes that allow adaptation to changes in the environment. Of course, there will be winners and losers. The losers will be disabled, disfigured or deformed in some way or have a disease that reduces or eliminates their chances of passing on their genes. The winners are the 'beautiful' people, birds or beasts that are attractive to the opposite sex, beauty being defined as fitness – in humans this may be strength, physical attractiveness, power, wealth or intellectual ability. (My own belief is that 'love at first sight' is actually the response in the brain of the beholder to a pre-determined map of the genetic makeup of an individual as expressed by the morphology of his/her body.)

Most organisms use sex to reproduce but a few organisms and plants do so by parthenogenesis.

Mike Gene in his book *The Design Matrix* advanced the idea of front-loaded evolution. The presence of genes in ancient single-celled organisms that are only used by multicellular organisms is strong evidence that protozoans are front-loaded to become multicellular. One example is the presence in single-celled Ascolobus and Aspergillius of H1 linker histone proteins used in DNA packaging in all eukaryotes (multi-cellular organisms). They are not essential for the survival of these single-celled organisms. Another example involves the single-celled choanoflagellates. Sean Carroll of University of Wisconsin found protozoa with a molecular sensor (a tyrosine kinase) normally found in animals. From their paper: "In marked contrast to their simple lifestyle, choanoflagellates express members of a wide variety of protein families involved in animal cell interactions, including cadherins, C-type lectins, tyrosine kinases and a G protein-coupled receptor, as well as several multidomain polypeptides that contain protein-protein interaction domains involved in signaling and adhesion in animals [such as the epidermal growth factor motif, Src homology 2 domain, tumor necrosis factor receptor domain]….(pages 264-5)[17]."

These findings are strongly suggestive of front-loading single-celled organisms to prepare them for multicellular life which leads to microevolution.

A concept spanning macro and micro evolution is the idea of gradual changes in adaptation. Richard Dawkins in his book *Climbing Mount Improbable* is a proponent of this idea. Its central thesis is that no matter how difficult, steep and high the mountain that must be climbed, if done in small steps it becomes possible. The story goes that small mutations occur in the genome which lead step by step smoothly to a desired outcome – adaptation to a changed environment. (Another variant is leaping an impossibly wide gully – again done in small steps. Michael Behe does a very good job of demolishing this notion in his book *Darwin's Black Box* and is highly recommended reading.)

However, most mutations that occur are silent in that they have no visible effect on the individual. Additionally there is a ratio of many hundreds of thousands or millions to one of deleterious mutations to beneficial mutations. J.C.Sanford[18] in his book shows that not all mutations have an effect on the ability to adapt: "…*standing between a nucleotide (the part that is mutated) and an individual are many different levels of organization. For example, a single nucleotide may affect a specific gene's transcription, which may then affect mRNA processing, which may then affect the abundance of a given enzyme, which may then affect a given metabolic pathway, which may then affect the division of a cell, which may then affect a certain tissue, which may then affect a whole organism, which may then affect the probability of reproduction, which may then affect the chance that this specific mutation gets passed on to the next generation. …There must be a vanishingly small correlation between any given nucleotide and a single organism's probability of reproductive success.*" This is the problem of the princess and the pea – but in reverse. In this case the princess (the individual) cannot detect the pea (the mutation) through the layers of mattresses.

The implied idea behind Dawkin's theory is that beneficial mutations are relatively common. In fact as Sandford, Behe and Mike Gene show beneficial mutations are rare whilst harmful mutations are not only common but always involve a loss of information. Beneficial mutations being rare make headline news. Frequently quoted is the case of the mutation resulting in sickle cell anemia. This disease affects the globin molecule in the red blood cells, deforming the cells and thereby reducing their oxygen carrying capacity as well as the ability of the cell to pass the small capillaries. It is certainly true that this mutation does confer a survival advantage in that malaria cannot survive in the mutated red blood cells but there is still a loss of information and a weakness in the individual that if expressed in a homozygous state (i.e. both parents carry the gene on one chromosome and these genes are given to the child) results in the early death of the affected individual. So it is certainly harmful to the reproductive ability of a population and it is then really beneficial?

A further problem is that the climb up Mount Improbable is neither linear nor smooth. Mount Improbable is depicted as a single smooth peak, a bit like a normal distribution rotated about the y axis. In reality Mount Improbable has a highest peak but many lesser peaks leading to the highest point. There may be steps up but a peak may be reached where a backtrack and a sideways move is needed. This means undoing the previous good work needed to get to that lesser peak but here another problem is exposed. Evolution is harsh on non-adapted individuals. Going backwards in evolutionary terms is loss of fitness so eliminating the beneficial mutation and reducing the likelihood of survival of the individual. This backtracking may require many reversals, each of which must somehow be overcome before going on again. This analysis may have given the impression that evolution has an outcome in mind. This is not so. It is totally blind – or random. We see the outcome (the mountain peak) as beneficial only in retrospect; if it were not we would never know as it would be eliminated by natural selection.

So we come back to front-loading evolution:

An intelligent designer (such as Yah) might seek to enlist and exploit random mutations and natural selection. This is achieved by front-loading which is designing the DNA at its creation in such a way that a specific outcome is likely at some time in the future. Front-loading does not allow for a prediction of specific outcomes at a specific time and place but does allow that specified outcomes can be made much more likely. "...Front-loading by definition is about designing the future through the present (page 147)[17]". We know from the arguments concerning macroevolution that Yah designed the first organisms – Archean micro-organisms - some 400 million years (or sooner) after the end of the cometary bombardment. The first organisms were bacteria capable of living in an environment that would instantly kill oxygen breathing animals. It took billions of years to clear and change the atmosphere such that the next stage of life on earth could begin. Whether Yah front-loaded the information into the genes of the archaebacteria or He intervened to change the course of microevolution at the Cambrian explosion is open to debate. Whatever the answer, somewhere the genetic code was programmed by Yah to change in a direction of greater complexity apparently against the laws of thermodynamics i.e. entropy. Couple this concept with islands of stability (or order) within a chaotic dynamical system (which is what evolution is) and we have potential triggers for gene expression and mutations that allow

a sudden jump in evolution to a different species or a greatly improved version of the same species.

An island of order in a sea of chaos may seem a strange notion. There is a lot of experimental and theoretical evidence concerning chaos theory[19]. In fluid dynamics an area of tranquility can spontaneously appear in roiling turbulence and then just as quickly disappear with small changes to the physical parameters. The characteristics of chaos are: sensitivity to initial conditions, unpredictability, never repeating, allowing short-term but not long-term predictions, association with trajectories that even though apparently close may diverge radically as time passes and association with fractal patterns (such as the Mandelbrot set) and strange attractors (such as the Lorenz attractor). It is a highly mathematical discipline and it can be shown that chaos can only exist in dimensions 3 and higher. (The last result may be significant in that Yah may exist in a chaotic dimension that, because it is unpredictable, will allow an infinity of exploration and discovery that is never repeated). Because we live on an island of stability in an ocean of chaos we are not aware how close it is to touching our lives. Chaos is in the weather, the stock market, road traffic, people en masse, fluid flows, physics, biology, even the sun. The 'cantor dust' (page 93)[19] produces random noise in electronic circuits generated through chaotic mechanisms. Aircraft wing vortices that can flip an aircraft upside down are related to a strange attractor and so on...

Returning to microevolution it can be seen from the above discussion that entropy will increase in a chaotic system such that the genome of a species will degenerate. Then combining Yah's front-loaded design with chaos, as time advances, an island of stability will appear spontaneously in which a genetic change of significance will suddenly occur. The resulting species of animal or plant will prosper for a while until entropy again produces a mutational load that eventually drives the organism to extinction. (The spontaneous and sudden changes in species may also be related to micro-organisms, in particular viruses. A virus is in biological terms simply a piece of DNA or RNA which could be considered malicious. These life forms – if they can be called alive – can't reproduce without a living cell. They enter the cell, take over the machinery of the cell, copy themselves and then depart the cell en masse to infect other cells. (They sound like muslims.) Obviously they are very destructive (like muslims) but they have one very useful function. They transmit genetic information within and between species. For example, pieces of genetic material picked up by a bacterial phage virus can transmit this genetic material to other bacteria. Why have viruses and bacteria at all? One reason has already been dealt with in macroevolution and the clearing of the earth's atmosphere. Viruses can speed up evolutionary adaptation and bacteria are essentially the 'clean-up' crew needed to remove unfit individuals and dead bodies, recycling them.)

We see the effects of chaos in the evolutionary record. Though some species may be destroyed by a massive natural disaster (at the end of the Permian period about 250 million years ago some 95% of life on earth was wiped out. The cause is not known but thought to be

atmospheric changes from volcanic eruptions) most seem to have declined and gone extinct in a seemingly benign world. Even the dinosaurs were declining before the asteroid event 65 million years ago, an event which does not explain the disappearance of all ammonite species while the coelacanth still survives to this day.

The degeneration of the human genome from the time of Adam and Chawah has been well documented by Sanford[18]. From the time of the garden, longevity has decreased from nearly a thousand years to less than a hundred today. This appears to be due to the shortening of the chromosomal telomeres (the ends of the chromosomes) and may have been programmed by Yah. On the other hand we appear to have become more long-lived since medieval times but this is an illusion. The genomes of our forebears had fewer mutations than ours. Their lives were shorter because they had no understanding of the nature of communicable diseases nor the ability to treat them effectively, nor the food supply, nor even some of the technology and scientific advances that make life today so much easier. (I'm sure the last will be vigorously debated.) As we now bump up against our 'natural' life span we see more of the degenerative diseases found in old age which would not have been so common in earlier societies when people died younger as a result of disease or malnutrition. Of course, mankind's evil nature has not changed. If anything it is worse and has devolved to the time of Noah. The kind of short-lived, violent and poverty-stricken society of medieval times can be seen in the primitive living-fossil societies of Islam. As this cancer and the cancers of Christianity, Judaism and socialist secular humanism hollow out our societies we are devolving backwards as well. Who said evolution only goes forwards to better and better things?

You, the reader, are near the end of my short overview of the evolution of life on earth. Questions such as 'what is life?', 'what is a soul?' have not been addressed as they are not directly related to the physical development of life according to the parameters set by the theory of evolution. We have simply assumed that something called life exists as distinct from inanimate objects. The very word inanimate gives us a clue: not animated, not able to respond to the environment. Is life then simply the right ordering of molecules and atoms such that a creature exists that is able to respond to the environment?

If we look at the analogy of a computer that appears on the surface to be true, ignoring how the computer came into being for the moment, we know there is an additional component that allows it to interact in a limited way with the environment – software. I say limited because our programs are still primitive. Software 'animates' the computer. Software is not physical. If you added a program to a computer you could not detect even the slightest change in mass. In religious terms you could call the software a soul.

Note that the software did not appear spontaneously in our example of the computer. So could software evolve? At the molecular level of life that is clearly impossible. Molecules simply interact according to the laws of physics and chemistry. (I suppose, upon reflection, you could call these 'laws' software.) At a higher level of organization we know e.g. that an amoeba will move away from an unpleasant stimulus or towards a pleasant one such as food. As we have demonstrated that Yah created the most 'primitive' life, He doubtless included programs of animation. Logically then, since microevolution is front-loaded and there is no further input from

the creator, then the ability to evolve a soul for all forms of life must have been front-loaded as well. Even some plants have very primitive avoidance mechanisms (though we don't have triffids yet). Thus the physical microevolution and the metaphysical microevolution must have gone hand in hand. Primitive man eventually evolved with a sophisticated program (soul) which in Hebrew is called a nepesh. In computer terminology this is an operating system. In man, a very advanced and sophisticated system but still only an operating system. To get past the point of responding only to the basic needs of food, shelter, sex and survival, primitive man needed something else. He needed in Hebrew the nesamah (in computer terms a plug-in). The nesamah was first given to Adam and from him the rest of humanity. This gave us the ability to think abstractly, to form concepts without apparent benefit and beyond the basic needs. It gave us the ability to wonder about the woods and trees around us without seeing them only as a source of danger or food. We could wonder at the sun, moon and stars and think about how they got there. We could think of a creator for everything we see, hear and feel. It gave the ability to detect the difference between right and wrong, good and evil and it gave the ability to choose between them. It gave free will. With a nesamah, we are still animals but with the ability to raise ourselves above the beast and to interact with the creator.

The nesamah, then, would have been transmitted in the same way a nepesh is transmitted after Yah gave the nesamah to Adam and Chawah. So when they were ejected from the garden, they mated with the surrounding men and women, transmitting the nesamah down through their generations. To do this the nesamah 'gene' would have been dominant. The ability to think and plan ahead that the nesamah gave these people meant they could (and did) wipe out their human rivals both with the nesamah and without. So then we came to the time of Noah.

Evolution by definition is a brutal process. Life for most is short, brutal and over quickly. So why did Yah create the universe in this way? I believe He did because, to carry out His purpose, He had to. Muslims believe their 'god' (Satan) is unlimited in anything he can do. His will is arbitrary and fickle; to them he can make black white, 2 plus 2 equal 5.

Such a 'god' would be the very definition of chaos. Even the process of thinking, of logical thought, could not occur because in our world we rely on the laws of physics to remain constant and unchanging.

The real God is, in fact, constrained by parameters that could be called universal. Logic and reason must be universal parameters for order to exist; likewise 2 plus 2 must always equal 4, not around 4, not a fuzzy 4, just 4.

If Yah wanted to reproduce Himself by having a family, how would He do it? The duality of order and disorder (good and evil) are universal. God is a god of order. He wants an ordered family. He could just create a clone of Himself and get a family that way but that would be like addressing yourself in a mirror. Your other 'self' always answers back in the way you would (and you know exactly how even before the other 'self' has opened its mouth) and is to all intents and purposes identical in thought, actions and appearance. That is clearly pointless. You might as well stay alone as have an echo chamber of your own thoughts. In a way it might be another form of hell.

So a being slightly different from you to be interesting but with your desire for order (good) must be created. But how? By creating a being with your ability to use logic and reason and that has the knowledge of order and disorder and can make a choice between them. (Disorder doesn't necessarily mean total chaos. There is a continuum from order to chaos with mixtures of both good and evil - order and disorder - so the individual and system the individuals create can still function but at lower efficiency.)

Those who have an enquiring mind, imagination, enjoy discovery, have the geography and genes implying a family background that allows an open mind and are willing to invest time to seek out a creator will do so as they will come to know there must be one. His name is Yahowah and his means of communication is the Torah. Those without the above characteristics will not and will be discarded. They may have a pleasant but limited life and after that they and their nepesh are no more (*Mizmowr* / Song / Psalm 1:4, 5:5-6, 103).

Those with the 'correct' characteristics are who Yah is looking for. They are like but slightly different from Him, able to think and act independently yet enjoying order all the time. So in this sense microevolution is a sieve filtering out the gold from the dross. He knows His family members and will act to protect each one. He doesn't know the rest because they do not know or want to know Him. Would you act to protect the family of someone hostile to you (someone who may be a member of Satan's family) when you have your own family to protect?

The dross is discarded. Yet the dross (thinking humans but with the wrong way of thinking) would, of course, like to live forever in the way they think is best. Who wouldn't? So when Yah appeared in diminished form as Yahowsha', He selected those with the right way of thinking and at the same time spoke to the others in such a way that they could not be saved as they did not understand who He was and certainly did not and could not know Him. (*Mattanyah* / Yah's Gift / Matthew 13:15, *Yahowchanan* / Yah is Merciful / John 12:40)

Much of the above is speculation on my part and therefore could be wrong. Yada (the author of *Yada Yah, An Introduction to God* and *Questioning Paul*) has made specific predictions based upon the Torah, Prophets, and Psalms. If you, the reader, decide not to accept some or all of what he and all those who have contributed to the understanding of Yah's word have written, that's Ok. That's your choice. You may recall that in the section on self-organization, I castigated those who put forward scientific hypotheses that could never be tested. Such ideas are science fiction, not science. However, what we have written is a testable hypothesis. Not directly but indirectly. You have to wait no longer than October 2033 to see if we are correct. If we are, Yahowsha' will return and any arguments about evolution physical or metaphysical will be moot. If we are wrong, then life will continue until we all die in a nuclear conflagration or we die naturally, after which we will know nothing and, of course, not care whether you think we're nuts or not. Either way there's only 18 years to go from the time this was written. Before then, I believe you will see signs along the way that should make you think.

One final thought: As a theory, macro-evolution is one of the Adversary's greatest triumphs. It gives those who hate Yah an intellectual basis for their belief in the religion of man and a convincing story to mislead children and students, leading them away from the greatest gift

they could receive. For indeed, superficially and even at a deeper level, the theory is enticing. It is only when examined at the molecular level that it falls apart and its satanic origins become visible to those with eyes to see.

Recommended reading:

Michael Behe: Darwin's Black Box

Michael Behe: The Edge of Evolution

J.C. Sannford: Genetic Entropy and the Mystery of the Genome

Mike Gene: The Design Matrix

Gerald Schroeder: The Science of God

James Gleick: Chaos

John Lennox: God's Undertaker

References:

Molecular Biology of the Cell: Alberts et al

Biochemistry: Voet and Voet

Foot notes:

1. Second generation stars contain most of the elements of the periodic table. When these elements are superheated in the star's atmosphere, characteristic bands of light are emitted that provides a signature to us indicating the presence of each element. When light from the star is passed through a prism, the light is broken into bands of lines characteristic of each element. Each of these lines is really a narrow grouping of electromagnetic waves which undergo stretching (called the Doppler shift) when the source of the EM waves is moving away from us. This is the basis of the red shift i.e. the characteristic group of wavelengths associated with each element is shifted to the longer wavelength end of the EM spectrum – or red shifted.

2. This is not to say we are at the center of the universe – the movements of the stars are simply relative. As an aid to understanding, the universe could be considered to be the surface of a balloon on which all matter is located. As the balloon is blown up the membrane stretches and the 'galaxies' on the surface move apart. The reverse happens as the balloon loses air.

3. The age of the universe is obtained through astronomical observations and is related to its scale. All observations have an error that gets larger the further the observations are extrapolated. For nearby stars, simply geometry can be used to determine their distance. The position of the star is observed twice, six months apart so the baseline measurement is thus the size of the earth's orbit, leading to a fairly simple calculation of distance. Further out we use very bright

stars called cepheid/RR Lyare variables. The cepheid and Lyrae stars are rotating, their light coming to us like light from a lighthouse. There is a known relationship between the period of rotation and their absolute brightness enabling a reasonably accurate measure of their distance from us using a known theoretical equation. The distance to nearby globular clusters (of stars) with visible cepheids could be estimated and then the brightness of the cluster could be used to estimate the distance to clusters further away where individual cepheids were not visible. So it can be seen that measurement errors are going to compound the further out we try to go. Other errors such as the sensitivity and accuracy of the recording medium in the telescopes, interstellar dusts and so on increase the uncertainty. The Hubble telescope has improved the observations but the bottom line is that our observations of the age of the universe could be out by at least +/- one billion years.

4. Precambrian Research, 5 (1977) 121--142

5. Science News August 22, 2011

6. Perspectives in Astrobiology: Hoover et al 2005

7. Microfossils found in meteorites may have come originally from the earth for the following reasons:

a. Contamination by terrestrial or atmospheric organisms. The meteorite or its fragments have fracture zones where contamination could occur as it passed through the atmosphere and impacted the ground. Surface contamination could easily be ruled out but not in fracture zones.

b. It is long known that all the planets in the solar system were and are subject to meteorite and comet bombardment. These impacts are sometimes sufficient to throw material from the earth's surface into space where it could be picked up by a passing comet or could seed another planet such as mars with earth's organisms. Rock fragments from Martian impacts have been found on earth. Comets and meteorites frequently have sulphur, carbon and water in them that allow the growth of microorganisms if close enough to the sun to allow liquid water without flashing the water to space. One such may have been the Murchison meteorite[6].

c. The highest layers of the earth's atmosphere have been shown to contain terrestrial micro-organisms. Impacts on the ancient earth could easily have thrown Archean micro-organisms into the higher levels of the ancient atmosphere where they could be collected by glancing blows from meteorites and comets.

8. Once more there is an even greater difficulty for him: space is expanding and has been shown to be accelerating in its expansion. Relativity tells us that matter cannot get to, let alone exceed, the speed of light. Therefore free floating bacteria in space or bacteria on comets would be travelling at considerably less than light speed. This would increase the time taken to get from a distant planet (since we know there are no planets anywhere near earth that could support life).

In addition we would have to postulate the spontaneous generation of life on a far distant planet with the enormous amount of time that would take, then a fortuitous collision with a comet or asteroid, followed by a long space journey in which the bacteria would be subject to various

levels of radiation. The diameter of the milky way galaxy is about one hundred thousand light years. Light travels at $3x10^8$ meters per second. A comet may be travelling at somewhere between 25000 meters per second and 134000 meters per second. Even at the highest speed it is travelling at only 0.045% the speed of light. So a comet coming from the other side of the galaxy would take 220 million years to get here; at the slower speed the outcome would be 1.2 billion years. The difficulties in getting from another galaxy are of at least an order of magnitude greater.

If seeding by comets or meteorites (the concept of panspermia) is true then the age of the seeding comet would have to be at least as old as and preferably older than the oldest known terrestrial microfossils. The oldest known terrestrial microfossil bearing rock is 3.4 billion years from rocks found in Western Australia[5]. The oldest known microfossil-bearing meteorite is ALH84001 from Antarctica discovered in 1984 and aged at approximately 4 billion years. However, there is considerable controversy surrounding the validity of the 'microfossils' in this meteorite.

9. The age of the universe is about 14.7 billion years. For life to occur somewhere in space, first generation stars would have to form and in their nuclear furnaces create atoms such as sulphur, carbon, oxygen, nitrogen, phosphorous, iron and so on – the building blocks of life. Eventually these stars would die, some in the form of supernovas spreading these building blocks into space. The time for this to occur depends on the mass of the star – our sun for example will last another 5 billion years before becoming a red giant, shedding its atmosphere and contracting to a white dwarf. Larger stars can explode after only a few tens of millions of years. Second generation stars are formed by gravitational collapse into planetary nebulae, incorporating the important elements for life. Star formation occurred about 500 million years after the big bang, leaving 9.5 billion years for secondary stars with planets suitable for life to develop before the origin of our solar system. Assuming supernovae occurred only 10 million years after initial star formation, the essential elements would have to spread out and join a dust cloud before being incorporated again into a secondary planetary nebula. The shock wave from a supernova[10] ten thousand light years away (a very short cosmic distance) is travelling at 13km per second which will take about 250 million years to reach the vicinity of earth. Shock waves like this are thought to collapse large gas clouds so that star formation occurs. This typically takes 1 to 2 billion years before a protostar with a planetary nebula forms. Then assuming an earth-like planet capable of supporting life forms within that nebula, another 500 to 700 million years has elapsed. Now we have a problem. We simply don't know how long abiogenesis takes to occur (if it occurs at all) since we are assuming (for this argument) life on earth occurred by seeding from space soon after the cometary bombardment. If we assume an earlier earth-like planet followed a similar course to our own then the earliest it could start would be about 2 billion years post big bang (since there is a 400 million year gap between the end of the cometary bombardment and the oldest known microfossils) and the maximum (allowing for distribution across space to reach earth and to seed it) 9 billion years post big bang. So, if abiogenesis is assumed credible it is remotely possible the earth was seeded by the hypothesis of panspermia.

10. Astrophysical journal August 20, 2013

11. A number of observations can be made from this. The first is that the production of these small molecules occurs frequently in nature. The Murchison meteorite was found to contain a large number of amino acids and spectroscopically many organic compounds have been found in outer space. Thermodynamically many of the reactions required to produce the organic compounds are endothermic (meaning energy has to be supplied). The amounts produced have, to my knowledge, not been quantified but it is known that only 2% of the carbon in the experiment was converted to amino acids and only about 15% to all organic compounds. The detection of the amino acids was via chromatography suggesting only small quantities are produced even after a week of continuous energy input. In fact the energy supplied to the experiment was in the form of a continuous spark approximately 2.5cm in length. At 10,000 volts per cm the sparking voltage was about 25,000 volts (there seems be differing accounts of the voltage used). At even, say, 12 mAmps, 300 watts was supplied continuously over 1 week – or the equivalent of about 181 million joules (one joule is a watt second). The human body requires on average 2000kcals or 2326 watt-hours per day and dissipates (mainly as heat) 58 million joules in 7 days (1 watt-hour equals 3600 joules). Lightning would have been present in the Archean atmosphere but it would not have been continuous so the quantities of organic compounds falling into the primordial soup would have been tiny. Interestingly the results from the Miller experiment produced a racemic mixture of amino acids (equal amounts of L and D forms) whereas all life uses only the L form (with a few minor exceptions) The human body is much better at producing most of the compounds mentioned above in much larger quantities every day. This is due to the presence of specific machinery to utilize the energy more efficiently and the presence of organic catalysts which are themselves proteins codified by DNA.

12. Darwin's Black Box Michael Behe Chapter 7 pp 153

13. Because the universe is expanding the energy per unit volume globally is always decreasing. This is true so long as there is no other source of energy. Thus the energy per unit volume is (on average) continually manifested by longer and longer wavelengths which eventually fade to nothing. This is the meaning of the heat death of the universe – but fortunately it is a slow process. Clearly there are areas where the energy levels are locally very high – such as the sun. That is, the universe is 'lumpy' but this will not affect its fate. Eventually the thermonuclear reactions will cease in all stars, matter will disintegrate, black holes will evaporate and the universe will become dark as night.

14. Ashley and Houmard Microbiol. Mol. Biol. Rev. June 2006 vol. 70 no. 2 472-509

15. Rachel et al Int J Cancer. 2005 Feb 23

16. Pavletich et al Genes Dev. 1993 Dec;7(12B):2556-6

17. Mike Gene: The Design Matrix: A Consilience of Clues

18. Dr. J.C.Sandford: Genetic Entropy and The Mystery of the Genome pp 49

19. J Gleick: Chaos: The amazing science of the unpredictable

20. Some speculation: The moon becoming visible in this way may relate to the fall of the Adversary. The creation of the lesser light came after the greater light. Satan was cast down to the earth so the earth had to be in existence when this happened. Therefore, Satan was cast down less than or equal to 4.5 billion years ago. We are told the lesser light became visible on the fourth day of creation. Using Schroeder's time line[21], this period was about 1 billion years. The Cambrian explosion occurred 550 million years ago. For multicellular organisms needing oxygen to exist, the atmosphere must have cleared and been oxygen-rich at or before the time of the Cambrian explosion.

The Cambrian explosion is the beginning of the fifth day of the creation timeline. Therefore, Satan must have been cast to earth between 4.5 and 0.5 billion years ago or between 10 and 13 billion years after the creation of the universe from our perspective. This is sometime between the second and third day in the creation timeline from Yah's perspective. The moon is a metaphor for Satan. Its age has been estimated at 4.5 billion years (i.e. around the time of the creation of the earth). If the creation of the moon and Satan's fall are related, then Satan was cast out soon after the time of the earth's creation. The creation of the moon may, in fact, have been directly due to his fall. When Yah returns, there will be massive tectonic changes. Likewise, if Satan was cast to the earth, he is also a powerful being (not as great as Yah, of course), and he may have been the cause of the moon's creation. This is not to say that Satan is the moon – that is merely a metaphor.

What is not a metaphor is his effect on the earth since his fall. If he helped create the moon, then maybe his effects are directly visible to us in the form of hurricanes, earthquakes and tsunamis and indirectly through mankind's effects on the earth through his worship resulting in wars and environmental destruction. (An example is the AGW or 'climate change' scam as this is clearly a satanic control mechanism.)

Satan would have been present at the time of the creation of the universe and would have been aware of the reason for the creation. He thought a lot of himself and disliked the idea of man – to him a grossly inferior being – ultimately taking a higher position in Yah's esteem than himself. He must have been like the eldest child being ignored when the next came along. When he rebelled and was thrown out, he set out to ruin Yah's plan for the earth and mankind. We see this kind of behavior in a spurned lover who is determined to destroy everything from the past relationship in a frenzy of revenge. Interestingly, before he rebelled, all the events up until then would have played out from his point of view in days or hours. After rebelling, he would have had billions of years to contemplate his fate and to try to work out how to bring Yah's creation to naught.

21. Gerald Schroeder: The Science of God pp 60

22. Seibert MM 2010 Protein folding and DNA origami Acta Universitatis Upsaliensis

23. The sense strand in DNA is the strand of the double helix which contains the open reading frame and is 'read' by the enzyme making mRNA. The anti-sense strand is the mirror image of the sense strand and may or may not have an open reading frame.