بسم البد الرحمان الرحيم

In the name of God, Most Gracious, Most Merciful

Six-Day Model of Creation

Zakaria Kamal



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Six-Day Model of Creation

The Six Day Model of Creation belongs to Holy Bible. The Quran fulfills the model and aids to explain.

Apparently, the Six Day Model of Creation looks unscientific. But it is not so unscientific if we consider 'Six Days' as 'Six Periods of Time'. In this book, the 'Six Day Model of Creation' is scientifically discussed considering 'Six Days' as 'Six Periods of Time'. The discussion will progress in the following sequence:

- 1. Six Days in Holy Bible
- 2. Creation of the Universe
- 3. Creation of the Earth
- 4. An Earth for Adam and Eve
- 5. The Coach and the Canopy
- 6. Creation of Life on Earth
- 7. Biological Evolution
- 8. Creation of Adam
- 9. Missing Link
- 10. Unique Adam
- 11. Six Days in the Quran

Initially, the explanation of the 'Six Days' needs several assumptions. Subsequently, the assumptions get validated as they fit into the overall story based on modern discoveries.

1. Six Days in Holy Bible

Holy Bible does not exist in its original language. In the process of translating into other languages, the wordings of some verses have changed; some verses are intentionally corrupted, some are misplaced, and some are forgotten. So, we should not explain it as we explain the Quran—literal meaning of the Quran is taken for scientific explanation. The Quran is explained as we explain the laws and definitions, because the Quran is hundred percent unchanged Words of God.

In Holy Bible, we should look at the main message of a verse, not looking at the implication of each and every word, because these words are translated from the other languages.

The Quran confirms whatever came before it. If a verse of Holy Bible does not contradict the Quran or a concept of the Quran, then we may take it as correct in its sense.

Holy Bible gives detailed description of Six Days. I have quoted important parts in sequence.

1a. First Day – Holy Bible

The universe has been created from a Soul that was hovering over Water:

"In the beginning, when God created the Universe, the Earth was non-existent. The raging ocean that covered everything was engulfed in total darkness and the **Soul** of God was hovering over the water."

- Genesis 1: (1-2), Holy Bible, GNB

The Quran too talks about the same water:

"He it is Who created the "Skies and Lands" (the Universe) in six days and His Arsh was over the waters." [Al Quran 11:7]

God created the water before the Big Bang. Therefore, the water exited beyond the space of this universe—it was in the Super Space. So, our universe (Skies and Lands) is one of the creations of God.

The soul of God was hovering over the water. It was not the soul of God Himself, it was a soul provided by God. So, the soul is called breath of God in the Knox Bible (a Catholic Bible):

"God, at the beginning of time, created heaven (sky) and earth. Earth was still an empty waste and darkness hung over the deep, but already over its waters stirred the **Breath** of God. Then God said, "Let there be light," and the light began".

- Genesis 1 (1-2), Holy Bible (Knox)

Therefore, the soul being a breath of God was a provided Soul. God provided the soul from His own soul to create the universe.

The Quran talks about a Soul Single (Nafsin-Wahidatin) that can be related to the provided Soul:

"It is He Who hath produced you from a Soul Single (Nafsin-Wahidatin); here is a place of dwelling and storage; we detail Our signs for people who understand." [Al Quran 6:98]

"He created you from a Soul Single (Nafsin-Wahidatin); then created favorable Pairs (DNA Double Helix); and he sent down for you of the cattle eight Pairs; He creates you in the wombs of your mothers—creation after creation—three tortures (on

Allah). That Allah is your Lord; for Him is the dominion. There is no god but He. Then how are you turned away?" [Al Quran 39:6]

To understand, how the universe has been created from a soul, we are to know, what is soul?

We think that a soul should be a kind of spiritual entity that should determine one's shape and nature, and sustain one's body as a living being. But, the soul is not related to the living creatures only. According to the Hadith, matter too has soul. A magnetic field helps sustain an atom and keeps it functional / living. So, magnetic field is an ingredient of the soul of atom. A Soul and a Force Field are the same thing.

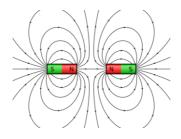


FIGURE 1: Magnetic Fields

My identification of magnetic field as a kind of soul is supported by the following verse.

"They ask thee concerning the ruhh (elementary soul). Say: "The ruhh is command of my Lord"; of knowledge it is only a little that is communicated to you." [Al Quran 17: 85]

The verse wants us to understand a ruhh (an elementary soul) as a command of Allah. We find in the nature that Allah has designed and invested the force fields as commands. For example, the Earth has a huge magnetic field that protects us from the Solar Wind. So, the Earth's Magnetic Field works as a command to the Solar Wind that it should not enter. So, a ruhh (an elementary soul) and a force field are the same things.

A combination of two or more force fields (ruhhs / elementary souls) makes a composite soul. A composite soul is called 'nafs'. We may write it as 'nafses' in plural form.

A nafs sustains a system and keeps it functional / living. For example, the nafs of an atom is a combination of three force fields, i.e., Magnetic Force Field (a ruhh), Strong Nuclear Force Field (a ruhh), and Weak Nuclear Force Field (a ruhh). The nafs (composite soul) holds the particles and forms the atom.

Here, we can conclude that:

- A force field and a ruhh (elementary soul) are the same thing. It works as a command of God.
- A combination of two or more force fields, which is supporting a living or nonliving system, is called a nafs (composite soul).

An elementary sub-atomic particle is a nafs, because it is a result of two or more force fields (ruhhs). For example, the light is an interactive electric field and magnetic field (electromagnetic force field). So, the light is a kind of nafs.

The 'Provided Soul' was hovering over the water. When God commanded, "Let there be light", the Provided Soul disintegrated, and the light appeared.

"Then God commanded, "Let there be light" and light appeared." – Genesis 1:3, Holy Bible, GNB

Light is Electromagnetic Force Field. Another two force fields that originated from the Provided Soul, were Strong Nuclear Force Field and Weak Nuclear Force Field. The force fields produced the atoms through a Big Bang (as we say).

In scientific community the Provided Soul is called GUT Force.

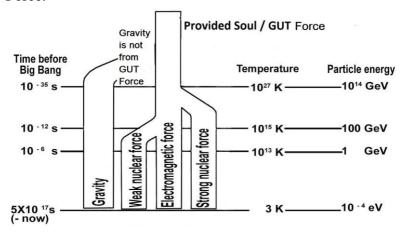


FIGURE 2: Provided Soul / GUT Force

The Provided Soul was a part of Nafsin-Wahidatin.

Another part of Nafsin-Wahidatin produced the water through a different Big Bang or through a different process.

The Nafsin-Wahidatin produced several kinds of unknown force fields as well, which are not yet discovered. The unknown force fields (ruhhs / elementary souls)

produced the nafses (composite soul) of living creatures. The emotions come from the unknown force fields of the nafses.

[The soul is deliberately discussed in my Tafsir, The Scientific Tafsir of Zakaria Kamal, available as free PDF in my web page.]

1b. Second Day - Holy Bible

In the next phase, the appeared light was separated from the darkness

"God was pleased with what He saw. Then He separated the light from the darkness."

- Genesis 1:4, Holy Bible, GNB

Probably, the light that originated from the Provided Soul was absorbed into a black hole at the outside of the waterball. It had a light releasing white hole in the center of the water-ball. The white hole was the Big Bang.

So, the light was pushed into the center of the water-ball through a passage of space.

The idea of moving through a black hole is flourished by Stephen Hawking in his book *Black Holes and Baby Universes*. As a black hole disappears, the matters that had fallen into the black hole can re-emerge through another white hole at a very large distance. The matter goes off into a baby universe, a small self-contained universe branches off from our region of the universe.

In this matter, Hawking made a critical analysis on time. He considers the time of the baby universe as imaginary time. In the scenario of Holy Bible, the Big Bang is the baby universe. So, our time is imaginary time that started at the Big Bang.

"And He named the light 'day' and the darkness 'night'. Evening passed and morning came that was the first day" – Genesis 5, Holy Bible, GNB

After the Big Bang, the universal time began. Almighty God named the light as day and the darkness as night.

"Then God commanded "Let there be dome to divide the water and to keep it in two separate places"—and it was dome. So, God made a dome, and it separated the water under it from the water above it. He named the dome "sky". Evening passed and morning came that was the second day"

- Genesis 1: (6–8), Holy Bible, GNB

The Verses say that the dome was named 'sky'. In Holy Bible too, the 'sky' means this 'universe'. So, the dome is the universe where we are living now—we are living inside the dome / sky / universe. Initially, the dome was full of smoke (hydrogen and helium).

Therefore, Big Bang occurred in the center of a huge water-ball. It (Big Bang) produced hydrogen and helium mainly (smoke). The gases produced a huge bubble (dome) in the center of the water-ball. A bubble and a dome look the same, so in Holy Bible, it has been called dome.

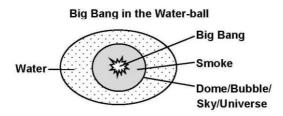


FIGURE 3: Big Bang in the Water Ball

When a bubble is produced in the water, it rises on the surface of the water. But the enormous water-ball was floating in the Super Space; it had no up or down. The bubble (dome) was expanding in the center of the water-ball in an enormous speed. The expanding bubble has formed the universe.

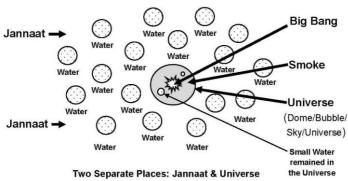


FIGURE 4: Two Separate Universes

Eventually, the water-ball burst due to the expanding bubble. The water gaining greater momentum went away from the bubble. The water has been used to create another universe, named Jannaat. The Verses under discussion talk about "two separate places": "Let there be dome to divide the water and to keep it in two separate places". These two separate places are two universes: the Samawaat (Skies / this Universe), and the Jannaat (another universe).

We know from the Quran that the width of the Jannaat is equal to the width of the Samawaat (this Universe). If two entities are equal in width, one cannot remain inside another. So, the Jannaat is a separate universe altogether.

"Be quick in the race for forgiveness from your Lord and for a Jannaat, whose width is that of the Skies and Lands (this Universe), prepared for the righteous..." [Al Quran 3:133]

"Race to forgiveness from your Lord and the Jannaat; the width of which is as the width of the Sky and Land" [Al Quran 57:2]

Holy Bible also says about two universes:

"Because only a few will be saved, God has created two universes instead of only one"

– 2 ESDRAS 7:50, Holy Bible, GNB

One may try to imagine how much water was needed to create billions of habitable planets in the Jannaat. The water was created for the Jannaat mainly. A small quantity was given to this universe (Samawaat), primarily for the Earth.

1c. Possibility of a Big Bounce

As the Big Bang occurred in the water-ball, much of the force of expansion transferred into the water, and the expansion of the universe halted. Then the universe could contract due to gravitational force and reinitiate from a Big Bounce, as a Seven-Sky-Universe. The Skies are spherical waves of space, one inside another; like the peels of onion.

The contracting universe of the previous cycle could produce silicon and lighter elements to produce dust, asteroids and long lasting stars. So, the First Generation Stars were not needed.

In the expanding Skies, the matter could concentrate into the clouds to form the galaxies. .

1d. Third Day – The Holy Bible

Holy Bible at this stage starts narrating the creation of life on Earth.

So, there is a gap between the second day and the third day. The Quran marks the gap clearly, as it narrates six days in the packages of "two days" and "four days". These are isolated periods of time—in two days the Universe was created; in another four days the Earth was made suitable for Adam by creating suitable nature, plants and animals.

"Then God commanded, "Let water below the sky come together in one place, so that land will appear" ... pleased with what He saw"

- Genesis 1 (9–10), Holy Bible, GNB

A small quantity of water remained in this universe. A part of the water was given to the Earth. It was given in a proper measure so that the land could appear (the continents would not sink).

It is yet to be discovered from where the water came to the Earth. The scientists predict that the Earth was created from small solid particles produced in the stars. The particles could not carry water with them to produce the oceans. No reasonable assumption works on this issue. One has to straightway agree that the water is a special gift of Almighty God. The Earth is specially prepared for a water-based creature like us.

Adam was originally created for the Jannaat that is full of water. So, the Earth needed water to be an exile home of Adam. There are indications that the oceans formed due to the fall of water bearing asteroids.

As water settled into the Earth, the creation of life began. The first living creature was a single cell creature. It was developed into grain bearing and fruit bearing plants through guided evolution:

"Then He commanded "Let the Earth produce all kinds of plants, those that bear grain, and those that bear fruit...that was the third day"

- Genesis 1 (11-13), Holy Bible, GNB

A time came when the Earth was full of plants. The plants made the Earth suitable for animals by producing soft-soil crust and probably free oxygen in the atmosphere.

1e. Forth Day - The Holy Bible

"Then God commanded "Let lights appear in the sky to separate day from night and to show the time when days, years and religious festival begin...Evening passed morning came; that was the fourth day."

— Genesis (14–19), Holy Bible, GNB

Now in above verses, the Holy Bible is talking about earthly days and nights. It was adjusted in the Fourth Day. During this time, Almighty God adjusted the rotation of the solar objects. The Sun is to give light. The Moon is for the reckoning of days, months and years; it works as a natural calendar

The Earth and the Moon had some kind of order so that plants could grow, but it was adjusted in the Fourth Day to create the higher animals. Probably, before the Forth Day, the lengths of day and night and related temperature, humidity, seasons, etc., were suitable for plants, but not for animals. For example, if the Earth had eight-hour-day and eight-hournight, then the plants would grow faster, but it would not be suitable for animals, as animals need rest and hunting time. Scientists predict that Earth's rotation is slowing down from its initial value of six-hour-day (at 4.5 billion years ago).

1f. Fifth Day – The Holy Bible

The plants were created in the Third Day.

In the Fourth Day, God did not create anything. Obviously, in this period of time, the plants were evolving, growing, and dying to make the Earth suitable for higher animals.

In the Fifth Day, God began the creation of animals. At first, the marine animals were created, and then the birds were created.

"Then God commanded Let the water be filled with many kinds of living beings, and let the air be filled with birds...Evening passed morning came; that was the Fifth Day."

- Genesis 1: (20–23), Holy Bible, GNB

The above verses talk about the creation of marine animals at first, and then it talks about the creation of birds. The same sequence is suggested in the theory of Modern Biological Evolution: plants \rightarrow marine animals' \rightarrow amphibians' \rightarrow reptiles' \rightarrow birds. The next verses talk about the creation of domestic and wild animals:

"Then God commanded "Let the Earth produce all kinds of animal life, domestic and wild, large and small—and it was done...pleased with what He saw"

— Genesis 1: (24–25), Holy Bible, GNB

After the birds, the verses talk about the creation of mammals. Again, it is in line with the theory of Modern Biological Evolution: plants \rightarrow marine animals' \rightarrow amphibians' \rightarrow reptiles' \rightarrow birds \rightarrow mammals.

Progression of Animals, as has been discovered		Holy Bible indicating Biological
Age of Era	System	Evolution in the Sequence of Description
Precambrian 4500–3300 Million Years	Olds single cell and multi-cell creatures (plants)	"Let the Earth produce all kinds of plants"
Paleozoic 600–280 Million Years	Fishes and Reptiles	"Let the water be filled with many kinds of living beings"
Mesozoic 230–135 Million Years	Dinosaurs, Flying Reptiles, Birds	"and let the air be filled with birds"
Cenozoic 63–13 Million Years	Mammals	"Let the Earth produce all kinds of animal life, domestic and wild, large and small"

1g. Sixth Day – The Holy Bible

"Then God said, "And now we will make human being...Evening passed morning came...that was the Sixth Day." – Genesis (26–31), Holy Bible, GNB

In the course of creating the plants and the animals, Almighty God said, "Let there be..." as a blessing / permission to move ahead. It means that He embedded the process of biological evolution in the first place; angels were monitoring; He just watched the end state of a phase, became happy, and gave permission to move ahead.

But, in case of humans, Almighty God said, "And now We will make human being...". It is not "let there be ...". So, Almighty God created humans separately.

The following table is taken from *The New Encyclopedia Britannica*, except the rightmost column, which I have inserted to show the support of Holy Bible to the Theory of Biological Evolution.

2. Creation of the Universe

The Quran confirms the key points of Holy Bible. We need to know a few modern discoveries to understand what the Quran says about the 'Six Day Model of Creation'. The discoveries are given below:

2a. Galaxies

In 1920s, an American scientist, Edwin Hubble, demonstrated that the stars were not haphazardly scattered throughout the Universe; they were grouped into systems

called galaxies. There are about 170 billion galaxies in the visible Universe.

In the Quran, the galaxies are called Houses of Stars (Mawaqin-Nujumi):

"But nay, I swear by the 'Houses of Stars' (Mawaqin-Nujumi). And, indeed, it surely a swear if you know great (structures)" [Al Quran 56: 75–76]

"Mawaqin" means "Houses" and "Nujumi" means "Stars". So, "Mawaqin-Nujumi" means "Houses of Stars". Only 'a galaxy' can be called as 'a house of stars'. Therefore, "Mawaqin-Nujumi" means "Galaxies".



FIGURE 5: A galaxy

In the Quran, galaxies are called ships as well:

"It is He Who created the Night and the Day; and the Sun and the Moon- each in a Ship (Milky Way Galaxy) they are floating." [Al Quran 21:33]

"It is not permitted to the Sun to outstrip the Moon, nor can the night outstrip the day; and all are in a ship (Milky Way galaxy) they are floating."

[Al Quran 36: 40]

The galaxies are like space ships carrying the stars.

2b. The Great Expansion

Hubble discovered that all distant galaxies (ships) were moving straight backward. It pointed out that the Universe was expanding.

The farther away a galaxy is, the faster it is moving away. The recession velocities are proportional to their distances. The nearby galaxies are receding at about 200 to 300 miles per second. On the other hand, the farthest galaxies, discover so far, are receding at speeds nearing the speed of light. This observation indicates that the Universe is expanding.

The phenomenon is expressed in the Quran in the following way:

"And the Sky (Universe), We constructed it with the hands, and indeed, We surely are Expanders"

[Al Quran 51:47]

2c. Dark Nights / Olber's Paradox

The light has no destruction. The scientists calculate that if the galaxies were not receding, the sky would be full of light, forty thousand times brighter than the sun at noon. There would be no night, no sunlit day. The Universe is expanding. So, the lights emitted by the galaxies are fading out in the expanding space. So, there is darkness everywhere, and the Sun breathes out the darkness at dawn.

"So verily I swear by the receding ships (galaxies) disappear—and the night as it departs, and the dawn as it breathes." [Al Quran 81:15-18]

The above verses are translated directly word-to-word. The ships (galaxies) are disappearing due to their recessions. So, in the expanding space, the light, emitted by the stars, is fading out to the darkness of nights, everywhere. So, a dawn can appear with the sunrise.

The key question - a deceptively simple one was asked by a man who we might justly regard as the first cosmologist: de Cheseaux (1744). It was he who first wondered why a supposedly infinite universe full of bright stars should be dark at night. Alas for de Chesaux no one else at that time seemed able to realize the significance of his question. It was thought up again independently by a German astronomer Wilhelm Olbers in 1826. For this reason, the puzzle is known 'Olber's Paradox'

 The Expanding Universe by John Gribbin in the Encyclopedia of Space Travel and Astronomy edited by John Man

"To look at the problem, imagine thin layers, or shells of stars surrounding the Earth. The intensity of light from all stars in any one shell can easily be worked out. The distance cancels out the increase in star light. Never the less in an infinite universe, there would be an infinite number of shells so that we might guess that the universe should have an infinite bright sky. In fact though nearby stars block out some of the light from further away when this is taken into account, we can say that the night sky should be 'only' as bright as the surface of an average star in total, just 40,000 times the brightness of the Sun at noon. The puzzle is not therefore, why is the sky dark at night. It is why the sky is so dark even in day time."

- *The Expanding Universe* by John Gribbin in the Encyclopedia of Space Travel and Astronomy.

The sky should have been crammed with stars forming a carpet far brighter than the Sun.

Nobody could answer where the light was going! It became known as the "Olber's Paradox".

In 1929, the Paradox was resolved when Edwin Hubble demonstrated that the Universe was expanding. The expansion solves the problem:

"Expansion solves the problem. The light and heat from all the objects in the sky has to spread over more thinly into the void to fill the increasing space between them. This effectively weakens the light, lowering the density of the energy of starlight- the brightness of the sky- everywhere. The faster each light source recedes, the weaker its contribution will be, and in a universe with the more distant shells receding more rapidly than those nearby, only the very nears are left making any noticeable contribution to conditions here on the Earth."

> The Expanding Universe by John Gribbin in the Encyclopedia of Space Travel and Astronomy.

If the Universe were static (not expanding), there would be no night; there would always be forty thousand times brighter light than the sun at noon. The darkness exists because the Universe is expanding. In other words, only an expanded Sky can be dark at night.

"What! Are you more difficult to create, or the sky? He has constructed it. He has raised its thickness and proportioned it. Its night does He endow with darkness, and its splendor does He bring out"

[Al Quran 79: 27–29]

"And a Sign for them is the Night. We withdraw there-from the Day (by rotating the Earth), and behold, they are plunged in darkness"

[Al Quran 36:37]

Now it is said that the scientists should have understood the expansion of Universe long before Hubble's discovery, only from the "Olber's Paradox", because the nights can be dark in an expanding universe only.

"So verily I swear by the receding ships (galaxies) disappear—and the night as it departs, and the dawn as it breathes.

Verily, this is the word of a most honorable Messenger, endued with Power, with rank before the Lord of the Arsh. With authority there, faithful to his trust; and your companion is not one possessed"

[Al Quran 81:15-22]

2d. The Singularity

If the galaxies are going away from each other, then it is obvious that they were closer to each other in any earlier point of time. Yesterday they were closer than today; the day before yesterday they were even closer to each other. In this way, at some point of time, far enough into the past, all the galaxies of the universe were joined together into a small volume of space. And, the expansion of the universe must have started from a great original explosion.

"For, as many astronomers were quick to see, if the universe is expanding now, then it must have started form some great original explosion. This is the Big Bang model of the universe"

The Expanding Universe by John Gribbin in The Encyclopedia of Space Travel and Astronomy edited by John Man.

Following verse is normally referred in support of the Big Bang. [However, in subsequent discussion it will be clear that the above verse suggest a Big Bounce origin of this universe.]

"Do not the unbelievers see that the Skies and Lands were joined together before We clove them asunder..." [Al Quran 21:30]

The scientists predict that the universe began as a "Singularity". The Singularity is defined as a super-hot, super-dense point of the space-time. The Singularity at the beginning of the universe is called Big Bang.

"Of course the fact that the universe is expanding implies that at some point in the past, all the objects in it were closer together. But we see very clear evidence that the universe we know today began as a super-dense, super-hot 'Singularity'

- The Encyclopedia of Space Travel and Astronomy

All the matter of the universe was closed into the Singularity. Matter cannot exist in that state; it was in the form of energy. As the universe began to expand, the temperature reduced, and the radiation (light) turned into matter.

"Singularity" is a mathematical point; it is a controversial starting state of the universe. In modern science, there are many models of the starting state. The above verse does not exactly indicate a state of Singularity; it only indicates a state when the universe was very small and all the objects in it were joined together. So, the verse stands out of the controversies. The universe might have begun from a "Singularity", or from a "tiny false vacuum under extreme inflation", or from a Big Bounce, or from something else; so far it started from a state of unity, it satisfies above verse.

The separation of galaxies and the rate of expansion suggest that the universe came into existence 8,000 to 14,000 million years ago from the explosion of Big Bang.

"By timing the expansion of universe, we can now say that it came into existence no longer than 20,000 million years ago in a monumental fire ball that provided raw material from which galaxies, stars and planets are still formed. We see around us the effect of that violent birth. The galaxies as we know form studying energetic dense quasar like 3c 273 are fleeing from us at speed up to 80 percent of the speed of light."

- The Encyclopedia of Space Travel and Astronomy

2e. The Smoke

In the beginning, the radiation turned into simplest form of matter, hydrogen, created out of one proton and one electron.

Later, twenty-five percent of hydrogen turned into helium along with a small amount of heavy hydrogen and other elements. The stars of the early universe could form out of these two gases.

"The primordial fireball contained reactions which led to the present distribution of hydrogen and helium 75% and 25% respectively, a balance that explains the evolution of stars..."

> Dawn of A New Era by Sir Bernard Lovell in The Encyclopedia of Space Travel and Astronomy

"Moreover, He put His attention to the Sky (single-sky-universe of the previous cycle), and it had been smoke..." [Al Quran 41:11]

2f. Formation of Galaxies

The Universe expanded, and the gases concentrated into the 'clouds of gases'. The clouds turned into galaxies by producing the stars.

"The standard picture of galaxy formation envisages to gas collapsing first into a roughly elliptical shape under the influence of gravity, with stars forming out of irregularities in the collapsing cloud. At first large hot stars, composed just of hydrogen and helium, will form in a young galaxy, run through their life cycle quickly and explode, scattering heavier elements into interstellar medium. From these materials, 'Second Generation' stars can form."

 To the Edge of Eternity by John Gribbin in The Encyclopedia of Space Travel and Astronomy edited by John Man. Groups of proto-galaxies were attracted together by gravity. They collided and formed the larger galaxies we see today.

Therefore, after the gases concentrated into the clouds of gases, the formation of stars and planets was a matter of time and evolution only. Here, the difficult part is to visualize, how the gases could concentrate into the clouds of gases as big as galaxies? In a uniform universe, the gases should have spread out uniformly.

"In a perfectly uniform universe, there is no way in which large concentration of gas could ever occur; indeed it is quite difficult to explain how concentration of matter as big as the galaxies could have formed in time since the Big Bang, no more than 20,000 million of years ago. How this happened is not known, but it is straight forward to calculate how a galaxy would form once these clouds of gas, held together by gravity, and containing enough material to form thousands of millions of stars."

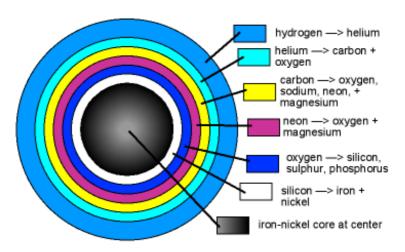
 To the Edge of Eternity by John Gribbin in The Encyclopedia of Space Travel and Astronomy edited by John Man

2g. Formation of Heavier Elements

A star can form out of hydrogen and helium. The helium is heavier than the hydrogen, so it deposits into the core. The gravity contracts the star continuously. The contraction increases pressure and heat in the center. At one stage, the pressure and heat initiate nuclear fusion reaction in the core of the star, which produces more and more heat.

In one hand gravity tries to squeeze the star on the other hand the heat produced in the core tries to expand the star, which brings a balance. A balanced star burns for a long time and due to nuclear fusion reaction new heavier elements are successively produced.

- Hydrogen undergoes fusion and produces helium; helium being heavier than hydrogen deposits in the core.
- Helium undergoes fusion and produces carbon and oxygen mainly; carbon and oxygen being heavier than helium deposit into the inner core.
- Carbon and oxygen undergo fusion and produce silicon mainly; silicon being heavier than carbon and oxygen produces even inner core.
- Silicon undergoes fusion and produces iron mainly; iron being heavier than silicon deposits into the center.



The "onion layers" of an evolved core of a high-mass star; from hydrogen in the outermost shell to iron at the center.

FIGURE 6: Evolution of High-Mass Star

The scientists predict that the first-generation stars formed one to two hundred million years after the Big Bang. Those were very large stars, about three hundred times larger than the sun. A massive star possesses strong gravitational force. So, the pressure and temperature in the core of the massive stars increased rapidly. As a result, the stars ran through their life cycles in short periods of time and exploded, scattering heavier materials, produced in them, into the space. The long lasting second-generation stars like the sun and the planets like the Earth have formed from the scattered elements.

3. Future the Universe

What is the future of the universe? Scientists predict tree likely futures in three Basic Models:

- Open Universe
- Closed Universe
- Cyclic Universe

3a. Open Universe Model

The universe is expanding. It may expand forever and cool. Eventually, the galaxies will be so far away from each other that the universe will not exist as a unit. The stars will die by radiating energy. Much of the matter will disappear through black holes at great distances. Eventually, the black holes will evaporate leaving the photons that never decay.

"And what is the fate of the universe? It is possible that the beginning can only be explained by a 'Rediscovery of God' and the end will be infinite dissipation in an infinite void."

- To the Edge of Eternity by John Gribbin in the Encyclopedia of Space Travel and Astronomy edited by John Man.

In ever stretching space, the dead stellar stumps would explode, the atoms would disintegrate, the sub-atomic-particles would decay—what would remain forever are the photons.

If the universe expands forever, it is open.

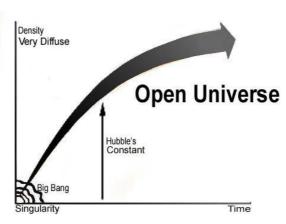


FIGURE 7: Ever Expanding Universe

Above figure depicts the ever-expanding universe. Here, the rate of expansion expressed as 'Hubble's Constant' is high. I have not found any verse in the Quran or Holy Bible that directly or indirectly supports the idea of ever expanding universe.

3b. Closed Universe Model

The universe is expanding, but the overall gravitational force is trying to stop the expansion. If the gravity wins over the force of expansion, the expansion of the universe will slow down to a halt, and its contraction will begin.

The universe is expanding for billions of years. If it starts contracting, it will continue for an equal period of time. At the end, everything of the universe will join together.

The huge accumulation of matter, possessing extremely powerful gravitational force, will continue squeezing the matter toward the higher densities. Finally, the universe may be squeezed into a super-dense, super-hot point called Singularity. The Singularity at the end of the universe is called Big Crunch.

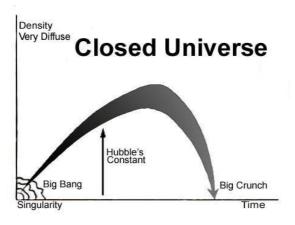


FIGURE 8: Closed Universe

Above figure depicts the Closed Universe Model where the expansion of the universe stops and the contraction begins. Eventually, the universe collapses into a Big Crunch.

3c. Cyclic Universe Model

The universe may collapse into a Big Crunch. The Singularity at the beginning of the universe is called Big Bang, and the Singularity at the end of the universe is called Big Crunch. These are the same thing.

The Singularity is a super-hot super-dense point of the space-time where known natural laws break down. One cannot predict what will come out of a Singularity.

From the Big Crunch (Big Bang-2) the universe may be born again.

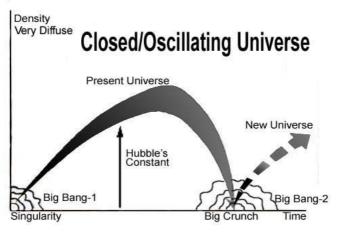


FIGURE 9: Oscillating Universe

"But it is also possible that expansion will be reversed by the pull of gravity, that all matter will collapse once again into a super-dense 'singularity', and that another universe will be born in another Big Bang- a cycle that could be repeated forever."

- To the Edge of Eternity by John Gribbin in The Encyclopedia of Space Travel and Astronomy edited by John Man

Alternatively, due to enormous pressure and temperature, the rapidly contracting universe may bounce back out from the state of Fireball, and a new universe may be born.

"For just as galaxies are combined by the attractive force of gravity the total mass of the whole universe provides an insistent tug on every galaxy and cluster of galaxies within the universe. As the universe expands out ward from the initial explosion of the Big Bang, the gravitational tug gradually decreases. But it is always present, and if there is enough matter, eventually gravity will overcome the expansion, and the universe will slow to a halt. The whole drama will then be played out in reverse. The universe will collapse faster and faster under the overwhelming pull of gravity until it is squashed into another fireball, perhaps then to bounce back out again."

 To the Edge of Eternity by John Gribbin in The Encyclopedia of Space Travel and Astronomy edited by John Man

Therefore, after the contraction starts, the universe may be born again from the Big Crunch or from a Big Bounce. This is the Cyclic Model of the universe.

4. The Quran's Model of the Universe

The Quran supports the cyclic universe model. But the Quran does not agree that the universe existed forever; it was created at the beginning of the previous cycle.

We have discussed according to science, how the universe evolved from the Big Bang when radiation turned into matter (hydrogen and helium mainly). But the following verse narrates that there were lands (dusts and asteroids) in the initial universe.

"Do not the unbelievers see that the Skies and Lands were joined together before We clove them asunder..." [Al Quran 21:30]

It means that the universe did not originate from the Big Bang. It originated from a Big Bounce where there could be land in the initial universe.

If the universe started from a Big Bounce, it is cyclic.

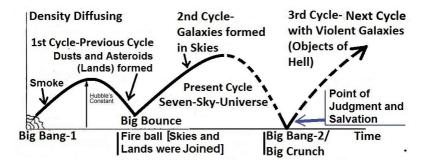


FIGURE 10: The Quran's Model of the Universe

However, a cyclic universe may be eternal—the cycles of creation, expansion, collapse, and recreation may be going on forever. But the Quran suggest that the universe was created in the previous cycle (1st cycle) when the Big Bang produced hydrogen and helium (smoke) mainly.

At the beginning of the previous cycle, the gases evolved from the Big Bang and spread out in the uniform space (single-sky-universe) of the expanding universe. When the contraction of the universe began, heavier elements, at least up to the silicon, were produced in the large concentrations of gases. So, there were the lands (dust and asteroid) in the contracted universe of the previous cycle.

Due to tremendous pressure and temperature the contracting universes bounced out from a Fireball when present cycle (2nd cycle) of the universe began. During the Big Bounce, the universe became a seven-sky-universe and the smoke (gases) and lands (dust and asteroid), which were available in the Fireball, were proportionally distributed in the Skies. The skies are spherical waves of space, one inside another; like the peels of onion.

"He is the One Who created for you what was in the assembly of lands (fil-ardi-jamian). Then He turned to the Sky and made them into Seven Skies. And of all things He had perfect knowledge" [Al Quran 2:29]

In the above verse "the assembly of lands (fil-ardijamian)" is the Fireball where all the matter of the universe assembled. Fireball is defined as a state of the universe less than a million years before or after the Big Bang.

In the waved space (skies) of the present cycle, the matter could concentrate into the conglomerates to form the galaxies with long lasting stars and initial planets. Each Sky has many galaxies and free matter.

The matter heavier than silicon such as, gold, silver, iron, etc., produced in the stars of the present cycle. Some of the stars exploded (supernova explosion), and the elements scattered into the space.

5. Creation of the Earth

Scientists believe that the Earth formed from many solid small particles left over from the creation of the Sun. The main ingredients were iron and silicates with small amounts of other elements.

The universe produced hydrogen and helium at the beginning. A star can form only from hydrogen and helium. Scientists believe that other heavier elements produced in the First Generation hot stars. According to the Quran, the heavier elements produced in the previous cycle, as we have discussed in serial 4.

"It is during supernova explosion that the creation of the more complicated elements like uranium is thought to occur. These, together with the other elements built up from hydrogen over the life of the star, are flung out into space in a vast expanding cloud of gas. The space between the stars is replenished with gas but not the original hydrogen and helium which collapsed to form the star. Instead it is full of oxygen, hydrogen, copper, manganese, bromine, titanium, gold, silver and all the other elements which make up our world on Earth. These elements went into the mixture from which the Sun and the Solar system were later formed...Massive stars are thus the crucibles in which the bulk of the elements with which we are familiar are created.

Without these massive stars the universe would simply be a mixture of hydrogen and helium, created during the early stages of the universe before stars or galaxies had formed at all. It is sobering to realize that almost all the elements, which make up our familiar world of water, air, earth and living tissue were formed in the deep interior of distant stars. You and I, and this book you are reading, and the ink it is printed with, once went though the raging furnace in the center of a star."

The Life and Death of Stars by Geoffray Bath in
 The Encyclopedia of Space Travel and Astronomy edited by
 John Man.

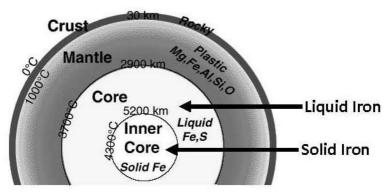


FIGURE 11: Earth's Interior

Probably, the Earth captured some kind of short-lived radioactive elements during its formation. It quickly heated up the matter and a large part of the Earth melted. As a result of the melting, the liquid iron deposited into the core and the lighter compounds of silicon, carbon, sodium, magnesium and other materials floated on the surface, which formed mantle and primitive crust.

"At some point, the release of energy by radio-active elements must have melted a large part of the Earth since this is the only way known for the separation of the original body of uniform composition into a core and a mantle. A similar process occurs when impure iron is melted in a steelwork and the nonmetallic parts separate out to from a low-density slag, which floats to the surface. It was in this way that the primitive crust was formed."

 Planet Earth by Peter Owen in The Encyclopedia of Space Travel and Astronomy edited by John Man.

The short-lived radioactive elements decayed long ago. It is believed that the long-lived radioactive elements, such as uranium, thorium, etc., are still present in the Earth, which maintains the temperature in its core at four thousand degrees centigrade.

6. An Earth for Adam and Eve

The Earth is a unique planet. It is clearly understood when we compare the Earth with the other planets of the Solar System. The Mars could be most similar to the Earth. But the Mars too does not look like a planet that could support the life of a simple microorganism. There is no water in the Mars. It has clouds, but those are clouds of Sulfuric Acid.

The Earth expels interior heat through volcanoes, but the Mars does not have such system. If the surface of the Mars is thin, it radiates interior heat through its whole surface; if it is thick, probably the planet explodes after long intervals to expel the interior heat.

The craters of meteor impacts are evenly distributed throughout the surface of Mars, which indicates that the planet has not changed in last 500 million years or so. On the contrary, within this time the Earth has gone through massive changes to be suitable for a creature like us.

When Adam and Eve were descended, the Earth was ready to receive them with suitable lands, rivers, plants and animals.

"And it is He who spread out the land and set thereon mountains standing firm and rivers; and of the all fruits He made in it—pairs two. He draws the night as a veil over the Day. Behold, verily in these things there are signs for those who consider!"

[Al Quran 13:3]

The verse above sequentially talks about a few matters, listed below, to narrate how the Earth has been made suitable for us.

- a. Continental Drift
- b. Formation of Mountains
- c. Formation of Rivers
- d. Production of Fruits
- e. Rotation of the Earth
- f. Creation of darkness

The points are discussed below by dividing the Verse in six parts.

6a. Part 1 of the Verse (13:3): Continental Drift

"And it is <u>He who spread out the land..."</u>
[Al Quran 13:3]

One may observe the shapes of the continents in a globe. It seems that the continents would fit together nicely if they

could be brought close to one another. For example, the bulge of South America nicely fits into the bight of Africa.



FIGURE 12: Continents

Thus, it is obvious that the continents were once joined together, and subsequently drifted away from one another.

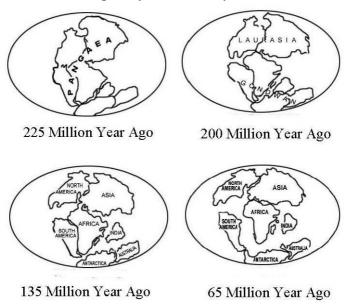


FIGURE 13: Continental Drift

British philosopher Francis Bacon noted the continental drift in 1620. Many scientists, such as Alfred Wagener, Prof Henry, Frederick J vine, Drummond Matthews worked on the subject. Ultimately, a theory has been developed named "the Theory of Plate Tectonics".

The Earth's surface is divided into huge plates (Techtronic Plates), 80 to 400 km thick, made of rocks. The plates move about atop the soft mantle (Asthenosphere). As the plates move, the continents are carried away from one another.

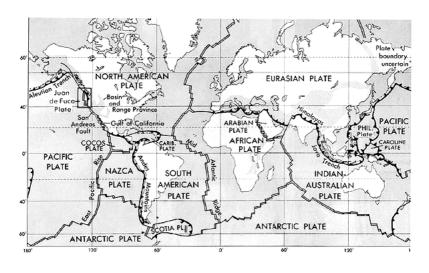


FIGURE 14: Techtronic Plates

Major Techtronic Plates are: Eurasian plate, Indian-Australian plate, Philippine plate, Pacific plate, Juan de Fuca plate, Nazca plate, Cocos plate, North American plates,

Caribbean plate, South American plate, African plate, Arabian plate, and the Antarctic plate. The plates consist of smaller sub-plates.

The Continental Drift has made the Earth more suitable for life. The central region of the undivided land (Pangaea) was far away from the ocean, but the central regions of the continents are closer to the oceans. The overall length of seashore has increased.

6b. Part 2 of the Verse (13:3): Formation of Mountains

"And it is He who spread out the land, <u>and set thereon</u> mountains standing firm..." [Al Quran 13:3]

The continental drift and the formation of mountain ranges are closely related.

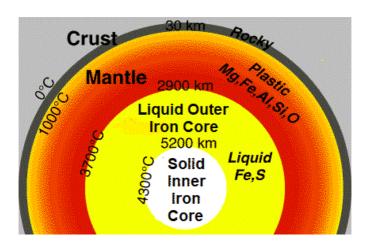


FIGURE 15: Earth's Interior

The interior of the Earth is divided in four prominent layers.

- The outermost layer of the Earth is called Crust. The Crust is a mixture of organic and non-organic compounds. Its depth is 30 to 40 km on the land, and approximately 10 km on the seabed.
- The layer below the Crust is called Mantle. The Mantle is a mixture of compounds containing Magnesium, Iron, Calcium, Aluminum, Silicon, Oxygen, etc. It is approximately 2920 km wide.
- There is Core below the Mantle. The Core is divided into Outer Core and Inner Core. The Outer Core is approximately 1800 km wide. It is liquid iron with 5% nickel. The Inner Core is approximately 1600 km in diameter. It is solid iron.

The properties of the Mantle are changed at a depth of about 100 km. The Mantle and the Crust above this depth constitute Lithosphere. The Lithosphere is rigid but broken into seven great slabs and a number of smaller ones (Techtronic Plates).

Mantle below this depth is called Asthenosphere. The slabs move about on the Asthenosphere.

The temperature in the center of the Earth is four thousand degrees centigrade. It decreases steadily toward the surface of the Earth. On the surface, the temperature is approximately 0.06 watts per square meter.

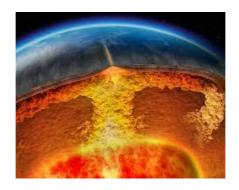


FIGURE 16: Convection Current

The heat flowing toward the surface produces convection current in the Asthenosphere. The currents drive the movements of the Techtronic Plates. Although Asthenosphere is solid, it can creep at a sufficient rate to push the slabs.

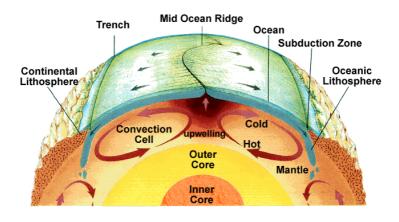
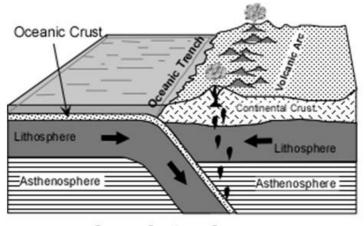


FIGURE 17: Subduction

The thermal energy given off by radioactive elements maintains the temperature of the Inner and the Outer Core. It heats up the magma close to the Outer Core. The hot magma rises and transfers heat to the Crust; thereby becomes cooler. The cooler magma drops back toward the Core. This cycle is repeated continuously. It causes the Oceanic Crust to spread apart at the mid ocean ridge. So, the Oceanic Lithosphere is subducted under the Continental Lithosphere at the Trenches.

The subduction causes volcanic eruption and form mountain belt, such as Andes Mountain Range. Andes formed about 65 million years ago when the Pacific Crustal Plate began to slide beneath the South American plate.



Ocean - Continent Convergence

FIGURE 18: Subduction and Formation of Mountain Range

Where two Tectonic Plates collide, and neither is pushed under the other, the plates crumple and form mountain ranges such as the Himalayas. The Himalayas is formed as the Indian (Indo-Australian) plate is pushing into the Eurasian Plate.

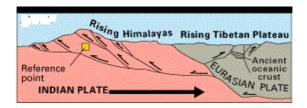


FIGURE 19: Formation of Himalayas

When plates collide under the sea, it creates volcanic islands.

Therefore, continental drift and formation of mountain ranges are closely related. The Quran mentions these two aspects in the same verse.

"And the land We have spread out, set thereon mountains firm and immovable, and produced therein all kinds of things in due balance" [Al Quran 15:19]

Mountains are firm and immoveable, because they are deeply rooted in the mantle.

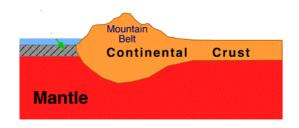


FIGURE 20: Mountains, Firm and Immoveable

Moreover, the continuous pressure of colliding Techtronic Plates sustains the high mountains; otherwise these heavy masses would sink into the earth over time. But they stand firm, as the Verse under discussion says: *And it is He who spread out the land, and set thereon mountains standing firm...*

So, the Continental Drift is related to the 'firmly standing high Mountains'.

6c. Part 3 of the Verse (13:3): Formation of Rivers

"And it is He who spread out the land, and set thereon mountains standing firm and rivers..."

[Al Quran 13:3]

The rivers can originate from the 'high' mountain ranges only.

The temperature on the top of the mountains is lower than the temperature at the sea level. Because of cool air, the clouds form water particles. In addition, mountainous terrain creates turbulence in the air that breaks the cloud. The broken clouds collide and mix the water particles with each other. So, it produces raindrops heavy enough to fall on the ground. So, there is usually precipitation in the mountainous terrain and the rivers are produced. If there were no mountains, the clouds would hang in the sky like the clumps of fog.

Moreover, the major mountain ranges of the Earth are roughly elongated north to south. So, the high mountain ranges can intercept clouds flowing along the main-cloud-flow-line running along the Equator east to west. The mountain ranges divert the intercepted clouds into the

continents (see figure below). Otherwise, much of the cloud would keep on flowing only along the equatorial belt. Is it not a work of a Designer?

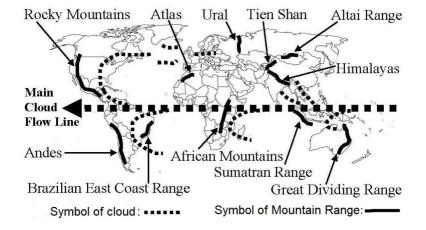


FIGURE 21: Flow of Cloud

The list of major mountain ranges is given below:

- Andes, South America: 7242 km long.
- Rocky Mountains, North America: 6035 km.
- Atlas Mountain Range, Africa: 2500 km.
- Himalayas + Tien Shan + Altai: 2253 km + 2012 km
 + 3862 km.
- Great Dividing Range, Australia: 3621 km.
- Sumatran Range: 2897 km.
- Brazilian East Coast Range: 3058 km.

In the above figure, the mountain ranges are shown by the continuous lines and the clouds are shown by the broken lines. It shows how mountain ranges divert the clouds into the continents.

The rain water moves into the continents and raises the height of Ground Water throughout the world.

"Then let man look at his food: For that we pour forth water in abundance, and We split the land in fragments and produce therein corn and grapes and nutritious plants, and olive and dates and enclosed gardens dense with lofty trees, and fruits and fodder; for use and convenience to you and your cattle."

[Al Quran 80:26-32]

Above Verses are not talking about the regular rainfall water that is available in the low-lying wetlands. It is talking about hilly terrains and deserts, which produce corn, grape, olive, date and enclosed gardens (oasis). So, the verses are talking about Ground Water that slowly flows through the Permeable Layers of the Earth and helps the growth of trees in these lands.

The water flows due to the layer structure and the difference in ground pressure, where mountains play vital role.

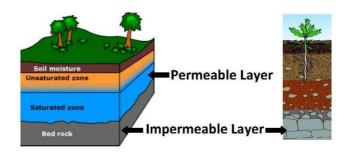


FIGURE 22: Ground Water

The Permeable Layer is made of fractured stones, gravels and sand. The layer is available throughout the world within the depth of 750 meters at the best. Even when the topsoil is dry, there may be huge amount of Ground Water in the Permeable Layer. The estimated total volume of the water is a 55-meter thick layer spread out over the entire surface of the Earth. So, the above verses say: "Then let man look at his Food: For that we pour forth Water in abundance, and We split the land in fragments, And produce therein..."

6d. Part 4 of the Verse (13:3): Production of Fruits

"And it is He who spread out the land, and set thereon mountains standing firm and rivers; and of the all fruits He made in it—pairs two (Double Pollination)..." [Al Quran 13:3]

I have translated the bold part of the verse word-to-word. Normally it is translated in a deviated form, as: "and fruit of every kind He made in pairs, two and two." The deviated translation should mean that there are male-apples and female-apples. But there is no such thing as male-apple and female-apple. So, I understood that there is problem in the translation. I looked for word-to-word translation and found that it is not about male-apple and female-apple. Actually, in the Quran the word "Pairs" normally means "DNA Double Helix".

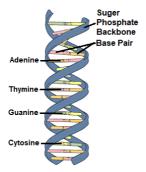
To confirm that "Pairs" normally means "DNA Double Helix", the verses of different chapters, which talk about Pairs, are discussed below. It may be mentioned that these verses do not give any meaning in straight translations

to those who do not know about DNA Double Helix). So, the translators translate "Pairs" as "Sexual Couples", and the verses in deviated forms. My translations are straight word-to-word.

"...And He scattered through it beasts of all kinds—We send down rain from the sky—all from Noble Pair (*Min kullay zawgin kareem*)" [Al Quran 31:10]

"Do they not look at the Earth, how many we produced in it—all from Noble Pair (*Min kullay zawgin kareemin*)?" [Al Quran 26:7]

Following is the picture of the Noble Pair. It is a DNA Molecule made of two linked strands wound around each other.



(Min kullay zawgin kareem)

FIGURE 23: DNA Double Helix (the Noble Pair)

All living creatures, from single cell microorganisms to the giant blue whales, are created from Double Helix DNA Molecules. A human DNA Molecule is about six feet long. It remains coiled as a chromatid, found in the nucleus of a cell.

A human Double Helix DNA Molecule has about 23,000 genes. However, it accounts for 2 % of the DNA. The function of rest 98 % is not clear. A gene is a segment of DNA that codes for a specific job. For example, a gene code for insulin that helps the body to control the amount of sugar in the blood.

With only about 20 types of amino acid, the genes of a Double Helix DNA Molecule can produce over 1000 types of proteins needed for a body. It can produce over 2000 types of enzymes. The genes are basic units of genetics.

In DNA replication, the double helix gets unwound, and its strands get separated. A strand acts as a template for the next strand. Bases are matched to synthesize the new partner strand. The strand is produced from the nucleotides available in the protoplasm. The old strand attracts the new strand to produce new Double Helix DNA Molecule.

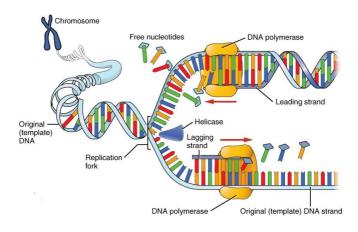


FIGURE 24: DNA Replication (Zawgin Baheej)

So, in the Quran, it is called "Attractive Pairs" (*zawgin baheej*) as well:

"And the earth, We have spread it out, and set thereon mountains standing firm, and grown therein every kind from Attractive Pair (*zawgin baheej*)"

[Al Quran 50:7]

There are 46 Double Helix DNA Molecule in the nucleus of a human cell. After the Molecules replicate, the cell divides

It is the blue print of life. A human body develops from a single cell (zygote). The genome code dictate which cells are to be what: which cells are to be bone cells, which cells are to be muscles, which cells are to be brain cells, and so forth. It does not make nerve cell in the hair, or hair cell in the nerve. Over 250 types of cells make our body. Every type of cells has specific programs needed to function. If the programs of genome expressions could be written in books, the stack of books would be higher than a mountain.

A human child is born with more than hundred trillion cells. Can it be believed that the whole process of creation is guided by the Double Helix DNA Molecules found in the nucleus of a cell, not visible to the naked eye? But in the above verses, it is called, "Noble Pair" (*Zawgin Kareem*). So, it really does a great job.

The following verse talks about "cattle" and "ships". The verse says that both are created from the "Pairs". The only "Pairs" in the world with which a horse or the wood for an ocean-going ship can be created are Double Helix DNA Molecules.

"That has created pairs in all things, and has made for you ships and cattle on which ye ride"

[Al Quran 43:12]

Chemically the genome of a plant and the genome of an animal are the same, but the codes differ, which make one genome a plant and another genome a horse.

All living creatures, from single cell amoeba to human, are created from DNA Double Helix (Pairs):

"Glory to God, Who created all things that the earth produces (plants and animals) as well as their own kind (humans) and things of which they have no knowledge (microscopic creatures) from Pairs (DNA Double Helix)" [Al Quran 36:36]

However, a virus does not have double helix in the DNA. It is also clarified in above verse by the words, "all things that the earth produces". The virus is not produced in the earth—it is produced in the host only.

The viruses can exist outside the host for a short time, but they need to be inside a host to replicate. The virus genomes do not encode all the proteins and RNAs needed for replication. Membrane of a virus fuses with the membrane of the host cell, so viral proteins mix directly with host cell proteins in the cytoplasm when they can replicate.

Moreover, the virus is a nonliving creature. The above verse is talking about living creatures.

"The Creator of the Skies and Lands: He has made for you pairs from among yourselves, and pairs among cattle; by this means does He multiply you; there is nothing whatever like unto Him, and He is the One that hears and sees." [Al Quran 42:11]

In above verse, cattle are mentioned just to clarify that the verse is not talking about married couple. The cattle do not marry.

The Pairs are created from among us, as the verse says: "He has made for you pairs from among yourselves..." And the pairs are the means of reproduction, as the verse says: "...by this means does He multiply you".

Therefore, in this verse, the "Pair" means Haploid Chromosomes that are available in a sperm. Each Haploid Chromosome contains one DNA Double Helix (Pair). The Diploid Chromosomes are made in the zygote through the fusion of sperm and ovum.

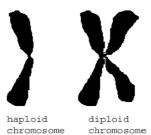


FIGURE 25: Chromosome

Now we can go back to the main discussion: "...and of the all fruits He made in it—pairs two"

A pollen grain is haploid—it possesses half of the DNA needed to make the plant. It combines with another half of the DNA that is in the egg cell and form the zygote. In the plants, this part is like sexual reproduction in animal.

But a second fertilization is needed in the plants to produce a fruit. The Double Fertilization is unique in plants. In Double Fertilization, two sperm cells fertilize the cells in the plant ovary.

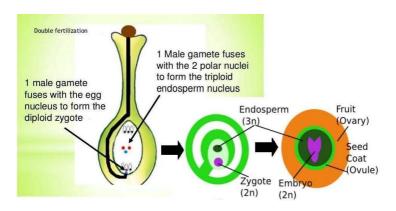


FIGURE 26: and of the all fruits He made in it—pairs two.

After a pollen grain sticks to the stigma of the pistil, at one stage a haploid cell divides into two haploid sperm cells. One sperm (n) fertilize the egg cell (n) and produces a zygote (2n). The zygote develops into embryo. Another sperm cell fuses with two cell nuclei and produce a triploid cell (3n). The triploid cell develops into the endosperm, which serves as the food supply for embryo. So, the eatable fruits are produced.

Thus, the Verse says: "...and of the all fruits He made in it—pairs two".

How the production of fruit is related to the Spread of Lands (Continental Drift)?

It is related to the supply of water. If we read the evolution of flowering trees, we find that they appeared with

the advent of pollinating insects (such as bees) about 73 million years ago, when the continents drifted adequately, and the high mountains formed to divert the clouds from the equatorial belt, which produced rains and rivers. It raised the Ground Water, which were needed to sustain fruit producing big trees.

The production of fruit bearing trees is related to the Continental drift in other verses also:

"It is He Who has spread out the land for creatures. Therein are fruit and date palms, producing spathes. Also corn with leaves and stalk for fodder, and sweet-smelling plants." [Al Quran 55: 10–12]

6e. Part 5 of the Verse (13:3): Rotation of the Earth

"And it is He who spread out the land, and set thereon mountains standing firm and rivers; and of the all fruits He made in it—pairs two (Double Pollination); He draws the night as a veil over the Day..." [Al Quran 13:3]

The rotation of the Earth is said indirectly in the Quran, because the people of the old times were very much sure that the Earth was fixed. It would be an extra burden to make them believe that the Earth was rotating. So, it has been said indirectly. The Earth rotates and the 'day side' gradually enters the 'night side'—thereby a veil of darkness gets laid over the day.

The production of fruits is obviously related to the day and night, as trees cannot grow without day and night.

However, the rotation of the Earth may be related to the other parts of the verse as well, such as continental drift, formation of high mountains, and rivers?

The popularly accepted theories suggest that the convection current of the Mantle drives the movement of the Tectonic Plates, which I have discussed above. But there is a concept that suggests that the forces generated by the rotation of the Earth, and the tidal forces of the Sun and the Moon are the causes of the continental drift.

"And it is He who spread out the land and set thereon mountains standing firm, and rivers; and of all fruits He made in it—pairs two; He draws the night as a veil over the Day. Behold, verily in these things there are signs for those who consider!" [Al Quran 13:3]

This simple looking verse narrates how the Earth has been made suitable for a creature like us.

7. The Coach and the Canopy

The Quran calls upon people to comprehend the existence of a Guardian Lord by seeing the land as couch and the skies as canopy. And the same canopy-sky rains.

"O you people! Adore your Guardian—Lord Who created you and those who came before you, that you may become Al-Muttaqun, Who has made the land your couch and the skies your canopy and sent down rain from the skies and brought forth therewith Fruits for your sustenance—then set not up rivals unto Allah when you know" [Al Quran 2: 21-22]

If one will see these with a neutral mind, one will find these as special creations of Allah to make the Earth suitable for us.

7a. The Land has been made a Couch

For billions of years the Earth had been producing living creatures. The active nature and prolonged deposit of organic decay have produced the soft soil crust.

The Pangaea split apart and formed the continents. It formed the high mountain ranges that produced the rivers.

The raining sky revives the lands again and again. It lifts up the Ground Water to make the Earth fertile.

We have top soil with balanced moisturized material.

So, the land has been made a couch, as the above verses say "... Who has made the land your couch..."

7b. The Sky has been made a Canopy

The above verses say that the skies have been made canopy: "...and the skies your canopy..."

7b(1). The Earth is protected from the solar wind by its magnetic field. The stream of energetic charged particles emanating from the Sun is known as the Solar Wind. Earth's Magnetic Field deflects most of the charged particles.

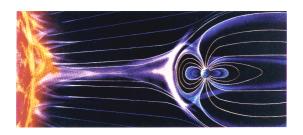


FIGURE 27: Earth's Magnetic Field deflecting Solar Wind

So, the sky has been made a canopy

7b(2). The atmosphere maintains temperature by Green House Effect.

Carbon dioxide in the upper layer of atmosphere traps the heat and keeps the Earth warm. If the quantity of carbon dioxide were more than what actually exists, the Earth would be over heated. If it were less, the Earth would freeze. The Earth has system to maintain correct quantity of carbon dioxide in the atmosphere.

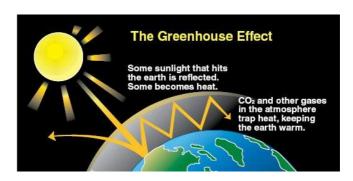


FIGURE 28: Green House Effect

So, the sky has been made a canopy.

7b(3). The atmosphere protects us from harmful radiations:

Only visible light and infrared light can come up to the ground. The harmful radiations, such as X-ray and ultraviolet ray, are absorbed or reflected by Thermosphere, Mesosphere and Stratosphere.

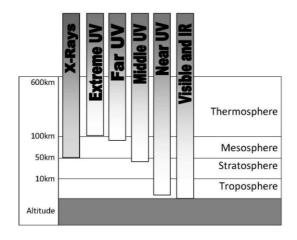


FIGURE 29: Earth's Atmosphere

So, the sky has been made a canopy.

7c. Formation of Clouds

The top layers of atmosphere works as canopy, but the bottom layers causes rain, as the Verses simultaneously say: "...and sent down rain from the skies..."

The clouds form and float mainly in the Troposphere. In this layer, the temperature of the atmosphere rapidly decreases and forms the clouds.

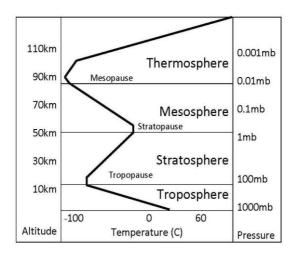


FIGURE 30: Temperature Curve

The towering clouds turn back from the height of 12 km. Layers beyond that height is meant to protect us from the harmful radiations. Much of water vapor is not allowed to rise there.

There is no scientific explanation why the rise and fall of temperature is so peculiar in different layers of the atmosphere; it is just nature, designed and sustained by God.

> O you people! Adore your Guardian-Lord, Who created you and those who came before you that you may become Al Muttaqun, Who has made the land your couch and the skies your canopy and sent down rain from the skies and brought forth therewith Fruits for your

sustenance—then set not up rivals unto Allah, when you know. [Al Quran 2: 21-22]

8. Creation of Life on Earth

A progression in the living organisms shows that they evolved through the eons of time from lower to higher form. The idea of evolution was presented by Ibne Khaldun (1334–1406) in his book, "Kitab al Ibar". It became known in Europe as the "Mohammedan Theory of Biological Evolution".

Many scientists carried forward the theory. In 19th century, Charles Darwin argued that the evolution occurs by means of natural selection, as he expressed: "As many more individuals are produced than can possibly survive". The concept was expressed in short by the words of Spenser as: "Survival of the fittest".

Simply, many species evolve naturally; the fit species survive and reproduce.

Darwin is called Father of the 'Modern Theory of Biological Evolution'. Actually, he should be called Father of the 'Atheistic Theory of Biological Evolution' because he tried to establish that the evolution occur through natural selection, not by God.

Falsehoods perish. So, his argument has been proven wrong in the laboratory. Living creatures are expressions of genome codes, proven handiwork of God. These monumentally complex codes of interdependent creatures cannot modify at its own in a positive direction.

So, the Biological Evolution is true, but the Theory of Natural Selection is wrong. The Evolution is guided by God. And He says that humans are stand alone creatures.

Modern scientific disciplines have established the Theory of Biological Evolution firmly. It shows that all living creatures have descended from bacteria like microorganisms that originated in the ocean floor more than three and half billion years ago. It had the same DNA Double Helix Molecule that we have today; only the codes are different.

"Glory to God, Who created all things that the earth produces, as well as their own kind, and things of which they have no knowledge from Pairs (DNA Double Helix Molecule)"

[Al Quran 36:36]

8a. The Instrument of Evolution

A DNA Double Helix Molecule is a long polymer. A human DNA Molecule is six feet long. It remains coiled in a chromatid.

A gene is a part of a DNA, which encodes a function. There are about 23000 genes in a strand of human DNA. These 23000 makes 2% of DNA. The jobs of rest 98% are unknown.

Surprisingly, the DNA of a chicken has the same numbers of genes (23000). It is minor variations in the genes and their switching on and off during formation of the body determines the kind of animal it will produce.

DNA is like a huge factory that has many kinds of machines. It is the Body Plan Genes that determines which machines will run for how long, and what will be produced: a gorilla, or a monkey. If the hand making machines runs for a long time, it produces the hand of a gorilla; if it runs for a

short time, it produces the hand of a monkey. The genes are switched on and off accordingly.

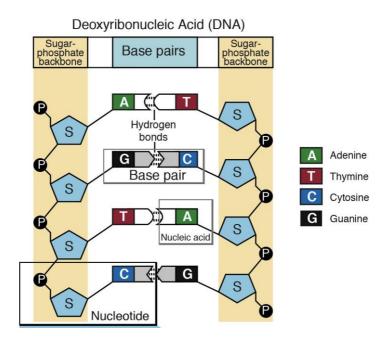


FIGURE 31: DNA Double Helix

It is the same genes that work in plants, horses, peacock, and fruit fly, yet they produce widely different results. It is hard to differentiate the embryo of a human and the embryo of a chicken. As they grow, their features become evident. The 'body plan gene' directs, when and where the head will grow—whether it will be a chicken head or a human head; where the legs will grow—whether it will be a chicken's leg or a human's leg; where the wings / hands will grow, and so on.

Another set of DNA determines body patterning, the blotches and spots.

Scientist Sean B. Carrol suggests how these genes are used to create diverse creatures. There are pitches of DNA, called Switches. The switches are not genes. They do not make stuff like hair, cartilage, or muscle, but they turn on and off the genes that produce these things. Thus, they choreograph the blotches and spots of the animal body.

A particular 'body plan gene' is called hox gene. They are at the top of the chain of command. They give order that cascade through developing embryo, activating entire network of switches and genes that makes the parts of body. They are critical to the shape and form of a developing creature.

Thus, there are genes that make the staffs of our body, such as hair, cartilage, and muscle. There are switches that turn them on and off. And there are hox genes that give commands of coordination.

Therefore, the origin of whole new structure in the evolution does not involve the origin of new gene or whole new genetic recipe; the old genes can be re-configured to create a new species.

The first single cell creature had the same DNA Double Helix Molecule we have today?

A new form of life has to have new code in the form of information inscribed in the spine of DNA Molecule. Such monumentally complex code cannot modify at its own.

There are clearly defined periods when the modifications took place. The Cambrian Explosion was an explosion of biological form, but it was an explosion of biological information as well. And we know what it takes to generate information into the computer.

So, evolution is not a continuous process and did not go on as a matter of survival of the fittest. A Super Intelligent Creator created the Double Helix DNA Molecule and carried forward the evolution by modifying the genome codes.

8b. The First Living Creature

Allah has evolved the Universe from a tiny state of unity. And He has evolved the giant blue whales from a tiny single-cell creature that He created in the water (ocean floor):

"Do not the unbelievers see that the "Skies and Lands" (Universe) were joined together, before We clove them asunder? We made from water every living thing. Will they not then believe?"

[Al Quran 21:30]

Allah designed the laws and initial configuration of the Universe so that it would evolve as desired. But the design could not be impregnated with the information needed to create the genome of the first living creature (a genome is an organism's complete set of DNA, including all of its genes). It is too complex and huge.

The DNA structure that is able to re-produce another similar creature is so complex and contains such huge information that it negates the probability of accidental creation—the probability is 1 in $10^{340,000,000}$.

So, the first genome was a special insertion by God. Subsequently, He modified it through the angels to create the higher species.

8c. Reason of Evolution

The Quran does not say that Allah created this vast universe by a single order of "Be". Instead, it says that He created it in six periods of time. Each of these periods was a long time. He adopted the best possible way to create. Otherwise, one of His names is Evolver.

The One Who made good everything He created, and He began the creation of man with clay.

[Al Quran 32:7]

The above verse says the reason of evolution: It was to make good everything He had created. In other words, it was to evolve the creatures to the higher forms. For example, He created the horse. But, the horse was only 20 cm high. He made it big by modifying its genome code. Now, it can carry a human.

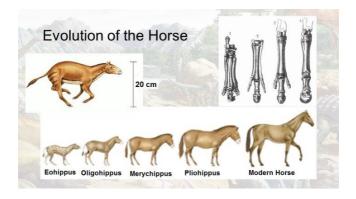


FIGURE 32: Made good everything He created

The reptiles were dominant creatures of the Mesozoic Era. So, the horses had to be small to hide into the undergrowth and small holes. As the age of mammal (Cenozoic Era) appeared about 65 million years ago, the evolution was directed towards the making of Earth good for Adam. The reptiles were erased and the horses were made big step by step.

8d. "Be" and it is!

Allah is ever living. He was never in a hurry to create.

The primitive Earth was not suitable for complex creatures. So, He created tiny single-cell creatures that could survive and contribute to make the Earth suitable for higher creatures. Those were esteemed creatures that survived in the barren earth.

There was no free oxygen in the atmosphere, so there was no ozone layer to protect the earth from harmful ultraviolet (UV) radiations. The evolution of life was going on in the water. In course of time, free oxygen produced in the air, ozone layer formed, and the land living creatures appeared.

The continents were drifted, mountains were formed, rains raised the ground water, and the fruit bearing big trees were evolved. When the Earth became suitable, Allah created Adam separately, but with the same Double Helix DNA Molecules (Pairs):

"Glory to God, Who created all things that the earth produces, as well as their own kind, and things of which they have no knowledge from Pairs (Double Helix DNA Molecules)" [Al Quran 36:36]

Why an Omnipotent God adopted a time-consuming process to make the Earth suitable for humans? He could say, "Be", and everything would be created instantly. To understand the matter, we are to discuss the verses related to the command of "Be". Look into the following verses:

"It is not befitting to God that He should beget a son. Glory be to Him! When He determines a matter, He only says to it, "Be", and it is." [Al Quran 19:35]

"It is He Who gives life and death; and when He decides upon an affair, He says to it, "Be", and it is."

[Al Quran 40:68]

The above verses say that before ordering "Be" Allah has to 'determine the matter' or 'decide upon an affair', which means that He has to concentrate and plan the matter / affair. Then He says "it" (an object) to be the intended thing. His plan and order must be deliberate otherwise the created thing would not be perfect.

His order gets materialize because the elementary subatomic particles are held in His hand of nafs comprising necessary force fields, such as Quantum Fields, Gravitational Force, Dark Energy (Force of Expansion), etc.

Allah in form is in the Arsh. His nafs (soul) may comprise 99 known and unknown force fields. He has extended 15 to 20 force fields as His hands (hands of nafs) to sustain and evolve the universes. He has infused (did *istawa*) the right hand of His nafs into this universe (Samawaat), and the left hand of His nafs into the Arsh. [Allah is deliberately discussed in Chapter-1 of my Tafsir, "Scientific Tafsir of Zakaria Kamal", available in the Internet as free PDF.]

"To Him is due the primal origin of the Skies and Lands; when He decrees a matter, He says to it: "Be", and it is." [Al Quran 2:117]

Allah is Creator, Sustainer and Evolver from the level of elementary subatomic particles. So, when He commands, the elementary subatomic particles of a material move to the destined points instantly and form the intended object. It is His power in the created universe where every inert thing is designed and sustained to obey His commands.

Once a thing is created, it can be reproduced easily. The Universe will collapse, and it will be created again. The revival will be easier because the space is collapsing like a written scroll—information cannot be destroyed.

"Is not He Who created the Skies and Lands (Universe) able to create the like there of? Yea, indeed—for He is the Creator Supreme, of skill and knowledge! Verily, when He intends a thing His command is, 'Be', and it is!" [Al Quran 36: 81-82]

But, if a thing is very complex, like a human body, the order "Be" does not suffice, as the following Verse says:

She said: "O my Lord! How shall I have a son when no man has touched me?" He said: "Even so; God creates what He wills: When He has decreed a plan, He but says to it, "Be," and it is! [Al Quran 3:47]

Allah said "Be" but Jesus took about ten months to form in Mary's womb, and then he took birth. It is most likely that a cell of Marry was modified as zygote and was put into her womb to create Jesus. Jesus took months to form in the womb of Marry.

Adam was created in the same process:

The similitude of Jesus before God is as that of Adam; He created him from *turabin*, then said to him, "Be", and he was. [Al Quran 3:59]

In above verse, "turabin" means collection (its root ward "turab" means "soil", but it means "collect / deposit" as well). Adam was created from the collection of DNA materials in the form of zygote.

Allah might have collected a zygote from an earthly animal. He made the developments in the genome to produce the zygote of a human. He put the zygote into a test tube, made the arrangement to supply the nourishment, and ordered it to be. So, Adam became in due course of time.

Allah had to create the zygote of Adam personally, and then He ordered, "Be", when the zygote began to develop. It must have taken months for child Adam to be born from the test tube.

Allah has created and designed the Universe in a way that every inert thing acts according to His order. They are devotedly obedient to Him. Many angels and systems may also come into effect on the order, "Be". They play their roles in the creation. So, in the Quran, "We" is often used in the descriptions of such acts.

9. Three Torturous Undertakings of Allah

Allah is the Creator. And it is not easy to be a Creator. Allah does not become tired, but He feels hardship. The following verse talks about three creations, which were torturous undertakings for Allah:

"He created you from a Soul Single (Nafsin-Wahidatin / a combination of known and unknown force fields), then created favorable Pairs (Double Helix DNA Molecule), and He sent down for you of the cattle eight Pairs (Modified DNA Molecules for four pairs of domestic animals), He creates you in the wombs of your mothers—creation after creation—three tortures (on Allah). That Allah is your Lord; for Him is the dominion. There is no god but He. Then how are you turned away?" [Al Quran 39:6]

Above verse is often translated in deviated form, as people do not want to accept that anything could be torturous for Allah. My translation is direct, word-to-word. According to the above verse, Three Tortures (*Zulumatin Thalathin*) on Allah were as under:

- 1. Creation from a Soul Single (Nafsin-Wahidatin)
- 2. Creation of Favorable Pair (Double Helix DNA Molecule)
- 3. Creation in Mother's Womb

These are tortures related to humans only. Allah has created many other creatures as well.

The tortures are discussed below. Each of these three acts was a monumental affair.

9a. The First Torture – Creation from a Soul Single

The Universe was created from a huge Soul Single (Nafsin-Wahidatin) provided by Allah. He provided the Soul from His own body.

A ruhh (an elementary soul) and a force field are the same thing. It works as a command of God.

Two or more ruhhs makes a nafs (composite soul). A nafs sustains a system, such as an atom. An atom is sustained by three force fields such as Magnetic Force Field, Strong Nuclear Force Field, and Weak Nuclear Force Field. These three makes the nafs of an atom.

The Nafsin-Wahidatin (a Soul Single) was a huge soul comprising known and unknown force fields. The unknown force fields which were required to produce the nafses (composite souls) of living creatures were extracted from the Nafsin-Wahidatin, as the verse says: "He created you from a Soul Single (Nafsin-Wahidatin)..."

The extracted unknown force fields were fragmented and were recombined in due proportions to produce the nafses (souls) of living creatures including humans. The consciousness and the emotions of an animal come from the forces of the soul (nafs).

The GUT Forces (Electromagnetic Force Field, Strong Nuclear Force Field, and Weak Nuclear Force Field) that produced the Universe were also extracted from the Nafsin-Wahidatin.

9b. The Second Torture – Creation of Double Helix DNA Molecule

The genome code is the blueprint of life. It guides the formation of a human body from a single-cell-zygote to a hundred-trillion-cell body. Allah alone made the Double Helix DNA Molecule (Pair).

Again, the genome of each human is custom made. Genome is complete set of DNA in an organism. It contains all information needed for the organism to form and grow. Almost each cell of a body contains a copy of complete genome. It carries the heredity. Allah guides the formations of sperm and ovum and finally produces the genome in the zygote with specific codes. It could not be left on chances. If Allah had made the nafs (soul) of an athlete, He has to give him the DNA of an athlete. Therefore, specific genome for each individual is produced and Allah monitors its production. So, the verses say: *He created you from a Soul Single (GUT Force +), then created favorable Pairs (Diploid Chromosomes with specific codes)*.

Allah, though highly capable, is one. Out of Three Tortures, this is the Second Torture on Him.

When Allah descended Adam and Eve, He gave them four pairs of domestic animals. These animals maybe from the Earth, but their DNA Molecules (Pairs) were modified to make them suitable domestic animals. So, the verses say: And he sent down for you, of the cattle eight Pairs (eight modified Double Helix DNA Molecules for producing four pairs of domestic animals).

9c. Third Torture – Creation in Mother's Womb

Allah has not left the creation of a man on his genome codes only. He guides the creation. It is necessary for the creation of a man, though scientists will tell you that the genome is enough. Allah knows – scientists know not.

A genome cannot fashion a human perfectly. A zygote kept in a test tube in the most favorable condition does not make a perfect human body. Allah guides the formation in the mother's womb, as the verse says; "...He creates you in the wombs of your mothers—creation after creation—three tortures"

How many women are pregnant today- Allah fashions all babies. Out of Three Tortures, this is the Third Torture on Him.

9d. Resurrection

A nafs is a combination of force fields; it gets imprinted with the information of physical development in a mother's womb; it becomes a program of creation. On the Earth, a body is like a mold and a nafs is like a cast.

The nafs gets fixed during death. It will assist the resurrection of the body. Then, the nafs will be like a mold and the developing body will be like a cast.

During initial creation in the mother's womb, a nafs cannot help; Allah fashions a human. But the nafs, designed in the mother's womb, will help the genome to develop the body during resurrection. It will keep on regenerating the body in the extreme punishment of hell.

Each human is custom made. But it is done or being done. Each has his DNA, and his nafs gets designed with the development of his physique in the mother's womb as a program of formation. So, the Resurrection will be easy.

The DNA molecules survive in the nature for hundreds of thousands of years. On the Day of Resurrection, a Set of DNA Molecules (46) will be attached to one's nafs. One will then grow on the land by absorbing the nourishment supplied in the surroundings, like a plant grows by absorbing suitable matter and energies; mother's womb will not be needed.

"He Who has made the land calm for you and inserted ways therein for you and has sent down water from the sky. Then He brought forth with it pairs (Double Helix DNA Molecules carried by the pollen grains) from plants diverse—eat and pasture your cattle. Verily, in this are signs for men endued with understanding. From it (Pairs / Double Helix DNA Molecule) We created you, and in it (Pairs / Double Helix DNA Molecule) We will return you, and from it (Pairs / Double Helix DNA Molecule) We will bring it out in time another" [Al Quran 20: 53–55]

We do not know the jobs of 98% DNA. Maybe, 5% of it is meant for Resurrection. When a Set of DNA Molecules (46 for a human) will be embedded in a nafs, it will form the cell, replicate, and produce the body in the sequence it developed in the mother's womb. However, some of the humans will form in devil-human shapes for the deformation of their nafses due to sins and satans.

"What! When we die and become dust that is a return far. We already know how much of them the earth takes away; With Us is a record guarding"

[Al Quran 50: 3-4]

A human will be created with the same DNA he had on the Earth so that he cannot deny him to be the same person who committed the sin.

Yes, We are able to put together in perfect order the very tips of his fingers." [Al Qur'an 75:4]

If one is here, one will be there too; nothing can be erased. There is no doubt what so ever. We are creatures of a Mighty Arrogant Creator. He says, "Be", and it is!

"They swear their strongest oaths by God that God will not raise up those who die. Nay, but it is a promise on Him in truth—but most among mankind realize it not—in order that He may manifest to them the truth of that wherein they differ, and that the rejecters of Truth may realize that they had indeed Falsehood. For to anything, which We have willed, We but say the word, "Be", and it is.

[Al Quran 16: 38-40]

10. Biological Evolution

The primitive organisms made the Earth suitable for animals. It probably produced free oxygen in the atmosphere.

The animals evolved from the aquatic creature that lived five to six hundred million years ago. The progression went on as under:

- 1. The first organism was created about 3 to 4 billion year ago. Life progressed in the water.
- 2. Most known animal phyla appear in the fossil record as marine species during the Cambrian Explosion about 542 million years ago.
- 3. The land plants appeared about 450 million years ago.
- 4. Continents began drifting about 225 million years ago.
- 5. The high mountain ranges formed by 75 million years ago. It spread the clouds in the continents and produced the rain and the rivers. The rain raised the ground water.
- 6. Flowering trees appeared about 73 million years ago.
- 7. Adam and Even were descended about ten thousand year ago (as envisaged from the cave paintings and fossil record of domestic animals).

The following verse narrates the progression of living creatures on the basis of locomotion. It means that the verse is talking about animals. Movement is the primary character of the animals: "All animals are motile, meaning they can move spontaneously and independently at some points of their lives" – Wikipedia, the free Encyclopedia

However, there are deviations. At lower level, it is difficult to differentiate plant and animal. Many lower animals resemble plants in their mode of growth and in their simplicity of structure, the colonies of the compound hydroids and the coral-making polyps are plant-like and lack the power of locomotion, but they are classified as animals.

"And Allah has created every animal from water; of them there are some that creep on their bellies; some that walk on two legs; and some that walk on four. Allah creates what He wills, for verily, Allah has power over all things" [Al Quran 24:45]

The verse describes the creation of animals in the sequence of: waterborne creatures – creeping creatures – two legged creatures – and four legged creatures. The progression is depicted in the following figure:

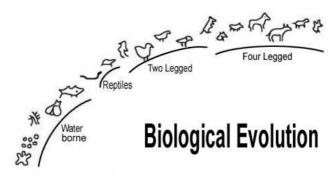


FIGURE 33: Biological Evolution

The figure is showing the Biological Evolution at a glance. It is drawn from *The New Encyclopedia Britannica*. I have underlined waterborne creatures, creeping creatures (reptiles), two legged creatures (birds), and four legged creatures (mammals) to relate it with the verse. I have erased human from the figure, as the link is missing (the missing link is discussed subsequently).

The verse is discussed by dividing it in four parts, as under:

Part-1 of the Verse: "And Allah has created every animal from water ..." [Al Quran 24:45]

The animals evolved from free-floating comb jellies that lived about 730 million years ago. They rely on water flowing through their body cavities to acquire oxygen and food.

A team from Brown University in Rhode Island analyzed massive volumes of genetic data to define the earliest splits at the base of 'animal tree of life'. The 'tree of life' is a hierarchy of evolutionary relationships among species that shows which groups split off on their own evolutionary path at first. The finding was unexpected because evolutionary biologists had thought that less complex sponge evolved at first. The comb jellies are complex creatures, having connective tissues and nervous system.



FIGURE 34: Comb Jelly

The plants and animals were evolving in the sea. They could not survive on the land because the land was bathed in lethal UV radiation due to the absence of Ozone Layer. Once

enough free oxygen produced in the atmosphere, the ozone layer formed, and the living creatures began venturing into the land.

But a fish could not migrate on the land straightway. The problems of land adaptation were many, such as gas exchange, water conservation, reproduction, dispersal, etc.

Animals evolved internal gas exchange system, waterproof skin, ways of reproduction that did not involve water, and strong support system to move about on land.

Part-2 of the Verse: "... Of them there are some that creep on their bellies..." [Al Quran 24:45]

Animals began exploring on the land about 530 million years ago. A discovery of 2002 suggests that arthropods were the first land animals.

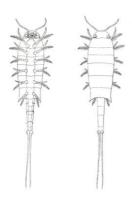


FIGURE 35: Euthycarcinoids

After arthropods, the tetrapods appeared on the land. The tetrapods such as Ichthyostega (See figure below) were

amphibians and were closely related to Eusthenopteron (see figure below).

The Eusthenopteron falls in a group of fish known as lobe-finned fish. The Coelacanth (see fig. below) is living representative of this group of fish.

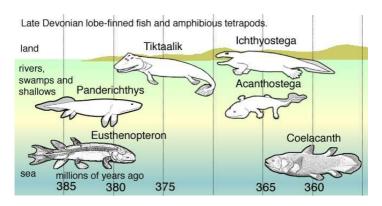


FIGURE 36: Ichthyostega, Eusthenopteron, and Coelacanth (Wikipedia)

The reptiles appeared on land about 360 million years ago. During this time amniotic egg evolved, which allowed the early reptiles to move away from the waterside habitats.

The amniotic egg allowed the ancestors of modern reptiles, birds, and mammals to reproduce on land by preventing the embryo from drying out. So, the eggs could be laid away from the water.

The early reptiles belong to a group called cotylosaurs. They were small lizard-sized animals.



FIGURE 37: Cotylosaurs

Thus, the creepers appeared on the land.

In Figure-33, the 6th and the 7th creatures, namely snake and turtle, creep on their bellies.

Part-3 of the Verse: "... Some that walks on two legs ..." [Al Quran 24:45]

The limbs of a lizard were jutting sideways, so they creep on their bellies. But dinosaurs had limbs under the body, which gave them erect posture. The reptiles gave rise to the dinosaurs. Some of them walked on two legs.

The birds evolved from theropod dinosaurs. The birds too walk on two legs.

Thus, from the reptiles, the creatures that walk on two legs evolved.

In Figure-33, the images of 8th, 9th, 10th, 11th and 12th creatures, namely Penguin, Chicken, Duck, Pigeon and Kangaroo respectively, walk on two legs.

Part-4 of the Verse: "...And some that walk on four. Allah creates what He wills; for verily Allah has power over all things" [Al Quran 24:45]

By 125 million years ago, mammals had become a diverse group of organisms with absence of lumber ribs implying the presence of diaphragm, well developed canine teeth, and bony secondary plate to allow air and food had separate passages to the back of the throat.

However, the mammals were a minor player of the times. They were small and adapted to survive by hiding in the holes. As the world entered Jurassic Period (213–145 million years ago), the dominant animals were reptiles. The dinosaurs were chief land animals; crocodiles, ichthyosaurs, plesiosaurs ruled the sea, while the sky was inhibited by the pterosaurs. However, in subsequent Cretaceous period (145 – 65 million years ago) many of these organisms were declining.

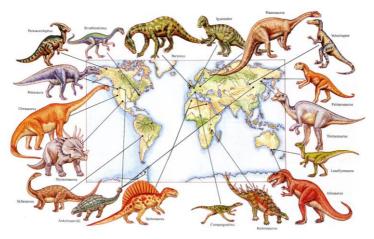


FIGURE 38: Dinosaurs

The origin of flowering tree during Cretaceous period triggered a major adaptive radiation among the insects; butterflies, moths, ants appeared and flourished. The insects acted as pollinating agents.

The mass extinction at the end of Cretaceous Period, 65 million years ago, wiped out the dinosaurs along with other

land animals heavier than 25 kg. It cleared the way for the expansion of mammals.

Thus, after the animals that walk on two legs (dinosaurs, flying reptiles and birds), the animals that walk on four legs (mammals) evolved.

In Figure-33 the images of 13th, 14th, 15th, 16th, 17th and 18th animals namely Rabbit, Pig, Donkey, Horse, Dog, and Monkey respectively, walk on four legs.

According to the Verse, the animals at the final stage are four-legged creatures. Therefore, humans are discarded from the chain.

Mass Extinction and Turning the Evolution for the Arrival of Adam

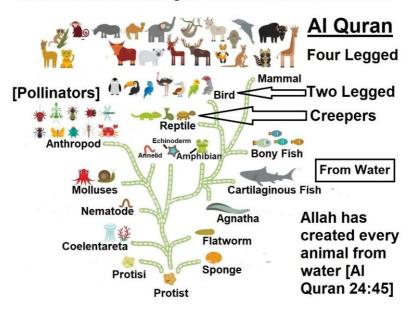


FIGURE 39: Evolution of Animals

The following table is taken from *The New Encyclopedia Britannica*, except the rightmost column that I have put to show the support of Al Quran to the Theory of Biological Evolution.

Progression of Animals,		Quran's
as has been discovered		Progression on
Age of Era	System	the basis of
İ		Locomotion
Precambrian	Old single-cell and	Allah has
Creatures	multi-cell creatures.	created every
4500–3300	(Marine Creatures)	animal from
Million Years		water
Paleozoic	Fishes and Reptiles	Of them there
Creatures	(Creeping	are some that
600–280	Creatures)	creep on their
Million Years		bellies
Mesozoic	Dinosaurs, Flying	Some that
Creatures	Reptiles, Birds	walks on two
230–135	(Two Legged	legs
Million Years	Creatures)	<u>[</u> j
Cenozoic	Mammals	And some that
Creatures	(Four Legged	walk on four
63–13	Creatures)	
Million Years		<u> </u>

"And Allah has created every animal from water; of them there are some that creep on their bellies; some that walk on two legs, and some that walk on four. Allah creates what He wills, for verily, Allah has power over all things" [Al Quran 24:45] Thus, the Quran does not contradict the idea of biological evolution. Only about humans and several domestic animals, the Quran gives a different idea.

"...And he sent down for you of the cattle eight Pairs (Double Helix DNA Molecules)..." [Al Ouran 39:6]

The oldest fossil of domestic cow is 10200-year-old. The fossil of their predecessor is not found—they too have missing link. Adam and Eve were descended on the Earth around this time.

Another three kinds could be goat, horse and camel. Evolutions of these animals show drastic changes towards being suitable for humans. Probably, Allah produced them on the Earth by modifying the genomes of similar creatures.

Cave painting and DNA analysis confirm that Adam and Eve (so called modern humans) appeared on the Earth about ten to twelve thousand years ago. Scientists show older fossils, looking like human bones; those actually belonged to different kinds of monkeys and apes

11. Creation of Adam

There are four verses that help us understand how Allah created Adam. From these verses we come to know that Allah has created Adam from four things as under:

- a. Water
- b. Pairs (Double Helix DNA Molecules)
- c. Amino Acid (Salsalin Hama-in Masnunin)
- d. Tinin (Lute / DNA Code)

:

11a. Following verse talk about water:

"It is He Who has created man from water, then has He established lineage of fusion (fusion of sperm and ovum); for thy Lord has power." [Al Quran 25:54]

A large part of human body is water.

11b. The following verse talks about Double Helix DNA Molecule:

"Glory to God Who created all things that the earth produces as well as their own kind and things of which they have no knowledge from Pairs (Double Helix DNA Molecules)" [Al Quran 36:36]

All earthly creatures from amoeba to blue whale are created from Double Helix DNA Molecules (Pairs); only the codes are different. The above verse says that Adam was also created from the same Double Helix DNA Molecules (Pairs).

11c. A human body is created from different kinds of proteins. The proteins are created from amino acid. The following verse talks about the amino acid:

"We created man from sauce (salsalin / salsa / sauce) of black mud (huma-in / black mud / carbon based matter), altered (masnunin / altered)."

[Al Quran 15:26]

The sauce of black mud is amino acid:

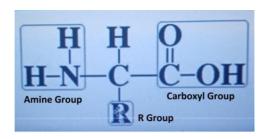


FIGURE 40: Generic Structure of Amino Acid

Each amino acid consists of a central carbon. The central carbon is bonded to an amine group (NH2), a carboxyl group (COOH), a hydrogen atom and an R group.

Liquid aminos are concentrated amino acids that are similar in taste and appearance to soy sauce.



FIGURE 41: Amino Acid

There are 20 different types of amino acids available in a cell. From these 20 types, the DNA can produce more than thousand kinds of proteins that make a human body.

11d. However, Adam did not appear as a result of biological evolution. Allah created him separately, which is said in the following verses:

"The One Who made good everything He created, and He began the creation of man from *tinin* (*lute* / DNA Code)." [Al Quran 32:7]

In light of above verse we may say that after developing suitable creatures to support the human life, Allah personally created Adam from *tinin*.

In above verse "tinin" is normally translated as "dust", but a dust is a silicon based matter and a human is a carbon based creature. "Tinin" means "lute" as well (see dictionary). The lute is an old Arabian musical instrument with strings, like a guitar.

A human Double Helix DNA Molecule is 6 feet long thin string that remains coiled in a chromatid. A genome with 46 Double Helix DNA Molecule is like a lute with 46 strings. Music of the lute (genome expression) forms a human body in a mother's womb.

So, it seems that Allah made a cell (zygote) with human genome and supplied it with nourishment (amino acid mainly). The cell multiplied and formed Adam. However, Allah guided the formation.

Old Arabians knew from Socrates the Philosopher that humans are created from earth. So, they understood "tinin" as "earth / dust". Gradually, the meaning has been introduced in the dictionary, when it was written a few hundred years ago.

Thus, Allah produced the seed (zygote / a cell) of Adam and planted it in a suitable place supplying nourishment. The cell multiplied, and Adam was created. This is the basic way

of creating a human. On the Day of resurrection humans will grow in this way.

But, on the Earth, a human is created in a mother's womb. The creation is determined through the fusion of sperm and ovum, as the verse say: "It is He Who has created man from water, then has He established lineage of fusion (fusion of sperm and ovum); for thy Lord has power." - Al Quran 25:54. It is done for the requirements of earthly human life.

12. Missing Link

After the publication of Darwin's "On the Origin of Species by Means of Natural Selection" in 1857 and "The Descent of Man and Selection in Relation to Sex" in 1871, many began to believe that human being evolved just from the existing apes.

We do not have any disagreement with biological evolution, indeed the Quran indicates that Allah evolved the living creatures from lower to higher form (water borne creatures – creeping creatures – bipedal creatures – four footed animals / Al Quran 24:45). The Quran differs in case of humans only, as it says that Allah created them directly.

Therefore, we will just have to see whether humans fit into the chain of biological evolution, or not? In other words, we will have to know the "Missing Link" only, in light of the Quran and modern science. In the following paragraphs, I have discussed the evolution of so called hominids and put forward my arguments:

The Theory of Biological Evolution looks good up to the creation of Chimpanzees, but, when one tries to add up humans, the Theory gets lost. The fossil finds of last two

hundred years and more could not support the idea that humans evolved from the modern apes (chimpanzee, orangutan, gorilla, etc.). The chest and the hand bones of humans and modern apes are similar, but there are significant differences in other parts of the bodies. The followings are the areas of wide differences.

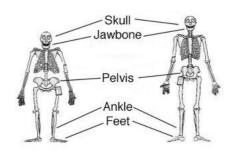


FIGURE 42: Areas of Major Differences

Skull: The cranial capacity of a human being is 1450 cc in average, whereas the cranial capacity of an ape is from 325 cc to 659 cc only.

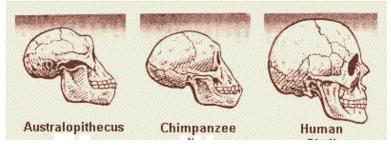


FIGURE 43: Skull

Face: Apes have smaller chin, large jawbone and teeth, flat nose, higher brow ridge, receding fore head, thick skull bone, and a thicker part at the hind side of the skull called occipital torus (Occipital Torus joins neck muscles with head. It is found in the apes only).

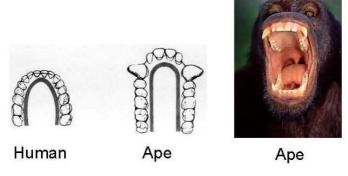


FIGURE 44: Dentition

Head-Neck Attachment: Humans have head-neck attachment suitable for an upright creature. But head-neck attachment of an ape is suitable for four-footed animals.

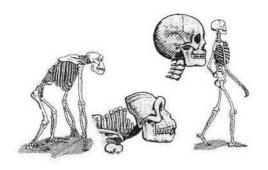


FIGURE 45: Head-Neck Attachment

Pelvis: Pelvis of a human is structured for sustained two-legged standing and walking. But pelvis of an ape is not suitable for prolonged two-legged standing and more than a few steps of bipedal walking.

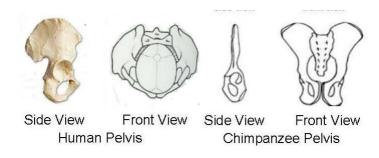


FIGURE 46: Pelvis

Legs: Legs of humans are long and well built. Feet are totally different.

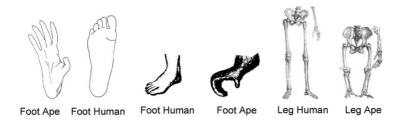


FIGURE 47: Foot and Leg

Body proportion of ape and human differs greatly. Apes have long, well built and strong hands and comparatively short and weaker legs. It is opposite in case of humans.

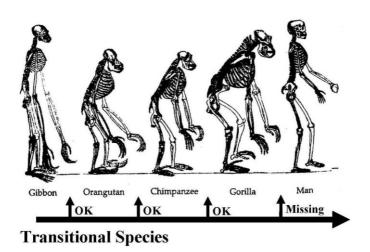


FIGURE 48: Modern Apes and Human Skeletons

A difference is not a negative aspect; otherwise there should be differences between two species. But a wide difference is a considerable matter. It demands transitional species to link up. It is obvious that Gibbon, Orangutan, Chimpanzee, Gorilla evolved from one another; they differ in sizes mainly. But humans have wide differences, especially in skull and physical structure related to locomotion.

Early Evolutionists got the idea that due to sensitive hands, the brains of some modern apes (chimpanzee, orangutan, gorilla, etc.) developed. So, they left the trees and started walking on two legs. Because of bipedal walking, their legs became longer and stronger. Eventually they became humans.

But so far, no fossil of modern ape has been found, which shows the sign of increasing brain. No fossil of modern ape has been found, which shows development in pelvis and leg. Therefore, the idea was found wrong.

They thought that they would find the fossils of linking species one day. But, more than two hundred years have passed in searching. No fossil has been found.

Now evolutionists suggest that from a common ancestor (hypothetical) two branches evolved: Hominids and Pongees. In Hominid Branch (Family), humans have evolved. And in Pongees, Orangutan, Gorilla and Chimpanzees (modern apes) have evolved.

The evolutionists suggest that they have found a few fossils of Hominid Branch. They are searching further for the fossils of ape like creatures that could strengthen the hypothetical Hominid Branch.

However, even after decades have passed, the fossil record is sparse. The finds are mainly fragments of cranium, jaws, teeth and hand bones. With these controversial fragments, the skeletons of fictitious transitional creatures are produced to form the Hominid Branch. They show the progression of this hypothetical branch as under:

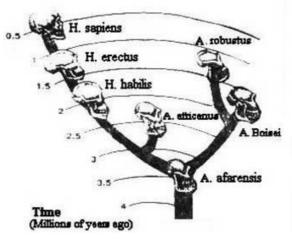


FIGURE 49: Hominid

- 1. Australopithecus (genus)
- 2. Homo Habilis
- 3. Homo Erectus
- 4. Homo Neanderthalensis.
- 5. Homo Sapiens (Human beings)

12a. Human Physical Structure

I want to discuss the physical structure of a human, before I discuss the species of Hominid Branch.

We are always being misguided. Look into the following picture. The picture has got a good circulation. It shows, at least to a kid, how humans evolved.

But what is the reality? Number 1 is an ape (Gorilla). Number 2 and 3 are fictitious creatures. Number 4 and 5 are humans—many of 4 are found in South America and many of 5 are found in North America. Did North Americans evolved from South Americans?

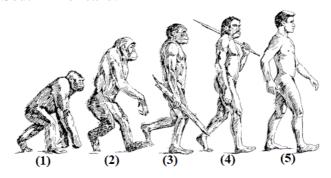


FIGURE 50: Hominid Branch (Artistic Impression)

"To attempt to restore the soft parts is an even more hazardous undertaking. The lips, the eyes, the ears, and the nasal tip, leave no clues on the underlying bony parts. You can with equal facility model on a Neanderthaloid skull the features of a chimpanzee or the lineaments of a philosopher. These alleged restorations of ancient types of man have very little if any scientific value and are likely only to mislead the public...So, put not your trust in reconstructions."

- *UP FROM THE APE* by EARNST A. HOOTEN, Harvard,

"And cover not Truth with falsehood, nor conceal the Truth when you know." [Al Quran 2:42]

Modern human skeleton has many unique features that negate their evolution from ape like creatures:

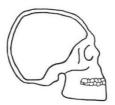


FIGURE 51: Human Skull

Human cranial vault has high maximum breath with vertical forehead.

A human have prominent nose and chin.

A human have smaller jaw and teeth, so it needs smaller masticator muscle on delicate facial structure.

The lighter face requires lighter neck muscle behind the point of balance of the skull. Therefore, the area of head-neck attachment is nearer to the chin.



FIGURE 52: Human Vertebra

Human skeleton shows a fully upright posture: Vertebral column shows two secondary curves when viewed from a side. These curves at the neck region and lumber region allow weight to be evenly distributed about the line of gravity, which passes vertically through the second vertebra, behind the rotation centers of the two hip joints. It permits pelvis to tip backward beyond the line of gravity and rest upon a strap like ligament. It is a sophisticated effort saving mechanism that allows muscles around it to relax during prolonged standing.

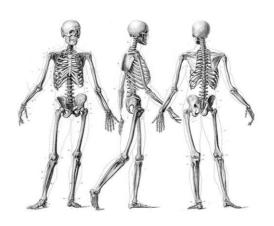


FIGURE 53: Human Skeleton

Ability to lock the knee rearward relaxes some surrounding muscles.

Power to rise from seated position is provided by large buttock muscles.

Pelvic tilt mechanism allows leg to swing clear of the ground during walking. In addition, such tilt must avoid wild side-to-side movement of the center of gravity. This is achieved by inclining the thighbones toward the midline and thus bringing the feet closer together.

Upper limbs provide dynamic balance of the body. Arms swing compensates twist of the body towards the side opposite to the advancing foot.



FIGURE 54: Human Walking

Weight and force are transmitted to ground through a propulsive system of short levers that permits a heel-toe stride.

12b. Australopithecus

The evolutionists suggest that Hominids evolved from Australopithecus. The genus (Australopithecus) comprises five species namely A. Afarensis, A. Africanus, A.

Anamensis, A. Garhi, and A. Sediba. They suggest that the species lived in Eastern Africa 2 to 4 million years ago. No animal of this genus exists at present.

In 1974, Donald Johanson, an Associate Professor of Case Western Reserve University, and his team discovered a fossil in Ethiopia. It was a piece of knee joint.



AL 129. Johanson's Find

FIGURE 55: The Knee Joint of Lucy (A. Afrensis)

The knee joint looked suitable for bipedal walking.

But, only a knee joint could not make news. So, they collected fossilized bones from a wide surroundings and made an ape-like skeleton. They named the skeleton "Lucy". Lucy represents the species of Australopithecus Afarensis. The height of Lucy is one meter.



FIGURE 56: Lucy

Fossilized bones are scarce on the land. Yet after extensive search through a wide area, sixty percent bones including the skull could not be found. So, they made a skull of an Australopithecus to put it with the Lucy.



FIGURE 57: Lucy Skull (Replica)

Some Evolutionists consider Lucy as one of the vital missing links. The skeleton is remarkable for its knee joint,

which shows that the animal could fully straighten its legs. It means that the animal could walk on two legs. Other parts of the skeleton are ape-like, which means that the animal was an ape that walked on two legs.

The Evolutionists preach that the bipedal walking of this ape triggered the evolution toward human being. It freed the animal from bowlegged stride that keeps the modern ape incapable of more than a few steps of bipedal walking and keeps them in dense forest where moving though the branches of trees is possible.

The age of the fossil (knee joint) could not be found out in 70s and 80s, but the fossil found its position in the genus of Australopithecus; such was the shouting!

Later in 1992 the age was assessed by dating the layers of volcanic ash found below the site of Lucy. The samples were tested in the Institute of Human Origins founded by same Donald Johanson.

The bones of Lucy belong to different animals from different ages. People devout to Biological Evolution constructed its skeleton with fragments of bones collected from a wide area. Actually, the complete skeleton is produced to decorate the knee joint because it looks suitable for bipedal walking.

"A great legend has grown up to plague both paleontologists and anthropologists. It is that one of men can take a tooth or a small and broken piece of bone, gaze at it, and pass his hand over his forehead once or twice, and then take a sheet of paper and draw a picture of what the whole animal looked like as it tramped the Tertiary terrain. If this were quite true, the anthropologists would make the F.B.I. look like a troop of Boy Scouts."

- MANKIND SO FAR by W. HOWELLS, Harvard

A study carried out in 2016 proposes that A. Afarensis was a tree-dwelling creature:

"To make inferences about how Lucy's bones were used in day to day life, the researchers analyzed 3-D digital models of bones built from scans of the fossil. Bones, like drinking straws, are hollow, and if you were to slice them horizontally you'd have a set of bone bangles. The width of each one of those bangles at particular parts of the bone indicate its strength. This width is called cortical thickness. For example, a professional tennis player's racket arm bone has a larger cortical thickness than that of the other arm. Lucy's bones were pretty thick."

– JOANNA KLEIN NOV. 30, 2016, The New York Times

By comparing the CT scans with those of modern primates and humans, scientists found out that Lucy's upper limb strength was more like a chimpanzee's than a human's.

The skull of A. Afarensis (the species of Lucy) is similar to the skull of Modern Chimpanzees:



FIGURE 58: The upper skull belongs to an A. Afarensis (AL 444-2), the lower skull belongs to a modern Chimpanzee

"The very clear similarity between the skull of A. Afarensis (AL 444-2) and Modern Chimpanzees is an evident

indication that A. Afarensis was an ordinary species of ape with no human feature"—Adnan Oktar (Harun Yahya).

Thus, a knee joint showing the sign of bipedal walking is falsely fixed to a concocted skeleton of an ape (A. Afarensis) and is named Lucy.

No DNA analysis of Lucy's knee joint is carried out. It could be front-leg-knee-joint of a four-footed animal. The Four-footed animals too can fully straighten their front legs.

Therefore, Lucy does not fill up the missing link.

An animal cannot be tree living and bipedal at the same time. The tree living needs special hands, pelvis, legs and foot suitable to grab the branches. It needs high skill to swing through the branches, which monkeys and apes are genetically taught.

If a forest would become savanna, the apes would migrate or die, because living in a savanna too, demands high land-living efficiency, including the ability to run fast that demands four legs with stronger hind legs, or robust body to fight the predator, or very small body to hide. And, a savanna would not evolve a bipedal creature like human.

The Evolutionists suggest that descendants of A. Afarensis were A. Africanus whose overall physical structures were similar to that of A. Afarensis. However, none of their knee joint is found so far.

12c. Homo Habilis

The Evolutionists suggest that Australopithecus Africanus evolved into Homo Habilis. The Homo Habilis is a species in the genus called, Homo.

Homo Habilis is remarkable for its increased cranial capacity, which was about 640 cc in volume.



FIGURE 59: Homo Habilis Skull

They appeared in Africa about 2.5 million years ago and survived fifty thousand years or more. It is assumed that a group of them evolved into next species called Homo Erectus.

The fossils of Homo Habilis are found at Olduvai Gorge in North Tanzania and in Koobi Fora region of North Kenya. These are OH–7, OH–13, OH–16, OH–24, KNH–ER 1470, KNH–ER 1813, and KNH–ER 1805. The finds are fragments of cranium, jaws, teeth and hand bones.

The Evolutionists suggest that Homo Habilis were descendants of Australopithecus, so they had increased height and used to walk on two legs. The Evolutionists suggest their average height as 1.52 meter and average weight as 45 kg.

"Only a few post cranial parts have been discovered. Some limb bones from Olduvai and Kobi Fora have been grouped tentatively with H. Habilis on the strength of general anatomic similarity to later humans. These fossils however, are not associated with teeth or skulls, and it is probably not appropriate to use them as the basis for describing early Homo"—The New Encyclopedia Britannica.

In 1986, a fossil of Homo Habilis was discovered in Olduvai Gorge (OH–62). It is the only fossil with which the limbs are found. It shows that Homo Habilis was a very small

hominid. Its arm was long relative to leg length. It had body proportions that dramatically differed from those of more modern hominids.

"The find is especially important because of the associated limbs, which show that OH 62 is a very small hominid indeed. The arm is long relative to leg length so that this individual has body proportions, which differ dramatically from those of more modern hominids."

- The New Encyclopedia Britannica.

The fossil (OH–62) dismisses the species from Hominid Branch.

Therefore, Homo Habilis fails to fit into the chain, and does not help to fill up the Missing Link.

12d. **Homo Erectus**

Homo Erectus comes after Homo Habilis. Homo Erectus lived in almost every part of the old world. The fossils of this species are found in Java, China and Africa. The finds are cranial bones, mandibles and teeth mainly. A few femurs from postcranial part are found, which are robust but similar to human femur. The species might have had several geographic variants. Its earliest fossil evidence dates to 1.9 million years ago and extends to 143,000 years ago.

Only a few femurs are found from the lower part of body. Evolutionists suggest them as upright animals on the basis of their head-neck attachment. An upright animal should have attachment nearer to the chin. However, a tree living animal may have the same feature.

Homo Erectus had increased cranial capacity of about 1043 cc in average.

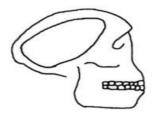


FIGURE 60: Homo Erectus Skull

They had skulls like apes. The skull bone was very thick. The braincase was low with jutting brow ridge, receding forehead and occipital torus. They had wide noses, heavy jaws and palates with very large front teeth. It is most likely that Homo Erectus was a kind of gorilla.

Many paleoanthropologists believe that modern human beings could not evolve from Homo Erectus.

"The skulls of the Homo Erectus fossils show other characteristics of their physical appearance. The braincase is low, and the skull bones are thick. They have jutting brow ridge and a markedly thickened area of bone at the hind end of the skull called occipital torus. The forehead recedes, and the nose, jaws, and palate are wide. The front teeth are larger even than Australopithecus an arctic trait that occurs in apes but in no other hominids. It is generally agreed, however that the dentition is hominid and not ape-like. These mixed traits are puzzling. Some paleoanthropologists see thing as specialized features characteristic of neither Homo sapiens not the ape and question whether Homo Erectus evolved towards Homo sapiens. According to paleoanthropologists, H. Erectus wandered off the main evolutionary line and could not have been an ancestor to modern humans. This appears to leave two possibilities.

Either H. Erectus with his thick cranium and outsize dentition was not on the direct evolutionary line from Australopithecus to H. Sapiens, or H. Erectus evolved specialized features from Australopithecus and then lost them again in the transition to H. sapiens."

- The New Encyclopedia Britannica.

"The total pattern of the bodily structure of H. Erectus as preserved in the bones is rather different from that of Homo sapiens. Parts of the post-cranial skeleton are robust but otherwise generally comparable to those of modern humans. The brain is relatively small, though not so small as that as Australopithecus and H. Habilis. In addition, in this hominid's thick skull bones and extra ordinarily developed eyebrow ridge and occipital torus, some investigators say that they see unique, specialized features, not characteristic either of its presumed ancestors or of apes and not pointing to H. sapiens as the direction of subsequent evolution. Some scientists even infer that these last traits show H. Erectus to have specialized so far off the modern human line that it could not have been ancestral to H. sapiens."

- The New Encyclopedia Britannica.

Fossil evidence clearly shows that Homo Erectus evolved into next species, Homo Neanderthalensis.

12e. Homo Neanderthalensis (The Neanderthal)

The species is called Homo Neanderthalensis because its first fossil was found at Neanderthal in Germany. They had geographic variants in other continents. They emerged 200,000 to 100,000 years ago. And, as the fossil record shows, the whole race suddenly disappeared about 30,000 years ago.

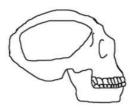


FIGURE 61: Homo Neanderthalensis Skull

Their development from Homo Erectus is clearly visible. Homo Neanderthalensis too had heavy skull bone with longer and lower braincase. The face remained large and long with wide nose and jutting brow ridge. Their chewing muscles and cheek reduced a bit, but teeth remained large like Homo Erectus. They had the habit of using their mouth as a vise or third hand. In Asia and Africa, facial massiveness of the Neanderthal-relatives reduced a bit.

Their hand bones suggest greater emphasis on power grip than precision grip.



FIGURE 62: Power Grip

The way we hold a pen to write is called precision grip, and the way we hold a rope to climb is called power grip.

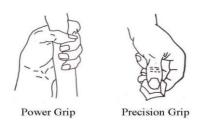


FIGURE 63: Grip

They had large chests, broad shoulders, and extremely muscular upper limbs. Their pelvis, legs and toes suggest that they required more irregular lateral movement during locomotion.

Neanderthals used to live in small groups. They could make stone tools as well as flakes and spears of wood. They domesticated fire, as it is indicated by charcoal and reddened earth deposits in their sites.

They totally lived on hunting and there is almost no evidence that they had the habit of eating plant food. Small sites and depth of debris indicate that they used to shift from place to place frequently.

The fossil evidences show a high frequency of traumatic injury among the Neanderthalensis. The remains show signs of serious wounds, sprains and breaks. They would most likely attack if they came across one from another group in their hunting area.

There are abundant evidences of nutritional deprivation during growth.

The fossil record shows that about 30 thousand years ago the whole Homo Neanderthalensis race suddenly disappeared.

Studies of Homo Neanderthal DNA carried out in 1997 and later times have confirmed that human beings have not evolved from Homo Neanderthalensis.

12f. Did humans evolved directly from Homo Erectus?

It is obvious that Homo Erectus evolved into Homo Neanderthalensis. And Homo Neanderthalensis disappeared about 30 thousand years ago. Despite that some Evolutionists links humans with Homo Erectus to keep the Hominid Branch alive. However, many oppose seriously.

The figures and the chart below show that Homo Neanderthalensis could evolve from Homo Erectus, but modern humans stand far away.

Genus	Erectus	Neanderthal	Human
Features	122335	C	10
Brow ridge	High	High	Plain
Forehead	Receding	Receding	Vertical
Skull bone	Thick	Thick	Thin
Occipital Torus	Present	Present	Absent
Brain case	Longer and Lower	Longer and Lower	Round and High
Chin	Full chin absent	Full chin absent	Prominent chin
Teeth	Large	Large	Small
Head-neck attachment	Rearward	Rearward	Closer to chin

12g. Evolution of Hominid

Homo Erectus and Homo Neanderthalensis had some physical features that bring them little closer to humans. But, it does not make much of difference. It only means that creatures somewhat looking like humans evolved on the Earth and were extinct about 30 thousand years ago.

13. Unique Adam

When the Earth became suitable for life, Allah created the first living creature and carried forward the evolution. The final creature was Homo Neanderthalensis.

Neanderthals came up through evolution, so they were extremely fit to survive in the nature—they did not require houses and cloths; they did not require fearing lions and tigers; probably, they were immune to all diseases.

However, the Neanderthals could not be a creature like humans though the braincase of a Neanderthal was almost equal to the braincase of a human. Scientists have identified the signs of serious wounds, sprains, and breaks in almost all Homo Neanderthalensis fossils. Hardly a few of them lived more than forty-five years. Animals like tigers, lions, wolfs are predators, but they do not bear so many wounds and sprains in their bodies.

"The difficult existence of the Neanderthals is reflected in their high frequency of traumatic injuries (the remains of all older individuals show signs of serious wounds, sprains or breaks), abundant evidence of nutritional deprivation during growth (more than 75 percent have evidence of growth defects in their teeth), and low life expectancies (few lived past 40 years, and almost none lived past 50 years). Yet, they were able to keep severely injured individuals alive, in some cases for decades, again reflecting more advanced social organization"—The New Encyclopedia Britannica.

It indicates that the Neanderthals had insistent tendency to fight with each other, or one group with the other. Their physical strength coupled with relatively developed brain made them too dangerous for themselves and for other creatures.

Probably so, when Allah said to the angels about His decision of creating human, they replied:

"Behold thy Lord said to the angels: "I will create a vicegerent on land." They said: "Wilt thou place there in one who will make mischief and shed blood?""

[Al Quran 2:30]

The angels thought that humans would make mischief and shed blood. Why angels got such idea?

Probably, they saw Neanderthals shedding a lot of blood. Probably, at one stage angels were sent to wipe them out, as we see that the whole race suddenly disappeared about thirty thousand years ago.

However, it was otherwise needed to settle Adam and Eve on the Earth. Adam and Eve were descended about ten thousand years ago (after the last glacial period ended 11,700 years ago).

Allah answered:

He (Allah) said, I know what ye know not [Al Quran 2:30]

Allah claimed that He had enough knowledge to create a suitable creature. Allah by Himself created Adam and Eve. They lived in the Jannaat (paradise) for a period and then were sent down to the Earth.

Adam had fundamental differences from the species that were evolved through Biological Evolution. The Quran mentions three capabilities of a human, which make him unique, and proves that he does not stand in the chain of Biological Evolution. Those are:

- a. Capability to Learn after Birth
- b. Capability of Precision Grip
- c. Capability to Speak

13a. Capability to Learn after Birth

Homo Neanderthalensis evolved through biological evolution, so their brains remained like the brains of other animals. The brain of an animal is genetically programmed in its mother's womb or in the egg. When an animal takes birth, it knows everything it requires knowing. But it cannot learn anything new—its brain gets fixed with the information it needs.

Each kind of animal has instinctive behavior and traits. These, they are not taught by their parents—they know it by birth. A bird knows by birth what to eat, where and how to make nest. Some of them can even fly from the North Pole to the South Pole and can return to the same place. Ask a pilot, how much training and experience is needed to do that!

Scientists have found out that a polar migratory bird hatched in an incubator and grown up separately, can fly to the polar region to the flock it belongs to. How it knows it without ever seeing its kind of bird. Actually, its brain is imprinted with that knowledge by birth. It has programs and sensors to know its present location and time, and it knows its due location at that point of time. In one flight it would cross thousands of miles to reach its location without losing its direction in day and night.

A baby monkey knows by birth how to grasp and remain hanging in mother's belly. But a human baby cannot grasp anything.

A cow or a goat knows by birth how to walk, but a human child needs about two years to learn walking.

How they can do it?

When they develop in the eggs or in the wombs, their Genome Codes design their brains and bodies to know and do all they need to know and do. But, after they are born, they cannot learn anything new, as their brains and bodies are already programmed and designed. They are designed to do what they need to do.

Here a human differs. While growing in the mother's womb, at a particular stage, his/her brain denies to learn from the genes. Therefore, at the time of birth, a human baby knows nothing. He does not know how to walk, or how to sit. A human baby starts learning after birth. Therefore, this process of learning remains active throughout his life. This is why humans have developed so much. They have reached the Moon whereas chimpanzees are still in the forest. Similarly, Neanderthals lived for about 150,000 years but could not develop.

Parts of human brain that run the organs, such as lungs, heart, kidney, etc., are genetically programmed, but parts are like white pages.

It may be mentioned that some animals can learn to obey a few commands, some birds can learn to tell a few words, but the learning is different, not like the learning of humans.

The angels too cannot learn anything new at their own (except the angels designed to learn, such as Keramon and Katebin). However, some leading angels are created with vast knowledge.

Here humans excel. After creating Adam, Allah taught him names of several things and Adam could learn and could tell those in front of the angels. It means that Adam had capability to learn after birth. Allah proudly demonstrated the capability to the angels:

And He (Allah) taught Adam the names of all of them, then He placed them before the angels and said, "Tell me the name of these if ye are right". They said, "Glory to thee, of knowledge we have none save what Thou has taught us. In truth, it is Thou Who are perfect in knowledge and wisdom." He said, "O Adam! Tell them their names", when he had told them. Allah said, "Did I not tell you that I know the secrets of the 'Skies and Lands' and I know what ye reveal and what ye conceal? [Al Quran 2: 31–33]

As Neanderthals evolved from other animal, they could not get rid of the 'genetic programming process of the brain' that takes place in the mother's womb. They could not learn new things. However, a Neanderthal had a big brain, so it had wider scope of programming. They had wider behavior and could live in groups. They were genetically taught to make stone and wooden tools, as the birds are taught to make nests. They had been making the same tools throughout one

hundred and fifty thousand years they survived. They used to live in caves. There is no evidence that they domesticated animals or cultivated crops. It indicates that their knowledge and wisdom did not develop. They looked like humans, but they had animal-like brains.

13b. Precision Grip

...let not the scribe refuse to write, as Allah has taught him, so let him write... [Al Quran 2:282]

A human is capable of precision grip. This requires tips of the thumbs and next two fingers to come together in order to hold small object like a brush to paint, or a pen to write—a grip that demands fingers be proportionate and that the joint at the base of the thumb be of a special saddle shaped variety.

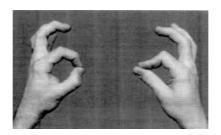


FIGURE 64: Precision Grip

The hands of apes and monkeys are not suitable for precision grip. Fossil evidence shows that the hands of Neanderthals too were not suitable for precision grip.

"The details of their (Neanderthals) hand bones, however, suggest greater emphasis on power than precision grip." – The New Encyclopedia Britannica.



FIGURE 65: Hand of Chimpanzee

But our hands are suitable for precision grip. It allows one to hold a pen for writing, or a brush for painting.

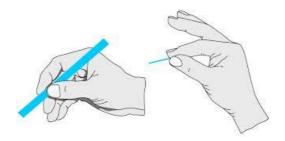


FIGURE 66: Precision Grip

Therefore, humans can write down acquired knowledge for their next generations.

13c. Capability to Speak

He has created man. He has taught him to talk [Al Quran 55:3-4]

We have the ability to speak. The mouth of Adam was made suitable to talk. Innumerable nerves (exceptionally greater than those of other animals) coordinate our talking actions. And we have fully developed languages.

Unlike apes, a large part of human brain is dedicated to control mouth and hands. If the sizes of one's body parts reflected corresponding amounts of one's brain tissues, one would look like the picture below.



FIGURE 67: Human in Nerve Ratio

Adam's body was made lighter. Skin was made soft. And the descendants of Adam were left with no other option but to use their brains to survive on the Earth.

13d. A Creation from the Noble Pair (DNA Double Helix)

Adam and Eve were created in the Jannaat separately, but with the same DNA Double Helix with which the earthly creatures are created.

"Glory to Allah Who created all things that the earth produces as well as their own kind and things of

which they have no knowledge, from Pairs (DNA Double Helix)" [Al Quran 36:36]

According to the above Verse, all plants and animals including humans are created with the same DNA Double Helix.

When Allah decided to create humans, probably instead of creating a new Set of DNA, He took a Set of DNA from an ape like creature and incorporated human qualities in the code. Most probably, He took the DNA from the latest ape, Homo Neanderthalensis. With the restructured genome, He created Adam in the Jannaat, with matter taken from the Earth. He created Eve with Adam's genome taken from his rib.

We had to have similar DNA to be suitable for the Earth. Only the creatures with DNA can be or can produce our food (synthetic food is not good for health).

"So, set thou thy face steadily and truly to the Faith. God's handiwork—according to the pattern (DNA Double Helix) on which He has made mankind—no change in the work by God; that is the established system; but most among mankind understand not."

[Al Quran 30:30]

But a person that will not set his face to the Faith would deform his soul (nafs) and would become nothing more than an improved ape in the afterlife. But he will be counted as a human and will be punished for the sins of his earthly life.

13e. Human, stand alone Creature

The Quran supports the idea of biological evolution, except in case of humans. Human being cannot be fitted into the chain.

Allah created Adam with extraordinarily advanced brain, hands and mouth. Human being is not a result of biological evolution, though they are created from the same pairs (DNA Double Helix).

"Verily in the skies and lands are sings for those who believe. And in the creation of yourselves and the fact that animals are scattered are signs for those of assured faith." [Al Quran 45: 3–4]

But, only the believers will be benefitted from the Signs. Others will fail to conceive:

Those whom God wills to guide, He opens their breast to Islam; those whom He wills to leave straying, He makes their breast close and constricted, as if they had to climb up to the Skies. Thus, does God (heap) the penalty on those who refuse to believe. [Al Quran 6:125]

"Refusal to believe" comes first, and then God constricts the heart. Thereafter, they develop as Unbelievers; even if they were great scientists moving through space with hi-tech space ships would not believe.

Even if We opened out to them a gate (portal) from the Sky and they were to continue ascending therein, they would only say: Our eyes have been intoxicated, nay, we have been bewitched by sorcery.

[Al Quran 15: 14-15]

Therefore, accepting True Faith is very important. But Allah will not compel one to believe. He is owner of both the universes, the Samawaat (this Universe) and the Jannaat (another Universe). He has a plan to depute His vicegerents (humans) in the objects of the universes. Those who will have True Faith will be shifted into the Jannaat, and those who will refuse to believe will be left in the Samawaat. And the Objects of the Samawaat (galaxies) are the Objects of Hell.

Many are the Jinns and men we have made for Hell. They have hearts wherewith they understand not, eyes wherewith they see not, and ears wherewith they hear not. They are like cattle, nay, more misguided—for they are heedless. [Al Quran 7:179]

Scope of accepting the True Faith remains open throughout one's earthly life. Allah has sent the Quran—do not refuse to obey; do not be headless.

14. Six Days in the Quran

The Six Day Model of the Quran is partially different from the scientific models of creation. But the Quran is correct. The scientific models differ due to the shortage of information. It is discussed as under:

14a. Length of a Day

According to the Quran, the Days of God may be different in lengths.

14a(1). One Thousand Year long Day

A day may be one-thousand-earthly-year long:

...Verily a day in the sight of thy Lord is like a thousand years of your reckoning. [Al Quran 22: 47]

He rules affairs from the skies to the earth; in the end will go up to Him in a Day—measure a thousand years of your reckoning. [Al Quran 32: 5]

These days are days of universal affairs related to the fates of living creatures. The fate is determined. The angels monitoring the fates come in the groups of one thousand earthly years.

14a(2). Fifty Thousand Year long Day

A questioner asked about a Penalty to befall, the Unbelievers, the which there is none to ward off from Allah, Lord of the Ways of Ascent: The angels and the ruhhs ascend unto Him in a Day. The measure whereof is fifty (thousand years). [Al Quran 70: 1-4]

Above verses talk about the Day of Final Judgment that will be equal to fifty thousand earthly years.

Therefore, a day of six days may be of any length.

14b. Verses Narrating Six Days

The Six Days are deliberately described in the following verses:

Say: Is it that ye deny Him Who created the land in **two days**? And do ye join equals with Him? He is the Lord of the universes.

And He placed therein firmly set mountains, and parked therein from above it, and determined therein its sustenance in **four days** equal; for those who ask.

Moreover, He established Himself (did istawa) into the Sky, while it had been smoke. He said to it and to the lands: "Come ye together, willingly or unwillingly". They said: "We do come in willing obedience". So, He completed them as Seven Skies in **two Days** and He assigned to each Sky its duty and command. And We adorned the lowest Sky with lights, and with guard. Such is the Decree of the Exalted in Might, Full of Knowledge.

[Al Quran 41: 9-12]

In these verses, the creation is described in a sequence that it could satisfy the commonsense idea of the old people. However, it remained true by adopting a technique, narrated as under:

People of the old knew that in any direction they would move, they would reach the ocean ultimately. So, the idea was that the land was floating in the water. But a piece of earth cannot float in the water! So, the idea was that the land was on the back of a huge turtle. Holy Bible talked about the creation of sky that removed the Turtle Theory. The fresh idea was that the water was there over a massive land. God created a huge dome that removed the water from a part of the massive land. The protected land is the Earth and the dome is the Sky.

In these widely circulated ideas, the sky was created after the land. The Quran did not counter the idea directly—it would put Prophet Muhammad (pbuh) in an unwanted problem. So, in these verses, the creation of Earth has been described at first. It may be mentioned that the verses were revealed to answer the question of a Jew.

However, the Quran has adopted a technique to harness the reality: One may add up the number of Days in the verses; it will be 8 Days, not 6 Days.

- a. 2 days in the 1st paragraph land was created.
- b. 4 days in the 2nd paragraph sustenance was parked from above.
- c. Total: 6 days, describing the creation of Earth
- d. 2 days in the 3rd paragraph Single Sky, full of smoke, was made into Seven Skies.
- e. G/Total: 8 days

One may notice as well that the narration of last 2 days starts with "Moreover". It indicates that the last 2 days are different days. These are days of previous cycle. I have discussed that the universe is cyclic and we are living in the second cycle.

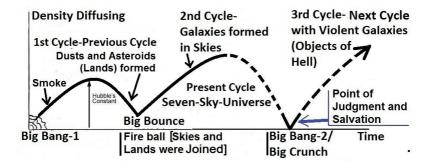


FIGURE 68: Cyclic Universe

The Big Bang occurred at the beginning of previous cycle (1st Cycle). It produced hydrogen and helium mainly. Scientists calculate that after 15 minutes of the Big Bang, the Universe was not hot enough to produce new elements. The elements heavier than helium could be produced within the first 15 minutes, but it would not survive because of extreme temperature of initial universe.

"One can calculate that in the hot Big Bang model about a quarter of the protons and neutrons would have converted into helium nuclei, along with a small amount of heavy hydrogen and other elements."

− *A Brief History of Time* by Stephen Hawking.

Allah established Himself (did istawa) into the single-sky-universe of the previous cycle, which was full of smoke (hydrogen and helium mainly). The gravitational force contracted the single-sky-universe and the heavier elements at least up to silicon produced. The heavier elements produced dusts and asteroids in the contracted Universe which is said in the following verse:

He is the One Who created for you what was in the assembly of lands (fil-ardi-jamian / dusts and asteroids). Then He turned to the Sky and made them into Seven Skies. And of all things He had perfect knowledge. [Al Quran 2:29]

Similar idea is given in Holy Bible as well:

...I alone stretched out the Skies (Universe); when I made the Earth (lands / dusts and asteroids), no one helped Me.

- Isaiah 44:24, Holy Bible (GNB)

Due to extreme pressure and temperature the contracting single-sky-universe of the previous cycle had a Big Bounce from a non-singular state and present cycle began. During the Big Bounce the single-sky-universe took the shape of seven-sky-universe. The skies are waves of space, one inside another; like the peels of onion. The following verse talks about the Big Bounce origin of the present cycle:

Do not the unbelievers see that the Skies and the Lands were joined together (as one unit of creation) before We clove them asunder... [Al Quran 21:30]

The above verse says that there were lands (dusts and asteroids) in the initial universe of the present cycle. So, the verse indicates that the present cycle started from a Big Bounce.

Therefore, last two days of the above mentioned eight days were days of previous cycle. And the last two days and the first two days were the same days.

14c. Four Days of Present Cycle

If one excludes iron, the Earth is roughly composed of silicon and elements lighter than silicon. Following four elements makes over sixty percent of the Earth. One is silicon; other three are lighter than silicon.

- Silicon 15.1 %
- Oxygen 30.1 %
- Magnesium 13.9 %
- Aluminum 1.4 %
- Total 60.5 %

Atomic Number of Silicon is 14. Lighter elements in the periodic table are: H, He, Li, Be, B, C, N, O, F, Ne, Na, Mg, Al, Si (14). The silicon and the elements lighter than silicon were created in the contracting universe of the previous cycle.

After the Big Bounce, the present cycle began and the universe became a seven-sky-universe. The skies, being waves of space, helped to accumulate matter into huge conglomerates that produced the galaxies by forming stars.

The elements heavier than silicon formed in the stars due to fusion reaction in their hot centers and supernova explosions. Due to the explosions, the elements scattered into the space. The elements heavier than silicon were given to the Earth from this source, as the following verse says:

And He placed therein firmly set mountains and **parked therein from above it** and determined therein its nourishment in four days equal; for those who ask. [Al Quran 41: 10]

The descended elements included massive amount of iron, 32.1% of the Earth.

And we sent down the iron, wherein there is strength and many benefits for the people." [Al Quran 57:25]

Rest 7.4% (100 - 60.5 - 32.1) was as under:

- Sulfur 2.9 %
- Nickel 1.8 %
- Calcium 1.5 %
- Trace amounts of other elements 1.2 %
- Total 7.4 %

According to the verse (41:10), these elements (7.4%) serve two purposes discussed below:

14c(1). Nourishment

Some of these elements provide nourishment to the living creatures. Living creatures need many elements heavier than silicon in their bodies.

14c(2). Firmly set Mountains

The elements helped produce active crust and mantle of the Earth. Some of these elements are radioactive. These radioactive elements maintain the temperature of the Earth's core. The heat of molten iron core sustains continental drift by creating convection current in the Asthenosphere, and in turn, the pressure of drifting continents sustains firmly set high mountains from sinking into the Earth. Otherwise, these heavy mountains would sink into the Earth over long periods

of time. For example, Indo-Australian plate is continuously pushing Eurasian Plate, so the Great Himalayan Range is standing firm.

14c(3). Melting of the Earth

The falling matter included some kind of short-lived radioactive elements. Because of the short-lived radioactive elements, a large part of the Earth melted. The melted Earth produced and the core, mantle, primitive crust and atmosphere.

"At some point, the release of energy by radio-active elements must have melted a large part of the Earth since this is the only way known for the separation of the original body of uniform composition into a core and a mantle. A similar process occurs when impure iron is melted in a steelwork and the nonmetallic parts separate out to from a low-density slag which floats to the surface. It was in this way that the primitive crust was formed."

Planet Earth by Peter Owen in The Encyclopedia of Space
 Travel and Astronomy edited by John Man.

The short-lived radioactive elements long since decayed, but the long-lived radioactive elements such as uranium, thorium, etc., and weakly radioactive potassium are still present in the Earth, which maintains the temperature in the core of the Earth at 4000-degree centigrade.

We find the indication of this melting in the following Hadith:

Allah sent Gabriel to Malik (Chief angel of Hell) to bring fire from the hell and give it to Adam for cooking. Malik asked Gabriel, how much fire he wanted to take? Gabriel said, 'If I take a finger of fire, the sky and land will burn'. Malik said, 'In that case half finger of fire?' Gabriel said, 'If half finger of fire is given, not a single drop of rain will fall from the sky and no tree will grow'. Gabriel shouted, 'O Allah, how much fire should I take?' Allah said, 'Amount of a dust (*zarrah*)'. He took the dust of fire, and put it on the highest mountain among all mountains after washing it seventy times in seventy rivers. The mountain melted, and the fire went back, from where it came, leaving its effect in the iron and the stone. Still today we are using the smoke of that fire particle. [Dakaikul Akhbar]

The Hadith says that the fire was brought for Adam. It does not mean that Adam was present on the Earth at that time. Hadith is taking about a time when the plants were yet to grow: "... Gabriel said, 'if half a finger of fire is given...no tree will grow...'.

The Hadith says that the fire-particle was brought from the hell. The following Verse and Hadith indicate that the galaxies are the objects of hell. Those are held by supermassive black holes that produce the fire.

"And We have adorned the Sky of the World with lamps (stars), have made such missiles to drive away the satan, and have prepared for them the penalty of the blazing fire of hell" [Al Quran 67:5]

"During Miraz, I saw in the Seventh Sky, there were thunder and roaring sound and a group of people. Their bellies were as big as houses. In those, there were many snakes, which were being seen from the outside. I asked to Gabriel, "Which kind of people they were?" He said, "It is the scene of those who devoured usury" [Bukhari]

Probably, the fire particles were brought from a neutron star. Neutrons could produce fire by matter anti-matter interaction. It could be a tiny black hole as well. Hawking narrates in his book, what would happen if a tiny black hole with the mass of a mountain were brought into the Earth:

"If a black hole would have the mass of a mountain compressed into less than a million millionth of an inch, the size of the nucleus of an atom! If you had one of these black holes on the surface of the Earth, there would be no way to stop it from falling through the floor to the center of the Earth. It would oscillate through the Earth and back, until eventually it settled down at the center."

− *A Brief History of Time* by S. W Hawking.

The fire-particles melted a large part of the Earth. As a result, the liquid iron deposited in the core, and the lighter materials floated on the surface to form the mantle and the primitive crust.

The Hadith mentions that the fire went back, from where it came, but its effects are still present in the stone and the iron. Here, the "stone" refers to the mantle of the Earth, and the "iron" refers to the core of the Earth. Some effects are still present, as the iron core is maintaining a temperature of four-thousand-degree centigrade, and the molten rocks are still boiling.

The melted Earth produced necessary gasses to form the atmosphere, where Adam could cook.

The melting made the Earth an active Planet. Its core, mantle and primitive crust could form. So, the continental drift became possible, and the mountain ranges could form.

"And He placed therein firmly set mountains and parked therein from above it and determined therein its nourishment in **four days** equal; for those who ask."

[Al Quran 41:10]

14c(4). Likely Lengths of Four Days

It seems that the four days began about 4.6 billion years ago with the fall of short-lived radioactive elements (fire-particles) and ended with the formation of mountains about 0.6 billion years ago.

Above verse (41:10) says that these days were equal in length. So, each of these 4 days were about one-billion-year long $[(4.6-0.6) \div 4]$.

The lengths of the Two Days were different.

The scientists calculate the age of Earth as 4.6 billion years, because the elements on which their experiments are based, such as lead, thorium, uranium, argon etc., were sent down into the Earth about 4.6 billion years ago. The elements were sent from supernova explosions.

15. Age of the Universe

These days do not represent the age of the Universe. Two Days were days of previous cycle, and Four Days are days of present cycle of the Universe. These days are parts of total time when the heavier elements were created and the Earth were made suitable for humans. There was a long time when the present universe was just expanding to be cool for the Earth.

"What! Are you more difficult to create, or the sky? He has constructed it. He has raised its thickness, and He has given it order and perfection. Its night does He endow with darkness, and its splendor does He bring out.

And the land moreover has He extended. He draws out there-from its moisture and its pasture. And the mountains He firmly fixed: For use and convenience to you and your cattle."

[Al Quran 79: 27–33]

The huge Universe had to expand in tremendous speed to reduce the intensity of light and heat for the convenience of our cattle and us.

The Skies are waves of space, one inside another, like the peels of onion. The Skies expanded, and the galaxies formed. After the Milky Way galaxy formed, some of the lands (asteroids) were tied with the Sun to form the planets and moons.

The Orion Spur was produced. So, the Sky of the Earth was adorned with lights and guards.

"So, He completed them as Seven Skies in two Days, and He assigned to each Sky its duty and command. And We adorned the Sky of the Earth with lights and with guard. Such is the Decree of the Exalted in Might, Full of Knowledge." [Al Quran 41:12]

11h. Time Line

Different methods of measurements suggest the age of Universe as 8 to 14 billion years. But, the seven-sky-universe needs less time to be suitable for us. Likely Time Line of the Six Day Model of Creation is given below:

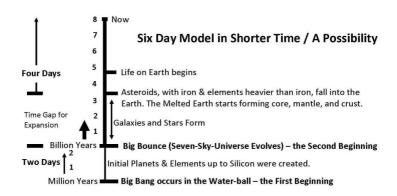


FIGURE 69: Time Line

16. Conclusion

When we start asking questions, we understand the Earth as a special creation. There are many questions that have no answer, such as: How atmosphere produced? How free oxygen produced? How oceans produced? Etc.

If the Earth captured atmosphere during its formation, it would be full of heavier gasses, such as neon, argon, krypton, etc. If it at all had an atmosphere, it moved away in the past. The scientists think that the present atmosphere produced with the gases released from the melted Earth. The presence of free oxygen is then a mystery. If oxygen were released from the melted Earth, it would produce compounds being a

reactive element. Plants produce free oxygen but unless some of the product is removed, oxygen recombines making the balance nil. And why oxygen should balance at 21 percent of atmosphere, rather than 5 or 50 percent? In the end, one has to believe their model, because those are scientific in some points.

Such a fine-tuned universe could not evolve without a God.

Do they not look at the sky above them—how We have made it, and adorned it, and there is no flaws in it? [Al Quran 50:6]

A few stars show the signs of having planets. Yet, many argue that there are trillions of planets in this universe and accidentally one has become suitable for life. But in reality, unless something is produced with intelligence, it does not take useful shape.

End