

*The wind blows to the south and goes around to the north;
around and around goes the wind, and on its circuits the wind returns.
All streams run to the sea, but the sea is not full;
to the place where the streams flow, there they flow again.
(Ecclesiastes 1:6-7)*

6

Creation and the Created Order

The Bible provides us with a two-storey universe – a spiritual realm and a physical realm. The spiritual realm is where God, His Son, the spiritual elders in God’s administrative assembly and the angelic spirits are operating – a headquarters in heaven, an area in space. The physical realm is where the universe is, as discovered by man and his sciences, with all its galaxies, suns and stars. The spiritual creation came before the physical one; scriptures*¹ in the Bible give indications that this is so.

The creation of the physical universe, especially our own galaxy, is given in the first chapter of the Bible (*NRSV*):

¹In the beginning when God created the heavens and the earth, ²the earth was without form and void, and darkness covered the face of the deep, while a wind from God swept over the face of the waters. ³Then God said, “Let there be light”; and there was light. ⁴And God saw that the light was good; and God separated the light from the darkness. ⁵God called the light Day, and the darkness he called Night. And there was evening and there was morning, the first day.

⁶And God said, “Let there be a dome in the midst of the waters, and let it separate the waters from the waters.” ⁷So God made the dome and separated the waters which were under the dome from the waters which were above the dome. And it was so. ⁸God called the dome Sky. And there was evening and there was morning, the second day.

⁹And God said, "Let the waters under the sky be gathered together into one place, and let the dry land appear." And it was so. ¹⁰God called the dry land Earth, and the waters that were gathered together he called Seas. And God saw that it was good. ¹¹Then God said, "Let the earth put forth vegetation, plants yielding seed, and fruit trees of every kind on earth that bear fruit with the seed in it." And it was so. ¹²The earth brought forth vegetation: plants yielding seed of every kind, and trees of every kind bearing fruit with the seed in it." And God saw that it was good. ¹³And there was evening and there was morning, the third day.

⁴And God said, "Let there be lights in the dome of the sky to separate the day from the night; and let them be for signs and for seasons and for days and years, ¹⁵and let them be lights in the dome of the sky to give light upon the earth." And it was so. ¹⁶And God made the two great lights, the greater light to rule the day, and the lesser light to rule the night – and the stars. ¹⁷God set them in the dome of the sky to give light upon the earth, ¹⁸to rule over the day and over the night, and to separate the light from the darkness. And God saw that it was good. ¹⁹And there was evening and there was morning, the fourth day.

²⁰And God said, "Let the waters bring forth swarms of living creatures, and let birds fly above the earth across the dome of the sky." ²¹So God created the great sea monsters and every living creature that moves, of every kind, with which the waters swarm, and every winged bird of every kind. And God saw that it was good. ²²And God blessed them, saying, "Be fruitful and multiply and fill the waters in the seas, and let birds multiply on the earth." ²³And there was evening and there was morning, the fifth day.

²⁴And God said, "Let the earth bring forth living creatures of every kind: cattle and creeping things and wild animals of the earth of every kind." And it was so. ²⁵God made the wild animals of the earth of every kind, and the cattle of every kind, and everything that creeps upon the ground of every kind. And God saw that it was good.

²⁶Then God said, "Let us make humankind in our image, according to our likeness; and let them have dominion over the fish of the sea, and over the birds of the air, and over

the cattle, and over all the wild animals of the earth, and over every creeping thing that creeps upon the earth.” ²⁷So God created humankind in his image, in the image of God he created them; male and female he created them.

²⁸God blessed them, and God said to them, “Be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth.”

²⁹And God said, “See, I have given you every plant yielding seed that is upon the face of all the earth, and every tree with seed in its fruit; you shall have them for food. ³⁰And to every beast of the earth, and to every bird of the air, and to everything that creeps on the earth, everything that has the breath of life, I have given every green plant for food.” And it was so. ³¹God saw everything that he had made, and indeed, it was very good. And there was evening and there was morning, the sixth day.

Much has been written on these verses (especially the first few verses) in Christian theological history. Believers have been trying to understand how and when God created.

On the back of thoughts akin to and later reinforced by the Theory of Evolution proposed by Charles Darwin, some believers think that the “days” of creation refer to undefined long periods of time, and that the earth has existed for billions of years. Some others believe that the “days” are literal twenty-four days (as accepted by all before the Theory of Evolution came on the scene), and that the earth is a young earth of probably less than 10,000 years, as proposed by some Christian scientists in recent years. The author takes the second view as he takes a literal interpretation of scripture and there are good reasons convincing to him for a young earth as propounded by these Christian scientists.*²

Among the different views offered for the translation and meaning of the first few verses of Genesis, I found a scientific view offered by Dr Charles William Lucas, Jr. as the most harmonious view available, which fits well into my approach to discovering truths from first principles. Dr Lucas in his booklet “The Mechanism By Which God Created” *³ proposed that the introductory verses of Genesis tells us how God, having chosen an area in empty space, brought forth the earth. It came into being by the spirit of God “brooding” over that volume of space and the earth came forth as the first physical luminary formed by God.

Taking research from different sources, the first three verses of the Bible may be translated thus:

¹In the beginning when God created the heavens and the earth, ²the earth was *unformed and unfilled*, and darkness covered the face of the deep, while *the spirit of God brooded* over the face of the waters. ³Then God said, "Let there be *a luminary*"; and there was *a luminary*.

The first part of the second verse in most Bibles is usually translated "the earth was without form and void". The phrase "without form and void" (Hebrew "*tohu bohu*") is best translated "unformed and unfilled", as shown by a scholarly work "Unformed and Unfilled" by Weston W Fields.

"*Ruach*" in Hebrew can refer to wind or spirit. The latter is the preferred word among translators for this verse, since here we are dealing with the very beginning of creation, and wind was not expected to be present when God began to create the physical world.

"Brooded" is translated from the Hebrew "*rachaph*" which conveys this root meaning according to some commentators.

So we have the Spirit of God brooding over a volume of space (a part of the "darkness on the face of the deep") where the earth was to be, like a bird incubating an egg. Instead of a baby bird hatching from an egg, there was the "earth" being as yet unformed and unfilled hatching as a luminary, having received its heat and its material from the brooding Spirit. This luminary may not be as hot as another luminary, the sun, which was created on the fourth day along with its lesser luminary, the moon (*verses 14 to 19*). It is postulated by science that the earth has a hot internal core. This relatively hot luminary cooled in very short time to become the earth.

In his booklet, Dr Charles Lucas Jr. pointed to the work of fellow physicist Dr Robert Gentry*⁴ and others on studies of the radioactive halo data in granite, the host rock of the earth. In these studies, the short radioactive decay times of some minerals, such as Polonium-218, could provide a scientific answer supporting instantaneous creation of the earth as conveyed by the Bible. The radioactive materials initially created could have started the clock ticking from the moment of their creation. According to Dr Lucas, the rapid conversion of the energy of the luminary to condensed matter should leave traces of all the original elements synthesized in the luminary, and thus it should be possible to find traces

of these primordial radioactive elements in the host rocks.*⁵ This hypothesis however is not unchallenged.

The “face of the waters” over which the Spirit brooded seems to convey the spherical outline of the earth surface which was originally created with a covering of water. This appears to be confirmed by later scriptures that reflect upon the initial creation, such as:

He stretches out the north over the void and hangs the earth on nothing.
(Job 26:7 ESV)

He has *inscribed a circle on the face of the waters at the boundary between light and darkness.*
(Job 26:10 ESV)

The above verse (Job 26:10) along with Gen 1:2 lend support to the view that the earth was once a luminary – but a special type of luminary unlike the sun or the moon. Here is a possible refinement to the idea put forward by Dr Lucas. This luminary refers not to the earth as a whole but more specifically to a layer of light just above and surrounding the inky darkness of the deep oceanic mass of water. This may be considered the bright shell of the egg. The sun was not created until the fourth day. Neither was there any other physical matter (as we know it) of any shape or size at the end of the first day.

Four other translations of the same verse (Job 26:10) given below seem to confirm the above hypothesis – that there is a layer or boundary of light between the earth’s watery mass (created at the same time) and the hovering Spirit of God. Visually, the picture given here may be like an eclipse of the sun.

A limit He hath placed on the waters, Unto the boundary of light with darkness.
(Job 26:10 YLT)

He has described a circle on the surface of the waters to the boundary of light with darkness.
(Job 26:10 LITV)

He has described a circle on the surface of the waters to the boundary of light with darkness.
(Job 26:10 MKJV)

He delineated a circle on the face of the waters, Unto the boundary of light with darkness. (*Job 26:10 CLV*)

The above versions, translated similarly, indicate that the “luminary” is specifically the spherical layer of light enveloping the water which in turn enveloped the (as yet unfilled or barren) earth mass. The earth’s makeup as a luminary in this sense is quite different from that of the sun and the moon, both of which are also translated as luminaries (*Gen 1:14-16 LITV, YLT, CLV*). The sun is a burning fireball, whilst the moon’s dry surface is not hot but it reflects light from the sun to the earth. Whereas surrounding the original earth, this corona layer of light also may not be hot, relatively speaking, as we now know that chemically-generated light is not hot (e.g. light sticks, and also bioluminescence in fireflies, glow worms, some deep-sea fish and other creatures). This layer of light glowed, being the luminous “egg-shell” imparted by the hovering Spirit of God, or by the garment of light surrounding God.

Bless the LORD, O my soul! O LORD my God, you are very great! You are clothed with splendor and majesty, covering yourself with light as with a garment, stretching out the heavens like a tent.
(*Psalms 104:1-2 ESV*)

Recall the story of Moses who having met with God for forty days on the mountain where he received the Ten Commandments, his face glowed in intense brightness and a veil had to be used when he came down to meet his people (*Exodus 34:28-35*). A kind of radiant energy was imparted to him without burning him, just like the unconsumed “burning bush” seen by him earlier (*Exodus 3:1-6*).

He set the earth on its foundations, so that it should never be moved. You covered it with the deep as with a garment; the waters stood above the mountains. At your rebuke they fled; at the sound of your thunder they took to flight. The mountains rose, the valleys sank down to the place that you appointed for them. You set a boundary that they may not pass, so that they might not again cover the earth. You make springs gush forth in the valleys; they flow between the hills.
(*Psalms 104:5-10 ESV*)

The above verses in *Psalms 104* quite clearly refer to the time of creation although it may also allude to the flood of Noah’s time, providing in human history a dramatic glimpse of the initial condition of the primordial earth.

“..... that heavens were of old, and earth by water, and through water, having subsisted by the Word of God,”
(2Peter 3:5 LITV)

The Good News Bible provides a picturesque co-relation between the two events, that of creation and that of the great flood at the time of Noah.

“..... long ago God gave a command, and the heavens and earth were created. The earth was formed out of water and by water, (6) and it was *also* by water, the water of the flood, that the old world was destroyed.” (2Peter 3:5-6 GNB)

The days of creation (defined as an “evening and morning”) mentioned in the Genesis account, especially before the sun and moon came on the scene, would appear to indicate that God established a definite cycle of 24 hours for a day and night. The introduction of cycles and rhythms in nature seem to be first conveyed by the diurnal pattern of the creation “days.” The luminaries of the heavens are given “for signs and for seasons and for days and years.” The water cycle in nature, as another example, is described in the Scripture.

“The wind blows to the south and goes around to the north; around and around goes the wind, and on its circuits the wind returns. All streams run to the sea, but the sea is not full; to the place where the streams flow, there they flow again.”
(Eccl 1:6-7 ESV)

As in any good manual or legal document, and as God’s manual of essential knowledge for mankind, the Bible starts from first principles and provides God’s definitions of basic terms from which later narrations therein are to be understood. This book is still yielding up its secrets as man probes further into it along with the aid of the “book of nature” – ongoing discoveries in the sciences (God’s physical creation).

On the second commemorative*⁹ “day” God separated the water mass into two layers with a “dome” or expanse between the layers and this expanse is defined as Sky or rather “Heavens” (in plural) more commonly (Gen 1:6-8). Here we see that the basic idea of three-dimensional space is vividly illustrated.

On the third day, the water under the Heavens was segregated into one place called Seas and the Dry Land appeared and all kinds of vegetation

were then created (*Gen 1:9-13*). The earth was then being filled with living things. The initial verses of *Psalms 104* mentioned above refer to this period of time.

On the fourth day, the luminaries – the Sun and the Moon – and also the Stars were created and the purpose for these luminaries was stated. It looks like the original luminous “egg-shell” of the first day expanded and “broke up” and the pieces converted into individual luminaries on the fourth day (*Gen 1:14-19*), signifying that “baby” earth was about to “emerge” with more life.

On the fifth day, fishes (of the seas) and birds (of the air) of every kind were created (*Gen 1:20-23*), filling the earth with more things in their various categories or kinds.

On the sixth day, land creatures of every kind were created, then also the first human couple (said to be made in “the image of God”), and the purposes for them are stated or defined (*Gen 1:24-31*). Everything created was in its mature or prime age. The proverbial chicken came before the egg.

The creation of the physical heavens and earth was completed in six literal days as given in the Biblical definitions, and God rested or stopped creating on the seventh day (*Gen 2:1-3*) whilst the newly created creation moves on.

The heavens like a tent that God dwells in

Do you not know? Do you not hear? Has it not been told you from the beginning? Have you not understood from the foundations of the earth? It is He who sits above the *circle of the earth*, and its inhabitants are like grasshoppers; who stretches out the heavens like a curtain, and spreads them like a tent to dwell in.
(*Isaiah 40:21-22 ESV*)

The additional information gleaned from the above verses is that God created the heavens as a tent for Him to dwell in. Some other scriptures indicate that God sits on a throne in Heaven (*e.g. 1Kings 22:19, 2Chron 18:18, Psalms 11:4*). Heaven is also likened as God’s throne area itself (*Isaiah 66:1*).

Paul mentions about a “third heaven” where he met Christ and received revelations from Him whilst there in vision (*2Cor 12:2-4*). From the biblical perspective, there are three heavens – the first one being the earth’s immediate atmosphere, the second being outer space, and the third being the area where God resides.

Gap Theory

There is a “Gap Theory” which says that the narration in the Genesis account refers to a re-creation of the earth which had become a chaos from an existing earth created earlier in an unknown period, the creative process of which was not described except for a mention in the (traditionally translated) first verse which says “In the beginning God created the heavens and the earth.” That this first verse is now seen as a part of a sentence is recognized by several Bible translations such as Young’s Literal Translation, The Good News Bible and the New Revised Standard Version. The Gap Theory has little scriptural support, and it is being abandoned by many believers nowadays. See appendix for some information on this theory and some scriptural reasons why it is not supportable.

Dinosaurs and Noah’s Flood

In line with the theme of this book, the dinosaurs, now-extinct creatures that have always captivated the imagination of adults and children, must have in my view been created along with other land creatures on the sixth day (*Gen 1:24-25*). The dinosaurs at one time walked the earth with man, and evidence for this is provided in several websites.*⁷

These dinosaurs were destroyed at the time of Noah’s Flood. It is believed that the water that contributed to the worldwide flood came down from what may be floating ice clusters or “waters above the expanse” referred to in the second day of creation week. The rainbow became visible for the first time – after the flood – with the emptying of the celestial clusters of ice or waters. With the threatening ice clusters removed, God used the now visible rainbow as a sign promising that the whole earth will not be flooded again (*Gen 9:11-17*).

The single land mass broke up into continents some time after the worldwide flood, possibly at the time of the generation of Peleg (*Gen 10:25*). Peleg (meaning “earthquake”) was given his name “for in his days the earth was divided.”

Sustenance of life

It is well known that the sun plays a most influential role in sustaining life on earth, especially in the process of photosynthesis. There is a “top-down” influence of life by the sun (its light rays), and by the earth’s life supporting magnetic environment. These life giving and moderating influences help to maintain the ecosystems. With these regulatory influences around, there is no need for any direct “God’s action in the world” except occasionally, for example, in events of divine intervention for the purpose of answering prayers or in God’s moving or directing an event for a specific purpose scheduled in the timetable of His plans. God rested from His works on the seventh day, but the created things continue to move and live without continuing external intervention by God. They all exist in their characteristics, they live and move by virtue of their having been created *ex-Deo*. In biblical history, we find God frequently uses agents (spirit beings, humans and also other creatures) to intervene in human affairs, more frequently than utilizing the raw forces of nature (such as parting of the sea at the Exodus of the Israelites from Egypt under the hand of Moses or stilling the storm at the time of Jesus).

In the Gaia Theory developed by James Lovelock, Margulis and others in the early 1960’s, the earth has been likened to a self-regulating living thing. Countless organisms interact with the atmosphere in a number of feedback loops of energy and waste recycling, and yet somehow the earth is able to maintain its balanced ecosystems in a holistic way. The organisms just do their own thing and the planet takes care of itself. With the increasing production of industrial wastes by humans however, the earth’s ecosystem is increasingly being adversely affected – by human intervention.

Electromagnetism

Dr Lucas indicates that the mechanism by which God created and sustains the universe is reducible to one that is ultimately electromagnetic in nature, and it does not appear to be of the type employed by evolutionary theories. He refers to the famous physicist and mathematician Jules Henri Poincare (1854-1912) who published one of the first logical arguments to prove that all phenomena in the physical universe were electromagnetic in nature. Subsequently, similar works were taken up by other scientists such as J G Barredo, Thomas Barnes and Dr Lucas himself.

We seem to live in an electric or electromagnetic universe.*⁶ This is as far as physics is concerned.

Radiant energy (a band of the electromagnetic energy spectrum) interfaces between the Spirit and Matter, like the luminescent layer of the earth on the first creation day.

The living things created, freely moving individual entities as they are, are not able to live beyond their habitats, being constrained to them by their God-imparted nature. Fish cannot live outside of their water environment unless they are amphibians. Likewise, the land animals cannot live in water, where the fish live. Each has its own characteristic cycles and rhythms of life that govern their growth, sleep-wake patterns, instincts and all their activities. They can interact with one another in their respective environments.

Animal electromagnetism and waves have been studied by scientists in the natural world, and these have been classified into various categories such as bioelectricity, bioluminescence, infrasonic waves and ultrasonic waves – electricity, light and sound (of long and short wavelengths).*⁸

The electric eel, for example, has the capacity to produce weak electric currents for catching prey, defense and navigation. It has current-generating organic electroplates quite similar to those of an electric battery. Likewise, the electric catfish has enough electric power to stun its prey and it is also used for defense and navigation. The electric ray and some other animals are also known to generate electricity.

Some living things are able to generate light, known as bioluminescence, such as the deep-sea angler fish, starfish, glow-worm and firefly, among a host of other varieties of creatures known. These may also be called luminaries in their own way. Place an adequate number of fireflies in a ventilated plastic container and we get an efficient lamp in a dark night.

Sound waves are generated by creatures such as bats, pigeons, dolphins for their own similar purposes. In fact, sound is produced by almost all living things. The human baby can do it most efficiently.

Some bird species are known to be able to find their way home after being released a long distance (thousands of miles) away from it. Their apparent ability to sense and remember the changes in the magnetic fields of the earth along their route of flight is what enables them to navigate successfully. Magnetite has been discovered to exist in their

brains. Migratory birds have this ability of moving across vast distances seasonally. These birds may be called living compasses (or magnets).

In chapters 3 and 4, we have seen that all living things are animated by a kind of life energy in them which is closely associated with electromagnetism. Volitional living things (animals and especially man) have a volitional spirit stuff in them that makes them thinking agents and initiators of events through the medium of electromagnetism.

The divine command for living things to “be fruitful and multiply” translates into a myriad of survival instincts (preservation of the self and its category) seen in them. Even plants can play possum as we have seen in Cleve Backster’s experiments.

In certain circumstances of need, some fishes are known to change sex to propagate the species. Some species of animals resort to camouflage in their survival capability.

Metamorphosis

Metamorphosis is a remarkable phenomenon found in the life cycles of some living things. In the life cycle of the butterfly, we see a grand metamorphosis, a change of sub-categories – from egg to caterpillar to pupa to butterfly. Each stage of life in the butterfly lifecycle is not an illusion but the reality we all see, touch and feel. The egg stage consisting of the “butterfly essence” hatches into a caterpillar which after its short spell of life then dissolves or “dies” in the pupal stage. An invisible transformation takes place remarkably whilst “entombed.” Then it emerges (“resurrects”) as a transformed glorious butterfly. The single underlying entity (or the “etheric body” of the butterfly) undergoes different forms and stages of life, each stage taking on (knitting or self-organising into) a unique characteristic peculiar to that stage. The possibility of a future transformation of man can be glimpsed in the butterfly’s lifecycle!

Omnipresent connections

Scientists believe that matter in its sub-atomic level behaves in an unpredictable “quantum” manner. Some other scientists think that the “quantum theory” is too exotic. An increasing number of scientists believe that the Quantum Theory is flawed if the internet is any guide.

Nevertheless, at the sub-atomic level, matter must in some way interface with the spirit or consciousness.

According to Quantum Theory, at the root of matter is quantum indeterminacy. No one knows with certainty how the atomic particles come and go. Does indeterminate behaviour connect consciousness? This is a question that no one seems to be able to answer.

Common Sense Science^{*11} is a body of theory regarding matter and forces that describes physical reality using geometric models, absolute time and Galilean space in a way that is consistent with experimental observations and free of internal contradictions. The foundational principles of CSS theory are based upon the law of cause and effect, conservation of energy, and the assertion that the universe and natural phenomena are fundamentally electrical in character. The principles have led to the development of more accurate physical models for elementary particles, nuclei, atoms and molecules, and the derivation of a new universal force law that applies on all scales ranging from the sub-atomic to the cosmic domain.

According to the model of the atom provided by Common Sense Science, the atomic particles are composed of spinning electrically-charged rings like a thin doughnut. Several of these (doughnuts of different diameters or sizes) are arranged or held in equilibrium and order (by the attracting and repulsing electromagnetic forces spiralling around the doughnut rings) in a symmetrical structure for each atom. There is no indeterminate behaviour but predictable ones depending upon the electromagnetic energy impinging upon them.

“In contrast to [earlier] point-particle theories, between 1915 and 1990 four physicists independently proposed an identical ring model of the electron consisting of electric charge. This atomistic assessment of the composition of matter permitted the *derivation*, instead of the *assumption*, of electrical, physical, and chemical properties of matter at the level of particles, atoms, and molecules. Today, based on *elementary particles composed of electric charge*, and *forces derived from electromagnetic fields*, Common Sense Science (CSS) is completing a theory of matter and space that is grounded in logic, consistent with experimental data, agrees with the current operation of the fundamental laws of physics, accurately predicts new natural phenomena observed in nature, and provides for natural processes on the basis of self-evident principles of *objective reality*, *causality*, and *unity* existing throughout the universe.”^{*12}

At the root of raw substances is this electromagnetism with law-like properties – electromagnetic properties that provide the foundation of science and engineering. This ever-present and pervasive electromagnetism may be considered a kind of “omnipresent connections”. Electromagnetism is transmitted from and received by entities.

Agency and Freedom

Most of us believe we have significant freedom to act or behave. We also believe we have significant, almost limitless, freedom to think or imagine (unless one is mentally handicapped). Our freedom is constrained by societal norms, by our own makeup (inherited characteristics), present knowledge, experience or exposure and by the physical environment. Nevertheless, we intuitively know we have significant freedom. Freedom essentially means the ability to move or not to move from one position to another; to act or not to act one thing or another; to think or not to think one idea or another. This does not mean however that each thought or act is not caused. It originates from the individual’s own internal impulse. The law of action and reaction is never violated. Freedom of an individual or entity refers to his/its level or degree of ability and scope to execute his/its actions or decisions. *Freedom relates to the “I”, the individual entity viewed as a whole unit, not to processes that make up that individual entity.* This distinction, to me, must always be kept foremost in mind, lest we easily, too easily, mistake freedom with cause-and-effect micro processes.

The issue of freedom verses determinism has been debated in theological circles for centuries. An extreme position for determinism has been taken by some in that all events are seen as reducible to infinitesimal motions, this view treating the volitional aspects of living things as also part of the process of events. Such an extreme view fails to see that a living being, especially man, can decide to act or not to act, i.e. having free choice originating from the immaterial spirit or mind. Nobody knows how the immaterial spirit or consciousness acts, as it cannot even be described. Nevertheless, it is quite clear that individual units of entity are not part of a flux of mere forces or processes.

The individual has options open to him in many a situation that he encounters in life. Faced with a situation, he can do this or do otherwise unless coerced in some way. Looking at such an encounter in the past-tense point of view, we say that he could have done otherwise, although he did not in fact do otherwise.

We have seen in chapter 4 that a person has a volitional spirit, according to Biblical Revelation. Ancient scientist philosopher Rene Descartes was right in postulating that we are made of two substances: matter and spirit/mind. Mind is immaterial and not visible under the microscope, but its existence is deduced from its effects, such as in Benjamin Libet's experiments we looked at in an earlier chapter. Volitions are not random but purposeful. In animals, these may arise more from instincts, whereas in man, they arise more from his ability to exercise free choice (deciding to take or not to take a certain course of action).

In the earlier chapters of this book, we have arrived at *ex-Deo* creation of the universe – living individual entities and matter. It is obvious from Sir Jagadish Bose's experiments that material substance (such as metals) possesses a lifelike property and responds or reacts to actions on it like the response of a human muscle. Like living things, metals experience fatigue, recovery from rest and react to poisons. In Cleve Backster's experiments, plants (a higher form of creation than metal) have individualities of their own, possess memory, have an affinity with their owners, react to deaths of nearby living things and are able to play possum, having a kind of volitions relating to its instinctive "desire" for survival. In Masaru Emoto's research, water crystal patterns remarkably reflect the nature of the thoughts or consciousness focused on the water. Water as a medium, unlike plants and animals, does not exercise volitions of its own but reflects the intent of the volitions exercised on it by others.

A stone, when dropped into a lake of water, causes waves to spread out in concentric circles. These waves fade out and disappear in time over a relatively short distance from the epicentre (where the stone was dropped). Likewise, eddy currents are caused in the water when a boat passes across the lake. These eddy currents also fade out and disappear gradually over a longer distance. There is always a limit of influence of the originating actions (the dropping of the stone and the passage of the boat). The effects of these originating actions are not felt beyond a limited distance. By the same token, the flapping of the wings of all the butterflies in the Amazon jungle will not cause a tornado in that jungle, much less will it cause one in a faraway place like the North Pole.

According to our above understanding of freedom, which we think is a basic and meaningful one, every being is seen as having freedom. God, the highest being is the freest personality around in the Cosmos. His free choice does not come from nothing, even as His existence did not come from nothing. His free choice must come from His internal Spirit being. Likewise, the free choice of any individual must also come from the internal volitional spirit of that individual.

The planets surrounding our sun circle in fixed paths assigned to them; hence they are not free in their assigned functions. The living things on the earth are free, each with a degree of freedom that is quite distinct from another. Human beings, the highest of these living things on earth, are the most free even though we lack the freedom of movement of the birds, for example. We are most free because we can think and decide to do various things, to invent, to create, to reflect, and most of all we have a conscience – we know what moral action is, intuitively. And no wonder, as we are told in Scripture that we are made in the image of God. We are able to make choices among open possibilities, limited only by our makeup and the environment in which we find ourselves.

Freewill & Determinism

It appears to me that there is quite a fair bit of misunderstanding of the issues involved by both proponents and opponents of ‘freewill’ and ‘determinism.’ Both parties have gone into huge amount of arguments to defend their positions which are often taken to the extreme. Pictures frequently painted do not reflect, in the opinion of the author, the realities of God’s creation, and these have coloured the true attributes of God and His ways. As it is frequently the case in contentious issues, the truth lies somewhere in the middle, so I believe. Associated with the concept of ‘freewill’ is the concept of ‘foreknowledge’ which is equally misunderstood, in my view.

It can possibly be accepted by all that there is no absolute *freewill* in the absolute sense that the will is *uncaused*. In fact, nothing at all that exists could ever be considered as having absolute freedom in this sense – i.e. to act without cause – as freedom to act is always limited by an entity’s own psyche or internal properties. There is nevertheless legitimacy in the use of the word *free* in a finite, relative and true sense. And most people have used and understood this word in this limited sense, which may be different from dogmatic assertions to the contrary in academic theology. It would be an untenable position if one insists that true free choice cannot have a cause, as this would violate the basic axioms which we have indicated earlier.

If being ‘absolutely free’ means that a person, a thing or an event can choose not to exist or to exist or to change his or its assigned properties at will, then this notion would contradict the most fundamental law that governs all existence, all knowledge – the universally accepted self-evident truth that ‘out of nothing, nothing can arise’ – *ex nihil, nihil fit*. We have

seen earlier that this dictum governs God Himself, as to His existence, His nature and His actions. If we apply this same mistaken notion of freedom to the Deity, then He too has no absolute freedom because He did not come from nothing, neither could He become nothing (i.e. cease to exist).

Human beings are more free than the animals in that they can move about to more distant places by way of contraptions they have created (ships and aeroplanes and rockets, for example). Animals are freer to move about than plants. But both humans and animals are naturally not as free as the birds to move about in space on their own. The fishes are free to move about as long as they are in an adequate volume of water that supports their life. The molecules of gases in a container are free to move within the container to the extent of the size and shape of the container. Such freedom or choices are limited by both the properties of the thing itself and the environment in which it exist, the set parameters and constraints. Water is free to flow, but it will naturally flow towards a lower level (water 'seeks its own level', it is said) according to the shape of the terrain on which it flows. A falling leaf from a tall tree does not fall straight down to the earth, the path of the fall being dependent upon (among other things) the shape and weight of the leaf and the wind direction and the speed of the wind at the time. The leaf may fall into a cart that is being driven past at the moment and it is thus carried away by unforeseen intervention. It may be caught in the net of a butterfly catcher and end up in a distant place not anticipated by its fall. It may also end up being a bookmark in a nature lover's library.

We do not have a totally deterministic universe, unlike a mechanical clock, because there are countless numbers of individual volitions exercised by conscious living things for their own purposes, and with varying degrees of freedom of choice and actions, causing events in earth space that impinge upon one another.

A piece of magnet carries a magnetic field (invisible lines of magnetic force) around it from one pole to the other.*¹⁰ It can be made a causer of motion, for example, on another piece of magnet by bringing it (in one's hands) with its North Pole pushing against a similar pole of the other magnet. The invisible repulsing forces of like poles give the push-effect. Unlike poles attract and give the pull-effect.

A magnet configured in a special way with wires wound round it and with electricity supplied, it becomes a motor that is used to do work – generate certain desired motions or effects. If the motor were a living entity with volitions of its own, it would quite clearly demonstrate how

electromagnetism (with its push-pull characteristics) can be used to move events in a precisely predictable way. A closer-to-life analogy would be a robot with “artificial intelligence” programmed with a “software” (analogous to a spirit mind stuff) to do certain tasks with limited ability to “respond intelligently” to certain actions (stimuli) by others (living things or other machines). Robots have been programmed to listen, speak, walk, play chess, assemble car parts, sing and even dance – all in utilizing the consistent electromagnetic laws discovered by science. With such lifelike qualities, and more so as quite complex individual machines, they too are agents (causer) of events in their own right and in their own milieu, not necessarily part of a process of events.

Unlike a robot, a living entity (plant or animal) has the ability to reproduce after its own kind, and has many other characteristics that robots could hardly ever imitate.

Nevertheless, the “laws of physics” are consistent and this has provided the foundation for scientific researches. In a mechanical clockwork universe, events such as the movement of the planets are predictable exactly. Likewise also in the world of machines, clockwork precisions are predictable exactly. In the world of living things, however, such exactness is usually absent, though instinctive individual and group behaviour may be quite predictable.

All these living creatures are able to move themselves from one place to another and make decisions subject to their individual characters, instincts and abilities; therefore they necessarily possess a degree of freedom of their own. The effects of their initiating actions may be felt, because of the law of action and reaction, by their environment and other living creatures that happen to be around them. A galloping horse will kick up sand and dust and wind currents, and this may cause the fall of a dry leaf dangling from a nearby tree in its path along with an ant resting on the leaf. Another ant held on to a swaying branch not violent enough to cause it to fall, whilst a bird looking for food flew away and another decided to stay on. Some ants on the ground may not be so lucky, as they were stepped to death or maimed by the runaway horse. In this scenario, we see a relationship between volitions (decisions) of living entities, chance (unintentionally caused) events external to the individual entities, and causes and effects (the distributed pushy force of the wind currents and the solid impact of the feet of the horse on the ground).

So we see the interplay of ‘freedom and determinism,’ of ‘chance and necessity’ in what occurs in the course of nature. Within the limits set

by God, the activities of creatures determine the details of what happens. Much that occurs takes place in a locality by chance interactions of diverse decision-making creatures. Nowadays, we are privileged to understand this better than our forbears. Much knowledge comes from viewing television documentaries like Animal Planet, Discovery Channel and National Geographic. We find many examples of living things involving the use of will – in play, in acquisition of skills, in development of character, in defending the family from prey. It is entertaining to see the antics of animals at play – the frolics of otters in the river, the amusing kittens with a roll of cotton ball, the powerful cubs of a lion's family as they playfully pounce on each other after a satisfying meal. Some of them may get hurt as they play. Nearby ants and other small insects may get hurt or even die (being trampled or lain upon) when these larger animals in roughness do they play in their individual freedom. The birds of the air have a greater degree of freedom of movement than the animals of the land, and the animals of the land correspondingly have a greater degree of freedom of movement than the plants rooted in a particular spot in the land.

There are many variables or permutations in the interactions of multitudes of entities, events and forces in nature such that there is a high degree of randomness or unpredictability on both the microscopic and the macroscopic levels. The seeds of a plant, for example, are produced in quantity such that *some* may find their way into fertile soil and grow and the plant thus propagates itself, those that fall on rocky ground will be wasted. The sperms of fishes, animals and humans are also produced in quantity so that *some* may find their way to fertilise some ova and propagate themselves, thus fulfilling the initial command 'be fruitful and multiply'. This is the method that God has introduced to ensure that his creatures propagate their progeny – a method that takes cognisance of the randomness or unpredictability in nature and the risks inherent therein (God's creation).

Likewise, a human being is as free to make choices as is generally allowed by his character (developed from heredity and environmental influences throughout his life). This unique "total person" is the initiator. There is a certain degree of predictability in the choices that he makes in certain types of situations according to his upbringing; there is also a certain degree of unpredictability in the choices that he makes in some other types of situations. A child, trained to be good when young, will likely do good when he is grown up. Spare the rod and spoil the child, it is said. A good predictable character is formed by good teaching from parents, among other things. When he is a grown man, his character is formed and it is harder to change it. A Chinese proverb says that it is

“easier to move mountains than to modify the character of a person” – that is, “beyond what his disposition must be.” This is not to say that every action that one takes or every decision that one makes is predetermined. Not in the least. It would be inaccurate to assume that the supreme freedom of the Creator is the only freedom available.

In the Old Covenant of the Jews, there are voluntary offerings commonly called “freewill offerings.” People can choose the types of offerings. The word “choose” is found in numerous scriptures. God chooses, man also chooses. The Mosaic Laws judge the free actions of men. “Whosoever will do this” will yield a certain result, “whosoever will not do this” will yield a different result. People can choose otherwise, and they are made aware of the consequences of their choices. In the Scripture, there is both God’s will and man’s will being spoken of. Both wills relate to choices, the difference being that one will is greater in its ability to perform than the other.

Seeing the corporeal God in the Son

In order for us to understand God properly, i.e. in the view that He is portrayed in Biblical Revelation, we should not view God as a diffused nebulous something, a process, even an intelligent process. We need to see Him in true anthropomorphic terms as He intended in revelation. That is why we are said to be created in His image, as also likewise His mediator, Jesus, came in the image of man to reveal Him. We understand the Father better if we see Him as like the person of the Son, because the Son comes in the image of God (*2Cor 4:4*), even also as we humans are made in God’s image. Several verses in the Bible tell us so, as we have seen earlier. Christ is the Express Image of God (*Heb 1:3*). A literal anthropomorphic view of God as we have shown earlier is the valid and true view; it is given in Scripture. It is in this ‘image of God’ terms that we, being truly theomorphic images, understand and enter into an intimate realisation of God. Philosophical views of God without the anthropomorphic image, without accepting God as corporeal, that is, with a body like the real person of Christ, lead to all sorts of vague ideas of Him.

A God’s eye view is needed to provide the correct perspective and this is extracted only from Revelation.

We conclude that there is no absolute freedom of the will; neither is there absolute determinism. In fact, determinism by its very concept is basically absolute, although there is a version of it known as soft

determinism. If there is any error in the balance, the weight of it would seem to fall more upon the side of determinism, subtly and unrecognised; and the implications are quite serious (in the eyes of the author) – as there would have been no necessity for Christ's sacrifice if absolute determinism were true. Determinism, as the author strongly suspects, and quite unrecognised by its adherents, would in his opinion make a mockery of Calvary. With it, God's love cannot be explained; neither can the facts of the real live world. It also makes void the grace of God. These views may be disagreed with, but as some authors recognise, "determinism does not serve the Christian cause." It would also be reductionism at its most extreme as every living thing is reduced to infinitesimal cause-and-effect motions without considering the uniqueness of individuals from whom actions come.

What determinists in reality are trying to defend is the inexorable existence and inescapability of the law of action and reaction, *once initiated by the individual*. The holism or uniqueness of the individual is lost if we view the world, or God's actions in it, as infinitesimal motions in successive increments of time. This view blurs everything. It sees a deistic God at best.

There is the law of cause and effect i.e. lawfulness everywhere in God's creation. Without lawfulness within Him, God would not be able to create successfully. Without lawfulness, there is no freedom but chaos (unpredictability). Sugar might taste sweet today, but it might taste bitter, spicy or any other taste another day. There would be no predictability of anything, and no meaning as well. Freedom (referring always to individual entities' volitions) rides on lawfulness. In our day to day living, lawfulness along with the concept of individual freedom is rightly assumed and understood by everyone without his casting a second thought. Lawfulness in creation can be understood by the electromagnetic phenomenon that holds up, permeates and influences all things.

Whilst *everything* in the universe is a "part of the all," each plays its part in the plan of God with a *degree* of freedom of its own, but *nothing whatsoever, however free it may be, is beyond God's ability to influence and control*. Always available to God is the option of intervention. God can intervene to modify or thwart the free action of a creature if it threatens the outcome of a specific event in the plan of God. The ability to intervene in the affairs of his creatures reflects God's sovereignty and omnipotence. That God is sovereign is agreed by all parties, and this is the overall message of Scripture.

God and His Word are truth (*John 3:33, 17:17*), not the brute processes of raw nature (God's creation). Processes per se are neither truths nor falsehoods. Much of events are also caused by relatively free evil agents, which form the backdrop for the display of God's love. Love is not rigid or deterministic (robotic); love is fluid and free. This is perhaps a reason why God patiently takes or prescribes long ages to fulfil His purpose. In the ultimate end, there will be much greater freedom for all (as free as Christ is free), more than is now experienced by the saints or the heavenly messengers, for then all would be able to manage their freedom without abusing it, as all would have been truly vivified by the same spirit of God, working together harmoniously – no more at cross-purposes. What God's family of spirit beings can do in the far future is freer than now, yet there must still exist the inescapable law of cause and effect in spiritual substances. Living beings, being *ex-Deo*, are not mere collections of interactive processes. There is a form-holding power in each entity which gives it the "self," as we have seen. If God is free, His living creatures are free too, at least to a large extent, and within the context in which they are placed.

Cosmic Operations Manager

Our God is the most efficient Cosmic Operations Manager. He controls by setting up limits and parameters to guide events. And He intervenes if necessary, for a particular purpose, or if events threaten to interrupt certain aspects of His overall cosmic plan. He has an administrative staff in heaven to assist Him (*Rev 4*), and an innumerable host of spirit messengers. The earth, it is true, is predetermined to move relentlessly in its set orbit around the sun, giving us day and night and the seasons. And (among other things) so that we, together with the circadian rhythms set in our bodies may work in the day and sleep at night to refresh ourselves.

However, with the light bulbs man has created, he can choose to 'extend the day' and work longer hours and sleep at hours other than those of the natural night. Because of economic necessity, he may even choose to work in the night as a night guard in a factory and sleep in the day time, thus having his circadian rhythm adjusted and adapted to the new circumstances. The circadian rhythm has a degree of flexibility (freedom) that can be adjusted.

Chance events

As humans are made in the image of God, they are given a certain degree of Godlike freedom to act. Most of these acts are not predetermined; there is no need for them to be so. Various 'independent,' living, self-conscious, self-regulating and self-adjusting entities (life forms) are created with different degrees of freedom to move, to act and to adapt to environment. This is what makes life interesting. These living entities have much greater degree of freedom than the building blocks (and their processes) from which they are made. Each has its sphere of operation and influence.

God and His Son are *actively working or operating or managing* all the time (*John 5:17*). The operations of God would likely involve planning, directing, controlling events – principles that we have come to know from modern management science. Both Father and Son are always busy, and they have powerful administrative spirit beings in heaven to help in the management and monitoring of events. There may be randomness of events in the creation; there may be chance events; these are allowed to be. Chance events are those which came out, not from nothingness, but from the interaction of a myriad variety of other events, many of which are spontaneously caused by separate living entities with intelligence and volitions.

The following verses speak about chance events in the Scripture:

I returned, and saw under the sun, that the race is not to the swift, nor the battle to the strong, neither yet bread to the wise, nor yet riches to men of understanding, nor yet favor to men of skill; but time and chance happen to them all. For man also doesn't know his time. As the fish that are taken in an evil net, and as the birds that are caught in the snare, even so are the sons of men snared in an evil time, when it falls suddenly on them.
(*Eccl 9:11-12*)

If a bird's nest chance to be before you in the way, in any tree or on the ground, with young ones or eggs, and the hen sitting on the young, or on the eggs, you shall not take the hen with the young:
(*Deut 22:6*)

Chance events operate within their limits and set parameters. God *monitors* their operation. *Nothing is outside of God's view and ability to control.*

The fact that God 'operates all' does not mean that every motion or thought is mechanistically moved or triggered by God at every moment. The phrase 'operates all' does not, as it may seem, refer to processes or micro events. It is quite evident to all Bible students that the Bible hardly ever refers to or describes processes in any detail. Hardly in the Scripture does God describe his operations from a microscopic viewpoint. The idea behind the phrase 'operates all' refers to His directing the works, and He frequently uses agents to do so, among the many options at His disposal. He manages well. At best, what we are intimated with in Scripture are some steps taken by God, as described in the book of Genesis in the creating of life forms on earth over a period of time (six days). His active works of creation are as shown in the opening verses of the Bible. God merely said 'let there be' some particular living things, and those particular living things came into being. The processes by which they came about are not described.

On the seventh day, God rested or stopped creating. Those things that He created continue to cohere or function according to their assigned properties with various degrees of freedom of movement and action, limited by their make-up (properties) and by their confining environments.

God has imparted some degree of freedom of action and volition to His creatures, and despite this dispensing of freedom, God is still said to be operating all (managing all) according to the counsel of His Will, i.e. His plans (*Eph 1:11*). In fact, we could say that *because of* this dispensing of freedom to His creatures, God has set limits to their freedom of movement and He intervenes to direct their actions where necessary so as to achieve or avoid frustration of certain of His plans.

Footnotes:

*1. *Job 38:4-7*

*2. *Refer to links such as: www.icr.org, www.evolution-facts.org, www.creationism.org, www.answersingenesis.org, www.arky.org, www.creationtruth.com.*

*3. *The book is published in 1990 by Church Computer Services, 4511 Poppe Place, Temple Hills, MD 20748. Dr Charles W Lucas Jr. may be reached at www.commonssensescience.org*

*4. *Some information on Dr Robert Gentry's work can be found at: <http://www.christiananswers.net/q-aig/aig-c009.html>*

*5. *Refer to Impact Article No.353 (November 2002) from Institute for Creation Research, www.icr.org*

*6. *See sites www.commonssensescience.org, www.electric-cosmos.org, www.aethrokinematics.com. Read also "The Final Theory – Rethinking our Scientific Legacy" by Mark McCutcheon.*

*7. *For some archeological discoveries refer to www.ChristianAnswers.net, www.answersingenesis.org.*

*8. *Refer to "Animal Electromagnetism and Waves" by Elizabeth Gerrow at <http://members.fortunecity.com/anemaw/.htm>*

*9. *This thought is taken from Dr Charles W Lucas' book "The Mechanism By Which God Created."*

*10. *Researchers Albert Roy Davis and Walter C Rawls discovered that the magnetic lines of force of the earth travels in a spiral from the South Pole to the North Pole, like the helical DNA.*

*11. *Journal of Common Sense Science, February 2006 Vol 9 No 1.*

*12. *Article "Atoms and Void" in www.commonssensescience.org*