

#### 4. The Universe – Divine Expert System

Physical, chemical and biological sciences at best explain to us and provide information on properties of various forms of energy and matter. There are, however, certain fundamental questions about the universe that remain unresolved. Some of these are: a) origin of chemical structures with specific properties, b) origin of rules and laws in the physical, chemical and biological segments of the universe, c) interconnectivity and coordination of the universal components to function as a single system, and d) origin of natural processes and mechanisms. These are some of the most difficult riddles to human intellect. Strictly speaking these issues are beyond the realms of science. Self-regulated functioning of natural systems, occurrence of natural cycles, and spontaneity of physical, chemical and biological reactions and processes do indicate the existence of a computerised set-up. It is possible to explain the various aspects of the universe considering it as a computer system. It also implies that whatever happens in this computer universe is pre-determined by Allah's program which rules out the element of chance. The 'chance' or 'accident' is merely a wishful thinking of the atheistic minds. It is in accordance with the divine program immanent in the universal structures the universe works like an expert system.

A computer model of the physical universe based on the Quran was proposed by me in 1998 in my book *The Divine Expert System* [1]. Its revised version *The Computer Universe: A Scientific Rendering of the Holy Quran* was published in 2006 [2]. The model describes the universe as giant computer designed, programmed and created by Allah to suit His mission. The computer model offers a new window to look at the universe and understand its self-propelled, self-sustained and self-regulated functioning, deterministic mode of behaviour and how the components acquire their characteristic properties. A living organism is likewise treated as natural biocomputer or biorobot.

Konrad Zuse, the German scientist who built the first programmable computer was also the first to suggest in 1967 that the entire universe is being computed on a computer, possibly a cellular automaton. He referred to this as "Rechnender Raum" ("Computing Cosmos" or "Computing Space") which in fact started the field of Digital Physics. In 2002 Prof. Seth Lloyd of Massachusetts Institute of Technology, USA, published a research paper entitled "Computational capacity of the universe" in the journal *Physical Review Letters* [3], and Stephen Wolfram of Wolfram Media, USA, published a book *A New Kind of Science* [4]. Lloyd published another book *Programming the Universe: A Quantum Computer Scientist Takes on the Cosmos* in 2006 [5]. A book entitled *Wetware: A Computer in Every Living Cell* written by Denis Bray suggesting that organism is a computer has also come out in 2009 [6]. More works on the subject are now available.

Seth Lloyd considers the universe as giant quantum computer. Quantum mechanics is weird. It treats waves as particles, and particles as waves. Things can be in two places at the same time. Quantum computers exploit "quantum weirdness" to perform tasks that are extremely complex for classical computers. Since a quantum bit or "qubit" can register both 0 and 1 at the same time unlike the classical bit (which can register only one or the other) a quantum computer can perform millions of computations

simultaneously. Quantum computers process the information stored on individual atoms, electrons, and photons. According to him, all physical systems are basically quantum-mechanical and all physical systems register and process information [5].

According to John Archibald Wheeler (coiner of the term “black hole”) atoms are made up of bits of information. As he put it in a 1989 lecture, “Its are from bits.” He elaborated: “Every *it* – every particle, every field of force, even the space-time continuum itself – derives its function, its meaning, its very existence entirely from binary choices, *bits*. What we call reality arises in the last analysis from the posing of yes/no questions.” [7]. All these works based purely on science support the concept that the universe works like a computer. The computer concept of the universe is an emerging field and it is where science and the Quran are bound to meet for the simple reason the universe has to have a programmer – God.

The computer model of the universe developed in the light of the Quran is briefly discussed here. The basic change that the computer concept of the universe based on the Quran brings into our present knowledge of the universe and cosmology is that it is the divine instructions carried in energy, Allah’s Word, that represent the fundamental basis of reality.

### **Natural evidence supporting the concept of computer universe**

The existence of natural laws and deterministic behavior of the universal components are clear evidence of a computerized set-up. The famous mathematician-physicist Pierre Simon Laplace’s doctrine of complete determinism is a tribute to the success of Galilean-Newtonian principles. According to him, the entire universe is like a clockwork mechanism – to a supremely intelligent mind with all-seeing eyes and unlimited calculating powers, the present would completely determine the future, and for that matter, the past as well [8]. Determinism became incorporated in modern science around the year 1500 A.D. with the establishment of the idea that cause-and-effect rules completely govern all motion and structure on the material level. According to the deterministic model, the universe works like a perfect machine without deviation from the predetermined laws. It was the work of Sir Isaac Newton that firmly established determinism at the core of modern science. He demonstrated that the three laws of motion, which he advanced, could accurately predict in time the orbits of the planets around the sun, the shapes of the paths of projectiles on the earth, and the schedule of the ocean tides throughout the month and year. Newton’s laws are completely deterministic because they imply that anything that happens at any future time is completely determined by what happens now, and everything that is happening now was completely determined by what happened at any time in the past. Determinism remains even today as the core philosophy and goal of physical science [9].

We cannot deny the fact that a programmed reality exists in nature. The countless number of celestial bodies of colossal size tracing their own paths in the cosmos without collision is indicative of a perfectly programmed behaviour. The gravitational forces responsible for this meticulous and amazing consistency in the peripheral motion and recurring relative positions of stars and planets do not operate in an arbitrary manner, but obey certain eternal laws prescribed by the Creator. It is because of this, we are able to formulate principles, which can reflect the natural order. What can be concluded from the success of the mathematical models and theories in the quantitative interpretation of

natural phenomena is that the universe has built-in rules and regulations to enable it to function like a self-controlled and self-sustained system. Even an infinitesimal deviation from these rules will cause catastrophic effect. According to Stephen Hawking, if the electric charge of the electron had been slightly different, stars would not have been able to burn hydrogen and helium [10]. These rules and properties could not have come into existence accidentally. Instead the universe has an Authority who designed and perfected it the way it is. To quote again Stephen Hawking: “It would be very difficult to explain why the universe should have begun in just this way, except as the act of a God who intended to create beings like us” [10]. (This statement is quoted here not to suggest his religious views).

Spontaneity is another evidence of programmed behaviour. Every natural process is a spontaneous phenomenon. Physical, chemical and biological processes are spontaneous phenomena as though the reacting species *know* how to react and what they should produce under different conditions. Their properties and mode of behaviour in diverse environments are all fixed. Evidently, divine programs are there latent in their structures.

We also find specific developmental sequence for each phenomenon. There is clear evidence of the existence of a biological (genetic) program in living organisms. This program is responsible for the development and moment-to-moment existence of a living organism. A plant develops from seed as specified in the bioprogram stored in its cells. An animal also develops similarly from the zygote. Every biological mechanism is suggestive of the sequential execution of the instructions contained in the biological program of the organism concerned.

Brains of animals are capable of storing and processing information. Human brain is the most advanced of them all. Plants also function like a computer. Leaves regulate their uptake and loss of gases by conducting simple calculations based on ‘distributed computation’ – a kind of information processing that involves communication between many interacting units. In distributed computation, signals exchanged between components of the system define the process for solving a problem [11].

### **The Quranic indicators of computer universe**

Many verses in the Quran point to a computerized set-up of the universe. These include verses relating to the structural components, natural mechanisms and functioning of the universe, monitoring and real-time recording of the goings-on, etc.

#### **a) Universal components carry divine instructions**

Allah tells us that the universal components have divine instructions built into their structures. That is how they function as programmed by Allah. They are therefore subservient and obedient to Allah.

فَقَضَاهُنَّ سَبْعَ سَمَاوَاتٍ فِي يَوْمَيْنِ وَأَوْحَىٰ فِي كُلِّ سَّمَاءٍ أَمْرَهَا ۗ وَزَيَّنَّا السَّمَاءَ الدُّنْيَا بِمَصَابِيحَ وَحِفْظًا ۗ ذَٰلِكَ تَقْدِيرُ الْعَزِيزِ الْعَلِيمِ

41:12 So He completed them as seven skies in two Days and He assigned to each sky its command (program). And We adorned the lower sky with lamps and rendered it inviolable. Such is His decree, the Mighty, the Omniscient.

إِنَّ رَبَّكُمْ اللَّهُ الَّذِي خَلَقَ السَّمَاوَاتِ وَالْأَرْضَ فِي سِتَّةِ أَيَّامٍ ثُمَّ اسْتَوَىٰ عَلَى الْعَرْشِ يُغْشِي اللَّيْلَ النَّهَارَ يَطْلُبُهُ حَثِيثًا وَالشَّمْسَ وَالْقَمَرَ وَالنُّجُومَ مُسَخَّرَاتٍ بِأَمْرِهِ ۗ أَلَا لَهُ الْخَلْقُ وَالْأَمْرُ ۗ تَبَارَكَ اللَّهُ رَبُّ الْعَالَمِينَ

7:54 Your Lord is Allah who created the skies and the earth in six days, and then was seated on the Throne (of Authority). He draws the night as veil over the day each seeking the other in rapid succession. He created the sun, the moon and the stars (all) obeying His command (instructions or programs). Are not the creation and command His? Blessed be Allah, Lord of the worlds!

اللَّهُ الَّذِي رَفَعَ السَّمَاوَاتِ بِغَيْرِ عَمَدٍ تَرَوْنَهَا ثُمَّ اسْتَوَىٰ عَلَى الْعَرْشِ وَسَخَّرَ الشَّمْسَ وَالْقَمَرَ كُلٌّ يَجْرِي لِأَجَلٍ مُّسَمًّى ۗ يُدَبِّرُ الْأَمْرَ يُفَصِّلُ الْآيَاتِ لَعَلَّكُمْ بِلِقَاءِ رَبِّكُمْ تُؤْفِقُونَ

13:2 It is Allah who raised the skies without any visible pillars. He then established (Himself) on the Throne. He subjected the sun and the moon (to His law), all moving for a prescribed term. He regulates all affairs. He explains the signs in detail so that you firmly believe in the meeting with your Lord.

وَلِلَّهِ يَسْجُدُ مَنْ فِي السَّمَاوَاتِ وَالْأَرْضِ طَوْعًا وَكَرْهًا وَظِلَالُهُم بِالْغُدُوِّ وَالْآصَالِ

13:15 To Allah prostrate whoever there is in the skies and in the earth obediently and compulsorily (i.e., programmed behaviour) and (so do) their shadows in the mornings and evenings.

وَرَبُّكَ يَخْلُقُ مَا يَشَاءُ وَيَخْتَارُ ۗ مَا كَانَ لَهُمُ الْخِيَرَةُ ۗ سُبْحَانَ اللَّهِ وَتَعَالَىٰ عَمَّا يُشْرِكُونَ

28:68 Your Lord creates what He pleases and He chooses. They (i.e., the created) have no choice (in any matter). Glory to Allah and so elevated is He above the partners they ascribe (to Him)!

وَالشَّمْسُ تَجْرِي لِمُسْتَقَرٍّ لَهَا ۚ ذَلِكَ تَقْدِيرُ الْعَزِيزِ الْعَلِيمِ وَالْقَمَرَ قَدَرْنَا مَنَازِلَ حَتَّىٰ آدَاءَ كَالْعُرْجُونِ الْقَدِيمِ لَا الشَّمْسُ يَنْبَغِي لَهَا أَنْ تُدْرِكَ الْقَمَرَ وَلَا اللَّيْلُ سَابِقُ النَّهَارِ ۗ وَكُلٌّ فِي فَلَكٍ يَسْبَحُونَ

36:38-40 And the sun moves on for a period determined for it. That is the decree of (Allah), the Mighty, the All-Knowing. And the moon – We prescribed for it mansions (i.e., orbits to traverse) till it returns like the old (and withered) inflorescence stalk of date palm. The sun cannot reach up to the moon and the night cannot outstrip the day; each swims along (its own) orbit.

يُولِجُ اللَّيْلَ فِي النَّهَارِ وَيُؤَلِّجُ النَّهَارَ فِي اللَّيْلِ وَسَخَّرَ الشَّمْسَ وَالْقَمَرَ كُلٌّ يَجْرِي لِأَجَلٍ مُّسَمًّى ۗ ذَلِكُمْ اللَّهُ رَبُّكُمْ لَهُ الْمُلْكُ ۗ وَالَّذِينَ تَدْعُونَ مِنْ دُونِهِ مَا يَمْلِكُونَ مِنْ قِطْمِيرٍ

35:13 He merges night into the day and He merges day into the night. He has subjected the sun and the moon (to His Law), each running its course for a fixed term. That is Allah, your Lord. To Him belongs all dominion. And those whom you invoke besides Him have not even the control over a date-stone skin.

سَبِّحْ اسْمَ رَبِّكَ الْأَعْلَى الَّذِي خَلَقَ فَسَوَّىٰ وَالَّذِي قَدَّرَ فَهَدَىٰ

87:1-3 Glorify the name of your Guardian Lord, most high, who created and further gave order and proportion, who ordained laws and granted guidance.

أَوَلَمْ يَرَوْا إِلَىٰ مَا خَلَقَ اللَّهُ مِنْ شَيْءٍ يَتَّقِيهِ بَطْلًا ۖ عَنِ الْيَمِينِ وَالشَّمَائِلِ سُجَّدًا لِلَّهِ وَهُمْ دَاخِرُونَ ۗ وَلِلَّهِ يَسْجُدُ مَا فِي السَّمَاوَاتِ وَمَا فِي الْأَرْضِ مِنْ دَابَّةٍ وَالْمَلَائِكَةُ وَهُمْ لَا يَسْتَكْبِرُونَ ۗ يَخَافُونَ رَبَّهُمْ مِنْ فَوْقِهِمْ وَيَفْعَلُونَ مَا يُؤْمَرُونَ

16:48-50 Do they not look at things Allah created? Their shadows tilt towards right and left prostrating to Allah in humility. And to Allah prostrate all living things in the skies and in earth, and the angels. And they are not arrogant. They all fear their Lord above them and they function as they are instructed (i.e., as programmed).

All these verses imply that Allah's instructions or programs are immanent in the universal components and it is according to that they function.

### b) Flow of information between the universe and Allah's abode

اللَّهُ الَّذِي خَلَقَ سَبْعَ سَمَاوَاتٍ وَمِنَ الْأَرْضِ مِثْلَهُنَّ يَنْزِلُ الْأَمْرُ بَيْنَهُنَّ لِتَعْلَمُوا أَنَّ اللَّهَ عَلَىٰ كُلِّ شَيْءٍ قَدِيرٌ وَأَنَّ اللَّهَ قَدْ أَحَاطَ بِكُلِّ شَيْءٍ عِلْمًا

65:12 (It is) Allah who created seven skies and similarly from the earth. (Allah's) command descends into their midst to make it known to you that Allah has power over all things and that Allah indeed encompasses all things in (His) knowledge.

وَاللَّائِي يَئُوسَنَ مِنَ الْمَجِيبِ مِنْ نِسَائِكُمْ إِنِ ارْتَبْتُمْ فَعِدَّتُهُنَّ ثَلَاثَةُ أَشْهُرٍ وَاللَّائِي لَمْ يَحْضُنَّ وَأُولَاتُ الْأَحْمَالِ أَجَلُهُنَّ أَنْ يَضَعْنَ حَمْلَهُنَّ وَمَنْ يَتَّقِ اللَّهَ يَجْعَلْ لَهُ مِنْ أَمْرِهِ يُسْرًا ذَلِكَ أَمْرُ اللَّهِ أَنْزَلَهُ إِلَيْكُمْ وَمَنْ يَتَّقِ اللَّهَ يُكَفِّرْ عَنْهُ سَيِّئَاتِهِ وَيُعْظِمْ لَهُ أَجْرًا

57:4-5 It is He who created the skies and the earth in six Days, then He was seated on the Throne (of Authority). He knows what enters the earth and what goes out of it and what comes down from the sky and what ascends to it (i.e., the sky). And wherever you may be, He is with you. And Allah sees well all that you do. To Him belongs the dominion of the skies and the earth, and all affairs are returned to Allah.

يَعْلَمُ مَا يَلِجُ فِي الْأَرْضِ وَمَا يَخْرُجُ مِنْهَا وَمَا يَنْزِلُ مِنَ السَّمَاءِ وَمَا يَعْرُجُ فِيهَا وَهُوَ الرَّحِيمُ الْغَفُورُ

34:2 He knows all that enters the earth and all that goes out of it, and all that comes down from the sky and all that ascends to it. And He is Most Merciful, Oft-Forgiving.

These verses reveal the existence of interconnectivity between Earth and other components of the cosmic space through information flow between them. This is vital for the coordinated working of the component systems. Further all the information transmitted from each component of the universe reaches Allah.

### c) Real-time recording of information

The Quran further reveals that moment-to-moment information generated from the Earth and the skies is recorded in real time. Allah thus knows what is happening in Earth and the skies every moment.

وَعِنْدَهُ مَفَاتِحُ الْغَيْبِ لَا يَعْلَمُهَا إِلَّا هُوَ وَيَعْلَمُ مَا فِي الْبَرِّ وَالْبَحْرِ وَمَا تَسْفُطُ مِنْ وَرَقَةٍ إِلَّا يَعْلَمُهَا وَلَا حَبَّةٍ فِي ظِلْمَاتِ الْأَرْضِ وَلَا رَطْبٍ وَلَا يَابِسٍ إِلَّا فِي كِتَابٍ مُبِينٍ

6:59 With Him are the keys of the unseen, the treasures that none but He knows. He knows whatever there is on the earth and in the sea. Not a leaf falls without His knowledge. There is not a grain in the darkness (or depths) of the earth, nor anything fresh or dry (green or withered), but is (inscribed) in a clear Record (Memory).

وَمَا تَكُونُ فِي شَأْنٍ وَمَا تَتْلُو مِنْهُ مِنْ قُرْآنٍ وَلَا تَعْمَلُونَ مِنْ عَمَلٍ إِلَّا كُنَّا عَلَيْكُمْ شُهُودًا إِذْ تُفِيضُونَ فِيهِ وَمَا يَعْرُبُ عَنْ رَبِّكَ مِنْ مِثْقَالِ ذَرَّةٍ فِي الْأَرْضِ وَلَا فِي السَّمَاءِ وَلَا أَصْغَرَ مِنْ ذَلِكَ وَلَا أَكْبَرَ إِلَّا فِي كِتَابٍ مُبِينٍ

10:61 You are not (engaged) in any affair, you do not recite about it from the Quran and you do not do any work without Us being witnesses over you when you engage in it. Not even the weight of an atom on the earth or in the sky is hidden from your Lord. And there is nothing smaller or bigger than that but is given in a clear Record.

وَمَا مِنْ دَابَّةٍ فِي الْأَرْضِ إِلَّا عَلَى اللَّهِ رِزْقُهَا وَيَعْلَمُ مُسْتَقَرَّهَا وَمُسْتَوْدَعَهَا كُلٌّ فِي كِتَابٍ مُبِينٍ

11:6 There is no organism on the earth without its sustenance depended on Allah. He knows its resting place and its repository; all (the information) is available in a clear Record.

The verses quoted above offer clear insight into the nature of functioning of the universe like a computer. The verses reveal to us that the universe is a self-regulated programmed system created by God. Divine commands (instructions or programs) are immanent in the living and non-living systems. Existence of mechanisms for real-time monitoring and recording of all that is happening in the universe further supports the computer model of the universe.

### **Natural designs revealed through the Quran**

The universe has been designed by Allah to suit His mission. Naturally every component of the system has specific purpose(s) and is so designed to meet the requirement envisaged in the divine scheme. We also observe and experience that natural designs are perfect. For instance, in the millions of biological species living on Earth, we do not find even a single case of half-developed organ incomplete in its structure or inefficient in its functioning. Several kinds of designs can be identified and recognized in nature. Apart from the structural design of each component of the universe, there are innumerable processes and mechanisms that exhibit spectacular operational designs. Depending on how they are viewed by our senses, they would appear to range from the simplest to extremely complex phenomena. We are so familiar with many of these natural phenomena in our daily life (e.g., gravity, wind, rain, etc.) that they have ceased to inspire awe in us or to attract our attention. Our stomach is capable of digesting every kind of meat. Suppose that you are able to cut out a piece of stomach and swallow it. It will be immediately digested. But so long as that piece remained as part of the stomach (i.e., before you cut and removed it), it was not digested! In other words, stomach produces juices containing enzymes and other substances capable of its own breakdown but remains at the same time unattacked and safe while it breaks down the food materials arriving to it! Evidently, there is mechanism designed to prevent it from getting digested. When a morsel of food is taken into the mouth, the teeth chew only the food material and spare the tongue. In effect the teeth can distinguish the food material from tongue. We also know that blood exists as liquid inside the blood vessel; everywhere else, it clots. Just look around; we will find in everything the most appropriate design to serve the purpose for which it is created. Scientific literature reveals this overwhelming truth in great detail.

### **Computer model of the physical universe based on the Quran**

Basically a computer system consists of software and hardware components. In the computer jargon, the term 'software' describes the program. The program is a set of instructions written in a suitable language in the proper sequence and is uploaded into the system for executing the tasks intended. The software stored on the memory device of the computer is thus an *unseen* component, which drives the computer to perform the tasks specified in it. The term 'hardware' describes all the visible components of a computer.

Supposition of the universe as divine computer system necessitates the existence of Divine Master Program (DMP). DMP is considered here as the cosmic software. For

convenience in discussion, the DMP may be distinguished as having composed of two subprograms namely, the abioprogram and the bioprogram [2]. The abioprogram (abiosoftware) determines abiogenesis (origin of the inanimate world) and the characteristic properties of the inanimate components. It thus forms the source of chemical information. The bioprogram (biosoftware) determines biogenesis (origin of living species) and the characteristic properties of the living matter. It thus represents the source of biological information. This means two kinds of divine information (Allah's Word or instructions) namely, chemical information and biological information are fundamental to the making of the universe.

Insofar as energy is information (Allah's instructions or Word) and the whole universe can be visualized as space filled with information, the concept of memetics with required modifications can be readily applied to the computer universe. The term "meme" was originally proposed by Richard Dawkins to mean "replicator" [12]. Memetics is a fast catching-up concept in epistemology with "meme" describing a piece of knowledge that is transmitted from one individual to the other and gets replicated in the process [13]. In the cosmological context, memetics can be thought of as separate science that describes the universe as divine instruction (information)-laden system. "Meme" is used here not with the connotation of a "replicator" or with the other characteristics originally assigned to it. *A Meme is defined here as piece of divine information (energy) in the abiotic and biotic segments of the universe.* The meme deriving from abioprogram may be referred to as "abiomeme" and the meme deriving from the bioprogram as "biomeme". Accordingly, abiomemetics forms the science of chemical information and biomemetics forms the science of biological information [14].

### a) Abioprogram –the divine source of chemical information

The Quran reveals that Allah's commands (programs) are immanent in the universal components:

فَقَضَاهُنَّ سَبْعَ سَمَاوَاتٍ فِي يَوْمَيْنِ وَأَوْحَىٰ فِي كُلِّ سَّمَاءٍ أَمْرَهَا ۗ وَزَيَّنَّا السَّمَاءَ الدُّنْيَا بِمَصَابِيحَ وَحِفْظًا ۗ ذَٰلِكَ تَقْدِيرُ الْعَزِيزِ الْعَلِيمِ

41:12 So He completed them as seven skies in two Days and He assigned to each sky its command (instructions or program). And We adorned the lower sky with lamps and rendered it inviolable. Such is His decree, the Mighty, the Omniscient.

وَمِنْ آيَاتِهِ أَنْ تَقُومَ السَّمَاءُ وَالْأَرْضُ بِأَمْرِهِ ۗ

30:25 "And among His signs is this – the sky and earth stand by His command..."

In the light of these revelations, it can be inferred that the mode of behaviour and functioning of the component systems of the universe are governed by the programs (divine instructions) immanent in them. The fundamental constituents of the universe are energy and space. Tangible energy exists as matter and non-matter (e.g., electromagnetic radiation, heat, electrical, etc.) forms. In whatever form it exists, it has a structure. For a better understanding of the proposed concept, we shall restrict the discussion to matter form from the level of atom or molecule. Presently we know more than one hundred and fifteen chemical elements with several atomic species (isotopes) for each of them. Each element has certain atomic structure, which determines its physical and chemical properties. These elements can combine in numerous combinations obeying certain specific rules to produce a wide range of substances each with specific chemical structure

and properties. How does this happen? Are the elements intelligent entities to invent and decide their structures, properties and rules by themselves? This is one of the most fundamental aspects of the working of the universe that has not been and cannot be addressed in science. The rules that govern the formation of chemical structures as well as acquiring properties by them are prescribed and governed by the divine abioprogram. Similarly for non-matter forms of energy also, the abioprogram determines their nature of existence and behavioural patterns (properties).

Matter and non-matter forms of energy can be conceived as embodiment of divine information. The abioprogram immanent in various matter and non-matter forms of energy can be therefore explained in terms of a structure-code concept. The atom is considered here as the basic unit of matter for illustrating this concept (Table 1). We may assume that the structure signifies a code ‘written’ in a special language like the symbolic language used in computer machines; i.e., the structure encodes specific divine instructions. This code is deciphered in terms of the abioprogram and the structure derives its properties (semantic content). The Quranic message that God’s commands are built into the universal components (see verses 41:12 and others quoted above) can be explained that way.

Table 1. Illustration of the abioprogram-based structure-code concept explaining how substances acquire their properties in comparison with acquiring of meaning by a word in English language

<b>Building block</b>	<b>Unit</b>	<b>Software</b>	<b>Task</b>
Alphabet	Word	English	Meaning
Element	Molecule	Abioprogram	Properties

Innumerable substances found in the universe owe their vastly diverse properties to their structures, which, in turn, are decided by the composition and arrangement of atoms (Fig. 1). Structure at the level of a molecule (substance) is defined here as the totality of the elemental composition and arrangement of the atoms. In the structure-code concept, the elements form the alphabets and along with their arrangement through bonding, etc., the structure (comparable to a word) is formed. The structure so formed is a code that carries chemical information. The chemical information is deciphered in terms of its properties.

A set of alphabets can carry meaning only if it is affiliated with a language. The meaning of a word depends on its alphabetic composition as well as the order in which the alphabets are arranged. Two words may be different in their alphabetic composition or in their arrangement. For instance, English words ‘nest’ and ‘sent’ have the same alphabets but different arrangements whereas the words ‘take’ and ‘buy’ are different in their alphabetic composition. Likewise, different chemical structures are formed based on



the composition and arrangement of the atoms of the elements. The structures of n-butane and iso-butane have the same elements and same number of atoms with the chemical formula of  $C_4H_{10}$ ; but the arrangement of the atoms is different in the two substances. These two structures are comparable with English words ‘nest’ and ‘sent’. The chemical structures of water ( $H_2O$ ) and benzene ( $C_6H_6$ ) are different in their elemental (alphabet) composition. They are comparable with English words ‘take’ and ‘buy’ (Fig. 1).

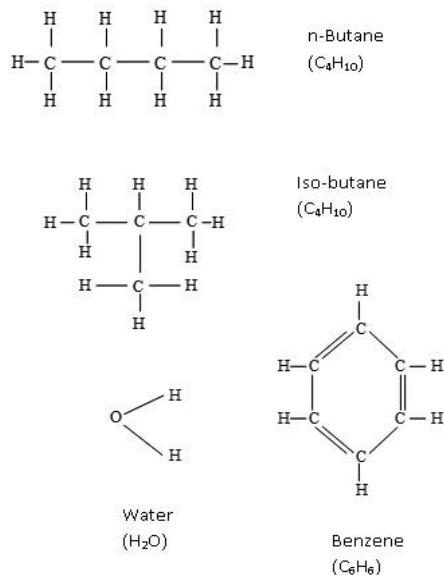


Fig. 1. Illustration of structure-code concept in relation to acquiring properties by substances based on the abioprogram

Note: Each chemical structure forms an abiomeme.

By this analogy, the phenomenon of how chemical structures (substances) derive their properties based on the divine program can be explained. Periodicity in the properties of elements which provides the basis for their classification (Periodic Table), specificity in the change of properties of substance with change in structure, etc., are clearly the clauses of the divine abioprogram operating at different levels of structural hierarchy. In fact by studying the structure-property relationships, we are deciphering the divine abioprogram at various hierarchal levels of the universe. The chemical structure may be thus likened to a kind of algorithm conforming to abioprogram. The universe is therefore nothing but divine instruction (information)-laden system.

### b) Divine governance of the universe

After creating the universe Allah – the Creator, the Programmer – is seated on His throne of authority controlling and regulating everything. A schematic representation of the divine governance of the universe based on the Quranic revelations is presented in Fig. 2.

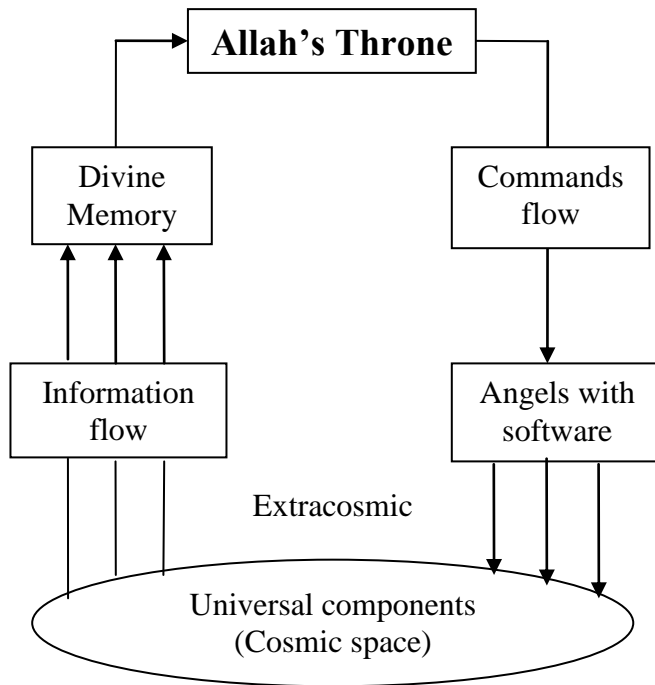


Fig. 2. A schematic representation of divine governance of the universe based on the Quran

As we have seen, the Quran provides a good account of Allah’s Kingdom and mode of control and regulation of the affairs from His abode, recording of information and flow of information between the universe and Allah’s abode.

إِنَّ رَبَّكُمْ اللَّهُ الَّذِي خَلَقَ السَّمَاوَاتِ وَالْأَرْضَ فِي سِتَّةِ أَيَّامٍ ثُمَّ اسْتَوَىٰ عَلَى الْعَرْشِ يُدَبِّرُ الْأَمْرَ لِمَا مِنْ شَفِيعٍ إِلَّا مِنْ بَعْدِ  
إِذْنِهِ ذَٰلِكُمْ اللَّهُ رَبُّكُمْ فَاعْبُدُوهُ أَفَلَا تَذَكَّرُونَ

10:3 “Verily your Lord is God who created the skies and the earth in six days and is firmly established on the Throne (of authority) regulating and governing all things....”

يُدَبِّرُ الْأَمْرَ مِنَ السَّمَاءِ إِلَى الْأَرْضِ ثُمَّ يَعْرُجُ إِلَيْهِ فِي يَوْمٍ كَانَ مِقْدَارُهُ أَلْفَ سَنَةٍ مِمَّا تَعُدُّونَ

32:5 He rules (all) affairs from the sky to the earth; in the end all affairs will go up to Him on a day that is a thousand years of your (man’s) reckoning.

There are many angels (*malak* in Arabic) in His Kingdom serving Him obediently.

الْحَمْدُ لِلَّهِ فَاطِرِ السَّمَاوَاتِ وَالْأَرْضِ جَاعِلِ الْمَلَائِكَةِ رُسُلًا أُولِي أَجْنِحَةٍ مَثْنَىٰ وَثُلَاثَ وَرُبَاعَ ۚ يَزِيدُ فِي الْخَلْقِ مَا يَشَاءُ ۚ إِنَّ  
اللَّهَ عَلَىٰ كُلِّ شَيْءٍ قَدِيرٌ

35:1 “Praise be to God who created the skies and the earth, who made the angels messengers with wings....He adds to creation as He pleases: for God has power over all things.”

قُلْ يَتَوَفَّاكُم مَّلَكُ الْمَوْتِ الَّذِي وُكِّلَ بِكُمْ ثُمَّ إِلَىٰ رَبِّكُمْ تُرْجَعُونَ

32:11 Say: The angel of Death put in charge of you will take your (soul at death); then you will be brought back to your Lord.

يَا أَيُّهَا الَّذِينَ آمَنُوا قُوا أَنْفُسَكُمْ وَأَهْلِيكُمْ نَارًا وَقُودُهَا النَّاسُ وَالْحِجَارَةُ عَلَيْهَا مَلَائِكَةٌ غِلَاظٌ شِدَادٌ لَا يَعْصُونَ اللَّهَ مَا أَمَرَهُمْ وَيَفْعَلُونَ مَا يُؤْمَرُونَ

66:6 O believers! Save yourselves and your families from a Fire whose fuel is humans and stone, over which are (appointed) stern (and) harsh angels. They will not defy His orders and they execute what they are commanded.

وَأَذَقْنَا لِرَبِّكَ لِلْمَلَائِكَةِ إِنِّي جَاعِلٌ فِي الْأَرْضِ خَلِيفَةً قَالُوا أَتَجْعَلُ فِيهَا مَنْ يُفْسِدُ فِيهَا وَيَسْفِكُ الدِّمَاءَ وَنَحْنُ نُسَبِّحُ بِحَمْدِكَ وَنُقَدِّسُ لَكَ قَالُوا إِنَّا نَعْلَمُ مَا لَا تَعْلَمُونَ وَعَلَّمَ آدَمَ الْأَسْمَاءَ كُلَّهَا ثُمَّ عَرَضَهُمْ عَلَى الْمَلَائِكَةِ فَقَالَ أَنْبِئُونِي بِأَسْمَاءِ هَؤُلَاءِ إِنْ كُنْتُمْ صَادِقِينَ قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ

2:30-32 Behold, your Lord said to the angels: I will create a vicegerent on earth. They said: Will You place therein one who will make mischief therein and shed blood? While we do celebrate your praises and glorify your holy (name). He (Allah) said: I know what you do not know. And He taught Adam the names of all things; then He placed them (i.e., the things) before the angels and said: Tell Me the names of these if you are truthful. They said: Glory to You. We (angels) do not have any knowledge except what You taught us. Truly it is You who are perfect in knowledge and wisdom.

The angels are assigned specific duties and are at His command. The angels mentioned in the Quran include messenger angels (Q. 35:1), angel for executing death of human beings (Q. 32:11), angel for guarding Hell (Q. 66:6), etc. All these revelations imply that angels have the divine software necessary to carry out their duties. Allah has also given them knowledge though much less compared to the knowledge given to human beings as can be inferred from their statement about the nature of human beings as ‘mischief makers on Earth’ (Q. 2:30-32). The angels do their job exactly as commanded by God (Q. 66:6). They are therefore intelligent dedicated robots. We may visualize that when Allah gives a command, the angel concerned will pick it up and execute the job through appropriate software. This is also suggestive of the divine ground control over and above the programmed functioning of the universe. This means there is connectivity between Allah’s abode and the universe. The Quran reveals there is transmission of Allah’s commands to the universe and flow of information from the universe to Allah’s abode.

يَعْلَمُ مَا يَلْجُ فِي الْأَرْضِ وَمَا يَخْرُجُ مِنْهَا وَمَا يَنْزِلُ مِنَ السَّمَاءِ وَمَا يَعْرُجُ فِيهَا وَهُوَ الرَّحِيمُ الْغَفُورُ وَقَالَ الَّذِينَ كَفَرُوا لَا تَأْتِينَا السَّاعَةُ قُلْ بَلَىٰ وَرَبِّي لَتَأْتِيَنَّكُمْ عَالِمِ الْغَيْبِ لَا يَعْزُبُ عَنْهُ مِثْقَالُ ذَرَّةٍ فِي السَّمَاوَاتِ وَلَا فِي الْأَرْضِ وَلَا أَصْغَرَ مِنْ ذَلِكَ وَلَا أَكْبَرَ إِلَّا فِي كِتَابٍ مُبِينٍ

34:2-3 He knows all that goes into the earth and all that comes out of it, all that comes down from the sky and all that ascends thereto. And He is the Most Merciful, the Oft-Forgiving...He Who knows the unseen – from Whom is not hidden the least little atom in the skies or on the earth; nor is there anything less than that, or greater, but is in the Perspicuous Record.

أَلَمْ تَعْلَمْ أَنَّ اللَّهَ يَعْلَمُ مَا فِي السَّمَاءِ وَالْأَرْضِ إِنَّ ذَلِكَ فِي كِتَابٍ إِنَّ ذَلِكَ عَلَى اللَّهِ يَسِيرٌ

22:70 Don’t you know that Allah knows all that is in the sky and on the earth? Indeed it is (all there) in a Record and certainly that is easy for Allah.

Everything that is going on in the universe is being recorded in real time and is stored on the divine Memory (the divine Register or Record mentioned in the Quran). All the information about the universe is thus available to Allah. And He knows everything, He hears everything and He sees everything. Apart from the programmed functioning of

the universe, Allah also executes any command at His Will from His abode. These revelations are no surprise to the people of modern era. We can and we do also use such computerised set-up with God-given knowledge for our purposes. The computer model thus enables us to visualise the design and programmed functioning of the universe to accomplish Allah's mission of testing human robots.

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