



# DESIGN PRINCIPLES OF THE COSMOS AND CYBERNETICS - A FUNDAMENTAL DERIVATION BASED ON THE KNOWLEDGE OF SCIENCE, TECHNOLOGY, PHILOSOPHY AND THEOLOGY

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**Abstract:** The world is defined as an automatic programmed perpetual machine. The origin and evolution of the Universe is explained. The control system of the Universe is also explained. Limitation of the human knowledge is explained. History of human values is also explained. Application of the global design principles is explained. History of growth of knowledge is explained and prediction on future growth is made. Then the design principles of the world are explained. The Universe is defined as a Quantum computer and works based on Quantum Electrodynamics principles. Finally, the branch of Cybernetics is analyzed and explained. In the first section, universe is defined based on scientific principles. In the second section, theory of origin of the universe is explained. In the third section, purpose and meaning of the life is explained. In the fourth section, origin and evolution of the holy Bible is explained. In the fifth section, application of global design principles is explained. In the sixth section, a new theory of knowledge is explained. In the sixth section, design principles of the cosmos is explained. In the last section, relationship between the cosmology and cybernetics is explained.

**Key words:** E.T.I., Design, Kardshev, Quantum Computer, Cosmology and Cybernetics.

**Introduction:** In the first section, scientific definition of the Universe is explained. Then based on the Bible and Science, origin and evolution of the Universe, Solar and the Earth systems are explained. Purpose and meaning of life is explained. Origin and evolution of the Bible is explained scientifically. As per the modified Kardshev scale, man is proved to have the capacity to produce earth like system and life in the previous article. Therefore, the fundamental design patterns and principles postulated in this article are proved to be useful while designing and producing earth like system and life. A theory of knowledge is proposed based on the history of progress of human civilization. Based on this theory, man is proved to be capable of acquiring the capacity to produce an earth like system and life at the end of 6000 years from now. The fundamental design patterns and principles observed in the universe are summarized. The design principles of the cosmos indicate that the Universe is a quantum computer working based on Quantum electrodynamics principles. At the end before concluding the article, based on the design principles of cosmos and as per the original definition of the Cybernetics, the branch of cybernetics is analyzed and explained in detail to include all the subjects of science and technology.

**1. Scientific definition of the Universe:** Evolution of the material universe and the solar system are explained by physical sciences. Life on the earth evolved through chemical and biological reactions and processes. We see very beautiful patterns in the nature and the society. We also see that all in the Universe are working as per certain laws. Therefore, the galaxies, solar system, earth and life are proved to have been designed, programmed and launched for evolution by an Extra Terrestrial Intelligence (ETI). Man is well known to understand the laws of the world and make technologies from the world. This creative power is comparable to the creative power of ETI which made the universe and the life. But man creates all based on the Universe made by the ETI. How did the ETI create the material Universe? and from where did this ETI originate are not known. Therefore, world could be defined as an automatic programmed perpetual machine [1].

**2. Theory of Origin of the Universe:** In the Beginning the Universe was absolute vacuum or space. Then material energy originated from absolute space and moved as waves (Electromagnetic waves). From the material energy, hydrogen clouds originated. From these clouds stars originated. Sun is also one of the stars [1][2].

The Sun was born when the solar system and the earth were formed. The planets of the solar system must have originated when sun was formed from Hydrogen cloud. Sun and solar system must have formed when hydrogen clouds spiraled around the center of the Sun. Due to the rotation of hydrogen cloud, thermal energy generated and thermo nuclear reactions must have been triggered. Therefore, earth and

other planets must have formed by the nuclear fusion reactions when planets cooled down from the temperatures at around the temperature of the outer core of the sun.

Earth revolved around the sun and day and night was born when earth rotated about its axis. The calendar time was born. Calendar year was born when earth began to rotate about the sun. Moon was formed when earth was made, to give light to earth during night time. Earth was covered with water (H<sub>2</sub>O). Earth surface water was covered by atmosphere in the beginning. Water and atmosphere originated from Hydrogen gas of outer most part of earth. When the water was displaced on the earth Oceans, hills, valley, plateau and sea originated.

On the earth, all types of plants originated from the soil and grew up. From the water which covered the earth in the beginning, all plants, animals of water, air and land originated. From the water and soil, seeds and eggs for all plants, animals and human beings originated first and then seeds and eggs were produced by the plants, animals and human beings themselves for reproduction of future generations.

All matter and energy works as per the laws of physics and chemistry. All animals work as per the laws of zoology. All plants are working as per the laws of botany. Human beings are working as per the laws of zoology, social sciences and humanities. All these plants, animals and human beings are made up of so many complex parts and sub systems.

Therefore, origin and functioning of all these systems must include a special design and power to collect different atoms and molecules from water and land to produce seeds and eggs of all life forms on the earth. Similarly to produce all matter and energy of the universe from nothingness special design and power is required. This power and energy is called as spirit or soul in religious literature. Soul or Spirit is simply a hypothetical career of knowledge and program for all matter, energy, plants, animals and human beings. Once the part of the world dies, soul or spirit separates from the body and the body stops functioning.

This souls or spirit is required at least to produce seeds and eggs of the matter, energy, plants, animals and human beings from soil and water. Soul or spirit may not be required for the origin, growth and death of second and future generation since they could very well be reproduced by programming seeds and eggs. Therefore, the first generation of men and women (and Adam and Eve of genesis) originated from soul or spirit. In short, one can say that the life forms originated from the non living matter under a very special, rare and unique condition in the beginning time of the earth.

As per the genesis of Bible the first generation of matter, energy, plants, animals and human beings were made by soul or spirit and the second and future generations were reproduced by programming method. The formation of first generation took place in the Garden of Eden (origin and development of earth and life phase of earth) and this period may be called as evolutionary phase as per science. Evolution stopped as per genesis of Bible (God sealed the Eden of garden by a sword from the entry of others after expelling Adam and Eve or first generation of earth and life)

**3. Purpose and meaning of Life:** All persons born in the world grow up and die at the end. But foundation of the man made world is on the natural world. Therefore, the man made world is controlled by the natural world. Man made world also relies on the knowledge of the natural world. Man's knowledge of the natural world is very much limited. Therefore, the man made world is not matched with the natural world. Why should the man be born, live and die? Man's problems begin with his birth. Birth of man in the world is forced by ETI which made the world. Therefore, purpose of life in the world is known only to the ETI which made the world. All that man acquires in life is just the experience and knowledge. In between birth and death each person contributes to the growth of language, literature and the man made world. But why should man acquire knowledge and experience and contribute to the growth of knowledge and experience in the world? Purpose and meaning of life is explained in the best way by William Shakespeare. He said, ' World is a stage set for a Great drama (History). We are all players in the Drama' Therefore, history of the world was written and directed by the ETI which made the world. Since ETI made the world and life, life should be lived as per the wish and the plan of ETI. Man is made as a social animal. Therefore, man has to live and work as per the laws of the society for peace and happiness. These laws were made by ETI. All the laws of humanity are written in the Bible.

**4. Origin and Evolution of the Bible:** In the beginning of the life on the earth, man did not have any rational thoughts. The powerful forces of nature must have given pain and pleasures in life. Therefore, he must have found good and bad elements of life. Therefore, he must have wanted to find the way of eliminating bad elements in life to live a happy life. In the absence of rational thoughts, he must have searched for the origin of world and the life. They found that God (ETI) who made the world is the source of all problems and solution of life. Therefore, they prayed to this God who does not exist in the world and collected the message of God from the sub conscious mind. These messages were passed on to the future generations and future generations too collected further messages by prayer. In this way, an intellectual tradition was built by ancient Jewish priesthood. In this way Bible was written. Bible describes the life and the history of ancient Jews. Bible describes the social moral, ethical and religious values of life. Bible is revealed body of knowledge since it was acquired in the absence of rational thoughts of man. In other words, Bible is believed to have originated from the subconscious mind of the ancient Jews.

Thinking means communication within oneself. Therefore, mind is made up of two personalities. One is conscious mind and the other is subconscious mind. Conscious mind is directed by sub conscious mind. Mind which is active when conscious mind is sleeping or inactive is sub conscious mind. This subconscious mind is programmed and directed by ETI. Man acquires information from both external and internal worlds. Information content of minds of people in the beginning of the world and of the mind of a newly born child is zero. But their sub conscious mind had knowledge. Therefore, Bible is truly the words of ETI (God) which made the world.

**5. Applications of Global Design Principles:** If man can find the secrets of design behind earth, the plants, animals and human beings, man could acquire the capacity to make earth like planets by changing hydrogen clouds. Thermo nuclear fusion reactions are the key behind making Sun and earth system. Man may change other planets into earth like planets. Or man may convert the earth into a very beautiful pollution free planet. Man will make eco friendly technology. Man made world will be matched with the natural world. Ultimately industrial economy will become a part of natural/agricultural economy. Man made world will be integrated with the natural world.

**6. Cosmology and Epistemology:** From the growth period of ancient Greeks and European age of Science, technology and philosophy and the period of accumulation of creative experiences in their languages and culture required to give birth to the age of discoveries and inventions, one may say that 1500 years of creative experiences are to be accumulated in a language and culture to give birth to 500 years period of discoveries and inventions. After Christ, Christianity spread all over the Europe and made the people to be organized as per the Social moral, ethical and religious values of the Bible. Such an organized life made the people to think and work in creative ways and their thoughts and experiences were accumulated in their languages and culture over nearly 1500 years. All European discoveries and inventions during last 500 years were derived from these accumulated thoughts and experiences. Therefore, all modern discoveries and inventions were derived from European Christian thoughts and experiences. Therefore, Christianity proved to be the most advanced religion of the world. In the east, Buddhism spread from India into all Chinese races and cultures and based on Buddhism they built a social moral, ethical and religious value based society and culture. They too accumulated creative thoughts and experiences in their languages and cultures since 2000 years ago. When the torch of renaissance was brought to these cultures, they too contributed to the European discoveries and inventions and able to catch up with European advancements.

Now, all laws of Physics were discovered and applied to produce technologies and advance the knowledge of other branches. First cycle of Age of discoveries and inventions is over. Therefore, to give birth to the next age of discoveries and invention, creative thoughts and experiences of the people have to be accumulated by making the people to follow social moral, ethical and religious values like Christians did under Roman Empire after Jesus Christ. Now, USA is leading the world. This culture leads 5 continents namely Europe, Australia, North America, South America and Africa. Therefore, English language accumulated and accumulates the experiences in these 5 continents. Moreover, Great Britain led the world and their Empire was widely spread all over the world almost in the last 500 years. Therefore, English culture has got rich accumulated experiences and thoughts in their language. USA is a country of immigrants from Europe. Among all cultures, English culture succeeded over others to integrate all immigrant cultures of Europe by English culture. Now, USA and UK lead the world along with other world super powers. Therefore, English language and culture proved to be the most advanced language and culture of the world. Man (Humanity) is a microcosm and if we know all about man, we will know all about the world. Humanity has different races and cultures. Some races are more advanced than others. Therefore, complete truth of the world is divided among different races and cultures of the world. Therefore, to give birth to all future ages of discoveries and inventions, all races and cultures of the world must be integrated by English Christian Culture and creative thoughts and experiences has to be accumulated. Integration of all cultures and races will solve all problems faced by humanity like threat of atomic war, large scale death and destruction, environmental pollution, poverty, sickness and ignorance, etc.

Now, all laws of non living world are found and technologies were made. In the next age of renaissance all laws of plant world will be known and applied to make technologies. Then in the subsequent age of discoveries and inventions, all laws of animal world will be discovered and applied to make technologies. In the last age of renaissance all laws of human world will be found and applied to make technologies. Humanity will acquire complete knowledge of the world at the end of 6000 years from now. Each cycle of progress happens for about 2000 years. Now, the world is just about to enter into the age of Romans after the age of discoveries and inventions. This age is known for practical applications of science and technologies to develop the economy and the welfare of the people, laws, business, religion and unification. Therefore, all research and educational institutions of the world must focus on doing research and developments in these areas in addition to offering present day's educational services to the public [3][4][5][6][7][8][9][10][11][12].

**6. Design Principles of Cosmos:** Structure of atoms is similar to the structure of planetary system. 70% of human body is made up of water. Nearly 30% of human body contains solid materials. Two third of earth surface is covered by water. Remaining one third of earth surface is covered by land. The universe is estimated to contain nearly 70% of missing energy. Remaining part contains matter and energy. Therefore, percentage of composition of human body, earth surface and that of universe are similar.

The universe consists of galaxies. The galaxies contain many stars. Sun is one of the stars of our galaxy. Solar system contains earth. Earth is made up of four parts. Basic part contains land, water, air, sky and fire. Other three parts are plants, animals and human beings. Basic structure and functions of human body includes structure and functions of matter and energy, plants and animals. Man's mind and brain are additional parts of an animal body. Therefore, man's body and mind is the most advanced product of nature. Therefore, man is called as a microcosm. Humanity has a history. This history too has histories within histories like other histories of natural world.

Therefore, the following postulates are made to integrate all realities of the world. 1. Universe is nothing but histories within histories in space time structure. 2. Each history is cyclical wherein birth, growth and death take place. 3. All histories are made based on the same or similar principles. 4. Therefore, all histories could be expressed by one Universal function which is sum of 4 dimensional (space and time) periodic/ cyclical functions whose frequencies are integral multiples of a fundamental frequency (4 dimensional Fourier series). 5. Quantum electrodynamics was formulated by integrating special theory of relativity with Quantum mechanics. Therefore, the Universe

appears to be a Quantum computer working based on quantum electrodynamics (Quantum electrodynamics is the basis of particle physics) [13][14][15].

**7. Cosmology and Cybernetics:** Cybernetics is defined as science of control and communication in animal and machine. As per the definition of cybernetics, cosmology and astronomy could be included as its branches. In the western countries, Cybernetics is defined as science of control of various control systems- technical, biological and social. This is a narrower definition of cybernetics. As per the original definition of cybernetics, it is a science of not only control systems, but also communication systems. So, information processing systems could be included as a part of Cybernetics. In the Russian definition of Cybernetics, Computer science is included in addition to the branches included in the western definition. So, this definition is very much broader [16].

Later Computers were merged with the communication systems and information and communication technologies have originated. So, internet technology is very much a part of Cybernetics. As per the unified theory of cosmology, the universe is proved to be an automatic feedback control system [17] [18] [19]. The other obvious definition is that the universe is a programmed perpetual machine. In other words, the world is knowledge based natural machine. All in the world and the world as a whole works as per certain scientific laws as explained in the previous sections. So, all in the world and the world as a whole is controlled by a program or knowledge or natural laws. So, all branches of knowledge could very well be included in the branch of Cybernetics.

So, Cybernetics is science of everything that exists in the world and the world. Ancient Greeks called all branches of sciences as philosophy. They were able to focus on all branches of sciences because they were developing the basic principles of each branch of the science. So, the volume of all branches of sciences was smaller enough for mastering by a single person. But now, all branches of sciences and knowledge are very well developed and volume of all branches of knowledge has become very large and no one can become master of all branches of knowledge. So, after high school education one is forced to focus on selected subjects for gaining mastery over the chosen branches.

But like the ancient Greek philosophers, basic principles or philosophy of each branch of knowledge could be learned by a single person and mastery over the philosophy or basics of all branches of knowledge could be learned like the school children and mastery over the philosophy of knowledge could be gained. In the schools, three science subjects are taught. They are mathematics, natural and social sciences in addition to languages. In the schools, so far the subjects of technology are not taught. The subject of science may be changed to include technology and may be called as science & technology. The same subjects of science & technology may be pursued in addition to other branches of knowledge in the colleges and universities after the school education. The programs on Cybernetics may be developed by combining the basics of computer science, physics, chemistry, biology, astronomy, technology social sciences and other branches of knowledge. So, Cybernetics is very much similar to the ancient Greek philosophy (Science) and is about developing the Encyclopedia. .

**Conclusion:** The Universe is proved to work as per the plan or program made by the extra terrestrial intelligence (E.T.I.) which made the world. These plans or programs are laws of the world based on which the world works. So, the universe is proved to be an automatic programmed perpetual machine. So, scientific study of natural and artificial world are defined as Cybernetics as per the original definition of Cybernetics. Cybernetics could very well include all branches of knowledge because all branches are interrelated, interlinked and parts of human culture.

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