WORLD AND WILL

In this chapter I shall describe the way I have understood the nature of the world and the emergence of will with which human specie act and decide in the world to give shape to the reality of life on Earth. By world I shall refer to the matter-based reality that impinges on the mind and creates the foundation of the will with which we operate and interact with the world. The experiences of the matter-based reality come to us through the sense apparatuses that we possess. Through seeing, hearing, touching, tasting, smelling and observing impacts of one thing onto another, which cause changes in the environment and the existing material set up, we realize the presence of the world around us. This perceptible world is divided into two categories: One without life and the other which possesses life, or constitutes the foundation of the process which we call life. The first is the physical inanimate world; the second is the biological world which bears the will in the world in the way we know it. However, these experiences of the world are confined within our home on Earth and its immediate planetary neighborhood. We assume that the world would reveal itself as experiences with similar attributes if we were transported into another part of the universe. In doing this we operate with certain ideas and concepts about the universe and its working methods, which are home grown and based on earthly experiences. The way we understand the universe and our position in it, colors the modality with which we operate. Our views about the cosmos impart on us the methods to observe and judge the conditions of our reality. So our view and understanding of the world are dependent on our concepts and knowledge about the universe. Without referring to the cosmos, where the reality of our experiences get its meaning and expressions through conscious reflections by the mind, the world would be devoid of meaning.

WORLD

The Physical World

What is this physical world made of? Though things in daily experiences make everything appear rudimentary and many may feel no need to delve into this

question beyond using and utilizing the physical world according to needs, the question leads to a mind boggling arena, which will baffle and confuse even the most powerful human intellect. They are made of extremely tiny packets of energies arranged in an incredulously intelligent way. The packets are basically two types: They are called leptons and hadrons. One is light and the other is heavy. The hadrons can form a tight packets of many of its members, which thus form the nucleus of an atom, which draws the electron-leptons towards it and form the atoms. The bigger the number of hadrons in the nucleus the larger are the number of electrons which revolve around it. The weight of the nucleus decides the weight of the atom. Different nuclear sizes and electron configurations around them generate different atomic elements as we know them. The material world is made of these different atoms. However, the atoms are no big things: There are about 100 trillions of atoms in a size of an animal cell, which is about 10 microns in size.

When several atoms stick together they form molecules. The ways they form and break depend on the amount of energy required to bind the different parts together. In different conditions of temperature and pressure they can break and form and the molecules may arrange themselves in orderly or disorderly fashions. When the molecules do not cohere in an orderly fashion they form gaseous phase. When they fall into an orderly arrangement they assume solid character. In intermediate stage they behave like fluids. In conditions existing on the surface of the Earth, some elements exist as gas, some as liquid and some as solid; and some vary among all these three phases with changing conditions of heat and cold. How the molecules arrange under different pressures and temperatures decide the properties of matter- their visual appearance; sound, heat, electricity and light propagation through them; their tolerance to external impact; their volatility, and ignition properties etc. These constant changes occurring all around cause the changing colors in the sky, form wind, rain and storm, bring ice and cold, sooth our bodies with breeze, sunshine and feelings of pleasure and warmth. The source of all these sentimental feelings is the mechanical motions of atoms and molecules constantly joining, falling apart and then forming new bonds with nature and making journey on Earth as atmosphere swinging with heat and cold, from night and day. During this dance of the molecules the energies are being released and absorbed, the radiations are being emitted and exchanged, the invisible laws of nature are conducting the symphony where all players must synchronize with the rhythm of the cosmos, to make it a reality that can sustain the marvel which we experience as our world.

Some movements and changes occur on daily basis, like winds changing directions and speed or intensity, the sun rays severing the cloud layers and breaking forth or the sunny sky suddenly getting covered by the layers of clouds bringing snow or rain; or the ripple gradually transferring into large waves carrying energies that can rock larger ships and boats to the point of falling into wrecks. The natural patterns of such changes are now understood from the laws of movements of things. They follow daily rhythms of rotation of Earth around itself, the attractions by the nearby moon, the streams and flows generated due to the drags and frictions and different pressure fronts circulating in the atmosphere etc. They are caused by natural order of things set in motions by the cosmic orbs and their arrangements in the cosmic arena that produce specific conditions of pressure, temperature and balance of forces which decide the way things flow, move or remain immobile. All movements are intricately balanced by all other movements caused by natural transformation of states of things that follow the lawful behavior of the clusters of molecules which hide the assembly of tiny energy packets.

The visible and the perceptible changes in the world appear different depending on the time scale in which the world is observed. Beyond the days the changes appear with seasons that affect the behavior of the living world while the temperature, pressure and energy input in the atmosphere from the sun vary with seasons. The cause of these changes can be attributed to the varying distance of the Earth from the Sun as it orbits around the star in a rhythmical cycle of one year. The living world on Earth changes its color and character with this cosmic movement. Though there is no God, everything seems destined by the cosmic happenings: Life follows death and death is followed by resurrection years after years. It is mechanical but complexly entangled with the existence of all in the cosmos. Any minutest disturbance in one place will disturb the pattern in which the reality is arranged all over the world.

If one looks at things in a higher time scale, the reality would look even more dramatically different than those brought by seasonal changes. Only a few millions of years ago no human beings existed on Earth. The climate was different; the mountains and lands were not there where they are now; the species inhabiting the Earth were different. If we go back in few hundred millions of years, there were no flowers and fruits, no plants and animals on land. Bacteria, protozoa and simple life forms in sea dominated the living arena of this planet. There were no intelligent creatures to ask about the deeper questions of life on Earth and existence of the universe.

One wonders what caused the appearance of life and why? Who are we? Why have we appeared on this planet? Is there any purpose and meaning behind our existence?

These are extremely difficult questions to answer. Before venturing into any effort, which may resemble like an answer, let me first describe the way I understand the existence of life i.e. the biological world.

The Biological World

The biological life is made of the same molecular elements which fill water and air of Earth. The same carbon, oxygen, hydrogen and nitrogen, which fill the atmosphere, assemble together to form the organic molecules, which are the basis of life. Two sorts of arraignments of these molecules - amino acids and nucleic acid -constitute the foundation of the biological world. They form the cells, which behave as living units that can divide and multiply by a mechanism inherent in their own structures. While 100 trillion atoms comprise a cell, a human body, for example, is comprised of nearly the same number of cells. So we are nothing but a packet of 10000 trillion trillions of atoms, which are built of energy packets of hadrons and electrons. But how could the molecules we find in the atmosphere turn into living creatures? There are many theories around this mystery: Some believe that the atmospheric conditions on Earth billions of years ago were ripe for the formation of the macro-molecules from which the DNA, RNA and amino acids evolved. This theory, in turn, hinges on the theory of formation of Earth from a molten ball of lava, which cooled and formed atmosphere around the planet. In the early days the atmosphere experienced violent conditions of electric discharge combined with extreme heat. It is argued that the molecules for building amino acids and nuclei acids came into existence at that time as results of the natural forces: In fact, the nature acted as the hands of God.

After different amino acids came into existence, they formed long chains. The sequence, in which the amino acids arranged themselves in chains, decided the types of jobs they were able to perform in the living world. These chains were called proteins. The different sequences of amino acids created different proteins, which were the power houses, where all activities of life were performed. From hundreds to thousands of amino acids formed a protein, where molecules were packed into three-dimensional shapes. First the chains either

took the shape of helical springs, or folded ribbon like structures. Then these ribbons and springs twisted and turned to create three-dimensional geometric shapes. The way these folding occurred depended on the charge properties of the assembly of molecules contained in the chains and their reactions to temperature, pressure and acidity or alkalinity of the aqueous environment in which they grew.

The life first started in the water by following the acidity and alkalinity of the hydrological environment of Earth at that time. The air, the wind, the dancing waves all contributed in the chances of the molecules to adhere into proteins. Life emerged out of the cosmic symphony being played in the physical world. Even more miraculous chains appeared as the nucleic acids. The Deoxyribonucleic acid (DNA), made of long double chains of molecules, contains codes of life. Each chain contained billions of molecules called bases which came in four types. Two chains were connected with each other by paring of bases: Base molecule from one chain associated with a base in the other chain. These base pairs formed the steps of a twisted helical ladder, known as double helix. The way the base pairs were arranged along the double helix decided the nature of life. They contained all the codes with which trillions of cells in the body were made. These codes decided the specie characteristics, individual physical appearance, life span, disease, mental abilities etc. The chains contained the codes in different segments, called genes. The total number of genes varied from different forms of life and specie to specie. The humans have about 20 000 genes. Some life form has more than 100 000. The genes contain the instructions about how the organelles in the new cells will be created, sustained and refurbished. The major activity is the fabrication of proteins. In creating a protein, a gene becomes active and the segment containing the gene untwines to give birth to a chain of molecules, called mRNA, which brings the code of life to a construction site in the cell, where the amino acids are spliced together and folded into a protein structure. Like this, everything belonging to the life process are made by following the codes imprinted in genes. While in the digital computers the coding is done with only 0 an 1, in the case of life it is done with four base molecules.

DNA, which contains all the genetic information of a life form, is a nanometer thin chain made of billions of base pairs. It remains packed inside the cell in a small area of a few microns (it is like packing one kilometer thread into a size of 1 mm). In humans when a cell divides in order to multiply, the DNA coils into 23 pairs of chromosomes (46 total). With cell division the 46 chromosomes create duplicate copies and then separates equally in two halves forming

two cells with 46 chromosomes in each. The way the DNA duplication, and cell division occurs is mind boggling: It is difficult to grasp how the incredible and awesome program, which cause all these to occur with meticulous perfection as process of life, may have come into existence following the mechanical laws of nature.

There is a general consensus among the scientists that this has evolved through billions of years` trial and error by nature. Changing environments have set the molecules to assemble and form to fit into the best possible configuration that may survive the environmental stress and changes. They have been wafted by the air and the wind and agitated by cold and heat since the days of the formation of these chains of molecules, who have learnt to move by themselves without being carried by external agents. They have learnt to generate the energy and power from within themselves that may be used to transport them physically from one place to another. By this method, they have managed to survive by avoiding unfavorable environment and choosing physical conditions more amenable to the chance of survival. Easy access to amino acids with which the DNAs may manufacture proteins, have led them to prey on structures and life forms which are unable to defend themselves against more intelligent organisms. Life has thus evolved by preying on lesser intelligent creatures, who could not find ways to survive against the threats of the competitors. Thus the evolution of life has started from the cellular level of bacteria and viruses to the stage of the humans contain trillions and trillions of such cells.

According to this evolutionary theory of life the genes have learnt to modify themselves in order to remain effective in reproducing and transcribing life which would be more adaptable to the availability of food and surrounding physical conditions. Thus life forms have diversified and spread to fit into different circumstances existing on the surface of the Earth. More and more complex organisms have evolved with the passage of time. With the passing of time more and more intelligence were required to survive the competitions for resources needed to feed millions and millions of species of living creatures who filled the biosphere of the planet.

The humans descended after evolution passed through many stages. A branch of the reptiles evolved into mammals. A branch of the mammals, in turn, evolved into apes. The humans descended from these apes. The way it has come about has environmental reason, as well the intelligence to secure and protect oneself against the predators, and strategy to overcome the enemies and overwhelm the creatures who were preyed on. It has involved cooperation among

the individual members of the specie and their joint efforts to seek a common goal, as well as loyalty, dexterity and adherence to some common norms, principles and values which forged cooperation among the group.

WILL

In the Physical World

Will can be defined as a power inherent in an object with which it responds and interacts with the world which surrounds it. In that sense all hadrons and electrons possess will, by which they form bonds with other members of the same group, or with the other group of energy packets. The way this associations happen and the resulting object of the association characterize the nature of the will. Hadron form tiny packets of atomic nuclei, as well as possess charges with which they establish bonds with electrons. The way they associate or dissociate with the other objects in the world bring the effects of the will in the world and build the foundation of the existence of the world. The nuclear binding between protons and neutron, and electromagnetic force between a proton and an electron define the will of the protons to associate itself with others in the world. Similarly atoms form associations with other atoms building the content of the material substances that we know. The molecules cluster to form the basic building blocks of life, which in turn cluster in millions or hundreds of millions to form the proteins and DNAs. On may argue that this will is mechanical and fixed, determined by the charge content and arrangements of the atoms and molecules. It behaves according to the charge distribution and its strength. It has no will to defy the modes in which similar objects should interact with the surrounding reality of the world. It only reacts to the presence of the world and seeks its own position in the world in the stream of movements of things undergoing constant transitory changes. In that sense will is the foundation of the world; while the world, in which the will remains immersed, gives will its appearance and form. By binding and associating with the world the will manifests. The charges manifest as the expression of the will as the world takes its physical form through attractions and repulsions. This will is not free. The content of the world and movements in which the objects in the world are set, condition the way the interacting object finds its destiny in the world. In no way it can free itself or choose the conditions in which it wishes to fulfill its destiny.

In the living world

The higher forms of life are characterized by the possibility of choices i.e. the freedom to move away or towards environments in which it may discover different possibilities of interacting with the world. This choice of associating or dissociating with particular given conditions is the sign of freedom, which characterizes higher will that is manifest in the living world. Freedom is a way to leave behind a given condition and seek a new foundation of life in the world. However, the degrees of freedom vary with the number of possible conditions one may choose from. At primary level the freedom is conditioned by necessities. Life always moves to environments where it may find more food and face less threat to its existence created by adverse environment. It always seeks its destiny where there are less predators and less competitions for satisfying the needs. This form of will, which chooses with freedom and associates or dissociates with an environment and acts to seek newer grounds for its existence on own initiative, characterizes the will of the living world. To express this will the creatures develop physical mechanism to react, respond, attach or withdraw from another existence and the surrounding. They develop nerves that carry the messages about the conditions throughout the living body so that the body can activate the mechanisms to choose, respond and act accordingly. In a higher manifestation of this will, the signals are organized, stored as memories, information is retrieved when necessary and analyzed to decide the way to respond and act with respect to a situation. At this stage of development, brain and a central nervous system forms, and intelligence appears in the way of brain activities. Though the neurons, which conduct information from brain to all other parts of the body, still make use of the physical laws of conduction of the ionic charges through material substrata comprising the body, at this level the will appears free from the physical laws: It is not the physical laws which blindly dictate the way to response to the world, but another dimension of life gets added to the world of charges and currents.

The capacity to make use of the information, retrieve data from memory and make judgements about the nature of the situation on the basis of what has been experienced and learnt from earlier circumstances, and then decide about the best way to act and respond in order to achieve the desired circumstance of life, is the foundation of the free will. The will to survive by overcoming the challenges of the world is the primary nature of this free will. Without this will the living creatures will be prey of circumstances, and loose the power to survive. One may also see it in another way: In the form of a will to dominate and subjugate the weaker creatures, who one may encounter in the way of struggle for survival. By restricting and depriving others of freedom and possibilities,

one seeks to enhance one`s own with the aim to secure one`s conditions of survival. One uses knowledge, intelligence and strategy to make it a success. The better the capacity of the brain, more advantage one enjoys with this free will.

The will to live and the will to overwhelm and subjugate the weaker ones is common among all animals, including the humans. It is an expression of freedom and security to exploit arenas of life where one may strive and grow easily at the expense of the others. However, this will is imposed by the world: The conditions and circumstances of the world put animals in competitions and struggle for survival. Without willing to defend one`s interest one may perish. So will acts as mechanisms of defense and security against the predators, who roam all around, wherever life has expressed itself with its will to live. Major part of the animal activities are driven by this will. There exists no respite from it.

While the will to live reflects the nature of the living world, where everybody is busy in securing their grounds for existence, there exists other dimensions of will in the world, which are free from the necessities of physical survival.

Will is an expression of the presence of intelligence in the world through the neuronal network of the brain. More evolved brain is the sign of more intelligence - the expression of the living world to transcend the limitations and conditioned imposed by the physical laws. The intelligence brings the knowledge and understanding of the laws and how to make use of this knowledge in transforming and manipulating the physical world in one`s favor. It creates new grounds bringing new relations of things with themselves and the human will. By knowing how to enhance the possibilities of growth by creating new conditions of one`s own innovation, the human will is able to redefine the premise of its existence in an innovative way. Thus it makes itself free from the dictates of the physical world and the blind will moving as the material content of the world. This power depends on the development of the brain and the genetic basis on which the life is coded. The more one may use this capacity, the codes may mutate and generate greater possibilities to achieve this power to transcend the blind path of the will. Thus will is something that evolves and emerges with the evolution of life as expressions of the intelligence that permeates all existence. However, the intelligence is something that needs a computer to be programmed. The neuronal network in the brain provides the computer. Without it intelligence finds no expression in the world. Life forms without possessing brains are thrown into the blind alleys of the will that can

not be freed from the laws of nature and the events churning in the universe in a mechanical way.

Though world is the foundation of the will, like the network of the brain, communicating by electrical signals and chemical secretions through an entangled pathways of hundreds of billions of neurons, the will evolves as something that can redefine the world and set new dimensions to the existence of the matter-bound reality. Through the manifestation of the will, corroborated with intelligence, the world receives a dimension which we may call non-material or spiritual. The material world hides the existence of the spiritual essence of existence, which only comes to expression through higher evolution of the brain.

The will is the essence of our mind, a spiritual reality which emerges through the working of our brains. Like a charge is embedded in a hadron or an electron, this spiritual essence envelopes the living world, which we experience as the existence of mind. It is the foundation of the psyche based on the soma. By controlling and regulating the somatic activities we can penetrate into the mystery of this psychic dimension; similarly by unfurling the psychic power we can generate new foundations of somatic existence. Through the body mind manifests; similarly mind is the one which seeks the best opportunities for the fulfillment of the needs of the body in the worldly arena, and imparts on the world changes in order to restructure it to fulfill its freedom.

So the will is not confined to the physical laws, though ionic activities of the neurons constitute the worldly foundation of the way the mind manifest through the activities of the brain. Only in complex organizations of matter as in a brain the will manifests as the essence of the living world.

Will is borne by the matter in the brain and the neuronal circuits and constantly affected by the sensations and signals, which impact the material foundation of the mind. With the world moving around, and events passing by, while churning the senses, the will flows as streams of thoughts seeking modes of response to the outside world which demands actions and attentions from the mind. The will has the power to disentangle itself from the happenings in the world and negate the demands of the physical world, arriving as sensations and feelings and generating thoughts. It can choose to process the neuronal activities in a way that is dependent on the will and not on the happenings in the world. It can take control of how the world will be received by the responses by the brain, and thus posit the existence outside the material conditioning of the world. It can transcend the world and make the world effectively non-existing

with respect to the mental activities. This is the meditative power of the will, that can turn the world into a void in terms of response from the will-bound mind. By this meditating power the mind can penetrate into the mystery of the will that emerges by using matter of the world as vehicles, but is not one with it. By this way the mind can experience the aspect of existence which exists in the state of the void, i.e. no world and nothing. This is the highest source of power that animate the living process and its will to engage or not to engage in the world as expression of freedom, which reflects the spiritual nature of existence.

Like the power of the will which can stop the flow of thoughts and events in the mind, as if the world surrounding the body has disappeared and non-existent, it can also simulate events, thoughts and feelings, which would have appeared in the mind if the world was framed with certain conditions of existence. It can make a non-existing world appear in thoughts, which can generate brain activities similar to the effects a real world would create. In that way, will can create the experiences of a situation, which may not be happening in reality. In that way it can create the world as a phenomenon of the mind

This power of the will can also mirror the experiences of other beings. It can experience the mental states of the others caught in a condition of the world by mirroring the neuronal events that would have been created if one was amidst such situation. This gives the will the power to feel the pain, suffering and joy of the fellow beings. This is a way to feel one with others. It lies at the root of compassion and altruistic values. More evolved a mind, more abilities one develops to erase the presence of the world, or mirror the world that others may be experiencing, in order to establish the power of the mind over the physical conditions of the world. In contrast, in less evolved beings the world controls the will instead, and guides it in blind alleys, where one experiences narrow paths of freedom.