

[Essay]

The Structures of Human Life

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Abstract

Humans are destined not only to live in uncertainty, but also to be confined in various structures that constrain them and limit their degrees of freedom. These structures, such as genome and society and concepts and the physical world, shape the human perception of reality and provide conditions for creating some sense of meaning in life that can only be realized within their boundaries. The predicament of human life is that, although it is intricately embedded in various structures, it is impossible to gain certainty or permanent foothold in any of them.

Introduction

Humans search for structures in their lives in an effort to connect to the unfamiliar world. This gives some sense of meaning to human life. The main challenge in this effort relates to the cognitive limitations of humans as imperfect biological beings, who are embedded in a seemingly random world that is indifferent to their survival. These limitations are of two types. The first relates to the ever-shifting and expanding boundaries of understanding, which always remains incomplete and provisional. The second one is more fundamental, and it relates to the realization that nothing one perceives is real but brain's interpretation of secondary signals originating from what is real. Thus, the human brain is a virtual reality machine that seeks to decipher the true meaning behind these signals.

Human life is structured on a number of levels. A human being is the genome-based structure embedded in a series of various structures that constrain the individual. These structures include society and concepts and the physical world. Some of these are necessary to sustain life, some are inevitable in the process of living, and some have to be endured. The necessary structures for human life are the genome and the associated human body, as well as the physical world and its

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laws, while structures such as society and concepts are constructed by humans. These structures determine the individual's states of being, as well as human awareness and perception of reality.

There is a hierarchy of structures of increasing size and complexity in the universe, in which various fields and the interactions between subatomic particles produce atoms that form molecules and various larger structures of the macroscopic world, which eventually assemble into the structure of the universe.

Human-constructed concepts and theories are necessary for ordering human understanding of the details of the universe. However, these structures of concepts and theories also confine the mind into a specific pattern of reasoning, or within their assumptions and limits, which must be constantly revisited and challenged and if needed revised. Nevertheless, they are necessary to make some sense of life and the universe. So, in this case humans are confined within the structure of their own making. Human survival demands to be part of most of these structures, as they offer greater predictability and protection against the uncertainty of life. In return, these human-constructed concepts and theories influence and shape the interpretations of their creators.

The analysis of these structures does not relate to the tenets of structuralism, which is the philosophical method, positing that social reality can be understood through underlying abstract structures defined as the modes of social relations. Structuralism applies to various disciplines, including sociology, philosophy, anthropology, semiotics, and linguistics. Specifically, structuralism strives to understand a specific subject in terms of interrelated components. Thus, things are defined by the patterns of relationships, rather than by their individual characteristics. Unrelated to these tenets of structuralism, the structures discussed in the present essay relate to the boundaries and limits associated with various structures, in which human life is manifested, that lead to human confinement and the limitations of freedom.

The structures constructed by humans, such as society and concepts, emerge with the evolution of human organizations. However, as these structures are constructed by imperfect human beings with limited understanding, they are also imperfect. Thus, in essence, imperfect humans construct imperfect structures within the "imperfect" superstructure. The term "imperfect" in relation to the world, which is in a delicate equilibrium between chaos and order, can be interpreted as such from a human perspective, although the world is what it is irrespective of human values. But in human perception chaos is typically related

to uncertainty and imperfection, which have pejorative connotations. In this context, as an antidote to the imperfect world full of uncertainty and the constant presence of death, the human imagination created a religious structure and associated afterlife in a painted paradise, although with no conception of the meaning of such an existence.

Individuals, inserted into ongoing structures, have no or little impact on them. Throughout life, an individual strives to adjust to a particular structure, or liberate oneself from it. However, within the hierarchy of various structures, the potential liberation from a specific structure still results in the confinement in another structure. In essence, the human mind is conditioned not only by these structures, but also by concepts and theories it generates; and thus, the true liberation of the human mind is impossible.

The human structure, based on genes and cells and functional architecture of various organs, is embedded in various external structures. Through their genome, human beings are hardwired for these structures, which are both limiting and necessary. As a physiological being, with a given genetic structure, an individual cannot be free from oneself. Furthermore, as a physical being, embedded in the physical world governed by the physical laws, an individual cannot be free from the world.

One can distinguish between several forms of human life. These include biological life, physical life, social life, and cognitive life. The biological life implies the biological processes of the human body; the physical life relates to the existence under the physical laws of the universe; social life relates to functioning in a society; and cognitive life relates to the cognitive processes in the brain that includes consciousness and self-awareness. One of the great riddles of human evolution is how consciousness arises from the physical processes in the material brain, which is essentially a complex network of interconnected neurons, ultimately consisting of elementary particles. The associated riddle of life is whether there is a cosmic imperative for the emergence of consciousness. According to the fundamental constants and laws of the universe, it appears that cosmic evolution is suitable for the emergence of life and consciousness, but only on a probabilistic level and with no assurance of their survival. This leads to a fundamental question whether the universe and human life have any innate purpose or meaning.

An important question relates to the stability of the structures of human life. Each of them has its own specific limitations, which can be defined as a measure

of stable equilibrium. These will be addressed in the following sections.

Human Genome

A human being is a complex structure, based on biological cells (the basic units of life) and an intricate architecture of functional organs. The basic component of organic life is the genome (the complete set of genetic information, or DNA instructions, required for a living organism to grow and function), which is sufficiently specific for each individual to be unique to a certain degree. The genome is stored within cells in chromosomes, which are long molecules of DNA (small sections of DNA are called genes). Human organism in essence includes a series of structures of increasing complexity, from atoms (made up of subatomic particles) to complex molecules to organelles to biological cells to organs and to the human body. This architecture of human body is embedded into extrinsic structures such as family and society and the physical world. On the most basic level, humans are constrained by genetic limits and physiological functioning.

The human organism undergoes random genetic mutations or changes in the genetic code. This raises the question of genome stability, related to the degree of preservation (including an error-free replication) of the genetic material. However, as DNA replication is not perfect and not all of the damage (variations having an atypical structure) can be repaired by the cell, the DNA damage during multiple rounds of replication accumulates, leading to the degradation of the cell structure. In addition, continuous cell divisions are accompanied by corresponding shortening of telomeres (protective structures at the end of chromosomes) that are essential for the preservation of genetic integrity. Eventually, due to the shortening of telomeres below a critical length, the DNA starts to unravel and becomes increasingly unstable, leading ultimately to the cessation of cell division and to the end of life.

Society

Society, as a social structure, consists of people and institutions and includes their relations and common norms and rules that guide social interactions within a society. Humans created society through organized cooperation and the collective values and the need for survival, which are mediated by language, norms, and culture. Social institutions in modern societies include family,

government, legal system, economic system, education system, religion, mass media, and healthcare system, which shape the development and behavior of individuals.

As such, society is not only a collection of institutions, but it is also an important structure that shelters an individual from the adversities of life. The types of relationships or interactions in society are, for example, educational, legal, economic, political, and religious, which all have their own specific characteristics. However, society is plagued with various types of inequality, related to race, ethnicity and socio-economic stratification. In this context, a specific position in the social structure influences an individual's perceptions and behavior.

As a social structure composed of multiple interacting parts (individuals, various groups, and institutions and levels of governments, with social relations involving people with a broad range of backgrounds, perspectives and interests), society is a complex system of interdependent elements striving to maintain some measure of stability. Such a structure cannot be perfect due to the fundamental nature of human existence in the presence of randomness and uncertainty in the world, as well as due to the flaws in human reasoning and organizations. In this context, the problem is how to address the human needs and desires for meaning, status, power and recognition, resulting in feelings of anxiety and resentment. Another persistent issue is that human life requires economic resources, which due to their relative scarcity can result in such traits as egocentricity, competition and hostility, as well as in the sense of uncertainty and insecurity. One of the predicaments of life within a society is the automaticity of existence, manifested in repetitive and unconscious processes of habitual living that strongly influences human thoughts and perceptions of the world.

Although individuals experience various interactions within the society, each person is ultimately alone in their thoughts and feelings and vision of the world and experiences that no one can truly understand; and all these against the background of the darkness of space and its unknowability. Individuals have little understanding of others and their thoughts; and they have only limited understanding of their own thoughts and feelings, and how others perceive them. Thus, human beings dwell in uncertainty about everything and everyone, as they are entangled in the complexities of existence and ambiguities of human interactions and their interpretations, which diminish the ability to distinguish between perceptions and reality. Society does not resolve this human condition; it

only creates an impression of being something greater than an individual.

The interpretation of various experiences in life often requires illusions that are in constant tension with the hidden reality. These include the illusion that what is perceived is reality, the illusions of faith and immortality, and of time and free will. In essence, human lives are immersed in the structure of illusions. These are deceptions of the senses or of the mind and imagination, which include visual, conceptual, scientific, metaphysical, and psychological illusions. These illusions distort reality; but the question is, what reality is being distorted, as one cannot imply that it is the ultimate reality which is unknown. One can only state that the limited senses distort what they perceive.

Illusions and reality are intertwined in the complexity of their interpretations. Most people, most of the time, prefer malleable illusions to the harsh realities of life. But these illusions, projected from the mind onto the world, can affect not only the perception of truth and reality but also the quest for the meaning of life.

These socially shared illusions, which only exist in the minds of individuals, become the basis for relations in society that confines humans within its norms and rules. These illusions also sustain the fragile layer of civilization that can be maintained within a narrow range of conditions. Illusions provide not only an antidote against uncertainty in life, but they also become abstractions and concepts that give false impressions of certainty. Thus, through illusions, humans try to establish certainty and control, which can never be truly attained.

Humanity is drifting into uncertainty, as nature and societies tend to be unpredictable owing to the multitude of increasingly complex interactions on many levels. Various systems (social, physical, economic, biological, and also the human brain) are on the edge of chaos, which is a transition space between order and randomness. Such a transition space is most flexible and adaptable, as it allows fast transition between different states in a constant interplay between these opposites. This transition space also allows the emergence of new properties and interactions.

In the context of the complexity of social interactions, a comparison can be made between the so-called “many-body problem” in physics and the “many-people problem” in sociology. The former relates to the description of interactions between large numbers of particles such as electrons in atoms and solids, or interactions between the planets and the star and between individual planets. In comparison, the many-people problem relates to interactions between different individuals in society.

Although the two-body problem (such as the Sun-Earth or the Earth-Moon gravitational interactions) can be accurately solved analytically, the many-body problem of predicting the orbital motions of individual planets can only be solved numerically (using approximations), owing to the complexity of the mutual gravitational interactions between the bodies of the solar system. Analogously, the many-particle problem is present in quantum-mechanical description of electrons in atoms and solids. In such a case, as it is impractical to account for the interactions between very large numbers of particles, and to circumvent the many-body problem, the one-electron approximation is employed, which essentially assumes that every particle is independent of each other and the properties of the whole system is a sum total of the actions of individual particles that are indistinguishable from one another.

In comparison, every human individual is unique, having their own thoughts and beliefs, and there are many behavioral rules in society, which make interactions in society relatively more complex, as it is through interactions that individuals create rules and institutions within which they function. Thus, unlike physics, which deals with somewhat predictable phenomena that can be described by mathematical tools, the human behavior and interactions are less predictable in the absence of detailed analytical methods.

Social interactions can also be a source of anxiety, as individuals compete for resources, status and personal advantages. In society, individuals have different abilities and values and roles and are driven by both collaboration and competition with others, resulting in constant ambiguity and uncertainty. They are also subject to the constraints of various institutions that require a certain degree of adaptability, which is often manifested in staged performances, designed for an intended impression, that vary according to the audience and context. Thus, social interactions often involve impressing others, rather than expressing oneself authentically without societal expectations or the desire for ego-driven recognition.

Human relations occur in the theatre of life and the mind. It is a complex interplay between competition and cooperation, involving navigating through an intricate labyrinth of moral dilemmas and choices. This antagonistic process of competition and cooperation is set against the backdrop of complexities of human nature and societal dynamics and the world, and their limited comprehension. In this context, human behavior in society is akin to that exhibited by an actor in a theatrical performance. In such a case, an individual assumes a persona, which

can never be authentic, since it is scripted. Personal authenticity can only be revealed by a person in an unscripted setting. In addition, as an individual is embedded in social structures and relationships that require adaptation, the awareness of being observed also diminishes whatever authenticity one might have attained in life.

The competition-cooperation paradox involves the coexistence of opposites, not as fixed extremes, but as shifting relationships between them. In many cases, the prevailing human traits of ego, self-interest, vanity, and hubris provide the context for the complexities of interpersonal and intergroup relationships. The challenge is how to minimize the inevitable tension between competition and cooperation, and find a balance between them.

One form of competition is a zero-sum game, which relates to the notion that one's gains can only be achieved at the expense of another's losses. This antagonistic mindset, which is prevalent in interpersonal and intergroup and international relations, has been manifested throughout human history in various contexts. It is prevalent among the public, professionals, and politicians in various fields. Such experiences as hierarchy, general scarcity (perceived and actual), threat (imagined and real), and competition for various benefits, contribute to zero-sum thinking that can result in tension and conflict.

Throughout life, one of the important issues is how to live with others in harmony and cooperation. However, the need for cooperation and acceptance in society can lead to conformity, which is not obvious in the presence of illusions of freedom and free will. One can argue that conformity can be good for maintaining social norms and the functioning of society; but the tendency for group conformity and the desire for stability and security can also provide fertile soil for authoritarianism.

One of the problems in life is distinguishing between good and evil. When a massive asteroid strikes the Earth, triggering cataclysmic events, it is not described as an evil act, but as one of the manifestations of the probabilistic universe. On the other hand, when an individual commits a malicious act, it is referred to as evil. In social and interpersonal affairs, a distinction is made between good and evil, which are both human concepts that do not exist in nature. These concepts delineate the principles which are necessary to sustain the semblance of humanity in individuals and society. The problem of choosing an appropriate response arises not when there is a sharp distinction between good and evil or between right and wrong, but when such a distinction is not clear.

There is an undeniable asymmetry between good and evil. The tension between them creates ethical dilemmas. The evil is not constrained by ethical and moral norms, and it uses all means available to reach a goal; whereas the good is based on human values and virtues. Thus, the struggle between good and evil is highly uneven, as the good endures, rather than overcomes, evil.

The stability of the social structure does not necessarily imply the absence of change, as society has been constantly changing and evolving. Rather, social stability relates to the acceptable limits of change for the desired outcome. In addition, as any local society is embedded in a larger structure of the global society, one must think not only about local social stability, but also about global social stability. In this context, another risk is the inherent instability of complex systems such as the globalized society, in which small changes and random errors can multiply and result in destabilizing effects on society.

The possibility of societal collapse is always present due to the natural disasters, economic failure, internal and external wars, climate change, extreme changes in population dynamics, and unintended consequences of technological advances. Societal collapse may also occur due to the complexity of modern societies; in this case, as a system becomes more complex, it becomes more vulnerable to failure. A failed society may either disappear, be absorbed into another society, or undergo transformation.

Another source of social instability is related to the lack of meaning in life. The quest for meaning is so fundamental in humans that they can surrender their rational thinking and take on incoherent causes without true understanding of the complex issues involved. Thus, the human irrationality and the lack of understanding of the complexity of human condition in the world on the edge of chaos will remain potential threats to maintaining the balance between order (stability) and chaos (instability).

Conceptual Structures

In order to understand reality, humans develop various concepts and models and theories, and thus individuals are also embedded in conceptual structures. These concepts and theories relate only to a limited part of reality. It is impossible to know how much remains to understand or discover. As human constructs, concepts are illusions that do not represent reality as it is.

All concepts and theories are based on simplified assumptions, which provide

a cognitive structure for describing reality. However, describing reality is not the same as understanding it. As such, concepts are abstractions in the mind, but they do not exist in reality. These human constructs are always provisional and subject to change. The fundamental paradox is that these incomplete concepts and theories are necessary for understanding reality; but, being ingrained in the mind, they are also confining.

In effect, humans are entangled in the conceptual reality which is within the limits of their vision. This hinders creative freedom, as an individual uses those concepts as a starting point. In this case, the dilemma relates to the need for a provisional conceptual structure for the analysis and at the same time to the necessity to transcend it for a broader view.

In the struggle to understand how seemingly distinct things relate to each other, these conceptual structures provide some certainty and predictive ability in a seemingly random world. However, when conceptual understanding is developed beyond visual experiences into atomic and subatomic levels, things get quite complicated, as the fundamental structure of matter and the universe is beyond ordinary human understanding.

Human experiences and beliefs are strongly influenced by concepts. One of the profound concepts in the evolution of human thought is the concept of God, and the associated structure of religion, which emerged in the human consciousness out of the deep desire for certainty and consolation in the chaotic world of adaptation and survival. Religion is a concept that offers a nearly perfect solution to the human desire for certainty and structure in life, but it does not provide any empirical support for its assertions. It provides uncomplicated answers to complex questions beyond the limits of understanding, and offers a reassuring belief in the significance of humanity in the creation story. The irony of religion is not that it confines the human mind in its system of beliefs and practices, but that this constraining structure is created by the limited human mind that consents to be shaped by its own imaginary construct.

The meaning of life can be found in the pursuit of truth that provides clarity to human experience in the physical world. In basic terms, truth is a human construct or concept for navigating reality. The concept of truth is closely related to the reality of things. Absolute truth and ultimate reality can be considered interchangeable, as one represents the other. Truth must be consistent, coherent, and useful, and it must correspond to reality.

Conventional truths are difficult to define, as they are different for different

individuals and depend on context and interpretation, whereas ultimate or absolute truth cannot be defined or understood at all, as it would require knowledge of the ultimate reality. The different types of conventional truth include, for example, scientific truth, moral truth, historical truth, and spiritual truth. It is also important to consider whether truth is objective, subjective, absolute, or relative. Objective truth is defined as independent of minds, whereas subjective truth depends on the perceiving and reflective mind. Absolute truth is fully independent and invariable, while relative truth can be considered as truth in relation to other things. Truth matters because it helps to understand life and the universe.

There are various views and theories of truth which have been debated for centuries. The major theories of truth include the correspondence theory, the coherence theory, and the pragmatic theory, as well as a deflationary or minimalist theory of truth.

The correspondence theory of truth is the most widely held view of truth. It is based on the correspondence of claims or statements of truth with the facts. Thus, truth is determined by reality. Most scientists and philosophers throughout history typically adhere to this theory, as it is considered self-evident. One of the main objections to the correspondence theory of truth is that the required correspondence between human thoughts and reality cannot be reliably established, as it is not possible to access mind-independent reality in order to ascertain the correspondence. Scientific realism, which is a view claiming that well-confirmed scientific theories reveal what exists in reality (including unobservable phenomena), is related to the correspondence theory of truth. In contrast, antirealism (or instrumentalism) claims that theories are just tools that do not represent truths and question the existence of unobservables until they are observed. The disagreements between these views are relevant in the context of the current research that theorizes the existence of entities that are only inferred indirectly (like subatomic particles such as quarks that are inferred from experiments and theoretical models), and sometimes are not even inferred (like strings in string theory).

The coherence theory of truth states that a proposition or statement is true if it is coherent with an established set of other justified propositions or statements. While the correspondence theory relates to the truth of a proposition as being linked with the facts or the way things are in the world, the coherence theory relates to the truth of a proposition as being linked with other propositions.

According to the coherence theory, any given theory can only be evaluated in relation to other theories. This theory of truth fits well with the rationalist side of theoretical science. The main problem of this theory is that this criterion is not sufficient for the definition of truth, as a proposition can be consistent with other propositions but still be false in the absence of any independent evidence. The coherence theory of truth is applicable in such areas as law and ethics.

According to the pragmatic theory of truth, a proposition is true if it is valuable or useful for individuals and society. This criterion, however, is ambiguous and not sufficient for the definition of truth, as a proposition can be beneficial in a certain context but still be false. The utility of something cannot be a criterion for truth. What might be useful for one person may not be for another. A related view to the pragmatic theory of truth is instrumentalism, which argues that scientific concepts and theories are merely tools that are useful for calculating, predicting phenomena, and solving problems. Other related views include positivism and logical positivism, which deny the value of metaphysics and emphasize inquiry on what can be clearly observed by the senses (through empirical evidence) and logically inferred. According to positivism and logical positivism, reliable knowledge can only be obtained through the scientific method, with theoretical models applied to observable reality.

The deflationary or minimalist theory of truth removes metaphysical factors and thus simplifies the concept of truth. This deflates the debate about the essence of truth and considers truth as an attribute of propositions representing certain facts that seem like self-evident truths. However, this conception of truth does not provide a complete description of what makes a given proposition true or false.

In the twentieth century, philosophical thought experienced a shift from modernism to postmodernism. Modernism was characterized by certainty and rationality, reinforced by the Newtonian paradigm of natural laws. However, new developments in science and philosophy revealed that true objectivity is impossible, and the inevitable reaction was the emergence of postmodernism. This was reinforced by new scientific discoveries, including the theory of relativity and quantum mechanics that have led to a new paradigm of understanding the universe. While modernism emphasizes reason and rational interpretation, postmodernism rejects absolute objective truth and emphasizes skepticism and the deconstruction of truth and reason. Postmodernism claims that truth is a human construct, rather than a representation of external reality in the mind, and that objective truth cannot be known with certainty. This leads to relativism, which implies that no truth is

fixed as it is constantly evolving; therefore, if there are no absolute standards and truth is relative, the distinction between right and wrong is blurred. According to postmodernism, objective reality and absolute truth are inaccessible, as human thoughts and perceptions are interpretations that are influenced by limited language and knowledge.

The prevailing theory of truth in modernism is the correspondence theory, which led to a conclusion that scientific truth and absolute truth are equivalent. According to postmodernism, the correspondence theory of truth is limited, since truth is relative to an individual or culture or society. Postmodernism rejects the correspondence between scientific truth and absolute truth, as all scientific conclusions are provisional, and instead it subscribes to the coherence theory of truth. Postmodernism, however, has no necessary foundation to maintain itself as a theory, since it denies every element required for it. It has no clear definition or certainty of knowledge.

In the end, what one perceives as truth is typically based on human perceptions that are distorted and filtered by limited human senses and subsequently interpreted by the limited and biased mind, using partial and tentative concepts and theories. In essence, the mind creates its own reality. The “absolute” truth is never reached; one can only arrive at partial and tentative truths with no measure of their accuracy or divergence from absolute truth.

As for the stability or permanence of concepts, there are no absolute concepts and theories, and all human perceptions, ideas, knowledge, and understanding are always incomplete, fragmentary and provisional. The extent of what is unknown or unknowable is forever elusive. What should be avoided is the tendency to confuse the current scientific models with the truth about reality, or to confuse knowing with understanding.

The Physical World

The physical world and its laws are vital for human existence. The structure of the physical world is based on the fundamental forces of nature. These are, at this stage of understanding, weak and strong nuclear forces, electromagnetic force, and gravitational force, which operate on different scales, from subatomic to large-scale cosmological structures.

In addition to the four fundamental forces, there are also secondary forces involved in maintaining the human biological structure. These include, for

example, Van der Waals force, hydrogen bonding, electrostatic force, and ionic force. Owing to these forces, the atoms comprising the molecules of life (carbon-based molecules) are held together in biological cells and organelles.

All matter consists of atoms that contain various subatomic particles (electrons, protons, neutrons, and quarks). An atom consists of a nucleus composed of positive protons and neutral neutrons, surrounded by negative electrons in discrete energy levels. These subatomic particles are inferred from the experimental data; and some of them, such as various quarks, can only exist in various configurations in protons and neutrons. But free quarks, which are considered as some of the fundamental building blocks of matter, do not exist as free isolated particles.

The question still remains, what is the ultimate nature of subatomic particles? These particles, which cannot be observed directly, typically leave traces in cloud chambers, and they are necessary elements of the structure of reality on the most fundamental level. The mental image of a subatomic particle is that of a tiny ball localized in space. However, this concept of “particle” is incompatible with current understanding of quantum theory. In fact, numerous experiments have conclusively demonstrated that quantum particles, such as electrons, can exhibit both particle-like and wave-like behavior. This counterintuitive behavior of subatomic entities challenges the classical perception of reality. There is disagreement among physicists about whether subatomic entities are wave-like excitations in a quantum field or discrete particles exhibiting wave-like properties. This relates to a quantum-mechanical principle of the presence of quantum fluctuations in the vacuum energy, which is a consequence of the Heisenberg uncertainty principle. The existence of these fluctuations is inferred from calculations using the Standard Model of particle physics.

According to quantum field theory, fields, rather than discrete particles, are the fundamental building blocks of reality, and particles are manifestations of these fields. Thus, the distinction between particles and fields, which appears clear in classical physics, is blurred in quantum mechanics. Irrespective of this distinction, the notions of fields and particles and waves are merely concepts for describing entities that can be inferred from theory and measurements and calculations, but cannot be visualized by the human mind, except by using analogies from macroscopic experiences.

The world is governed by impersonal laws of nature described by impersonal mathematical equations. Human beings are embedded in the physical world with

its specific laws. Everything in the universe undergoes change, and eventually all things come to an end due to the law of entropy, which holds that energy has a tendency to dissipate, and organized systems become disorganized unless hindered from doing so.

The current understanding of the stability of the universe is that it is in a metastable state (neither decaying nor stable), meaning that there is a chance it could decay to the true vacuum (the lowest energy stable state). It is also likely that due to the accelerating expansion of the universe and increasing entropy, ultimately everything will decay, resulting in the end of the universe. Another possibility is that the gravitational pull reverses the expansion, leading eventually to the collapse of the universe back into singularity. Then again, a different universe with new laws and constants may come into existence, and some forms of intelligence may emerge anew.

Freedom

Freedom, which in basic terms can be defined as the ability to function without impediment, is one of the most fundamental concepts introduced by humans in order to delineate or define their condition in society and nature. Freedom is a big word, as it is also an abstract and ambiguous concept whose meaning depends on the context of its use or application, and thus it is open to broad interpretation, but it cannot be measured. The types of freedom include personal freedom, political freedom, economic freedom, and national independence. This concept is often discussed in the context of philosophy, sociology, psychology, and politics. Freedom is a human concept; it does not exist in reality. However, as many other human-constructed concepts, it shapes human perceptions and interpretations of the world and human affairs.

The confinement in various structures prevents an individual to be completely free. Each of the structures of human life sets limits to human freedom. Human beings can never experience absolute or complete freedom from these structures, as anything “absolute” is undefinable and unreachable. There is no condition that can be used as a reference or comparison for absolute freedom. Human freedom is always limited, relative, conceptual, contextual, and immeasurable.

The dilemma of the concept of absolute freedom is not that it is impossible to achieve, but that human life with no boundaries and limits would be chaotic and meaningless. In the end, humans tend to both maximize individual freedoms and

maintain structures for orderly existence. This creates certain tensions in life, as individuals strive to find the balance between these opposing goals which can never be truly attained.

Conclusion

From the simplicity of childhood to the obscurity of old age, human mind undergoes continuous transformations, but no definitive understanding of life emerges with the clarity of truth. This is because ultimately this mind is confined within an individual, who is constrained by the boundaries of structures ranging from genome to society to concepts and to the physical world. Only in a temporary flight of imagination can one transcend these boundaries, but with no resolution to the dilemma of waking up every day in a world that an individual cannot choose or escape but must endure.

Living with constant uncertainty in the world, which is both familiar and strange, is like writing a drama that intersects with other stories filled with hopes and expectations. This life is based on probabilities and outcomes. The narrative is about darkness and light, suffering and happiness, illusion and reality, loss and discovery, and more importantly it is about survival. However, most people pass through this life unseen and forgotten by the world and history, with their stories untold. In this hidden life, individuals rarely see things as they truly are and they are seldom seen as they really are.

The most challenging realization for humans is the vast scale of the universe in which they are embedded into. The limited human knowledge cannot unravel why the universe exists at all and what is truly fundamental and permanent in the physical world and life. A common dilemma faced by every individual is a great disproportion between the human finitude and the immensity and complexity of the universe, where it is hard not to feel insecure and insignificant. The image that comes to mind is that of fragile dandelions in the wind that is about to obliterate them. And yet dandelions represent a symbol of rebirth and hope, although they are also seen as a metaphor for the fleeting nature of time and human life.

Some view life as a gift; others see it as an ordeal. In reality, it appears to be both, as life includes great times and bleak moments, tranquil sunsets and stormy nights, bright thoughts and harsh realizations, all intertwined in a kaleidoscope of changes. These variations give a sense of the passage of time and the associated aging and eventual oblivion. As everything is constantly changing, a temporary

foothold for existence can only be found in the structures of life.

Without the structures of human life and their boundaries, there would be no form or substance and thus no human existence; there would be no sense of meaning and thus no use to human life; and there would be no semblance of order and thus no society. Within these boundaries, one does not discover meaning in life, but one creates it in many different ways. And in this structured world, it is this small measure of meaning, although limited in time and space, that gives some value to human life.