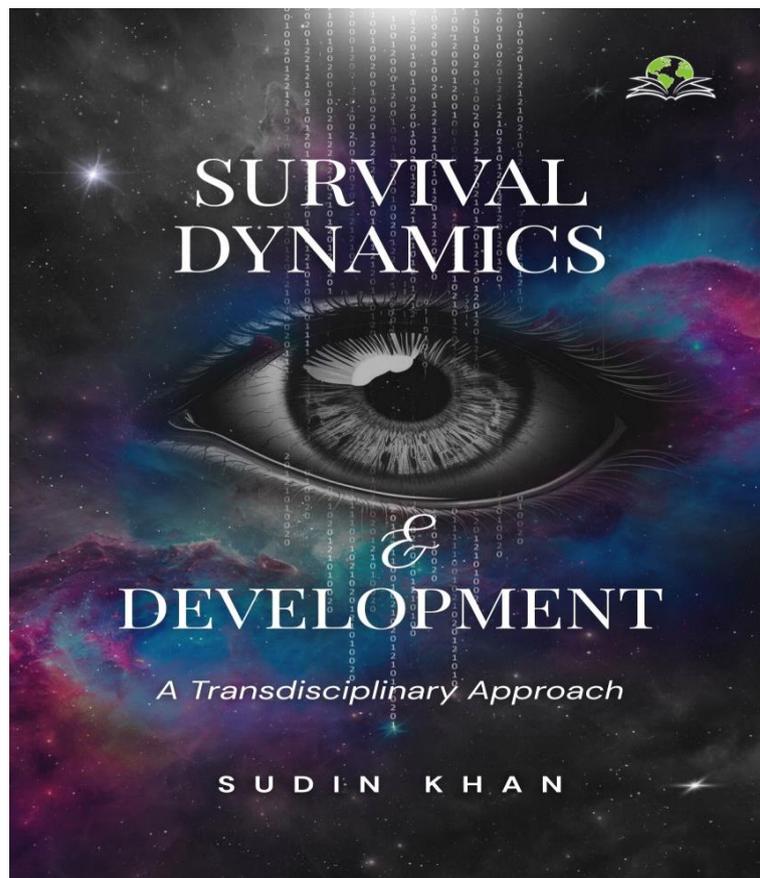


Brief Synopsis

Survival Dynamics and Development

An interdisciplinary research-based transdisciplinary thesis paper, written by –

Sudin Khan



INTRODUCTION

SURVIVAL DYNAMICS AND DEVELOPMENT

We are human beings because, futuristically, we are best capable of thinking and acting according to the circumstances; we have the rational capacity to control instinctive desire-driven animalistic functional tendency. We consider ourselves different, modern, and advanced from the other living species within the known universe. There is a reason for humankind to become arrogant, because of their super-rational capacity. But should we become arrogant with respect to our close competitor species? In reality, there is no close competitor of humankind within the known universe. Thus, it is the intraspecific competitive survival landscape, where they are expressing their cognitive talents, emotions, arrogance, or egoism. They are more concerned about attaining survival fitness within the intraspecific competitive survival landscape, rather than within the interspecific and inter-systemic survival grounds of humankind.

With respect to the evolutionary flow of existence and survival as humankind, two conceptual domains are pre-dominating the whole process. One of the most accepted Darwinian concepts of evolution by natural selection is also called a naturalist approach. Another is structural functionalism, also a similarly pre-dominating evolutionary concept of the society, known as the functionalist approach. These two conceptual domains regulate different levels of the human survival process, including genetic and cognitive functional levels. According to the naturalist approach to evolution, mutation occurs by chance, not because of the environmental demand of survival. The frequency of the favourable mutational survival traits is naturally selected over the period. The concept of structural functionalism originated from the biogenetic concept of existence, explainable by the naturalist approach. If we consider that modern human society has emerged and developed based on the same operational principles as the biological evolution process, then cognitive functional mutation is a by-default natural process. However, it has been proven that the environmental interaction of an individual, or the environmental interaction of the genetic layer of an individual, plays a crucial role in both contexts, as the survival environment initiates evolutionary changes in the individual's survival function. The survival of humankind is not only dependent on genetically driven instincts, but cognitive functional operations play a profound role here. Moreover, the survival of humankind is not only dependent on its genetic and cognitive functions, but other forms of existence, such as abiotic and biotic, have equally relevant roles. For example, to survive as a species, the respective ecosystems, as well as appropriate climatic conditions, have to be conducive. However, all the associated factorial domains of human survival are naturally dynamic.

Ultimately, different mechanisms of the evolutionary change process are operational, belonging to various associated factorial domains.

Modern human civilization is almost ten thousand years old; through constant cognitive innovation, civilization has arrived at its present state. From the day of its origin, civilization is not standing still at any particular survival layer point; it is constantly evolving. Now, modern humans are planning to advance their civilized survival process in a specific direction. It may be the naturalist approach or the environmental interaction-oriented approach; for both mechanistic domains, evolutionary flow is an auto-regulated natural process. In these circumstances, humankind is trying to inject a planned mechanism into the naturally operational dynamic survival process. The objective of this thesis paper is to understand the natural mechanism of the evolutionary flow first; understand the ultimate meaning of development in the context of the natural evolutionary flow, and how it is possible to develop the survival of humankind in a planned mechanism, without contradiction by the auto-regulated natural evolutionary flow.

Humankind, as the cognitively most advanced species, has been surviving on the planet Earth for almost 2.5 million years, whereas their modern civilization is only around ten thousand years old. Throughout the evolutionary journey of their survival process, they have been passing through an enormous number of survival-related challenges and issues in a stepwise manner. Although survival-related challenges and issues are an inherent part of the survival process, they were present at the primitive stage of human civilization and continue to exist in modern society, and will likely persist into the future. Alongside the evolutionary flow of the human civilization process, associated challenges and issues are also transforming into the next level simultaneously. The survival challenges and issues faced by modern human society differ significantly from those of primitive societies. Alongside the evolutionary flow of the cognitive layer of the human brain, mankind has undeniably recognized the need for a planned mechanism of survival.

There are vast subjective domains in the academic arena, and they continue to diversify into new domains, such as Physics, Chemistry, Mathematics, Biology, History, Anthropology, Sociology, Psychology, Economics, and more. These academic domains represent the respective areas of the modern survival process of humankind. There are inter-associative correlations between the progression of human civilization and the advancement of knowledge through the varied subjective domains of the academic arena. Thus, the modern survival process of humankind is the joint operation of all those subjective domains oriented functional fields. Survival-related challenges and issues are also arising in the subjective area-specific aspect of modern human survival, such as biological challenges, genetic challenges, psychological challenges like mental disorders, sociological challenges like social issues, economic challenges like economic crises, or technology-oriented challenges. Thus, every subjective area of the survival function explains the respective subjective area-specific version of the planned development process. For example, explanations of the development process, with respect to economics and evolutionary biology, differ significantly.

Through this thesis paper, we have tried to conceptualize the ultimate meaning, purpose, and strategy of development, within the landscape of the natural evolutionary flow of existence, in the transdisciplinary context. We have begun the analysis at the atomic level of existence to explain how it has evolved to the stage of modern humans; thus, we have been equipped with certain conceptual and mathematical models. In light of our proposed concept, we have analyzed the present survival scenario of humankind. Considering the whole analytical notion of the survival dynamics, we finally

presented our perspective about the ultimate meaning, purpose, and strategy of the planned development process.

THE APPROACH OF THE STUDY

As this is a transdisciplinary research paper, we have begun our analysis at the most fundamental level of existence, namely, the atomic form. This fundamental form of existence, through the naturally rhythmic, auto-regulated evolutionary flow, has evolved to the stage of modern humans. Humankind has developed modern society as its survival platform. Although the survival of modern humans is an inter-associated, systematic process involving abiotic, biotic, and cognitive layers of existence, today's modern humans are the stepwise evolutionary outcome of the fundamental form of existence, as atoms. We may subdivide the whole thesis into three phases. In the first phase, based on the varied mechanistic principles of evolution that operate at different levels of survival, we have developed certain conceptual and mathematical models that can be used as analytical tools. Then, in the second phase, we applied those analytical tools to analyze the evolutionary survival circumstances of modern humans. In the final phase, based on the whole analytical notion, an ideal mechanism of development has been proceduralized.

This is a secondary research-oriented, qualitative, and quantitative data-based analytical thesis paper within a transdisciplinary context. We have applied theoretical concepts from various subjective domains to conceptualize the naturally dynamic flow of the universe and its diverse forms of existence. Numerous inferential case examples are used throughout the thesis paper to validate the proposed concept. Although the primary quantitative data-based application of the mathematical models, as well as the qualitative data-based application of the conceptual models, is a futuristic process, we hope to be able to present that part of the study, along with the next edition of the book.

WHY THE PLANNED PROCESS OF DEVELOPMENT ON THE GROUND OF SURVIVAL DYNAMICS

The concept of existence as living beings is unique, as varied forms with diverse functions of existence are constantly evolving. This form, with the function of existence, determines the survival process of respective existence, which is also evolving. The genetic layer is responsible for the evolution of genotypic and phenotypic combinations of the surviving forms of existence. Survival-oriented environmental interaction is also creating an impact at the genetic level; as a result, the functional pattern is evolving. Human cognitive decisions may not be capable of directly regulating the genetic layer evolution process or germ line mutation, but cognitive decisions are the regulators of interactive cognitive functional patterns, which, to some extent, are responsible for the remodelling of genetic configurations.

The planned development is necessary in the context of improving the quality of life, which is a key aspect of the survival status of modern humans. The survival status of an individual human being or a population group is dependent on the society and its civilization status, to which that individual

or group belongs. Human society and its civilization are constantly evolving by the natural mechanism of evolution. Human functional patterns of survival are also constantly evolving by the same natural mechanism of evolution. At every step of the evolutionary flow of the multi-dimensional survival process, the natural mechanism of evolution is operational. In this context, modern humans are imposing a planned development process, where the natural mechanism of evolutionary flow is already functional. Both the mechanisms, whether natural or planned, should not contradict each other if activated simultaneously; otherwise, conflicting outcomes will arise. Thus, we have to know the natural mechanism of evolutionary flow first. The better we would be able to understand natural mechanisms, the better we shall be able to proceduralize the development process accordingly. There is the relevance of the planned process of development in the context of survival dynamics.

Through the process of development, humankind certainly does not intend to diversify into new human species; rather, the objective of the planned development process is to enhance the status of survival, as the quality of life of humankind, concerning the multifactorial domains of survival; like income, education, life expectancy, life satisfaction, and other domains. This state of survival for the biogenetic form of existence is evolutionarily dynamic, operating through a naturally auto-regulated mechanism. Thus, if humankind desires to achieve a certain specific state of survival, where the natural mechanism of desire fulfilment is already functional, then they must conceptualize that natural mechanism first and then regulate that already functional natural mechanism, by the planned purpose-oriented initiatives, as the development strategies.

ARE WE DEVELOPING IN THE ULTIMATE SENSE

Humankind is the cognitively most advanced species within the known universe; they proudly consider themselves the greatest creation of the universe. Belongs to modern human civilization, the desire for materialistic consumption-oriented cognitive satisfaction of humankind has grown at its unimaginably hilarious level. They have landed their feet on the moon, and they have invented artificial intelligence instruments as a substitute for human functionality. Life expectancy is constantly improving alongside the advancement of medical science. Advancement of biotechnology has made nutritional consumption sources more optional as well as customized. All these great achievements may be considered sufficient reasons for humankind to feel proud of them. On the contrary, the defence budget of developed or even developing countries is higher than the allotted budget for maintaining universal peace, stability, and equality.⁴⁰ They have invented the atom bomb, and have already tested it on themselves. Every country is constantly researching to strengthen its defence mechanism as better as possible. In reality, humankind is growing to become their worst and toughest predator, in the intraspecific interactive survival context, as well as from themselves they are trying to protect. This is similar functional logic of survival, like any other species as living beings used in the intraspecific as well as interspecific survival context. In fact, in some cases, altruism and cooperative behaviour within other living species are even better than modern humans; like the cooperative survival mechanism of the bacteria colony. Modern humans are not so wearied about the inter-systemic or common threats on humankind; rather they are more concerned about the intraspecific threats. May it be considered evidence of their greatness or

civilized way of survival, that they have invented nuclear weapons to protect one country from the other?

At the proximate survival level, modern humans have customized their survival functions in such a way that even god (if exists) shall be surprised about. But at the ultimate survival level, their functionality principles are just similar to other living beings. Extraordinary cognitive capacity, which is their strategic strength of survival, probably modern humans are still unable to utilize that survival resource, in the best humanitarian way. Probably they should consider themselves as the greatest creation of this universe, only when their weariness about the intraspecific threat will completely transform into areas of common threats to humankind like environmental pollution, global warming, socioeconomic inequality, or any other common survival challenges of humankind as a survived species.

CRISIS-ORIENTED MECHANISM OF FUNCTIONAL REFORM, AND THE PROCESS OF DEVELOPMENT

Any form of functional crisis in the modern system of survival is the symptom of system equilibrium imbalance. There is an auto-regulated mechanism of ID operational, to transform a crisis-oriented disruptive system into the next equilibrium point, by the functional evolutionary reformation process. This is the system-operated natural reactive process of evolutionary transformation, with respect to any functional crisis as a survival challenge. The planned process of development may be considered the cognitive brain executing an explicit attempt of functionality, backed by certain objective purposes. Thus in any crisis-oriented situation of the system, when survival dynamics is already operational by the reactive mechanism, the explicit development process must be proactive, on that mechanistic ground. It means that the development process should act as the preventive mechanism of the futuristic probable threats of the system of survival; rather than just reacting like a natural genetic mechanism of the stimulatory readjustment process. Belonging to the nation-specific modern system of survival, the administrative and regulatory department take necessary transformative action, whenever there is a crisis; this is an example of the natural reactive mechanism of the dynamic system. We may not consider those reactive cognitive as well as collective functions, as conscious developmental initiatives.

Consider the context of any renowned social reformist, as the dominant system stimulator; social reformists are the catalyst to transform society from its crisis-oriented struggling disequilibrium state, into the stable equilibrium state. It may be considered the specialized form of functional role module, operationally activated within the system, in the crisis-oriented survival context. Belong to every era-based human modern civilization process, social reformists from religious as well as scientific both the domains-oriented backgrounds have played central roles, in carrying forward modern human civilization process at its present state. If we look back past two thousand years of the evolutionary history of the human civilization process, we would find that at every critical stage of the human civilization process, certain great social reformers played crucial roles at that layer point, to transform respective civilizations into next-level. Great reformists belonging to every layer of the civilization process had played revolutionary roles, to rectify as well as facilitate respective critical stages of the civilization to promote to the next level.

Modern humans are also facing an enormous number of survival challenges. Alongside the evolutionary flow of survival patterns, survival challenges are also evolving simultaneously; this is because of the natural auto-regulated mechanism of ID. If the survival challenges are evolutionarily arising automatically in a continuous rhythmic fashion, then there should be an automatic mechanism to redress every survival challenge as well as every disequilibrium state of the survival system. It would be irrational, that in every crisis-oriented functional context, somebody will play the role of rescuer, or another way, to reform the system, there must be a certain crisis as the stimulatory drive of functional reaction. Rather it would be safer if we proceduralize the operational mechanism of the system in such a way that the deleterious survival strategies will automatically be eliminated from the system. By the initiative of the planned process of development, we may replace the functional role of reformist, as rescuer of the crisis-oriented dynamic system; moreover planned process of development should act as a preventive measure, with respect to the probable threats of the system of survival, through the proactive mechanism of functionality.

DEVELOPMENT (ONTOGENY) ON THE GROUND OF EVOLUTION (PHYLOGENY)

Biogenetic concept of development as the life-cycle stages-oriented phenotypic expression process, as the ontogeny; about how a zygote grows through its different developmental stages of the life cycle, like foetus, baby, child, adolescent, adult, and old age. Every biogenetic form of existence as living being has the installed genetic resource capacity, as the instruction components to regulate developmental stages of the life-cycle. Based on installed genetic instructions, respective living beings developed throughout the life cycle stages accordingly. These genetic resources as instruction guidelines are evolving constantly, by the natural mechanism of the genetic evolution process; as a result, the phenotypic expression of the living being throughout the life cycle pattern-oriented developmental stages also depicts transformative output accordingly. The biogenetic developmental flow of any particular form of living being is dependent on the installed genetic instruction manual of the biogenetic existence. Phenotypic expression-oriented development is possible up to that functional level, depending on the genotypic capacity installed within, in the context of evolution. A biogenetic form of existence is naturally capable of developing through its life-cycle pathway up to that level, how much it is genetically installed instruction-based capable of. Its core installed capacity is the guiding principle of the natural development process through its life cycle pathway.

In the context of survival of coexistence, development is a relative process in the sense; we are trying to achieve a predetermined functional state of survival, which is comparatively more advantageous than the present state of survival, with respect to the dynamic survival environment. There is a natural mechanism of the evolutionary flow already operational within the system. Every form of existence is inheritably conditioned by its respective expected environmental and interactive context, belonging to which the subject will survive. To achieve a certain objective-oriented planned state of survival by the process of development, evolutionary installation of the core instrumental capacity at the different survival levels (for modern humans, it is genetically, cognitively, and collectively installed capacities of the modern system of survival), are the pre-requisite conditions to successfully coordinate and execute the natural process of development, through existential life cycle pathway accordingly. By the process of evolutionary change, existence is pre-installed within the necessary resource capabilities, to achieve a certain desired state of survival, by the process of

development. In the context of survival and development of modern humans, if the survivor's genetic, cognitive, and collective core capacities do not relate with the functional demand-oriented expected developmental state of survival, then the survival system will certainly not be able to respond according to the planned expectation of functionality; whatever may be the mechanism, used to transform or develop society and its civilization cognitively, by the modern humans. It means that, if the installed genetic, cognitive, and collective resource capacities of survival of modern humans are not sufficiently capable of restoring and executing the planned development process, then the survival system would certainly not be able to respond expectedly. On the ground of evolution (phylogeny), development (ontogeny) itself is a pre-programmed installed natural process for living beings, dynamically executed by the evolutionary flow; it is a preinstalled process of auto-execution by the system.

Every survival layer point of the social system has optimum installed functional capacity, to produce system layer-specific functional output, by its representative survivors. That is also the optimum capacity point of the representative survivors, belonging to that layer point of the survival system, to grow or develop. Thus if modern humans desire to achieve a certain pre-planned state of survival, through the mechanism of planned development process, for its representative survivors, then the respective survival layer point of the social system have that necessary amount of installed genetic, cognitive as well as collective functional capacities to adapt with the planned development programs. If the installed genetic, cognitive, and collective functional capacities are not sufficient to achieve the desired state of survival, through the planned development process, then the ultimate job of the planned development process is to enhance the installed survival capacity first. For example, to capitalize benefit of the fourth industrial revolution by any country-specific system, which is advanced technology driven; the respective country should have academically advanced enough population groups to adapt to the advanced technology-driven global trends. If there is insufficiency as well as inefficacy of the knowledge group of the population belonging to any system, then the job of the administrative and regulatory department of that country is to train their population first; then only it is possible to adapt to the advanced technology-driven civilization process. When the system becomes genetically, cognitively as well as collectively enough flexible and capable to respond positively to any crisis-oriented survival circumstances, then the job of the planned process of development would become easier, to achieve any height of the survival process of humankind.

CHAPTER INTRODUCTION

The whole thesis has been presented in five chapters, which are the five mechanistic domains of the study. As we have mentioned earlier, the approach of the study is the formulation of conceptual as well as mathematical models, on the analytical ground of the dynamic universe and its varied forms of coexistence. We then applied these concepts and models to analyze the natural survival conditions of modern humans. Finally, we have conceptualized the developmental perspective as a strategic mechanism for development; we then analyzed the relevance of the proposed development concept based on the naturally dynamic survival circumstances of modern humans. This whole mechanistic approach of the study has been presented in the five chapters.

The first chapter, 'Universe and Its Existence,' is the foundational ground of the thesis. This chapter explains the 13.8 billion-year evolutionary journey of the varied forms of existence. We started our analytical discussion from the cosmological ground of the universe. Then, we presented a conceptual model of the dynamic universe, based on which we attempted to understand the fundamental conceptual basis of the survival and evolution of existence. This conceptual model of the dynamic universe may be considered the mechanistic model, describing how the most fundamental form of existence, as an atom, evolved into the complex existential stage of modern humans through a constant evolutionary flow.

The second chapter, 'Evolution and Survival of the Existence,' is more focused on the mechanism of the evolutionary transformation process. This chapter explains the fundamental mechanism of evolution and the survival process of the varied forms of coexistence. The first part of this chapter represents the evolutionary mechanism, while the second part is associated with the concept of survival. We considered the multi-dimensional evolutionary flow of various forms of existence to conceptualize a unified, mechanistic model of the evolutionary process. We then explored our discussion about how varied forms of coexistence interdependently survive together and form a particular system of survival.

The third chapter, 'Survival Dynamics,' is focused on the dynamic survival mechanism of the study. This is not only about the dynamic survival mechanism of the biotic form of existence on planet Earth; the survival of the abiotic form of existence, belonging to the universe, is also mechanistically the same dynamic process, akin to the dynamic flow of survival of the biotic form of existence. Based on the conceptual explanation of survival dynamics, we have proposed certain mathematical models to analyze the concept of survival dynamics mathematically. Throughout the first, second, and third chapters, we have proposed conceptual as well as mathematical models to analyze and understand fundamentally the dynamic scenario of the universe.

The fourth chapter, 'Survival of the Humankind,' is the application field of our proposed conceptual models. We have analyzed the current survival scenario of humankind based on our proposed models. The objective of this chapter is to understand how the primitive human survival process has arrived at the stage of today's modern human society and its civilization, through constant evolutionary flow. This chapter explains how the survival process of humankind, as its interdependent functional strategy, is being dynamically transformed, as well as the survival-oriented challenges faced by modern humans and their probable origins.

The fifth and final chapter, 'Development Dynamics,' is based on the comprehensive analytical concept of survival dynamics. We present our perspective on the ultimate meaning, purpose, and probable strategy of the development process. Through our proposed analytical models and the present survival scenario of modern humans, the reliability of the proposed development strategy has been examined. We have used the phrase 'Development Dynamics' as the chapter heading because development is a continuous process, applicable alongside the survival dynamics.

CHAPTER ONE

UNIVERSE AND ITS EXISTENCE

The universe, a system of survival, is the dynamic landscape of its varied forms of existence through space and time. According to the standard model of Big Bang cosmology (Lambda-CDM model), there are three elementary constructive components of the dynamically expanding universe: 4.9% is ordinary matter, 26.8% is dark matter, and 68.3% is dark energy. Stars, planets, and even living beings on Earth, as the visible forms of existence, represent only around 6% of ordinary matter; thus, they comprise around 0.3% of the entire universe. Fundamental constructive elements as atoms of this 0.3% observable existence, by its constant evolutionary flow, arrived at the stage of living beings, on the planet Earth, where humankind also may be considered the by-product of this constant evolutionary flow of living beings, ultimately originated from the fundamental state of existence as an atom.

As cosmology is the study of the origin, evolution, and ultimate fate of the universe, cosmological explanations of the universe with respect to different theoretical domains, such as religious cosmology and scientific cosmology, vary to a great extent. Even within the domain of cosmology of science, there is scientific debate about the concept of the universe. Different astrophysicists designated it as the universe, multiverse, or even megaverse. Whatever the diverse scenario of cosmological explanation about the universe, with respect to the different theoretical domains, there are also certain commonalities.

With respect to the different domains of cosmological explanation about the universe, one common ground is that the origin, evolution, and ultimate fate of the universe are cyclical processes. At one point, it takes birth, then evolves and expands, and at the end, dilutes into its original state. Stars are also formed from molecular clouds in interstellar space, and then they expand; finally, they are diluted by the gravitational collapse. The birth, evolution, and death of the universe, as well as its varied forms of existence, such as stars, planets, and galaxies, are a cyclical process, as is the cosmic reproductive cycle. For a similar reason, our universe was formed 13.8 billion years ago, as estimated through cosmic background radiation; whereas the Sun, as well as planet Earth, were formed around 4.57 billion years ago. It had taken almost one billion years, through the abiotic form of existence on planet Earth, to transition to the state of biotic existence via the process of abiotic to biotic evolutionary transformation. The first prokaryotic life on Earth formed around 3.8 billion years ago, whereas humans have been surviving for almost 2.5 million years. Human civilization is almost 12,000 years old; considering the agrarian era as the origin period of modern human civilization, it started around 10,000 years before the Common Era (BC). Within the 3.8 billion years of survival history of biological species as living beings on Earth, more than 99% of species have gone extinct. The total population of Homo sapiens is around 8 billion as of now, surviving along with distinct survivor category status as developed, developing, and underdeveloped, belonging to the seven continents and 195 countries.

Considering the 3.8 billion-year survival scenario of living beings, we may conclude that there is a natural flow of the development process, implicitly operational as a form of evolution. Humankind, along with its super-rational capacity, has been surviving for only the last 2.5 million years. Before that period, it was natural selection only, which was driving the evolutionary tree of living beings forward. Thus, it may also be considered that evolution itself is the auto-regulated process of development. As conceptualized by Darwin, the species surviving today are more able to survive. Those living organisms in today's world are more able to survive and more strategically fit in the

context of dynamic environmental scenarios. The Ability, capability, or fitness of a species depends on the combinatorial relative impact of the varied forms of coexistence (later discussed). The ratio of a particular population or species is moving upward or downward, that may not be because of the stability of the fittest survival strategy, or instability of the unfit survival strategy. In today's technologically advanced world, there is an irresistible scope of adaptation of the unfit survival strategy, by biased transmission. At the time of greatest technological power, modern humans are still dependent on the experimentation process of evolution by natural selection, to scrutinize the fitness strength of the alternate survival strategies, to gain evolutionary stability by the respective survival strategies.

The evolutionary history of the biotic form of existence is around 3.8 billion years; within this period, the mass extinction of living beings happened several times, because of different reasons. After each extinction event, evolved new species have emerged as different forms with functions; like dinosaurs never return in the evolutionary tree, after the species has gone extinct. Thus we may conclude that there is no ultimately predetermined destination of the multidimensional evolution process, for the biotic form of existence. However, an abiotic form of existence follows a particular existential state-oriented mechanistic path of the evolutionary flow. For example, in the evolutionary flow of the chemical compounds, in the process of evolution of a star; it is hydrogen to helium to carbon, and so on; it may not happen that the hydrogen atom directly evolves into the state of the carbon atom.

Nothing is absolute and permanent belongs to the universe; the observable universe is relative with respect to the perceptual state of consciousness, of the varied forms of existence. Even time does not have any absolute value, it is relative with respect to the state of existence; proximately it may be considered a scale to identify as well as compare two survival layer points of existence. Evidential relevance of the existence and survival of humankind also depend on their perceptual state of consciousness. Perceptual evaluation-driven conceptual understanding of the modern civilization of the two different individuals along with respective cognitive capacities is also different. In this context, humankind is explicitly attempting to develop them, on the ground of massive future uncertainty. A brief fundamental knowledge about ourselves may help us better, to forward our survival strength into a more purpose-oriented direction. Cosmology is the study of the origin, evolution, and ultimate fate of the universe; on the same notion, spiritual cosmology raised existence centric three most fundamental questions, with respect to the existence and survival of humankind; those are:

- Who are we?
- Where do we come from?
- Why are we here?

A brief review of these three fundamental questions may help us to conceptualize development theory in a fundamentally relevant manner. Thus, we have considered the analytical base of the thesis as a cosmological explanation of the universe. Considering scientific cosmological information as a reference, we have attempted to provide a balanced answer to these three fundamental questions, encompassing both scientific and spiritual cosmology, throughout this chapter. An

explanatory description of the varied forms of existence that belong to the universe, including humankind as a special form of existence, may help us to understand fundamentally who we are. The evolutionary flow of existence, from abiotic to biotic to cognitive survival levels, may be considered the evidential explanation for where we come from, which we will discuss later in this chapter. The survival purpose of humankind is associated with the ultimate fate of the universe; thus, it is cognitively determinative. Considering the entire notion of the universe's origin, evolution, and ultimate fate, humankind should have an ideal survival process and purpose as a benchmark accordingly. Since it is cognitively determinative, there are many contradictory thoughts operational within the society, concerning the ideal concept of the survival process and the purpose of humankind. However, the ultimate survival purpose of humankind, even cognitively determined, may also be considered the ultimate objective purpose of the planned development process. Thus, fundamentally, there must be a uniquely acceptable survival process and purpose for the whole of humanity, which will lead them toward a common platform in the development process. -----

CHAPTER TWO

EVOLUTION AND SURVIVAL OF THE EXISTENCE

The whole thesis as survival dynamics and development may subdivide into three phases, as we have mentioned in the introductory chapter. In the first phase of the study, proposed certain conceptual models about the dynamic universe and its varied forms of existence. In the first chapter, we have explained how the most fundamental form of existence an atom arrived at the stage of modern humans. We have presented a few models, to explain about stepwise evolutionarily transformed flow of existence. We have discussed briefly, the basic concept of existence, as well as the respective survival environment of existence. In this chapter, we shall focus our discussion on the fundamental mechanism of the evolutionary change process, as the in-depth study of the Intellectual Dimension (ID) of the EIE(3D) model. In the first part of this chapter, there is discussion about the evolutionary change of existence, and in the second part, we have expanded our discussion, in the area of survival of existence.

EVOLUTION OF THE EXISTENCE

Evolution is the change of deterministic components of the structural functionality of existence; as a reason, existential form with function changed accordingly. An existence's form with function is changed, because of something somewhere change; these are the deterministic components of the structural functionality. Like at the abiotic phase of existence, helium atoms behave differently than the hydrogen atoms, because of their different atomic power. Eukaryotic life behaves differently from prokaryotic life, because of the different genetic combinations of the two different domains of

living beings. Humankind belongs to modern society functions differently, as compared to primitive societies, because of their evolutionarily advanced cognitive capacity.

Those deterministic components of the structural functionality are like, for the abiotic phase of existence, it is the ratio of electron, proton, and neutron, which determines the respective atomic structure, as well as its functional pattern within the environment. For the biogenetic phase of existence, deterministic components are the genetic combinations installed within the living being, which determine the structure of the respective organism, as well as its functional pattern within the survival environment. For the biocognitive phase of existence, it is the cognitive information as memory and knowledge installed within the brain, through the mechanism of the cognitive learning process, which governs the cognitive functional patterns of an individual, or even a group of individuals. These cognitive functions at the collective level, determine the collective structure of the society; that collective structure also functions in a certain way, which may be considered the societal functionality. There is a natural mechanism of evolution, operational, belonging to all three mega phases (abiotic, biogenetic, and biocognitive) of existence and their survival process, as the natural mechanism of ID. Atoms, molecules, monomers, polymers, nucleic acid, bacteria as living being, plants, animals, and finally modern humans are the different domains of existence, evolutionarily added with the process, through this natural evolutionary mechanism of ID. All have evolutionarily emerged in a stepwise manner, from a single source, as the eternal state energy of the universe. Within the 13.8 billion years of the evolutionary history of the universe, belonging to three mega phases, millions of new existential forms have emerged in the evolutionary context, especially biogenetic and biocognitive; but the maximum number of survivor categories that have ever emerged, are not surviving today. More than 99% of the evolutionarily emerged biological species have gone extinct. By the same mechanism, within the ten thousand years of evolutionary history of human civilization process, the human cognitive functional layer-dependent survival process has been evolutionarily transformed unimaginably miraculous fashion; on the contrary primitive human civilizations have also gone extinct simultaneously.

If we consider the existence of the living being represented by its genotypic and phenotypic combination; survival of existence is the relatively interdependent strategic expression of phenotypes, as the individual-specific functionality in the collective survival context. Thus survival as the reactive functional strategy may also be considered the evidential ground of the respective form of existence. In the evolutionary context of biotic existence, genetically initiated change is expressed through phenotypic functional variation. On the contrary, functional expression as the survival pattern may act in a reverse way also; that is evolutionary change of environmental survival context, acts as the stimulatory driver of biocognitive as well as biogenetic variations.

As we have discussed in the previous chapter, there is no other purpose of the varied forms of existence, except survival only. Considering that notion, we may conclude that the passive purpose of evolution is survival opportunity exploration. Genotypic variation is naturally entering into the process through germ-line mutation as well as by genetic recombination, which is the driving cause of phenotypic variation. Natural selection stabilizes the fittest survival traits. Thus strategically fittest variants, with respect to the available strategic opportunity of survival within the environment, are enjoying extra advantage to survive. Thus the evolutionarily emerged variant is bridging the gap between the existing state of existence, and the available environmental survival opportunity-oriented expected state of existence.

NATURAL SELECTION IS BEING EXPANDED BY THE JUDGEMENTAL SELECTION PROCESS, BELONGS TO THE BIOCOGNITIVE SURVIVAL PHASE

The cognitive information-based rational judgment process is one of the key functional traits of the biocognitive phase of the survival process, which differentiates this survival phase from the abiotic and biogenetic phases of the survival process. At the biogenetic phase, natural selection plays a crucial role in stabilizing the fittest survival strategy as the evolutionary stable strategy (ESS). Natural selection is one of the key instrumental features of biogenetic ID operation. Along with the evolutionary addition of the advanced cognitive layer of the human brain, the biogenetic ID operative layer also has been extended into the biocognitive ID operative level. The rational operation of the judgment process is executed by certain logical principle grounds, like self-satisfaction-oriented utility-based cost-benefit analysis. Natural selection is a process by which beneficial survival strategies are selected over a period. Biocognitive ID rationally invents beneficial survival strategies, and injects them through the mechanism of cognitive and collective decision-making process, into the system. The biocognitive phase of survival is the pre-planned mechanism of survival, executed by the cognitive brain; whereas the biogenetic phase of survival is the post-executed stable pattern of survival by the natural selection process.

Biocognitive phase survival patterns of an individual, group, or nation are not stable at any particular point; they are constantly in evolutionary transformative motion because survival is a naturally dynamic process (later discussed). Planned process of development is stimulating the system, to move in a certain direction. Natural selection is still functional to stabilize the fittest pattern of survival as ESS. The rational judgment-based decision-making process, and natural selection to stabilize the fittest survival pattern, both processes are functionally active in the biocognitive phase of the human survival process. Somehow by the mechanism of the planned process of development, modern humans are rationally intensifying the natural selection mechanism to select, the desirably planned pattern of survival.

Consider an example; prenatal sex discernment is a crime, as considered by the collective ID operative layer. But this behaviour as prenatal sex discernment is naturally stimulated behaviour, because the human cognitive desire to reproduce a gender-specific baby that is capable of enjoying better survival value within the society, is a natural selection-regulated behaviour. But the collective ID operative layer is restricting people from this functional pattern, for the benefit of humankind. Because, if any specific gender is prioritized in the process of reproduction, by the biocognitive phase of the natural selection process, then the gender disequilibrium state will arise. In this context, planned judgment-oriented decision is dominating the natural selection process, for the well-being of humankind.

Modern humans play a dominant role belongs to the modern-day ecosystem. They are selecting in a planned manner, which species along with which survival traits (like hybridization process), and with how much frequency will survive, for the benefit of their survival process. From here onward, natural selection is slowly but surely transforming, into the mechanism of planned selection-based judgment-oriented decision process. -----

CHAPTER THREE

SURVIVAL DYNAMICS

Varied forms of coexistence, through the mechanism of functional interdependence, develop the system of survival, under which all the survivor variants survive as well as evolve, through the auto-regulated evolutionary mechanism of ID. This survival of the varied forms of coexistence belongs to the system, is a dynamic process in the sense, of how (functional strategy) any particular survivor variant is surviving, along with what survival mass or frequency, both domains are evolutionarily unstable. For example, within the ecosystem existential form with function of the primary producers and primary consumers, along with their respective survival ratios are evolutionarily unstable. The reason behind the process of this survival instability is the continuous flow of evolution of the varied forms of coexistence. Though every unstable state of survival of the system regains its stability also; thus it is a cyclically dynamic game of the system.

The world's human population has grown more rapidly in the last century than ever before. With respect to the carrying capacity, as one of the primary drivers of the population growth process, humankind has also improved their survival fitness, as another primary driver of the population growth process, by the application of their supernatural cognitive capacity. Cognitive intelligence is their greatest strength for power dominance, on every surviving biogenetic form of existence within the planet Earth. They are the king of their artificially developed kingdom. But this kingship status within the kingdom of living beings may not be determined by the democratic process, but rather by the manipulative use of their advanced cognitive ability, as the most efficient equipment for the survival competition. Thus it is not democracy; rather autocracy is the naturally adapted regulatory principle of the dynamic survival and evolution process of coexistence.

Belongs to the biocognitive phase of the human survival process every country, every population group, or even every individual member of modern society is constantly trying to improve their position on the ground of the EIE (3D) landscape. We may optimistically wish that, someday the whole population of mankind will arrive at the stage of equality, from where nobodies along with their respective survival strategies will play the role of functional invaders within the society or system. In economic terms, this is called the state of Nash equilibrium, but in the dynamic survival context, maintaining the state of Nash equilibrium is nonviable, because of the naturally dynamic nature of the system. Thus it may not be possible for humankind to erase gaps from the modern system of survival, on the grounds of the EIE (3D) survival landscape. Individual differences-oriented survival gaps are natural evolutionary by-products of the dynamic system of survival.

We have considered two domains of the intellectual dimension (ID); the domain of survival, and the domain of evolution. Varied forms of existence, by their functional interdependence, survive by a particular mechanism, as the survival domain of ID. Variant-specific survival strategies are also constantly evolving, by a particular mechanism, as the evolutionary domain of ID, which we have already discussed in the second chapter. There are survival context-specific multilayer intellectual mechanisms (as the survival domain of ID) operational to the system, to execute the survival process of the varied forms of coexistence; for example, the regulatory mechanism of structural

functionality, or the mechanism of survival dynamics. Here we have focused our discussion, on the mechanism of survival, as the survival dynamics. In this chapter, first, we have conceptualized the mechanism of survival dynamics; then based on that conceptual ground of survival dynamics, proposed certain mathematical models to analyse the dynamic scenario of survival. As the conceptual model of survival dynamics has emerged, based on three evolutionary mega phases, applicability of the inferred mathematical models to analyse survival dynamics, also should be consistent, in all three evolutionary mega phases.

The objective of this thesis paper is to draw a planned mechanism of development for modern humans, in the light of the natural evolutionary flow of survival. Modern humans arrived at the present survival state through that natural flow of evolution. If we intend to draw a planned mechanism in the light of natural mechanisms, then we must critically analyse natural mechanisms of survival and evolution, from the different theoretical perspectives. Considering different theoretical grounds of survival and evolution process, in the transdisciplinary context, have articulated the concept as survival dynamics, which is the fundamental ground of our proposed planned mechanism of development of the survival of humankind.

POPULATION DYNAMICS, REPLICATOR DYNAMICS, AND SURVIVAL DYNAMICS

The population dynamics concept is developed based on the variant-specific population carrying capacity by the system of survival. This population carrying capacity (K) is the regulator of the population dynamics equation as $\{dx/dt = rx(1 - x/k)\}$; regulating variant-specific population growth rate belongs to the system.⁹ But in the dynamic survival context, the carrying capacity of any survivor variant belonging to the sub-systemic survival level is not constant except the universal layer; the value of 'K' is also simultaneously dynamic in the dynamic survival context. Multiple factors are associatively responsible for determining the carrying capacity of any specific variant, when a group of variants interdependently coexist. One unit change of any variant within the system is the cause of the change of the 'K' value for the other survivor variants within the system. This is also not only the density-dependent factors like population carrying capacity that are only responsible for the population growth rate; rather the density-independent factors like competitive landscape or relative appropriateness among the variants belong to the system of survival, are also equally important influential factors, to regulate survival frequency or mass growth pattern, of the representative variants within the system. Population carrying capacity is only a factorial dimension of the multidimensional factorial impact on the population growth process.

Population survival fitness as the regulatory logical principle of the replicator dynamics equation as $\{\dot{x}_i = x_i(f_i - \Theta)\}$; disadvantageous species or survival strategy is replaced by the strategically advantageous more fit species, as the mechanism of replicator dynamics.¹⁰ But in the context of the coexistence of multiple species, and the co-evolution process of all those species as survivor variants belonging to any unique system of survival, the relative evolutionary cross-impact of all those species as survivor variants played a more important role in determining survival frequency or mass of any survivor variant within the system; where all the survivor categories are coexisting and coevolving. However, fitness of any survivor variant is dependent on the survival form with

functional status of the respective survivor variant. But this is not only survival fitness as the factorial criteria of survival, but rather relative appropriateness is also a more elaborative criterion, as the reason for the survival of any specific form with function of survivor, along with appropriate survival frequency; because relative appropriateness or the relative balance is maintained by the two-dimensional approach, existential form with function based relative balance and survival frequency based relative balance. In the context of survival as a system, the survival fitness of all the surviving population groups may not be equal, but even less advantageous survivor groups are also surviving because of maintaining the relative balance of the system to survive. Though they are hard-core strugglers, the farmer group survives under the modern system because it maintains the relative functional balance of the modern system of survival. Primary producers are consumed by the primary consumers belonging to the ecosystem, but primary producers also surviving belong to the ecosystem, by the impact of the relative balance based equilibrium property of the ecosystem, as a dynamic system of survival of the biogenetic forms of existence.

According to the evolutionary dynamics equation, the growth of the survival frequency or mass of any form of existence is dependent on the survival fitness of the respective form of existence. If we classify the world's human population into different groups, in terms of their profession, would find tremendous high discrepancy between the groups, in terms of their survival status. The survival status of a farmer is far lower than the survival status of a businessman or knowledge-centric professionals. It is true that based on the fitness criteria; certain survivor groups are enjoying a certain advantageous status of survival. But behind the survival scenario of any variant along with the higher fitness value, survivors along with the lower fitness value also have a certain role. If farmers or primary producers belonging to the social system or ecosystem are completely replaced by the business group or by the primary consumers respectively, then the businessmen of the social system or the primary consumers of the ecosystem will certainly not be able to survive. Their respective relative survival fitness values will naturally move in a negative direction. To survive any specific form of existence, its co-dependent functional groups of survivors within the system also have to survive. To sustain any system of survival, all the functional role players as the survivor variants have to survive. Thus we may conclude that survival is a co-dependent process of coexistence, where the relatively balanced state of coexistence may be considered the equilibrium point of the co-dependent system of survival. Survival co-dependency developed based on the functional cross-impact of the varied survivor variants. This functional cross-impact may be positive or negative, depending on the inter-variant as well as the system with variant correlation patterns.

Survivor's relative balance is the regulatory drive of the survival dynamics equation, logically backed by the concept of the 'struggle of equilibrium' to maintain relative balance. The survival dynamics concept is more explainable about how any system of survival is transforming into the next level through its variant level evolutionary change process, which is naturally auto-regulated. Density-dependent as well as density-independent factors of the population growth process, both are the responsible factors of relative balance-based survival dynamics. At any given survival layer point of the system, which variant will survive, is partially determined by the survival fitness of that variant. Population carrying capacity (K) also partially influences the variant-specific growth pattern belonging to every survival layer point of the system. Survival system relative balance determines which survivor categories along with what survival ratios will survive at any specific survival layer point of the system. Each dynamic concept has been derived based on a certain core theoretical principle, which is appropriate from the respective analytical viewpoint.

Conclusively we may say that the survival dynamics concept is to some extent different from the evolutionary dynamics and population dynamics. The evolutionary dynamics concept is based on the concept of survival of the fittest. Species along with higher survival fitness are getting an advantage to survive and reproduce, and over the period fittest survivors along with the advantageous survival traits are naturally selected over the others. The population dynamics concept is functional, based on the concept of population density-dependent growth control mechanism. Population carrying capacity is the limiting factor here. However, behind the process of evolutionary dynamics, density-dependent and density-independent both the controlling factors are functional. The concept of survival dynamics has emerged from the base concept of the struggle for equilibrium of the varied forms of coexistence as survivors belong to the system of survival. This struggle for equilibrium is based on the two-dimensional relative balance properties of the varied forms of survivors; those two dimensions are existential form with function-based relative balance, and survival ratio-based relative balance. Within the system of survival, as the survivor's form with function or frequency or both are evolutionarily changing continuously, one unit change of any variant has a multidimensional cross-impact, on the survival form with function and frequency of other survivor variants within the system. This mechanism ultimately produces a dynamic momentum of the survival system. Density-dependent and density-independent, both the factorial domains are playing their respective roles, behind the dynamic process of survival. But the ultimate driver of the survival dynamics is the struggle for equilibrium, by the naturally active operation of the ID of the varied forms of coexistence, and their respective system of survival.-----

CHAPTER FOUR

SURVIVAL OF THE HUMANKIND

The world human population as of now is 8 billion and surviving belongs to the modern social system of survival. This is the biocognitive phase of the survival process, where humankind performs cognitively determined functional roles and responsibilities of the society to survive, which are the determinants of their respective varied survival status. This biocognitive phase of the survival process of humankind has been evolutionarily transformed by a revolutionary manner, from its most primitive stage, like human civilization of the agrarian era. Alongside the constant evolutionary flow of the cognitive brain function, biocognitive phase-specific survival environment of humankind emerged as well as evolved multi-dimensionally like economic, technological, or sociocultural environmental domains of survival. All those artificial factorial domains of survival are the instruments of the modern survival process, as the cognitive functional by-products of humankind. Because of their extraordinary cognitive capacity, today's modern humans are extremely self-conscious about their proximate survival process and purpose; they are cognitively aware of their present state of existence, present survival issues, and future probable threats of humankind to survival. Their survival process is no more dependent on the natural selection process only; conscious cognitive (rational) judgment-based decision is the primary regulator of their day-to-day

survival functions. Modern humans are consciously more concerned about the well-being of humankind, as surviving species of the ecosystem.

The total world human population is segregated by seven continents and 193 countries. Their culture, demographic structure, geographic environment, and associated survival status are all discriminatory factorial domains that are different from each other, with respect to the continent-specific, as well as country-specific separated population groups. Each country is an independent society, with an independent system of survival. Society is the combination of collective existences and their respective survival environment, as the survival landscape of respective country-specific population groups. Alongside the evolutionary flow of cognitive brain function, human biocognitive functional patterns (human behaviours) have also been evolving constantly; human society has also grown, becoming more complex simultaneously. Today's modern human society is the evolutionarily advanced version of the primitive simple society. Because of the preliminary cognitive functional capacity, human behaviour belonging to the hunter-gatherer or even to the agrarian society was very simple. Alongside the evolutionary flow of the human brain (genetic, structural, and functional layers of the brain), behaviour functions have also evolved simultaneously; as a result complex structure of modern human society has emerged, and primitive civilization has been replaced by its modern version. The strategic survival advantage of the human cognitive function is external functional flexibility (behavioural flexibility), the capacity to make functional context-specific rational judgment-based reflective decisions. By the evolutionary addition of an advanced cognitive layer of the human brain, functional patterns of humankind evolutionarily transformed from the predetermined (as genetically determined instinct-driven) to post-determined (as implicit or explicit judgment-based planned decision-oriented) futuristic process.

By the constant evolutionary flow of the biocognitive phase of the survival process, external functional patterns have been diversified in many directions. This multidirectional functional pattern of humankind interdependently developed a systematic collective approach of the society, as the social system. Alongside the evolutionary flow of external functional patterns, different functional role modules like the farmer, labour, trader, or businessman have emerged within the society, based on the societal functional requirement. This inter-modular systematic functional pattern of modern human society is operationally quite similar to the functional operation of biofilm as a bacteria colony. In the biofilm, every member produces public goods and re-utilizes them; similarly, every member of modern human society performs a certain functional role to produce goods and services and redistribute them within the community. Nation-specific system economic status is the most advanced by-product of this modern, systematic, relatively interdependent survival process. The ultimate difference between the biogenetic and biocognitive phases of the survival process is rational judgment-oriented cognitive functionality; whereas biogenetic layer functionality is a genetically regulated instinct-driven process. In the context of the survival of modern humans, biogenetically originated instinct-driven functionality, as well as rational judgment-oriented cognitive functionality, both domains are operational to execute the survival functions of modern humans.

MODERN CIVILIZATION

Through the biocognitive phase of the evolution process, primitive human society was transformed into the state of civilized society; then civilized society has been transformed into the state of knowledge-based modern society. This may be considered the evolutionary trend of the human survival system. Civilization status at the primitive stage or the modern stage is the respective functional status of the social system as the survival system of humankind. As the system of survival is constantly in evolutionary motion, the functional status of the system that is the state of civilization is also dynamically transforming into the next level simultaneously.

According to the history of the human civilization process, it has been grown separately, at different geographic locations of the world. Different environmental survival circumstances belonging to different geographic locations have stimulated respective civilizations to grow their survival context-specific relevant survival skills. This is one of the mechanistic drives of the region-specific multidirectional evolutionary flow of the human civilization process. For example, certain civilizations are more industrially advanced than others; because their survival circumstances stimulated them to invent as well as adapt to the industrial revolution faster than the other agriculture-dominant civilization processes.

Modern civilization is the cognitively collective functional outputs of the social system as the survival system of modern humans. Under this system of survival, an individual alone certainly would not be able to survive at this survival level; because different individuals in the society are performing respective social functional roles to attain the common purpose of the collective survival process. The modern civilization of humankind is the by-product of conjointly shared operational outputs. To survive as an individual within the society with its fullest potential, all the functional role modules of the society have to function by their fullest potential. Thus an individual's survival potentiality at its most modern level, is simultaneously dependent on the survival potentiality of the system of survival, at its respective EIE(3D) survival layer point.

UNCIVILIZED MODERNIZATION

Civilization is the functional status of the social system as the survival system of modern humans. Based on this functional status of the system of survival, humankind cognitively designated their present civilization status as the modern or even postmodern state of the civilization process. But all the modern survival strategies, as the functional strategies followed by the modern humans, may not be considered the civilized way of survival.⁶ Functional strategies, those creating obstacles with respect to the attainment of passively ultimate survival purpose of humankind as living beings, may be considered uncivilized practices, as survival issues. If we compare 21st century human society and the human society of five thousand years before, there was also enormous number of survival challenges, like health-related problems, natural calamities, or nutritional insufficiency in front of humankind, like today also have. But the survival-related challenging issues that have come into cognitive consideration like corruption, pollution, terrorism, global warming, or clash of civilizations, have been increased in the modern period, as compared to the ancient period. But surprisingly, the worst news is that the number of survival issues caused by rationally irresponsible human behaviours is ever-increasing.

As the status of civilization is being progressed, the ratio of uncivilized survival practices has also increased, on the contrary.⁷ They are the natural functional obstacles and may be considered survival issues. As humans are evolving to become cognitively more rational, this frequency of uncivilized survival practices should have gone down, instead of growing up. Unfortunately, this is a negative symptom for the modern species, on the way to their civilized journey of survival. -----

CHAPTER FIVE

DEVELOPMENT DYNAMICS

The universe is dynamic in the sense, that all of its elementary constructive components including living beings are constantly evolving, by the auto-regulated natural mechanism. With respect to the specific layer point of the dynamic system of survival, relatively inappropriate particles, living beings, or even inappropriate survival strategies in the dynamic survival context have naturally been going extinct, through the background extinction process. Modern humans are the most advanced form of living beings, as the biogenetic form of existence, surviving through the biocognitive mechanism of the survival process. Because of the dynamic nature of the system of survival, their biocognitive survival mechanism as the social system of survival is also constantly transforming into the next level of the civilization process. On the way to their evolutionary journey of the modern survival process, advanced forms of survival issues and challenges are also arising, destabilizing the relative balance of their modern survival process, intra-systemically as well as inter-systemically both ways. But humankind dreams of surviving forever, even if their relative existence proved to be irrelevant in the future survival context of the universe, as the survival ground of its varied forms of coexistence. However, in the modern survival context, humankind is already experiencing the irrelevancy of their modern survival patterns, within their primary as micro as well as secondary as macro survival environment. But to survive for long, they have to readjust with their primary as well as secondary survival environment, through the appropriate execution of cognitive as well as collective ID operative layers. There is the ultimate scope of implication of the planned process of development, on the way of their civilized journey of survival of humankind.

Modern society, as the system of survival of modern humans, belongs to an almost eight billion population surviving throughout the world. This ratio of surviving human population was enormously low just two centuries before. Massive evolutionary growth of the cognitive and collective ID operative layers, throughout the modern human civilization phase has changed the survival scenario of modern humans revolutionarily. Biogenetic and biocognitive both the existential survival layers of modern humans are being evolved through their every associated survival functional domain. Biogenetically, structural and functional layers of the modern human brain are now more capable of executing biocognitive survival functions super-efficiently, as well as in a purpose-oriented manner. Every individual member of the modern human society is born under a

certain concept of survival, with respect to the cognitive concept of speciation, which is inherently installed (genetically, cognitively, and collectively) within the existence as an individual human being. Installed survival traits are being expressed throughout the lifetime, as a form of application of the installed survival strategies. Based on the level of functional efficiency, and relevance of every survival strategy, an individual or community enjoys survival benefits of the modern survival system, in terms of the standard of living, life satisfaction-oriented survival happiness, life expectancy, and more.

Human civilization process may not have any biologically determined ultimate destination point to arrive in, through the constant evolutionary flow, except for survival only. Of course, there is a cosmologically predetermined destiny point of the universe and its associated form of existence. Thus the ultimate fate of the survival of humankind as associative elementary members of the universe is also associated with the cosmological destiny of the universe, as well as its associated forms of coexistence. Thus biocognitively, modern humans should assign meaning (purpose) to biogenetic life as modern humans in such a way that will provide maximum benefit to the survival and existence of humankind, on the ground of the cosmological destiny of the universe as well as its associated members.

Planned process of development may be considered the collective as well as individually pre-planned defensive as well as offensive functional actions, with respect to the future probable instability of the survival equilibrium of modern humans. It is the process of consciousness, an explicit attempt to improve the cognitive as well as collective functional patterns of the system, supported by biogenetic functional efficiency. Every given survival layer point of the survival dynamics curve is the unique equilibrium point, with respect to its varied forms of survivors. At any particular survival layer point, if any one survivor category individually demands to transform its survival status beyond the present capacity level of the system, then the whole system of survival along with its relative systems have to be transformed accordingly to readjust with the desirable new equilibrium point. For example, suppose a farmer group of any country-specific system of survival, desires to improve their survival status beyond the presently maintained survival status by the system, then the functional outputs of the other survivor groups like the business group, knowledge group, or the labourers and workers must be relatively appropriate, with respect to the desired improvement criteria of farmer group. Because the functional performance of the farmer group within the system, which is the determinant of their survival status, is associated with the functional outputs of other functional groups of the society. Thus the planned process of development is not individualistic; rather it is a process of transformation of the whole system of survival, as well as its associated systems.

Any particular survival layer point (Y_i) is a by-product of the respective survivor variant's correlatively interdependent equilibrium state. If we consider the planned process of development as the layered advancement of the survival system (Y_i), by balancing the disequilibrium state of the existing survival layer point, into the reformative equilibrium state at the advanced level; this hypothetical ground may support both the domains of competitive strategic decision mechanism; offensive mechanism of competitive decision-making as the layer point advancement of the survival system, as well as defending the system of survival by rebalancing the disequilibrium state of the system.

The most obvious challenge in front of modern human civilization is to identify survival strategies (cognitive and collective judgment-oriented), which will add the highest fitness value in the process of survival of humankind. Survival is a system, and we are planning to develop that system. The concept of life is unique at its most fundamental level; variations arising at the survival system level that is how fundamentally unique the concept of life is surviving. Through the process of development, our goal is to improve the status of the human survival patterns, as the different ID operative layers-oriented mechanism of survival of the fundamentally unique concept of living being as existence. This variant-specific mechanism of survival is the determinant of survival fitness of the respective forms of living beings.

The modern system of survival has been developed by the functional operation of cognitive as well as collective ID operative layers of humankind. Operation of ID is the natural auto-regulated process; through this mechanism, the system is misbalancing its existing system equilibrium, as well as rebalancing equilibrium at another survival layer point. This is the natural dynamic mechanism, fundamentally operational, belonging to all three mega phases of existence and their respective survival processes. But belonging to the modern system of survival of the biocognitive phase, this nature-driven auto-regulated dynamic survival process is now being sifted into the mechanism of explicitly conscious cognitive desire-driven cognitive as well as collective ID-regulated process. The planned process of development is most relevant in that context, where the natural mechanism of disequilibrium to equilibrium cycle is being gradually grabbed by the rational judgment-based decision-making process of the neuropsychological layer of the brain.

CRISIS-ORIENTED MECHANISM OF FUNCTIONAL REFORM, AND THE PROCESS OF DEVELOPMENT

Any form of functional crisis in the modern system of survival is the symptom of system equilibrium imbalance. There is an auto-regulated mechanism of ID operational, to transform a crisis-oriented disruptive system into the next equilibrium point, by the functional evolutionary reformation process. This is the system-operated natural reactive process of evolutionary transformation, with respect to any functional crisis as a survival challenge. The planned process of development may be considered the cognitive brain executing an explicit attempt of functionality, backed by certain objective purposes. Thus in any crisis-oriented situation of the system, when survival dynamics is already operational by the reactive mechanism, the explicit development process must be proactive, on that mechanistic ground. It means that the development process should act as the preventive mechanism of the futuristic probable threats of the system of survival; rather than just reacting like a natural genetic mechanism of the stimulatory readjustment process. Belonging to the nation-specific modern system of survival, the administrative and regulatory department take necessary transformative action, whenever there is a crisis; this is an example of the natural reactive mechanism of the dynamic system. We may not consider those reactive cognitive as well as collective functions, as conscious developmental initiatives.

Consider the context of any renowned social reformist, as the dominant system stimulator; social reformists are the catalyst to transform society from its crisis-oriented struggling disequilibrium state, into the stable equilibrium state. It may be considered the specialized form of

functional role module, operationally activated within the system, in the crisis-oriented survival context. Belong to every era-based human modern civilization process, social reformists from religious as well as scientific both the domains-oriented backgrounds have played central roles, in carrying forward modern human civilization process at its present state. If we look back past two thousand years of the evolutionary history of the human civilization process, we would find that at every critical stage of the human civilization process, certain great social reformers played crucial roles at that layer point, to transform respective civilizations into next-level. Great reformists belonging to every layer of the civilization process had played revolutionary roles, to rectify as well as facilitate respective critical stages of the civilization to promote to the next level.

Modern humans are also facing an enormous number of survival challenges. Alongside the evolutionary flow of survival patterns, survival challenges are also evolving simultaneously; this is because of the natural auto-regulated mechanism of ID. If the survival challenges are evolutionarily arising automatically in a continuous rhythmic fashion, then there should be an automatic mechanism to redress every survival challenge as well as every disequilibrium state of the survival system. It would be irrational, that in every crisis-oriented functional context, somebody will play the role of rescuer, or another way, to reform the system, there must be a certain crisis as the stimulatory drive of functional reaction. Rather it would be safer if we proceduralize the operational mechanism of the system in such a way that the deleterious survival strategies will automatically be eliminated from the system. By the initiative of the planned process of development, we may replace the functional role of reformist, as rescuer of the crisis-oriented dynamic system; moreover planned process of development should act as a preventive measure, with respect to the probable threats of the system of survival, through the proactive mechanism of functionality.

DEVELOPMENT AS FREEDOM AS THE PLANNED PROCESS OF DEVELOPMENT

Universal freedom, as the natural desire of salvation, liberty present in every evolved form of existence of the universe, which is the ultimate destiny of the dynamic flow of the universe. However, in the dynamic survival context of the varied forms of coexistence, environmental freedom acts as an instrument of stimulation; it generates the opportunity for the existence to transform, or to evolve into an environmentally relevant direction. There are multiple sources of stimulatory drives operational at every ID operative level. Freedom accelerates the cumulative strength of all those drives of the natural evolutionary flow. Suppose at the collective level economic growth of the country is stimulated by the progression in science and technology, as well as the available skilled workforce. Thus available level of freedom, with respect to all those environmental factorial domains as probable stimulatory drives, determines the scope of economic growth prospect of the respective country.

Suppose there is a family with sufficient financial capability, surviving under the modern system of survival. The family's professional background is agricultural farming-oriented, surviving belong to middle-class socioeconomic status. Now suppose there are sufficient academic facilities available within the society for higher studies. Thus the family's economic background, as well as academic institutions for higher studies, both the domains-oriented freedom is available to the family. Now

the question is, will the younger generation of that family go for higher studies or not? This judgement process not only depends on the available economic and academic freedoms; rather the family's rational judgement about the education for its future generation is dominantly influenced by the interactive survival landscape, with respect to the varied survival strategies operational, in the social interactive context. If the members of that family in the social interactive context perceive that higher studies may provide better survival benefits, than the minimum standard as required academic qualification for the farming profession; then the young generation of that family will be auto-stimulated naturally by the activation of cognitive as rational desired intention through social interaction, to go for the higher studies, if the cognitive capacity of the new generation also supports the same. Notice here that, only freedom on the necessary domains is not sufficient to initiate transformative change; something extra (in the form of desired intention) motivated strength is required to capitalize on available freedom in the necessary directions. Freedom itself is one of the stimulatory drives of desired intention.

Consider another example the class struggle. The dominant, capitalist class of the population survives better than the labour group of the population. In the social interactive context, this concept harnesses the concept, of social alienation, which also stimulates the desired intention of the labour group of the population to transform into the next level. Now if the collective level (government) also provides necessary environmental freedoms, like economic and academic freedoms for those backward classes of the population, then they obviously will uplift themselves to the next survival level. Notice here that, other than necessary environmental freedoms, social interaction of the labour and capitalist classes of the population is also playing crucial role in propagating logically-driven cognitive desired intention as survival status enhancement, in the backward class of population. For both case examples, individual cognitive as well as collective ID operative layers are playing equally important roles, to execute the process of development.

The planned process of development should be mechanistically well-balanced enough to redress survival issues, as the by-products of the modern survival process, simultaneously along with the process of advancement of the survival status of modern humans. But the survival issues and challenges are moving dynamically parallel alongside the dynamic flow of the survival process, naturally or by the restoration of any planned mechanism of development. Whatever mechanism humankind may follow to transform human civilization into the next level from its present state, survival-related issues and challenges with respect to the transformed survival layer of society will also be there. If the collective ID operative layer provides freedom on the necessary dimensions, which humankind values most, and also has the reason to consider valuable to grow, by the cognitive layer ID operation; still it may not be possible to make society become issue-less and survival challenge-free. In that context, survival issues and challenges will also evolutionarily transform into the next level.

Freedom plays a crucial role as a stimulant of the evolutionary change process, but only freedom alone may not be sufficient to restore the dynamic flow of the system. Moreover, in the context of the survival of modern humans, freedom should be provided only on those dimensions of the survival process, in which direction the planned objective purpose-oriented development process of civilization intends to move. This is a collective judgment-oriented naturally selected process, about which survival strategy is beneficial for humankind to survive better, where individual decision-selection is more biased. If humankind can manage all these things, still there would be survival

issues and challenges, which will demand another explicit effort to redress, in the respective survival context. Considering the whole analytical ground, it may be possible that the facilitation and rectification of the dynamic evolutionary flow, as the planned developmental instruments may play respective vital roles in this context, to drive-forward the modern system of survival into a more ultimate survival objective purpose-oriented direction.

SUSTAINABLE DEVELOPMENT AS THE PLANNED PROCESS OF DEVELOPMENT

The core logical principle behind the process of sustainable development is to develop humankind in such a way that the future generation may survive uninterruptedly. In this regard natural capital must be conserved and used wishfully, considered the strong sustainability. On the contrary manufactured capital may substitute the place of natural capital, considered the weak sustainability.⁴⁷ But is it possible to make the system of survival become issue-less and survival challenge-free forever, by taking any particular sustainable action; unless we consider sustainable development as a continuous process; because survival challenges are also evolving along with the evolutionary flow of existence, and their system of survival. As we have discussed in the second chapter, survival challenges play the role of evolutionary drive; every survival challenge is the opportunity ground for evolutionary exploration. If modern humans become unable to perceive advanced levels of survival challenges, then civilization will certainly stagnate into that particular survival layer point.

Natural evolutionary fact is that, if we use natural capital rationally or irrationally; the flow of the manufactured capital, as a means of the survival challenges will be there, by the automatic operation of ID. Functional innovation at all three ID operative levels is system-regulated automatic processes. At least modern humans have the potential to find solutions to any level of survival challenges, by the use of their cognitive capability collectively in that respect. Too much defensive strategic approach to survival in the name of sustainability may hinder the flow of cognitive growth-oriented productivity. Modern humans are surviving within the phase space of the biocognitive survival layer. Cognitive growth is the primary driver of the progression of the civilization process symmetrically. Jeopardizing cognitive functionality, in the name of sustainability may produce even more dangerous survival circumstances for humankind.

Another complexity to follow the principle of sustainable development is that the concept of right and wrong about any survival strategy, with respect to its survival circumstances, are relative matters. A survival strategy is right in a certain survival context, but in the other survival context that same survival strategy for the same population group may not be right equally. Massive industrialization was right for the population belonging to the 17th and 18th centuries, because human cognitive perceptual capacity was not at that level to conceptualize the origin of future probable threats, as the consequences of industrialization; but in today's context, this consumption-centric materialistic survival pattern is the primary driver of environmental pollution. It is very difficult to predict the multidimensional cross-impact of any survival strategy, which is entering into the process today, through the triple layer (genetic, cognitive, and collective) ID operation process. For example, certain initiatives taken by the cognitive and/or collective ID operative layers today

may produce negative responses at the genetic survival level that would be surfaced tomorrow. Lifestyle-oriented diseases like diabetes, depression, and hypertension are a few examples in this regard. New strategic entry through the three ID operative layers is an automatic process, and sometimes it is beyond the capacity of our explicit cognitive control mechanism to restrict them, where rectification as the planned developmental instrument has a continuous role in rectifying the system, by eliminating deleterious strategy from the system.

As we have already discussed, survival is a relatively co-dependent game, where the fitness credibility of any survival strategy also depends on the relative impact of multidimensional environmental factors. Based on the principle ground of sustainable development, today's selected fittest survival strategy may prove to be unfit in the context of future survival circumstances. It may also be possible that, from one challenging ground selected survival strategy may prove to be deleterious, with respect to the other grounds of the multidimensional survival process. The origin of the lifestyle-oriented disease is an example in this regard. Thus there must be a backup developmental mechanism, to eliminate future deleterious survival strategies from the system. In that respect, the role of rectification as a strategic developmental instrument is continuous; even if modern humans adopt survival strategies on the grounds of sustainable development goals (SDG).

In today's world, there is much buzz about sustainable development; even the United Nations (UN) has added SDG to its action plan agenda. But the problem is how a nation, group, or individual will operationalize a sustainable development agenda in day-to-day life; in that respect the concept of development as freedom is more practical implication-oriented. If collective existence or authority provides necessary freedom, with respect to the needed functional dimensions, then the system will automatically move forward toward the free direction. Thus it is not only the question of finding a sustainable survival strategy; rather it is also the question of implementation of the right strategy at the right survival layer point.

Sustainable development should be considered the objective statement of the planned process of development. Like the attainment of infinite bliss followed by infinite existence as our proposed objective statement of the human survival process. Sustainable development as an objective principle also supports the ultimate objective purpose as the infinite existence of humankind. But how humankind will attain those objective purposes, as the mechanism of the planned development process is the uniquely relevant area, where our proposed concept as the planned development process is relevantly applicable. We are all well aware of environmental pollution as a survival issue. The sustainable development principle claims that we need pollution-free industrialization, as well as restoring pollution-free survival habits. But in the evolutionary context, the system is already maintained by a rhythmic pattern; we may not change everything overnight. To transform the existing layer point of the survival system, we have to do something, somewhere, so that the system may move forward safely. There is the relevancy of this thesis paper; explains the attainable objective purpose of humankind, as well as also explains the mechanism of the objective attainment, as the planned process of development.

There was a panel discussion at the World Economic Forum, on the topic of sustainable development in the context of the fourth industrial revolution, which is technology-driven. Almost all the panellists agreed upon one conclusive point, which is educating world citizens to adapt to this technology-driven revolutionary transformation process of society, is a big challenge. Notice here one thing, we are certainly not going for the rejection of the technology-driven evolutionary flow of

society, in the name of sustainability, which creates temporary survival challenges for modern humans; rather we are trying to adapt to the natural flow of the evolutionary change process. People are considering it as a survival challenge, because to make life sustainable, in the context of the fourth industrial revolution. Another point is that the fourth industrial revolution itself is not a planned initiative taken by the government of any nation; rather it has been naturally entering into the process, by the mechanism of self-administered evolutionary flow executed by ID. This revolutionary transformation by the evolutionary flow is driving forward civilization into the next layer point of the survival dynamics curve. This is an example of the evolution-oriented natural mechanism of the development process. The sustainable development goal is facilitating humankind to adapt to the natural evolutionary flow of the multidimensional survival process of coexistence. Thus the natural evolutionary flow of the survival dynamics plays a role as the primary driver of the human civilization process; whereas sustainable development goals play a secondary role as a facilitative drive for the progression of the civilization process. The same analytical notion is also applicable on other challenging grounds like environmental pollution, economic inequality, or clash of civilizations, of the human civilization process. Our proposed mechanism of the planned development process is applicable from the primary drive level of the survival dynamics; as we are accelerating the dynamic evolutionary flow of the survival system, by the developmental objective purpose-oriented facilitation and rectification mechanisms of the survival strategies. -----

(Note: Book is available worldwide through online platforms like Amazon, Google play)

