
The Principia Nature 1.

By

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Abstract:

The Globalization age and the biosphere crisis are making a more challenging present. It is important to research the present for the scientific truth about the social phenomenon that the humanity is facing in the third millennium. The Nature has not been well researched due to agendas of the profit and war philosophy of present world leaders. The Nature research has to overcome a gap between present knowledge and needed knowledge. That is what we are presenting here.

Key Words:

Basic Environment, Co-operation, Continuum, Complex and Complicated, Globalization, Global Studies, Interdependence, Interaction, Nature, Operational Research, Requisite Holism, Social Responsibility, Solar System, System Thinking, The Climate Change System, The Planet Earth Requisite Holistic System, Universe System,

Foreword

What is the truth? »The Philosophy of the Truth« has been anthropocentric philosophical term/asset/issue from commencement of the humanity and it is an ever lasting and never ending discussion. Truth has been and is a quality of each individual, local community and society (The Global Humankind Community). Meaning and philosophy of the truth has been discussed and we will make effort to present the most recent philosophy of the truth.

The truth is a topic, which has been discussed countless times and by countless people during 200000 years of humankind history. By the Nature heritage Homo sapiens has ability to express his thinking, acting, co-ordination, feeling, and many more personal and societal issues. Of course, with evolution of Homo sapiens and our civilization the truth of pre-antiquity humans has got many more meanings and become nowadays a very complex or complicated issue. Please understand our discussion as a system thinking practice.

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From Pre-stone and at Stone Age, antiquity, great civilizations (China, India, Persia, Babylon, Egypt, Greece) to Roman Empire, great cultures of other continents (North, Latin and South America, Oceania and Australia, and Africa), Mediaeval times, Renaissance, Baroque, Pre-industrial and Industrial ages, Information, and Innovative societies to the age of Globalization, truth has always been an integral part of each and one representative of Homo sapiens and society - as outlook of Homo sapiens societal ability for living and continuum.

At present the Globalization age society could be described as follows: »Globalization is amalgamation of national economies into united world system based on rapid capital movement, new informational openness of the world, technological revolution, adherence of the developed industrialized countries to liberalization of the movement of goods and capital, communicational integration, planetary scientific revolution, international social movements, new means of transportation, telecommunication technologies and internationalized education«.²

We shall mention another description “*Globalization is a natural process of the evolution of the Homo sapiens social species*”³. There are many more definitions but it is not the purpose of this presentation to deal with other definitions.

In our research *the truth* could have a commencement: The philosophy is the search for knowledge and understanding of the Nature, and meaning of the universe and life. In our opinion truth is: The quality or state of being true; Loyalty; Trustworthiness; Sincerity; Genuineness; Honesty; The quality to being in accordance with experience, facts or reality; Conformity with fact; etc⁴.

However the truth has a centric thinking position and it is the truth, which is always a deciding issue for quality of research. Today there are many theories about truth.

To mention some⁵: from: »The neo-classical«, »Tarski's«, »Correspondence«, »Realism and anti-realism«, »Deflationism« and there are many more theories from antiquity and consequent ages, which we are not discussing or mentioning. We may discuss it at large as a philosophical viewpoint, but we shall try to present the real research as the truth about *the Nature*.

The Nature, The Universe/Cosmos, The Star Sun System, The Planet Earth System, origin of humans etc are parts of the large content we call »**The Nature**«.

Present understanding of the Nature by humankind has been built up as long as the present civilization has been evolving and we hope it will continue so for many more generations of humans.

Discussion:

² At page 220 of »Global Studies Encyclopedia« ISBN 5-05-005719-1, 2003.

³ New description of the Globalization as a natural process of the evolution of the Homo sapiens social species has been result of the Prof. Dr. Timi Ecimovic research, working together with many scientist from the Global Studies, and was prepared for this publication as first statement.

⁴ Webster's NewWorld Dictionary, Second college edition, 1984

⁵ Wikipedia – Stanford Encyclopedia of Philosophy



We, humans, we have eyes to look but many times we look and we see nothing. We, humans, we have ears for hearing but many times we hear but understand nothing. We, humans, we have the ability to speak, but many times we talk but say nothing. We, humans, we have a brain to process what we see, hear and communicate but many times our brain offers us nothing. Learning how to learn for the whole life could be useful, but is not common with present-day people. It could be fault of the nature, what we do not believe, but what we do believe, is that learning how to learn should be a part of our education from the birth, baby age to the final day of our rest.

The nature is where we belong and it is our mother and father. Humanity is a part of the nature but has no rights to exclusivity whatsoever.

In 2002 we published “System Thinking and Climate Change System (Against a Big “Tragedy of the Commons” of all of us), Economic, Mayur, Mulej and others, what was first publication in the book form after many presentations worldwide on systemic background of the climate change and introduction of the **climate change system**.

The next in line was the book “The Information Theory of the Nature, and” published in 2006, Ecimovic, ISBN 961-91826-1-8, the paper book, and CD. Third part was “The Environment Theory of the Nature”, which was published in the book “The Three Applications of the System Thinking”, Ecimovic, 2010, ISBN 978-961-92786-0-4, bilingual paper book and CD in Slovene and English, As usually in our life the things have a turned-around following order and the last should be the first.

In co-operation with many scientist and researchers worldwide, we concluded two trilogies:

- “The Nature” is a trilogy of: “System Thinking and Climate Change System (Against a big “Tragedy of the Commons” of all of us)”, T. Ecimovic, R. Mayur and M. Mulej, and co-authors, 2002, ISBN 961-236-380-3, a book 302 pages, soft cover paper edition and CD; “The Information Theory of the Nature, and” published in 2006; and “The Three Applications of the System Thinking”, in 2010,
- “The Sustainable Future of Mankind” is a trilogy of: “The Sustainable (Development) Future of Mankind”, Ecimovic, Bunzl, Esposito, Flint, Haw, Mulej, Shankaranarayana, Wilderer, Williams, and Udyavar, 2007, ISBN 978-961-91826-2-8; “Sustainable Future, Requisite Holism, and Social Responsibility”, Bozicnik S., Ecimovic T., Mulej M., digital book on sustainable future been number two of the trilogy, 2008, ISBN 978-961-91826-4-2; and “The Sustainable Future of Mankind III” Ecimovic, Esposito, How, Mulej, digital book, ISBN 978-961-92786-2-8, 2010.

Both trilogies are displayed at www.institut-climatechange.si

All in all what we are trying to present here is the truth about the nature.

We (humankind global community) are a part of the whole. The whole from the viewpoint of system thinking and requisitely holistic approach is the planet Earth requisitely holistic system, which is a part of the whole of the star Sun system, which is a part of the whole of the Milky Way Galaxy, which is a small part of the whole of the Universe, The Universe is with all known and much larger unknown parts to humanity the whole that we may see as the Nature. The rules and techniques of the nature are not known to us for the whole of the nature.



A small part of the knowledge of it is a treasure of the humanity, and we have to research and learn much more, to be able to understand more about our sustainable future.

The epic song of the humanity has some 203 millennia long history. From its commencement via prehistoric times and civilisations confrontations of Homo sapiens neanderthalensis and Homo sapiens sapiens, Stone ages, great civilisations of Antiquity and times of Confucius teachings, Siddhartha Gautama Buddha philosophy, classic Greek philosophy (Socrates, Plato, Aristotle and others), horrible times of medieval ages, industrialisation, information, and innovations we have reached the globalization of today. We hope the dark ages of humanity will end, and a new era of sustainable future of global humankind society will commence during the 3rd millennium of our times.

Many individuals marked their times and influenced evolution of the society, to mention some; Confucius (551 – 479 B. C.) of China, Siddhartha Gautama Buddha (563 – 483 B. C.) of India, Socrates (470 – 399 B. C.), Plato (427 – 347 B. C.) and Aristotle (384 – 322 B. C.) of ancient Greeks, Jesus Christ of Christianity, Alexander the Great (356 – 323 B. C.) of Macedonians, Julius Caesar (100 – 44 B. C.) of Romans, Mohammed (570 – 632 A. D.) of Arabia, Charlemagne (742 – 814) king of the Franks (768 – 814), Napoleon Bonaparte (1769 – 1821) of France, Leonardo da Vinci (1452 – 1519) of Italy, Albert Einstein (1879 – 1955), Adolph Hitler (1889 – 1945) of Germany, Sir Isaac Newton (1642 – 1727) and Stephen Hawking (1942) from the UK. It is clear that leadership of exceptional individuals changed and could change history.

The Nature

Introduction

The nature in its broad meaning from the viewpoint of natural sciences, environmental sciences, system thinking, operational research, global studies, complex problem solving, case study research, and holistic or better requisitely holistic approach is the ***Universe/Cosmos***.

Universe⁶ has been described as “the totality of all the things that exist; creation; the cosmos” and “the world or the earth, as the scene of human activity” and “an area, province, or sphere, as of thought or activity, regarded as a distinct, comprehensive system”.

A part of the above description has something to do with our civilisation heritage – religions and beliefs. It is particularly seen at mentioning creation. We know, it is hard to accept the reality, but in the science it has to be so.

Our research is about systems, system thinking, requisite holism, complex problem solving, global studies, case studies, operational research, and we would like to challenge you with a small sentence about systems:

The term system will here rather mean a feature/event/process that is so complex in its components, relations and influences between them and their consequences that it is difficult to comprehend and even more difficult to control.⁷

⁶ Universe at Webster 1986

⁷ By Prof. Emeritus Dr. Dr. Matjaz Mulej of Maribor University, Slovenia,



To us the Universe has many definitions and descriptions, which will come with future experiences and research. We would like to mention some:

- The Universe system is the most complex system mankind could research,
- The Universe system is the environment for the nature,
- The Universe system is a totality of all things that exist,
- The Universe system is so immense that it is hard for humans to understand its immensity. We need new standards in the research work for the universe.

The Universe system, as environment for the nature or the *basic environment*⁸ discussed for the nature from the quality/internal viewpoint, could have following characteristics:

- The Universe system has no commencement and no end,
- The Universe system contains all matter, energy, information, dimensions, light, rays, powers and forces, particles, transformations and other contents not yet known to humankind,
- The Universe system functions are systemic: interdependences, interactions and co-operation,
- The Universe system as basic environment is environment for the *continuum*⁹ of the nature with all happenings, transformations, dimensions, and systemic relations.

The Universe system from the formal viewpoint could be seen as a composition of the environments, larger and smaller *requisite holistic units*¹⁰ to us at present known as galaxies, star systems, and planets. There is large content of smaller energy and matter forms. Of course, it is within to us seen present dimension, which does not exclude other dimensions that are not known to us at present.

The universe system is a *basic environment*¹¹ meaning that within it, the present nature is at home, and as such, it is a precondition for the existence of nature.

*The Environment Theory of Nature*¹²

The environment theory of the Nature takes the environment as a precondition for anything. »Basic environment« of the Nature is the Universe or the Cosmos. Within it the Nature exists in countless forms, dimensions and contents as »**interdependence, interaction and co-operation**« of all matter, energy, information, dimensions, light, rays, powers, forces, particles and yet unknown contents of the Nature.

The beginning or end of the basic environment does not exist, but it is »**continuum**« of the Nature, which makes/holds/transforms all contents. The basic environment (the Universe or the

⁸ The basic environment has been first discussed at »The Environment Theory of the Nature«, Ecimovic, 2009.

⁹ Please see footnote 7.

¹⁰ The requisite holistic unit term comes from the »Law of Requisite Holism« as practical application within the natural sciences. As description to assist, we may say; the requisite holistic unit is the smallest but yet still understandable whole. In case of future reduction, the understanding is decreased.

¹¹ Basic environment has been term introduced by the author in his book/work »Three Applications of the System Thinking«, Ecimovic, 2009.

¹² »The Environment Theory of the Nature« was presented in the book »Three Applications of the System Thinking«, Ecimovic, 2009, and was the basis for his the Nobel Prize nomination, 2010.



Cosmos) should get a proper description, which according to the system thinking does not commence with beginning and end, but it exists as »*continuum*«.

Let us put on records some definitions of the environments:

1. The **basic environment** (the Universe or the Cosmos) it is environment within which the Nature exists as **continuum** of all matter, energy, information, rays, particles, dimensions, powers and forces, and yet unknown contents of the Nature. The basic environment (the Universe or the Cosmos) does not have the beginning or the end, but has countless forms of matter, energy, and information transformations, dimensions, and systems. It is a continuum, and it is a system of the Nature.
2. Second to the basic environment (the Universe or the Cosmos) are countless forms of matter, energy and information of larger and smaller dimensions as **requisitely holistic units** of the nature or: the star systems, the galaxy systems, and within them individual star systems, such as our star Sun system with planets and the planet Earth.
3. The basic environment (the Universe or the Cosmos) as system makes possible the **interdependence, interaction and co-operation** of all matter, energy, information, rays, particles, dimensions, powers and forces and yet unknown contents of the Nature. Consequently each and every case system under observation: big and small bangs, seen or dark energy, black holes, galaxies, star systems and all other forms of systems within it, have their contents and characteristics (individuality).
4. The star system environment it is a particular star system with its internal and external environments and systems.
5. The planetary system is a part of the star system and it has its external and internal environments and systems.
6. The star Sun system is a part of the Milky Way Galaxy, which has 100000000000 + other star/planets systems and countless meteorites and other forms/systems of matter, information, and energy. All of them are moving like a top and circular movement around each other. According to **interdependences, interactions and co-operation** the star Sun system is moving like a top and with app 800 000 km/hour speed circling around the centre of the Milky Way Galaxy. The circular movement is the main physical characteristic of all larger and smaller forms of matter and energy within the Nature.
7. The planet Earth is one of eight planets, but only one of them with environmental characteristics allowing “the living Nature”. The planet Earth contains its three basic environments (the planet Earth basic environments): the Land, the Water, and the Atmosphere environments.
8. “The living Nature” at the planet Earth’s natural system has countless living creatures larger and smaller forms and systems, amongst which there it is the Homo sapiens’ civilization. All of them share the environment or the Biosphere, which is a tiny and thin part of the planet Earth system’s surface, within the land, water, and atmosphere’s lower part.
9. The Homo sapiens’ civilization has its own environment of different characteristics but in the third millennium the urban environment prevails as its internal environment made by humans. Other forms include: rural areas; agriculture; forestry; transport means systems including roads, railways, airports and ports; industry; sports including sport facilities, etc.; military with barracks, armaments and other facilities; education with schools, universities, researching facilities, etc.; healthcare system with hospitals, researching and other facilities etc, sanitary facilities; and etc. In 2008 in Europe (EU)



- 17 % of total area was sealed land or land taken from the Nature and occupied by the Homo sapiens civilization.
10. The living creatures' environment could be divided in internal and external environment. Typical internal environment (within the body) is cell liquid or blood as environment for blood cells etc., while the external one consist of family, local community, society, surrounding, water (bathing, drinking, etc.), air for breathing, etc. The living environment decides/allows whether any living creature is to be alive or not.
 11. Man made system has internal and external environment – for instance the car has its combustion engine as a part of its internal environment, and roads as part of its external environment. Homo sapiens civilization's environment and its natural environment are parts of the general natural environment.
 12. Also a number of other social creatures have their living environment to mention some: bees, ants, termites etc and a number of parasitic creatures have living environment within host living environment to mention some: microbes, viruses, endo- and exo-parasites etc.
 13. Living environment could have countless different forms. One of them is urban environment with Homo sapiens global community made of requisite holistic units or environments – towns, cities and mega cities. Inhabitants could be described as Homo urbanus¹³ civilization and parallel Homo slumus¹⁴ civilization.

Please accept our discussion as an initial recording and other characteristics, contents, and possibilities could be worked out by others research work.

Continuum

Putting the “continuum” in the centre of the Nature makes a huge difference in possibilities for research. The continuum is a result of the environment and its contents, the nature systemic relations and operations.

It makes understandable the nature, “living nature” part more as other part, which is less known to us. The Continuum is a force of the nature. Second to that - **in the Nature only successful forms exist.** The commencement of the living nature at any requisitely holistic unit of the nature, usually at planets with adequate environment, is a result of the local environment. The sooner the life is born; it is its continuum as the only force needed. Because of the slow evolvement, from the commencement of the anaerobic primordial creatures on the planet Earth, it took the nature approximately 2000000000 years to evolve the next generation of aerobic creatures. To humankind civilisation, which is approximately 200,000 years old it looks incompatible. **The reality is that continuum from the commencement to the present is the only possible way.**

When analyzing happenings in the known star system, intergalactic space, and galactic spaces where major catastrophic events are a transformation of the matter and energy and are exceptionally fast happenings, it is hard to understand their reason as continuum. However, it is continuum, because any transformation of the energy and matter is somehow the birth/commencement of the new system whatsoever.

With the philosophic approach, it is understandable because any system has its commencement, childhood, adult ages, and old ages, which end in whatsoever way. Adding to it the continuum as

¹³ Homo urbanus are people who live within reasonably organized urban environment.

¹⁴ Homo slumus are people who live within mega and poly cities slums.



purpose, it makes difference from the present thinking. Of course, a major novelty is the requisitely holistic approach¹⁵, which makes possible to understand a reduction to units, which are capable of certain happenings. We are suggesting requisitely holistic units at all levels of the universe system as a whole and as separate parts.

Reductionism to the level of understandability has been known for a long time. In addition Einstein confirmed usefulness to the level of keeping understandable. That is also the corner stone of requisitely holistic approach.

In this way we may describe the basic environment as the universe system being the whole. As requisitely, holistic units are parts of the universe system within which the galaxies, star systems, and planets are requisitely holistic units.

It is not the law on universe system but a step toward understanding of the nature.

System operations

Therefore, we have now the basic environment and the continuum, we have basic requisite holistic units, and our home the planet Earth is one of them. System operations are the result of many different happenings at different requisitely holistic environments, which put the environment under research. In our research the operations are result of **interdependence, interaction, and co-operation** of all matter, energy, information, light, rays, powers, forces, particles, dimensions and yet unknown contents of the Nature.

Interdependence¹⁶ - dependence on each other or one another; mutual dependence – the nature and the universe system are interdependent and mutually dependent; the universe system and Milky Way Galaxy are interdependent; the star Sun system and Milky Way Galaxy are interdependent; star Sun system and planet Earth are interdependent, living nature and three basic environments on the Earth – land, air and water – are interdependent; human body and mind are interdependent; In our opinion, everything is interdependent.

Interaction – action on each other; reciprocal action or effect – in the nature everything is reciprocal and affect environment, life and other nature, the universe system, etc. Within the requisite holistic unit, everything is in interaction and the system as whole interacts with major system within which they are placed.

Co-operation - the act of co-operating; joint effort or operation; Ecology is an interaction between organisms that is largely beneficial to all those participating – in the nature co-operation is integral part of a complex relationship or integral part of system operations. To our research co-operation is closely connected with information, as described in the information theory of the Nature.

Evolvements within the nature are the result of all matter, energy, and information permanent interdependence, interaction, and co-operation. The nature has only one form - "***present***".

¹⁵ »Requisite Holism« has been part of the Law of Requisite Holism (Mulej/Kajzer, University Maribor, Slovenia) and is taken from the world of economics.

¹⁶ By Webster 1986



All three - interdependence, interaction, and co-operation - should be understood as a part of system operations.

The present understanding of the Nature has been evolving on as long as the present civilization has been a part of the biosphere. We think it is the time for a step forward, and understanding of the nature will follow.

The differentiation of the nature to the living nature and other parts, conditionally described as non-living nature, are heritage of the humankind thinking pattern, and need to be revised in the future.

Evovement

Due to immeasurability of the basic environment, the universe system as whole, humankind at present has no possibility of following evovement of the universe system as a whole. To us it is possible to research the evovement of parts of the universe system known to us, and of course the star Sun system including the planet Earth.

One of thinking problems has been a heritage of the past that is predicting the future should be handled properly. Humankind could research and learn about the past, also the present could be known, but predicting the future is not possible.

Generally discussing the evovement of the nature could be described as “***evovement is always multidimensional from the smallest to the biggest part of the environment under research and has only one direction – ahead***”.

The nature is always in “present” and has only one direction to evolve – multidimensional evovement ahead. It could not be repeated¹⁷ whatsoever.

The Information Theory of the Nature.

The novelty of the information theory of the nature is a research of the term “information”, which has been researched in connection with the system thinking, and the philosophy. The “information” was understood as a system of the abilities, quantities, qualities, relationships, instructions of each and every matter, energy, light, rays, powers, forces, particles, dimensions and yet unknown contents of the Nature under prerequisite of **interdependence, interaction and co-operation**.

¹⁷ With commencement of the »Information society« after 1990 and due to use of modern information technologies human has got wrong habit of pushing button and deleting content. In the nature, it does not exist. For instance in case of catastrophic accident with nuclear power production facility anywhere on the Earth, the present planet Earth could be changed into an unrecognizable form. In addition, this principle could be applied to synthetic chemical compounds, which never before have been within the nature. The researcher who have invented and innovated synthetic chemical compounds (which are today in millions) has no idea of what such compound could cause within the natural environment. Proof of it is CFC's, which free chlorine ion was destroying the ozone protection band around the planet Earth. In case of our civilization not noticing destroying effect of CFC's on time, today our civilization and other living creatures would not be present. We think it is question of individual social responsibility of each and one human within the global humankind community.



Transformation of the matter and energy with their information is a simultaneous event according to the environment qualities as major influence to the information. New transformation has its information in the same manner as the genetic code of living creatures. It is a precondition of their continuum, and it is at the moment composed of transformation. In living creatures it is according to prearranged (by the nature) genetic structure, and in the other parts of the Nature the genetic structure is exchanged for abilities, qualities, quantities and other characteristics of the environment, within which the transformation of matter and energy takes place. By the continuum, the systemic process is upgrading all characteristics of the Nature.

Taken from the living nature and genetic science we have to accept changes, which happen only with successful transformation of the genetic code. Unsuccessful creatures/cases/events do not exist.

That is why the biosphere had been operating for 2000000000 years before the next generation of aerobic creatures evolved. In the meantime, other parts of the planet Earth were evolving environmental conditions suitable for more complex living creatures. That is why complex creatures like the kingdom of animals and plants commenced only 700 million years ago. Moreover Homo sapiens have “only” 200000 years of history. That is why we are discussing the threat of the climate change system impact to the biosphere of the planet Earth as very dangerous option for extinction of present living creatures including mankind global civilization, in case of significant changes within the quality of the environment – biosphere.

It happened before it may happen again!

It is important to discuss the system – as a complex entity, rather than a mental picture in living creatures’ mind - from the operational content. Any system is in stabile mode as long as all its internal systems are in stabile mode. Whenever external reasons or instability of internal system is moved, changed, and impacted, or etc., the system as complex entity commences to move. It is not possible to predict the direction of the system movement.

For instance, after “Big bang” (Hawking) had happened, being responsible for our part of the Universe, the transformation of matter and energy resulted with formation of the Milky Way and other Galaxies, countless star systems and our star Sun system. From the commencement of the Big bang the energy and matter transformation resulted in new transformed contents, and it has been simultaneously enriched with information of its abilities, and so on. We think a major part of the information is composed of characteristics of the environment within which various processes were and are going on. Of course, the environment characteristics have also been changing or transforming accordingly.

Finally, some 4560000000 years ago the star Sun system evolved its planetary systems including our planet Earth. Each part of the system has its own information according to which the evolvments are possible. In our research, we think this possibility is opening the door for researching further contents of the Nature.

The question then arises as to what this “The Information Theory of the Nature” is. It is a system subsumed under a requisite holistic unit of the natural system, including the planet Earth. The Nature exists as a system, whether we choose to interact with its mechanism or not. Our civilization has assumed the prerogative to interpret it. There is thus, a dual interpretation of the nature. Science understands it as it is, more or less, as a system/mechanism. Civilization sees



nature in a different way. Both these interpretations do influence each other but not in the required holistic manner. Let us put a case of nanotechnologies. Nano researchers from Feynman onward and recently with improved microscope facilities have been researching the atoms. The conclusion is that atoms have self-organization ability. They do not see the nature properly, because they do not see the environmental influences. To know abilities of any atom the research should include temperature and some other characteristics of environment as an important part of the information.

If this thinking is applied to our environment then the Universe, and the Earth are requisitely holistic units and the biosphere is the living environment/sphere of the planet Earth. The basic relations and operations amongst the earth-nature contents are interdependences, interactions, and co-operations.

The Information theory of the Nature was devised as the basic quality of nature of a matter, energy, and information where the information is an integral part of the nature as it is matter and energy. Evolution of matter and energy interconnects with evolution of the information. All this should be within an *environment* and under the practice or operations of interdependence, interaction, and cooperation.

The information theory of nature is a case study of system theory/thinking implementation, as contribution towards a better understanding of the nature by humankind. Information should not be misconstrued. It does not mean the process of communication or transmission of messages or a collection of data, its storage/retrieval, or any other use of the word. "Information" as used in the Information Theory of the Nature deals with:

- Information as an integral part of basic environment;
- Information as an integral part of matter and energy;
- Information is not only as a part of the existing energy and matter but also of the evolving ones, whether energy, whether matter whether requisitely holistic unites or contents of them;
- Information, matter, and energy do not exist if they are not the integral part of the system, environment, basic environment, universe, and cosmos in any dimension;
- Information, energy and matter evolve within the interdependences/interaction and co-operation practices of all levels of systems within basic environment, and make evolution of the Nature in case (requisitely holistic unit);
- Information as a part of »Information Theory of the Nature« is the ability/quality of environment, matter, energy, information, dimensions, particles, rays or any form of matter, energy or natural powers and forces, and yet unknown contents within the Universe, to make impact. This theory is a theoretical approach addressing basic problems in understanding the Nature. It fills in the need for a holistic presentation of the nature.

The Information Theory of the Nature can explain any whole, part, unit, mezzo, micro or macro dimensions in an infinite cosmos. One can understand evolved environment, evolution within environment, energy, matter, dimensions, rays, particles, natural powers, forces and not yet known contents of the Nature regulated by interdependencies, interaction and co-operation



practices. The rules do not exist but are the result of a particular case content. We may mention environmental characteristics of the case deciding on the rules – like liquid methane rivers and lakes on the planet Saturn moon – Titan. Using this theory one can understand any processes like transformation of matter energy and information within environment under interdependencies, interaction and co-operation principles up to the present. The solution for a sustainable (development) future of humankind is in maintaining harmony between nature/biosphere of the planet Earth and all users of it. This is the answer to the future of our civilization. Systems theory, especially dialectical system theory (Mulej) as a science of interdependence methodology through interdisciplinary co-operation is the core of the future.

The Information Theory of the Nature is a commencing point of Environmental Sciences to become a chapter at the beginning of the Book of Physics. It is seen and known when heard and understood, but not yet used at scientific and research work as well as practice or applied research due to need for evolvment of new part of the Mathematics as scientific language of our civilization. The characteristics of the environment make evolvment within the nature possible.

Big bang theory provides answers to almost 99 % of theoretical approach to the beginning of Universe. Figuratively expressed the environment changes our Universe into many other requisitely holistic Universes or one Universe of which our Universe is just a part.

Many more explanations could be elaborated from simple systems as combustion engine, human society, rocket etc to finally largest to us known system The Universe, which could be explained by using a system theory, system thinking, analysis and synthesis. The planet Earth as a part of Universe, Milky Way Galaxy, and Solar System represents requisitely holistic unit to hold living nature as it is in our case and the Universe of which we are a part. Understanding its reality is a treasure of Nature given to humanity as path for continuum, survival, and existence.

The Information Theory of the Nature is a missing part needed for the new frontiers of science movement towards the sustainable future of humankind. By evolvment of other contents, the human society may have an option of sustainable future and large explorations within the Nature. It incorporates the present knowledge and opens an option for its confirmation and reintegration.

All big achievements such as: Theory of Relativity, Big Bang Theory, Unified Field Theory, Strings Theory, Particles research, nano research, dimensions research, use of geometry and algebraic operations, reconfirmations of present knowledge, and many more possibilities will be hopefully achievements in the future of humankind.

As conclusion;

Our present life style is not in accordance with the nature operational practices.

In many fields of activities, we are endangering our existence with opening the possibility to planetary catastrophe. The nuclear technologies are the most dangerous activity. Our recommendation would be “The nuclear research should not come out of research laboratory doors”. It is number one possibility for global humankind community to experience the extinction.



The impact of climate change system is number two. “The climate change system impact to the biosphere could change geography, biology, and chemistry so much that our planet Earth will not be recognizable for present humankind”.

The climate change system did it in the past and caused the extinction of many species, it has practically changed the living nature of the Earth.

Explosive reproduction of humankind is the third most dangerous activity. Intensification of the climate change system impact is the result of a high increase of the global humankind community input/output, due to its energy consummation, transport activities, urban life, and total consummation.

Synthetic chemical compounds, particles research, nano technologies, and genetic manipulations in practical use could be next in the line. It is most dangerous because the long-term impact of them to the nature is completely unknown.

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