

IMAGINING OF THE FUTURE HUMANITY

Margarita Iudin

April 18, 2014

Abstract

Although human self-awareness, constrained and fallible, lacks knowledge about position of human life in the hierarchy of cellular life, there is an accurate understanding that this position has been changing with time. The Holocene climate conditions made possible the booming growth of human population and technoscientific advances, especially in chemical, biochemical and information technologies. We suggest that ongoing extension of the limits of specific human consciousness has been predisposed by unknown needs and interests of total cellular life and the living Earth. It seems that human consciousness is impending great changes.

In our view, all the applied science and technological innovations is not more than an imitation and reflection on the already existed phenomena of nonhuman life forms. We believe that technoscience achievements have become possible due to analogous imagining in cellular life observers. Human analogous thinking is a kind of analogous imagining. To create mental analogs, human observers employ topological mapping, or Gestalt imagining. For example, human observers employ topological mapping over the physical network of brain cells and signals.

Present of humanity

After all we know about cell biology and the communication and social behaviour of cellular life and development of the living Earth, we should acknowledge the consciousness of individual cellular life forms, the quorum consciousness and the great engineering skill of total cellular life. For geological ages, the Earth's totality of cellular life significantly contributed to the development of the Earth. We suggest that for whatever needs and interests, cellular life has engineered the glacial-interglacial climate mode. At present, total cellular life closely controls the Earth's climate.

Human life is one of many cellular life forms which consciousness and physical body are in the process of being transformed beyond recognition. Planned or not, interglacial periods exceptionally benefited the expansion of the human species and reconsideration of human capabilities. For over twelve thousands years of the Holocene interglacial period, humanity had experienced a demographic boom, technical advancement and social reorganization due to favorable climatic conditions. The majority of human populations slowly but surely relocated to the waterfront; gradually all the territories suitable for commercial agriculture were made use of; large cities were built and became important cultural and political hubs; and lots of people moved to live most of their life in enclosed indoor spaces. Today the bulk of people on Earth have minimal contact with living nature and do not have survival skills to handle open space, unprocessed contaminated water and unfamiliar plant and animal world.

In the Holocene period, social and technical development of human life has been sustained by the relatively steady and safe climate and weather phenomena at the Earth's surface. Experiences of human life are presupposed by highly potent human consciousness. Even in relatively steady external conditions humanity underwent very special experiences. The human capability of abstract thinking, observation and quantitative modeling of the natural phenomena had been strengthened. Although human life might be interested in keeping the current global and local climates, this is not possible. As any other single cellular life form, human life is not competent to control climate conditions.

For now, humanity is not yet able to determine its position in the hierarchy of cellular life and only recently began to understand the needs and interests of total cellular life. Instead of dreaming of keeping current climate conditions as long as possible, for present humanity it would be better to match human interests with the interests of total cellular life and to anticipate climate change in the interests of total cellular life.

As the form and conscience of cellular life forms apparently had been transformed and integrated many times in the past, it may certainly be expected that the renewed human consciousness and body would be successfully integrated in a future climate arrangement. Our vision for future humanity is the optimal transformation of human consciousness and body. Human consciousness and the human physical body would transform to fit the forthcoming living conditions on Earth. In the future not only the type of relations between consciousness of the total cellular life and human consciousness would change, biology of human life form would inevitably change too. In light of upcoming changes, it would be constructive to understand how technical inventions and innovative technologies created by the cooperative effort of tens and hundreds of thousands individuals can help humanity in the future. Though we do not really know how life forms had been transformed in the past, we have all right to think that transformations and transitions within total cellular life have something to do with fine sensation and control management of the physical processing.

The goals of humanity are simply to sustain best qualities of human conscience and special sensation of the physical world human consciousness and body are capable to experience. Presumably human consciousness would change in a way it could be imagined changing. It is why we need to look into how human consciousness works.

Cellular life consciousness and handling of information

Consciousness of any life form is at all times realized through local and nonlocal computations. Data comes in and data comes out; datasets enter energy-information flow and energy-information systems and make superposition with other datasets. Self-aware instances of the life forms are capable to translate the superimposed information and learn how to complete their collectively determined missions. Since self-awareness of cellular life is extended to the partial recognition of its own foundations and germination, the fact of the computing is recognized in mind. Mind tries various explanations and approaches; for example, in a human form, mind tries mathematical theories. Mathematics of computations and the Fractal theory [Mandelbrot] can be conveniently used for imagining, simulation and analysis of energy-information transfer and natural systems.

Henceforth, closely replicated, multiplied in a number, the original datasets (or data patterns and components) form more complex and larger-in-size symmetric datasets preserving some of the

properties and functionality of the source data. Properties and functionality attributed to the original data have been revealed upon dynamic synchronization of structural components of built-upon datasets. Symmetries (topological coherence, in general) play important part in dynamic synchronization of components of datasets.

Through large-size datasets cellular life maintains within itself a bulk of information. This information is used to coordinate activities of single life forms and to directly transform environment and some of the life forms. Transformations are going in series and in parallel, sometimes with drastic results for a particular life form. Extinction of the life forms is an example of rather radical transformation at global scale.

To imagine the Earth's coherent datasets, we suggest thinking about the upper-atmosphere, planetary-scale formations like Van Allen radiation belts, zonal jets and polar stratospheric vortices. The fact that human observers were able to use preconceived ideas and produce the analytic description of these planetary structures shows that human life as a part of a collective of life forms has its vision and appropriate instrumentation of influence on the global phenomena.

For a while, human life developed anthropocentric views and tried to ignore the evidence that ignored at all times, individual life forms are developed under the control of total cellular life. Radical anthropocentrism made human consciousness too vulnerable and caused severe disconnection from other life forms. The most desirable for humanity is to change its views at cooperation of the life forms and the living Earth and to change human practices so these practices would be in spirit of natural engineering of the Earth by and large. In order to restore a balance with other cellular life forms and to live full-fledged lives and for sustained development humanity just has to have a push in the right direction.

Methodology of analogous imagining

To begin with, we consider analogical imagining.

After I. Kant we assume that science and engineering (*in original, mathematics*) stay within the bounds of possible human experience and that human experience is determined by human consciousness.

Contemporary engineering generally implies an application of scientific and mathematical knowledge to the planning, manufacturing, and operation of physical objects and processes. Though anthropogenic engineering has been one of the pinnacles of collective human consciousness, the truth is that it rigorously follows the footsteps of natural control engineering. Human engineers effectively experiment, imitate and adapt logic and material design of the pre-existent natural manufacturing schemes (e. g, biosynthesis of antibiotics in nature). Imitation can be technically complicated, but it does not require new ideas and does not go beyond the bounds of consciousness of the totality of cellular life. For example, there is no principle difference between the logical design and methods of the capital recycling (formidably described by great logician K. Marx) from one side and logical design and methods of energy-information recycling from the other side. In many cases, straightforward imitation is placed before an understanding. In fact, recycling of the monetary capital has been practically introduced into human society long before the recycling schemes and workings of capital as a whole were given a proper

philosophical explanation and before anybody thought about mathematical picture of the capital's flow.

The adaptation of logical design of natural data transmission schemes to the computing schemes for computerized communication is another example of a successfully staged adaptation. It is easy to see a certain analogy between data flow across the totality of corporeal life and data flow over the computerized networks. Natural computing methods are imitated in scientific neural and evolutionary automata models; natural computing schemes are being knowingly adapted for molecular computing, quantum data computations and the newest automated communication means.

Behind original dataflow schemes is the basic need of the seal-aware instances of the cellular life to process, analyze and store large amounts of information. Logic of dataflow schemes employed in cybernetic world of the internet copycats logic of data transmission schemes of cooperative networks of corporeal life at multiple timescales across the Earth's system.

Imitation and understanding of a logical design and its physical implementation are possible because of analogous imagining. Analogous imagining serves to transfer meaning between from one content, whether material or not, to the other.

It appears that structural analogy between physical forms of the things often means similar functionality in terms of mathematical description. Subsequently, we turn our attention to natural and mathematical (here, *topological*) mapping methods of construction of structural-functional analogs. Topological mapping is a construction method of structurally analogous datasets. Essentially, it does not matter what physicochemical content a dataset is associated with. What matter is that datasets express information in symbolic forms (e.g., numerical form) and that information in a dataset is presented both in dataset's components and the relations between components.

Topological mapping is widely applied in nature where it is included in analogous imagining (also, *by-analogy construction*) of the forms. Topological mapping is extensively used in mental and computerized constructions of human observers. By mapping observers extend their techniques from the one content to many (e.g., in case of mental math mapping, observers extend their techniques from calculus in one variable to calculus in several variables, from differential geometry in one dimension to differential geometry in higher dimensions). Mathematically analogical operations cast data that has a meaning for all logical constructions (and physical forms corresponding to them) related by analogy.

To understand better natural workings of an analogous construction methodology one may look at such application of analogous construction methodology such as reproduction and growth of cellular life. Reproduction of a living cell is based on reproduction of nucleic acids which also serve as templates for the synthesis of larger molecules, say, proteins. Proteins are an expression of operational control schemes; they participate in metabolic reactions and translation and transcription of information. Both at molecular [macromolecular and cellular] levels and macro and global levels, actuation of the meaning in different context and arbitrary fragmentation of the context enable solving of practical problems [of grabbing and release of energy-matter-information].

All cellular life observers communicate, store and simulate analogous datasets (also, *images*) via natural physicochemical and lightwave networks.

In fact, analogous images are created not only in consciousness of the human life, but in consciousness of every self-aware observer, including total cellular life [observer]. Separateness and differences in consciousness of individual observers cannot conceal the fact that consciousness perpetuating and specializing itself at different levels of scales remains a consciousness.

Analogous imagining, storage and simulation of the apprehended information within biological-body boundaries of cellular life happen parallel to analogous imagining, storage and simulation of apprehended information in intercellular media. Simulation of energy-matter-information data in intercellular media changes properties and behavior of the media.

Depending on situation, analogous imagining involves different contexts; generate different inferences and transformations and proceeds at different speeds and with different computational precision. Then, to determine viability of a certain analogy, embedded in physical forms, analogs (or analogical products) are tested experimentally.

Analogous imagining could very well be an example of information exchange via nonlocal consciousness. Interacting processes between energy-information systems frequently result in specific kind of synchronization, or rapid, lighting [rapid replicating] impact. Lighting impact is the interoperation of one energy-information system with another at the level of meaning of the data. It is often linked to replication of instructional data from a principal operational scheme (configuration) of one system to a scheme of the other. For example, lighting impact is materialized in the moments of enlightenment that people accidentally experience during the imagining. To better understand lightning impact, one can use an analogy with time-manipulated replication of one-dimensional cellular automata where any living cell [and any sub-system], has cognitive abilities to anticipate its state one step in the future, and the upper-level system is allowed to correct the past over many iterations.

At certain conditions, lightning impact brings with itself an enlighten experience [a moment of enlightenment]. Enlighten experiences instigate human awareness of nonlocal consciousness and inspire people to want to learn more about self.

Analogous imagining is a key to nonlocal consciousness and to broader experiences of the physical world. Nonlocal consciousness is phenomena common to all living things.

Maybe nobody yet knows what the imagining is and how it is resolved in cellular life as a whole, but humans and other cellular life observers use the imagining at all times.

We assume that analogous thinking in humans (here the term also covers thought experiments, mathematical modeling, music composing and other imagining) is a peculiar kind of interacting processing between a source system and an image system. As so, thinking is phenomena of hierarchical relations and energy-information exchange between an image and its sources.

While thought experiment has been conducted, rapid energy-information exchange takes place. Exchange triggers transitions over energy-information systems which change their states (here, change datasets and/ or operational schemes). Further, the changes are mapped from the logical level of meta-physical systems to the physical level of the real things. At the physical level changes in human thought are expressed, among the other things, - in a concatenation of certain neural events. Interacting processes work to remove blocks in human thought and help make projections and learn something new.

In our view, without exceptions, technoscience achievements of the modern human life are not more than an imitation and reflection on the pre-existed phenomena of nonhuman life forms. We believe that scientific and technological achievements have become possible due to analogous imagining in cellular life observers. Human thinking originates in analogous imagining. In fact, there is no principle difference between mental construction of analogs and actual construction of the functional analogs. To create mental analogs, human and nonhuman observers employ topological mapping, or Gestalt imagining. For example, human observers employ topological mapping over the physical network of brain cells and signals.

Meaningful information operated by instances of the self of cellular life forms is acted out in metabolic and social activities of associated cellular entities. Metabolic transformations in a body of cellular life and the energy-matter-information transformations occurring outside a body of cellular life are related. Through the physicochemical pathways connecting cellular life and its environment, physically-expressed information gets into the environment. Information about physical realization of ideas is transformed back to logical level. While in environment, information is reproduced at different levels of scales of the energy-information system(s) the environment is associated with. Information has been shared among different instances of the self. The sharing of information by physicochemical means is feasible because instances of the self are capable of translation of experimental, physical information to the theoretical, meta-physical energy-information and vice versa.

Future of humanity

The future of humanity is in an optimal transformation of the human conscience and physical body. Analogical imaging is essentially the methodology common to an exploration of the physical world and transformation of the life forms.

It is possible to “steer the future” of humanity by means of analogical imagining.

In a meantime, the right thing to do is to enjoy the immediate expression of life in a human form.