

BIOPHYSICS AND PSYCHOPHYSIOLOGY

UDC 159.95:519.7

Gaiseanu F.

CONSCIOUSNESS AS INFORMATION SYSTEM OF THE HUMAN BODY*Bucharest, Romania*

Starting from the observation of the binary character YES/NOT of our decisions in relation to the information received from the environment, determining both our life and specie evolution by adaptation, it is defined the info-creational field and thought as an information operator on this field, allowing to describe the individual EGO as a receiver and producer information system, based on an operational and a programmed informational subsystem. Consciousness appears thus be an integrated information system which allows the adaptation to the environment and survival of specie, supported by informed matter (physical body) to maintain functionality of the whole. On this basis, there were identified two main informational circuits of the human body controlled by the consciousness: (i) the attitude as a short-time reaction circuit allowing the immediate adaptation to the environment; (ii) the informational genetic transmission as a large-time process assuring both the evolution by the transference of the new adaptation characteristics to the next generations and the survival of the specie. Observing the anti-entropic nature of the information activity mobilized to support the living structure, there were identified the anti-entropic, antigravitational and reverse temporal arrow features that the thought could access under special focusing conditions, similar to those of antimatter, explaining the paranormal capacities like premonition, psychotherapy, telekinesis and levitation, particularly the cloud dissipation, induced/supported by the mind power.

Keywords: consciousness, informational field, thought operator, entropic/anti-entropic matter/antimatter binomial, paranormal properties.

Introduction

Consciousness was and remained a subject of debate not only because of poor technological possibilities of investigation and hence of the shortage of data about the relationship between the microphysical and chemical phenomena serving nervous activity and its properties, but also because of the lack of adequate concepts to describe it. As much as the investigation technologies advance, especially on the base on the miraculous growth and development of the intelligent microelectronics and microsystems, enabling non-invasive and non-destructive capture and processing of live information, we assist to remarkable progresses on the capture of the low frequency currents and/or of the associated electromagnetical field for data interpretation [1], allowing the developing of mind-commended intelligent systems, serving particularly to the life quality improvement of the people with disabilities and to robotic domestic applications. However, even considering extended proposed theories [2, 3], unitary concepts and the nature of the consciousness are not yet available, especially regarding the subtle nature of so called paranormal phenomena, like the communication by means of thought, the global nature of the collective consciousness, and other similar phenomena [2], despite of the advanced knowledge of the anatomy and physiology of the brain [4] and of the progresses related to the particle physics and their quantum behaviour which have opened new ways of understanding also in the field of parapsychology, assigning for instance to mind instantaneous communication properties based on the particle quantum correlation effect, known as “entanglement” [2, 5]. Prestigious contributions in this field were done by the discovering of microtubules in the nerve cells of the brain and by the theory substantiating their quantum type operation at high frequencies [6-9], which suggests that the very low frequency currents are actually a result of this activity, formed by the interference of close frequency signals, defined as beats. Therefore, only a complex and multidisciplinary approach of this topic from different perspectives can bring progress in this area. This article aims to approach the consciousness from an informational point of view, defining the so-called info-creational field and the thought as an operator carrying the information, with access to this field, and which ensures the adaptation to the environment and the acquisition of new data, part of them converted into genetically stable, serving to the adaptation and therefore to the evolution of species. Moreover, analysing the nature of the consciousness from this perspective and based on the last discoveries in the physics, it is shown that some so called paranormal properties of the mind like the premonition, levitation and telekinesis,

particularly the possibility to dissipate the clouds with the power of mind [10] and anti-entropic properties of the informational system of the organism could be well explained taking into account the properties of antimatter.

Information-induced evolution by the selection YES/NOT

The presents attitude draws our future evolution. YES and NO, the fundamental elements that ultimately decide our trajectory as individuals in the society, in life, but also as species, are nothing more than constitutive elements of the information unit, Bit: we simply associate 1 to the decision YES and 0 to that of NOT and will thus designate by information units our decisions. We are the product of our decision chains of elements YES-NOT assumed at any moment, designing our future trajectory. The present decision YES or NOT defines next steps on an irreversible path. Our attitude expressed by an YES today attracts tomorrow a different perspective from that if we have chosen the alternative NOT to a given situation. The chain YES-NOT of an elemental decision determines a direction through the life, so the attitude is a vector defining the direction on the map of our personal evolution.

The evolution of life itself is based on chains of incremental decisions YES/NOT, starting from our most subtle constituents of matter, microparticles. The relationship of an atom with one electron by YES (bounded) or NOT, determines its current state, which will enrol in a potential partnership with another particle, forming a new configuration dictated by a new YES/NO state, like for instance during an impurity diffusion process in solids [11].

Referring to the same event, the relation of association/dissociation:

$$\text{YES} + \text{NOT} \Leftrightarrow 0 \quad (1)$$

represents a dynamic equilibrium, a doubt, an incertitude, an attitude oscillating between YES and NOT with a final result zero and therefore without an effective effect, if YES and NOT are not separated and finally expressed by a firm decision. It is to note than a stationary equilibrium between YES and NOT transforms relation (1) in the evident (definition) equation: $\text{YES} + \text{NOT} = 0$, showing the antagonist behaviour ($\text{YES} = - \text{NOT}$) of two competitive components. A similar YES/NOT unit in a semiconductor, particularly in silicon, is represented by the pair electron/hole: while the electron is negatively charged, the hole is a lack of electron in the atom, with a positive charge equal with that of the electron, migrating in semiconductor under an electrical field and generating thus currents in junctions as well as the electrons themselves, or recombining to give finally a zero result [12]. Association/dissociation processes make effective the atomic transport phenomena in semiconductors [13] by means of the competitive pair atom/vacancy (defined as an unoccupied site) and is a decisive process of matter/antimatter generation in vacuum, as it will be commented latter. Competitive antagonist elements are everywhere in the nature assuring the local equilibrium, from mechanical forces (action/reaction) to electrical ones (positive/negative charges), gravity/anti-gravity, matter/antimatter [14], where the atoms would be composed by the same type of components (electrons and protons), but located in a symmetrical structure, the electrons playing the role of the protons. Such concepts are today useful vehicles for the physicist to explain the nature and the universe laws.

YES/NOT effective decision chains form complex structures of organic matter. Evolution of a germinating material system as that of the seed is directed by the informational chain of decisional elements YES/NO, which is a stabilized genetic chain and determines the direction of its development, defining the morphology and function of all system components like leaf, stems, roots. This development is manifested by the massive cell reproduction-assisted algorithm, the genetic logic of the informational program composed by chains of elements YES/NOT “printed” in the germination seed. Each step performed as a consequence of a decision either YES or NOT, determines the direction of the next step. We defined this genetic chain as a stabilized one, because once triggered by a minimum of external physical parameters like moisture, temperature, nutrient medium, this will follow its course always in the same way, according to the genetic characteristic program. The same kind of algorithm dictates the evolution of humans and other living embryos.

Generally, our decisions are based both on the informational luggage of the hereditary dowry and on that acquired by our own experience, which becomes selection criteria and stabilized behavioural patterns by their repetitive application. However, the daily situations require a continuous flexible adaptation to the environment, soliciting rapid and new solutions, which can form stabilized informational chains, if the algorithmic is often repeated.

The perception and response to external stimuli determined the apparition of the first living

creatures and their evolution, starting from the reception of the most basic primary information on some physical parameters like temperature, humidity and light, progressively forming the so-called level 0 consciousness creatures (the plants), level I (reptiles), level II (mammals) and level III (human being), for whom the answer is much more complex, capable of ensuring a social life, and more than that, able to design his own future [1]. But what else would represents the signals received from these external physical parameters than information? The signal perception represents the information input and the processed information represents the system reaction, the attitude in our case, which is the information output. If at the beginnings of the life the chains YES/NOT had a strong probabilistic character, resisting to the environment conditions only those stabilized species and capable of reproduction, the evolution allowed a more and more efficient control by the development of information processing capabilities, increasing the reactivity and adaptation to the environmental conditions. Movement itself into the environment has signified a great performance, which required the addition of new operational circuits in the information-decision-execution reaction chain.

Operating in this way, we understand that the man is ultimately a creation of information, capable of organizing matter at a superior level, subjected to a permanent cycle of rebirth by the transmission of genetic information from one generation to another. The elemental process YES/NO of the nature created informational chains, organized against the chaos of the material world resulted by the increasing entropy, adding and accumulating information as an anti-entropic process to the genetic information dowry gained and incorporated into DNA. Man would be therefore an anti-entropic creation of information, an enclave in the material world, a result of the informational intervention, determining the matter structuring as self-controlled entity, under a constant antagonism with the disorganization trend of the entropy law. The consciousness appears consequently as originating in the survival struggle for the environment adaptation and is a consequence of the dispute between the increasing entropy law obeyed by the physical world, and genetic information that tends to accumulate itself as a stable informational program of YES/NOT chains, following in such way an anti-entropic law, with a structuring tendency of the physical matter, according to its well-defined program. Consciousness can be defined as a state of detection-operation-storage-processing of information and elaboration of decisions. This state is a result of the evolution to more and more complex creatures, forced to seek and find reliable solutions to more and more sophisticated environmental conditions. The evolution of the species appears therefore as a result of the successful adaptation of that forms of life able to evolve not so by the development of their the physical force, but rather by information processing tools. The life evolution is an information-induced process based on the binary (informational) mathematics (software) of the nature.

Informational EGO

In terms of intelligent microelectronics/microsystems we can compare the body information system with a computer represented by the brain, which processes the information received from a sensor assembly (eyesight, hearing, smell, touch, taste) to ensure the connection with the external environment and which can store and/or elaborate a decision, as a reaction response (attitude), transmitted to the executive organs (transducers). The heart is part of this motor complex, on one hand coupled to an automatic rhythmic circuit, needed to permanently supply to the body the “info-nutritious” fluid (blood), and on the other hand to the signals received from the information system, feeding the priority areas of the body for adaptation, according to the necessities. The conscious mind is used for adaptation to the environment and therefore is connected to sensors for perceiving external information. The information system consisting in the automated programs, representing the subconscious mind, achieves the coordination of the body maintenance and is inaccessible to the information system coupled with the environmental realities, known as the conscious mind. This is the result of the genetic acquisition of many generations, as an adaptation for the survival.

To operate with informational parameters, we define the info-creational field as a creative field where the thought acts as an informational operator. I called this field as info-creational, because it is able to generate and support the information received from the sensor system, allowing moreover the creative generation of new information, based on that acquired and stored in the memory. For simplicity and for clarification, we can suggestively define as Centre of Acquisition and Storing of Information (CASI) all brain areas contributing to the acquisition, operation and storing of information as a data base library. We define also the Center of Decision and Command (CDC) as the sum of all brain areas responsible both for the information processing/elaboration of the decisions, and for order transmission to the executor centres. These are the muscles, glands and other organs responding to

chemicals and electrical commands.

In this context, the thought may be described as an information-bearer focused-energy pulse. From this perspective, the thought is a form of life energy, which by focalization allows us to operate with images, sounds, sensations and to store/access them to/from the library data. The thought is a concentrated form of life energy, able to consciously collect and transfer information from the environment into the data library or wherever is required to do so. As a concentrated form of energy-beam, it is able to find and select the recorded information and to reproduce it on the mental display. Therefore, the thought acts as a vector, because is characterized by the focused direction, sense and intensity, according to the attention assigned to the target. To fulfil its mission, as a creational energy spot, must dispose of an address where have to direct and to store the information. The thought focusing permits a selective process, allowing to distinguish from the multitude of environmental or internal library data those of the actual interest. According to this point of view, we can define the info-creagram as the captured information, and the infogram as a recorded and stored information in (CASI), independently of the information source. The brain operates with these entities to build new, more complex structures by means of imagination, showing the ability to be creative. The name of info-creagram recognizes by its content that this entity is the result of a creative process, by which the informational energy serves as a support for the capture and transport of information. The info-creational space is in this vision a space of creation, because it allows the formation of info-creagrams and infograms and moreover allows their conversion in stereotypes and stabilised programs by repetition.

The infograms are firmly configured entities, operable in the info-creation space, characterised by a bonding energy between information and the material support (brain), with an existence duration depending on their accessing frequency. As information focused energy, the thought operator has access both in the info-creation and in the material space. The storage is achieved by interconnecting neurons, the thought performing an unique relationship bond within these neurons, according to the specific infogram data. Relating this new infogram by association with other already older, consolidated and easily recognizable infograms, the thought can find and access it in order to be reproduced on the memory display. Each person has access to his info-creation world, but because we are simultaneously creators and detectors of info-creagram, the access could be finally universal and collective.

In this context we can define the mind as the information system using the thought as operator, working on the basis of a material support (brain and nervous system connected to sensors), of which we can be aware (the conscious) or not (subconscious). However, the mind is usually a concept meaning especially the operational conscious, by which we perceive, store and operate with the thoughts. The conscious mind would be therefore the informational system connected to sensors through which the information can be received, recognized and accessed. So, the conscious mind would be represented by (CASI) and (CDC), the sum of which we can call the Operational Information System (OIS), dedicated to the usual real-time adaptation. The subconscious can be defined as the information system that conducts and control the vital functions of the organism and all physic-chemical processes, from its formation until its disappearance, including all channels of information known or not by the conscious mind, but to which it have not informational and/or decisional access, based on the brain as a principal material support (information "hard") and the autonomic nervous system for the information transmission to and from the body's cells.

The subconscious is therefore mainly charged to support and maintain the material base of the information and executive systems, by running of automatic information programs, and could be called the Programmed Information System (PIS). Since the human body is actually a matter connected to the information systems, working closely with it, both in a direct and in a reverse way, we can define this live matter as the Informed Matter (IM).

We are therefore a bio-complex unit equipped with a bio-computer (hard) plus an info-creational system (software) - part of it as the subconscious (PIS) component, represented by the information of specie gathered from the previous generations plus personal experiences during the lifetime - and another component as the conscious subsystem, playing an active role to gather/process information by (OIS). We can therefore define ourselves as information entities (EGO), composed by informed matter (physical body), connected with the Operative Information System (OIS = (CASI) + (CDC)), able to elaborate the attitude (information output) and execute the orders for adaptation, and with the Programmed Information System (PIS) to support mainly the functionality of the physical "hard" (IM), as an integrated system as follows:

$$\mathbf{EGO = EGO (informed matter) + EGO (info-programmed) + EGO (info-operational)},$$

where EGO (informed matter) represents the physical body, EGO (info-programmed) represents the subconscious mind (PIS), together with all acquired automatic experiences, and EGO (info-operational) represents the conscious mind (OIS) together with all stocked data (remembrances) allowing the reaction for adaptation.

The input information could be disseminated as output information by two ways: (1) as attitude, which is the reaction of the organism to the input received information; (2) by genetic transmission, assuring the reproduction of the specie. If we would consider only the pure informational component, we could write the following information chain in terms of input and output information:

Info Input → [(CASI) → (CDC)] → Info Operational Output (=Attitude).

However, when we refer to the body as a reactive system, we must include the emotions as body's reactions [15], these becoming thus co-participants in determining a final and complete attitude. Emotions are transmitted by the nervous system as reaction signals to the cells by means of electrical impulses, which assure a rapid transmission, and by chemicals agents (neurotransmitters), specific to each kind of emotion. The body cells that have been “educated” to receive repetitively a certain type of emotional signal, adjusts their surface receptors to receive the same kind of emotional information by means of the chemical agents, thereby creating a perpetuating emotional state. By means of this mechanism controlled by (PIS), (CDC) emits to the cells specific emotional signals, and the cells respond to (CASI), requiring the same type of emotional signal by means of the surface receptors. As the emotions are associated with execution elements, first of all with the heart as a pump-vital centre of the blood, this will react accordingly. Therefore, the information is transmitted through and from the informed matter (IM) in a mutual way, so the information chain of the input/output transfer can be rewritten as follows:

Info Input → [(CASI) → (CDC)] ⇔ [PIS] ⇔ [IM] → Info Operational Output (=Attitude) (2)

Emotions can be saved as remembrances, “embedded” in the brain by their “arousing” information, constituting the data library of all emotional experiences and allowing the body executor reactive system (heart, glands, muscles) to operate. So the soul appears to be also a creation of information, manifested through the activation of the stored emotional “archives”, which become by repetition “emotional prototypes”, initiated at the material level by (IM) reaction.

Reflexes are already typical forms of response to the same situation, learned by repetition and automatically triggered under the same conditions, assuring to the organism a significant energy saving. These become finally informational programs acquired from the personal experience, added to (PIS). Therefore, the subconscious system appears as a computer laboratory in which the information is retrieved and rendered in the form of stabilised programs, not necessarily requiring a conscious effort and therefore a high energy cost. Under these circumstances the EGO (info-programmed) can be written as: EGO (info-programmed) = EGO (info-genetic) + EGO (info-acquired). We operate therefore by (OIS) allowing the adaptation by the exchange of information with the environment and with the stored background information (CASI), including the emotional one, sustained by the hard of the informed matter (physical body), coordinated by the genetic running programs and we develop decisions by (CDC), expressed by the attitude, with impact on the environment and on ourselves, in order to assure the survival.

The second circuit of the information output in the organism concerns the genetic transmission. The genetic storing process of the information is determined by the informational activity of the body, starting with the acquisition of information by the thought. As previously commented, the info-creagrams are entities generated by the thought, which is an energy beam carrying the information on its own energo-informational support-essence. The thought creates info-creagrams and distributes them as infograms in (CASI). If the infogram is accessed frequently, thus it will become a stabilised infogram, if not, it will be forgotten. The more frequently accessed, the more stabilized infogram will become, not requiring a recall effort to be found, in this way being integrated into the info-programmed system. This step can be defined as an information acquisition phase of the process, as it refers to the integration of a stable and secure information in the brain subroutine system (PIS). In the next step midbrain generates substances called generically peptides [3], with a specific configuration according to the information contained therein. This stage could be interpreted as an energo-informational configuration of the matter, able to transfer the information to the cells, as codified chemical information messengers, with a recognisable form. The cells configure their surface receptors in accordance with the peptide structure in a complementary shape structure, in order to match it as a key in a lock. This mechanism is actually nothing more than an information codification, conduct-

ed by the elemental material messengers (“info-material quantiles”) between the information and the informed matter. This mechanism shows the following: (1) the informed matter reacts and communicates with the information centre (brain) by a feed-back response, asking a certain type of information, as previously delivered by a sufficient high frequency; (2) the information intervenes into the cell metabolism, becoming a genetic modification factor.

Each of these steps described above shows various degrees of matter configuration by information, initiated by the thought. Defining a characteristic amount that we will call informationally-configured matter density, we notice that it is increased starting from the information capture by the thought as an info-creagram in the info-creational field, where the density of “pure” information is preponderant, to the matter to be configured as informed matter. The thought is free to move in the conscious space but not in the subconscious one, where the information starts to configure the matter. When the information is consolidated as a stabilized information through repetition, it is “decanted” at the material level. The informational-configured matter density becomes more and more “dense”, as the cells generates suitable receptors for the peptide reception. This process can not be controlled directly by the conscious mind. We assist therefore to an individual process of continuous transformation of information into informed matter, which is transmitted by a genetic chain, as follows:

**(Input info) -> (OIS) -> (PIS) -> (IM) ->
genetically informed matter -> Genetic transmission (=Genetic output info) (3)**

On this chain the subconscious no longer analyses an informational “reality” because it has been validated by experience as functional and useful in relation to the body system. But as the environment conditions there are under a permanent changing, the nature has allowed the adaptation based on the information processing in the conscious “window”, followed by the filtering and “settlement” of the useful information at the subconscious level through the process of the information conversion into the programmed and then genetically informed matter, represented finally by the “seed”. The acquisition process of “pure” information and its conversion into a codified matter information therefore shows how the body captures and assimilates it by selecting the most useful one within its genetic program, transmitting it furthermore to the next generations. The informed matter incorporates the genesis matrix as a genetic information program, that of the material creation.

The genetic transmission mechanism is a sort of “Save as” of our bio-computer, which will become a genetically informed matter. A shorter form of “Save as” in the virtual info-creational space is the acquisition of infograms in the memory. Under this perspective, the genetical “Save as” is similar with that obtained on a CD or an external memory stick, while the memory “Save as” would correspond with that obtained on the computer hard.

The operational informational output is a consequence of the need of immediate adaptation to environmental conditions, while the genetic information output is necessary to assure the existence of the species on a long term duration. The programmed information system is dedicated both to maintain the life functions on the base of the hereditary genetic program, and to the stabilization for long-term duration of the acquired programs “installed” in the informed matter. Man appears therefore as an anti-entropic information creation, a result of the contribution of the information focusing field, determining the matter structuring into a self-controlled entity, which there is in a permanent opposition with the the entropy law, which tends to disorganize the material world at any level, starting even from the atomic transport processes. We come into the world already “as-informed” by the background information transmitted genetically from our parents, and accumulate our own experience during the life, which is our acquired information baggage. Both the genetic and accumulated informational components constitute a permanent and stable data library, including the physical evolution program, the reference spiritual values, which serves as decision criteria, and also the individual predispositions, based on which we operate, react and manifest our self within and outside of our being. The conscious mind is under a permanent activity of adaptation to the environment, providing information and immediate reaction to the environmental factors in order to correlate to them, while the computer subconscious provides current functionality of the integrated systems, collaborating with the informed matter and organizing it.

Life is constituted at the material level by informed matter with metastable bonds in a continuous movement and transformation oriented to a common purpose, namely to rebuild permanently the unity and integrity of the body and its functionality. In the body take place billions chemical reactions per second, each element is a component with specific tasks on the biological chain matter-energy-information, dedicated to create relations and interconnections between all parts, receiving and trans-

ferring information, matter and energy in a permanent cycle of interconnection and relationship. This is what distinguishes the life from the inanimate matter. The elements of life, although composed of the same chemical elements that we know from the universal elements table, there are in a permanent inter-combination, inter-communication, inter-communion, often as fluid, metastable, with complementary properties, forming temporarily chemical bonds, combining and dissociating themselves, determining each other under cause-effect chains. The thought effort is to connect information with matter, achieving the creative association of the creative energy field with the matter under (meta)stable forms. This is an admirable work to produce configurations of matter/energy/information type in an unitary whole.

On the physical essence of the consciousness as an information system

The mind operation mode by electrical currents flowing along the neurons, associated with the afferent electromagnetic field, usually working in the low frequency range, is more and more studied, yielding remarkable advances in the detection, processing and decoding of such currents, allowing to remedy some human dysfunctions by means of suitable operational mechanisms or to develop new generations of robots commended by the thought [1]. On the other hand, the mind model operating in the quantum range proposed by Hammeroff and Penrose [6-9] is very promising to explain the communication at distance between “entangled” minds [2] on the basis of the teleportation of information between so called microtubules discovered in the brain cells. The nature of this communication, which can take place spontaneously between microparticles or even atom collectivities, is not yet known, but we have to note that this could be assimilated to the characteristics of the info-creational field, as defined above. The phenomenon of mind communication is evident especially between the members of the same family or people who develop very close relations, because in this case the condition that the microtubules of the transmission/reception participants should be previously correlated, if this would be the implied mechanism, is fulfilled by the hereditary affiliation (parents-children) or by cohabitation “resonance”. This fundamental aspect was not sufficiently emphasized in the literature, although it is experimentally proved.

However, in spite of these progresses, any of such operating range does not succeed to provide an explanation regarding either the anticipation of special events (precognition), the telekinesis and levitation [10] and neither the anti-entropic character of the informationally-programmable body system, so therefore new data are required to be discussed on the fundamental nature of the info-creational field as defined above, and which will be commented below.

Information in the philosophical sense is in the vision of Academician Mihai Draganescu a concept that can explain both the living and non-living structures [16]. According to this conception, the so-called “deep matter” is the layer of ultimate objective reality, indestructible and eternal matter “source”, generating universes and time, which is formed by unstructured “orthomatter” plus “informatter”, uniquely able to structure it. The “informatter” could be regarded as a fluctuation, as a tendency to configure the matter in a certain way. In accordance with this conception, the information is therefore a primary ingredient of material which, by interaction with “orthomatter” forms non-living organized structures. The living structures can be understood as a combination of structured matter with “informatter”.

Applying this vision to the concepts defined above, the thought would correspond to an “ortomaterial” energy beam, bearing information from sensors or data library of the brain (CASI). Following this line, we can observe that the variations of the physical quantities are actually information, that can lead and even determine the evolution of a system. Information is therefore a deviation from equilibrium, which can be transmitted and causes a “trend” of the system of which that information is part. The vectors are characterized not only by their physical size, but also by direction and sense, thus giving to information and to the system which includes it a well-defined orientation.

Therefore, it could be attributed to the informational component a property that can be called “intention”, being it good or bad, depending on the direction and sense with respect to a reference. Attributing to information the power of trend, of the “choice” or of the targeting, it is not surprising for us that we are not only tools, but also the result of such a feature. We choose always between YES and NO, and the result of present election determines and plots the trajectory of the future status at any moment. Fluctuations around equilibrium emphasizes two forces, one of expansion and another one of compression. Like in nature, the balance of the human body is based on the alternations. Living organisms can not therefore be regarded only as a creation of matter and energy without adding at these two components the information, as an evolution, and thus creation element.

The body is a self-organized running machine, which actually opposes for a fixed time (lifetime) to the disorganization trend provided by the natural law of entropy, so therefore it is an anti-entropic energo-informational system. Every organ conscientiously and convictionly fulfils its assigned functions, participating with its contribution to the smooth running of this mechanism and is rewarded by the part of the whole with the benefit offered from the good operation of the other components, i. e. collaborating associated organs, which provide the food, protection and information. The exchange of matter-energy-information with the external environment carried by the body as a unit, ensures it optimal operating conditions.

Following the informational statement on the nature of the universe suggested earlier [15], it is important to note that theoretical and especially experimental investigations of elementary particles increasingly reveals surprising differences between their features and the known macro-physic properties of the matter. Starting from the observation that everything surrounding us in the nature is subjected to well-defined mathematical laws, the physicist Max Tegmark [17] believes that removing layer after layer towards the minuscule particles that marks the physical reality, we arrive to the fundamental essence of the universe, that of the laws, of building-rules of training and organization. This conclusion on the nature of the universe is consistent with the hypothesis that we are promoting here on living systems. The thought has the power to imagine and to bring information to the mind, asking to the physical body to convert it in applications. The thought has access to the information, acting as an organizing operator of the living matter. Therefore, the direction towards this system is moving is that from information to the physical matter, restructuring it, on the basis of a certain purpose.

Aiming to observe if the universe can be described by the characteristic units of an information systems (Bits), Sylvester James Gates [18] defined the interactions between particles by geometric structures of 0 and 1, and used them to rewrite some fundamental equations of the particle physics. He found that some results are similar with the repairing error codes of the internet browsers, promoting the assumption that the universe disposes on the possibility to repair interaction errors between particles, keeping the fluency of its inexorable laws. As in the universe, the error codes operate also in the body to repair the human genome. The error codes according to such a vision maintain the gene stability and the body health, ensuring the correct reproducibility of the cells.

According to these results it appears that the universe contains itself all its ingredients, including the information units, both at the cosmic and the human level, to ensure its functionality at the elementary microscopic scale. Moreover, it seems that we actually operate under informational system conditions. Indeed, these results begin to confirm the information base of the system in which we live and to which we belong, directly stating that this basis can be described by binary information units, corresponding to the choice between YES and NO of an operative system, working permanently and subtly with the matter and energy at the microscopic scale. We can observe therefore that the universe could be described as a binary working system. Referring explicitly to the life and its characteristics, the universe appears therefore as a scene of collaboration/confrontation of two different worlds: one tending to disorganize (entropy = NO) and another to order (anti-entropy = YES), both aimed ensuring its own equilibrium, its universal YES/NO unity by means of dynamic equilibrium like in relation (1). The universe is therefore an "ocean" which maintains its own balance by the confronting of two opposing and inseparable universal forces, as in relation (1), reflected in the live systems.

The impurity diffusion in solids, particularly of boron in silicon [11, 13] consists for every impurity atom in a chain of YES/NO atomic substitutions in the host structure, showing actually an entropic behaviour. The physicist Erik Verlinde succeeded to argue that the empirical Newton's gravitational law can be deduce actually from thermodynamic considerations [19], the gravitation resulting in fact from the difference in the entropy value between the positions of the attracting masses. The gravity appears thus to act as an entropic force orienting the matter to more entropic zones. To deduce on this basis the universal attraction law, he associated with information the particle position expressed in Bits. The main conclusion of such a study is that if a system is entropic, thus this is also gravitational. Another important conclusion is that information could be used as an operable physics quantity, allowing to obtain some fundamental laws of the matter.

But the surprising evidences do not stop there. One of the most remarkable results recently obtained, within the experiments conducted by Dr. Jeff Tollaksen and his collaborators [20], have shown that the properties of elementary particles, specifically those of the neutrons, can be separated by their mass. This remarkable discovery brings to light two important conclusions: (1) the information co-works with the matter at the elemental level; (2) the information can detach of matter, getting an independent associated status. This experiment can be considered without doubt one of the proofs that we

can talk about information as a property that can be treated independently of matter, although inseparable. This discovery supports our assumption on an informational field, where the consciousness can access and operate by means of the thought as an information operator, with a decisive influence on the matter. Following such a vision, we have to remark that this field should have anti-entropic properties because it tends to organize the matter, against the chaos created in its absence. Indeed, the error codes as information elements described by James Gates [17] would play the role to restore the order in the interactions between the particles, just as the genes fulfil this role in the living organisms. Actually, the achieving of an atomic or molecular chemical bond is a form of decision between YES and NOT, and the transit from one state to another is a change of information within the system. The process of the matter structuring according to the genetic program is an anti-entropic act, while that of the disorder is an entropic action. If we define the information field of the life as an anti-entropic field characteristic of structuring information, the time arrow associated with this field should be oriented in the opposite direction with respect to that of the physical time in our material space, because the two forces have antagonistic properties. The life is therefore a product of the balance between the anti-entropic, organizational, informational field and the entropic and therefore destructive force, thus explaining that the living entities are born in the material space driven by the anti-entropic information field, but they can only have a finite lifetime in this space as a result of the competition between these opposite forces. In other words, if our consciousness, accumulator of organised information tends by means of its programmed information system to keep the body structure, subjected continuously to deconstruction, according to the law of entropy. During the life we accumulate experience thus information, contributing to the improvement of the information field of the species, but the matter is subjected to the inexorable law of increasing entropy, which acts to destroy the body.

On the dispute over the existence of the time as a cosmic real parameter, the physicist Sean Carroll believes that the time does exist as a determining physical parameter of the universe, because the entropy of the systems naturally increases in the physical space [21]. Therefore, the increasing entropy is a law related to a time arrow directed from the past to the future. However, the time arrow in an antimatter systems, created by symmetrical but with opposite type of particles in universe to maintain its equilibrium, should be oriented in the reverse sense, from the present to the past. Moreover, considering the super-symmetry of our universe, where the equilibrium is due to the continuous generation of matter and antimatter particles in the void because of the quantum fluctuations, the physicist Dragan Slavkov Hajdukovic [14, 22-24] believes that the antimatter is rejected by the matter, so the anti-matter forms an anti-gravitational system. The generation/annihilation (relation (1)) and the separation of matter from antimatter should be therefore a natural process in the universe, because the repulsive force between matter and antimatter. The mystery of the dark matter (which till now was not detected yet directly, but which seems to model the universe structure) and that of the dark energy, responsible for the universe expansion, would be in this way well explained. Indeed, the expansion of the universe could be supposed to originate from the antigravitational effect of the antimatter. Moreover, we have to note that other mysteries could be solved considering the dark matter as anti-matter: (1) the elemental particles of antimatter could not be detected, as expected by many researchers in this field, because the direct contact between the matter and antimatter would produce an explosion of energy; (2) the gravitational force is lower than the others three fundamental forces in the universe (the electromagnetic and the nuclear forces), because this would be partially compensated by the antigravitational force of anti-matter. Therefore, we could only detect the indirect influence of the anti-matter systems in our world and our life.

Applying these principles to the functioning of the information system of the body, we can observe that the ordering and structuring of the matter maintaining the functionality of the system is assisted by a process characterized by a decreasing entropy, that meaning the greater is the degree of information accumulation, the lower is the informational entropy, because of the continuous increasing degree of the information ordering. This behaviour would be similar to that produced by the antimatter. The thought has access both to the presents and to the past by (CASI), storing and updating information whenever it is necessary. In the info-creational space it is possible to travel in the past and in the present, but in the real space this is not possible, the arrow of the time is irremediably related to the sense of the entropy increasing, from the past to the future. In the info - creational space, characterized by an organized accumulation of information, the entropy decreases, so the time arrow should be oriented in the opposite direction, from the future to the past. This property could be one that allows to the clairvoyant persons to predict certain future events. In other words, our informational system is capable, based on this principle, to operate in two worlds, the material world of increasing entropy,

oriented irreversibly from the present to the future, and in the virtual world, in which this informational system has the possibility to scrutinize the future.

The life information system seems to follow in this way a recycling and performance improving path with each exemplar born in physical space, returning in the information space enriched with his obtained experience. This experience is physically reflected in the children's genes. The return in time from the present to the childhood in the last moments of life reported by the dying who have returned to alive could be interpreted as a manifestation of the time arrow oriented to the opposite direction to that of the physical space, as a resorption of information into the origin informational space. At the birth moments, the living being gets an impulse toward the physical space together with an information baggage, whose program begins to operate during the pregnancy, the information is accumulated during the life and is resorbed in this space, once leaving the existence from the physical space. We are carrying therefore our life at the frontier (or by cooperation) between the organizational (info-creational) space and another dis-organizational (physical) space. We operate thus as organized, informational "enclaves" of the world of low entropy in the material physical world, with its entropy increasing, struggling for ordering it, according to its origin genetic information. From this competition arises our lifetime as a result of the info-organizational energy which we were born with, to oppose us to the implacable trend of entropy increasing in the physical system.

The same interpretation can be given to the anticipation of the future events by means of the premonition and clairvoyance phenomena, the visionary people bringing information from the future by means of the info-creational space. This perception would arise from a sensitivity exercised to discern the essence of our existence in two different but congruent spaces, that of information and that of the physical matter. Under the light of such a reality as described by the modern theories of the possible anti-entropic and anti-gravity forces allowing the time running in an opposed sense to that in the material space, the precognition can be explained by the access of the thought to the anti-entropic field of information, where the time runs from the future to the present, and therefore thereby it is possible to forecast some future events that have already happened in such a field, but occurring within the material reality with some delay. The mystery of the anticipations could thus be easily understandable.

Moreover, the levitation, a phenomenon related to the raising up of the body (and thus against the earth's gravity) and telekinesis (related to the objects moving, particularly to the dissipation of the clouds), performed by some endowed and practising persons (in particular those of the Buddhist faith, resorting to special specific practices and meditation/prayer), could provide a further proof of anti-entropic and thus anti-gravity properties of the mental info-creational field. Let us remember that we assign extra-earthly (angelic) life always to heaven, and when we are happy, we feel as exhilarated, "touching" the haven, imponderable. These phenomena can be assigned to the access in two worlds: the material, entropic and gravitational one, and the informational, anti-entropic and antigravitational world. Psychotherapeutic treatments can be equally explained by the therapist's access to the info-creation field of the patient and the amplification of its anti-entropic force in the debilitated areas.

As mentally connected entities to the anti-entropic force, operating both as emitters and detectors, we can observe that a mental unresolved task is received as an information load, and hangs hardly in the conscience but also in the body, which will become more "pondered", more "attracted" to the earth from the functional point of view, while a solution of this task, which is actually an ordering, anti-entropic, settlement information, makes us feel lighter and therefore more imponderable, so more "unbounded" to the earth entropy. It is actually recognised the entropic effect of stress on the organism, reflected in dysfunctions and organic deterioration, while the peace gained by spiritual practices is beneficial as an anti-entropic remedy. The final sensation of the release from the worldly charge during the last moments of life, which could be interpreted as an anti-gravity phenomenon, could be regarded as a relief by an ascent to heaven, to the "divine" essence, i.e. organized, pure, anti-entropic and antigravitational information. The sensation to feel the sons of this extra-terrestrial force coming from heaven, which watches and protects us, promoted by various versions of different religions, is the detection result, the awareness of the information field that ensures us the functional anti-entropic structuring in correlation with the entropic, material support, for ordering it.

Moreover, if the gravity as an entropic force is a major parameter from the informational point of view of the human state, we can deduce that the influence of the planet configuration on the features of our personality, experimentally observed, could be also explained on this way.

The info-creational field appears therefore as a similar manifestation like an anti-entropic and antigravitational effect of antimatter, undetectable till now by usual tools but existing everywhere in the universe, with effects on the automatic program which support the functionality of the body. Ac-

According to this vision, the antagonist binomial YES/NOT unit would be the primary element of our life and evolution. The scenario assuming that the consciousness would have access to an antigravitational force similar with that of antimatter, in our universe of entropic and thus gravitational matter, coexisting with the anti-entropic and thus antigravitational antimatter would explain the special properties of the human mind and of the living organisms in general. The binomial pair YES/NOT of the matter/antimatter particles is a good candidate to explain well both the mysteries of universe and of the consciousness, as part of it.

Conclusions

- (i) The life evolution is an information-assisted process, based on the binary (informational) mathematics (software) of the nature, expressed at the top level by the human consciousness.
- (ii) The info-creational field, defined to recognise the creative process of the mind, is the field where the thought acts as an information operator in order to relate the body with the environment and which allows the transformation by repetition the acquired stereotypes in automatic programs.
- (iii) The thought is a selective vectorial operator, necessitating an address where to stock and collect from the information.
- (iv) The info-creagrams and infograms are informational entities operated by the informational system of the body, defined to allow the unitary approach of information, independently of their source nature.
- (v) The informed matter is the body itself, recognised as a sensitive matter, allowing the transmission and the reception of information.
- (vi) The personal EGO is an information system composed by operative and programmed subsystems, as a receiver and producer of information and is supported by the informed matter (human body).
- (vii) The received input information is disseminated on two ways: (1) by the output reaction (the attitude), coordinated especially by means of the operative informational subsystem as a short-time adaptation process, and (2) by the genetic transmission output, coordinated by the programmed informational subsystem.
- (viii) The conscious mind, as a part of the consciousness, serves the short-time adaptability by attitude, while the subconscious mind as another part of consciousness serves the maintenance of the body functionality, including the genetic transmission as a large-time adaptation (evolution) and guarantee of specie survival.
- (ix) The informational system of the human body is an anti-entropic system, opposing to the body degradation induced by the entropic force.
- (x) The approach of the universe properties from informational point of view is not only a theoretical or a philosophical hypothesis, being already justified by scientific reasons, showing that information is a constitutive component of the nature and life.
- (xi) Thought could have access to the anti-entropic antigravitational and with reverse-time properties, similar with those of the antimatter, thus explaining the paranormal features of the human psychic like levitation and telekinesis, particularly expressed by clouds dissipation, the health therapeutic interventions by the mind power, and the premonition phenomena.
- (xii) The functionality of the body appears as a result of entropic and anti-entropic forces, the antagonist pair matter/antimatter, the YES/NOT unit of universe, being a good candidate to explain the mysteries of the properties of the consciousness.

References :

1. *Kaku M.* The Future of the Mind: The Scientific Quest to Understand Enhance and Empowered the Mind. — NY, London, Toronto, Sidney Aukland: Doubleday, Division of Random House Canada, Toronto, Penguin Random Hose Companies, 2014.
2. *Radin D.* Entangled Minds: Extrasensory Experiences in a Quantum Theory. — NY, London, Toronto, Sydney: Paraview Pocket Books, a division of Simon Shuster, Inc., New York, 2006.
3. *Smith S. W.* The Inner Light Theory of Consciousness. — USA: California Technical SA, 2001.
4. *Dispenza D.* Evolve Your Brain: The Science of Changing Your Mind, Deerfield Beach, FL: Health Communications, Inc. (2007)
5. *Bouwneester D., Pan J.V., Matle K., Eible M., Weinfuster H., Zeilinger A.* Experimental Quantum Teleportation // Nature, 399, pp. 575-579 (1997).

6. *Hameroff S., Penrose R.* Orchestrated Reduction of Quantum Coherence in Brain Microtubules: a Model for Consciousness // *Math. Comput. Simul.*, 40, pp.453-480 (1996).
7. *Penrose R., Hameroff S.* What gap? Replay to Grush and Churchland // *Journal of Consciousness Studies*, 2, pp. 98-112 (1996).
8. *Hameroff S.* Quantum Computation in Brain Microtubules? The Penrose-Hameroff. "Orch OR" Model of Consciousness // *Philos. Trans. Royal Society London, Ser.A, Math. Phys. Sci.*, 356, pp.1869-1896 (1998).
9. *Hameroff S., Penrose R.* Consciousness in the Universe: a Review of the 'Orch. OR' Theory // *Physics of the Life Review*, 11, pp. 39-78 (2014).
10. *Ignatenko A.* How to become a phenomenon. — Bucharest: Biodova, 1994 and <http://www.professor-ignatenko.com/en/about-author>.
11. *Gaiseanu F.* Boron Diffusion Profile in Silicon and Data Analysis // *J. Electrochem. Soc.*, 132 (9) pp. 2287–2289 (1985).
12. *Gaiseanu F., Sachelarie M., Sachelarie D., Esteve J.* Analytical Modelling of the Gold Diffusion Induced Modification of the Forward Current Density Through the p-n Junctions // *Solid State Phenomena*, vols. 37-38, 525-530 (1997).
13. *Gaiseanu F.* Contributions to the Modelling and Simulation of the Atomic Transport Processes in Silicon and Polysilicon and Applications // *Proceedings of the Romanian Academy, Series A. Vol. 4, Nr. 4*, pp. 376–384 (<http://www.acad.ro/sectii2002/proceedings/doc2013-4/15-Gaiseanu.pdf>) (2013).
14. *Hajdukovic D.S.* Do we live in the universe successively dominated by matter and antimatter? // *Astrophys. Space Sci.* (2011).
15. *Goleman D.* Emotional Intelligence. — NY, England: Bantam Books, Inc., 1995.
16. *Draganescu M.* Information of Matter. — Bucharest: Romanian Academy, 1990.
17. *Tegmark M.* Our Mathematical Universe: My Quest for the Ultimate Nature of Reality. — USA, Randomhouse, 2014.
18. *Gates S.J., Jr.* Symbols of Power // *Physics Word* 23, pp. 34-39 (2010).
19. *Verlinder E.* On the Origin of Gravity and the Laws of Newton. University of Amsterdam Valckenierstraat 65 1018 XE, Amsterdam The Netherlands, Institute for Theoretical Physics. — <http://www.arXiv:1001.0785v1> [hep-th] (2010).
20. *Denkmayr T., Geppert H., Sponar S., Lemmel H., Matzkin A., Tollaksen J.* Observation of a quantum Cheshire Cat in a matter wave interferometer experiment. — <http://www.arxiv.org/pdf/1312.3775>, Dec. 16] (2013).
21. *Carroll S.* "The Arrow of Time" and "From Eternity to Here, the Quest for the Ultimate Theory of Time". — GB: Oneworldpublication, 2015. — www.proposterousuniverse.com.
22. *Hajdukovic D.S.* Black Holes and Gravitational Properties of Antimatter // *Advanced Studies in Theoretical Physics* 5, pp. 2-17 (2011).
23. *Hajdukovic D.S.* Is dark matter an illusion created by the gravitational polarization of the quantum vacuum? // *Astrophys.Space Sci.* 334, pp. 215-218 (2011).
24. *Hajdukovic D.S.* Quantum vacuum and dark matter // *Astrophys. Space Sci.* 337 (6) pp. 9-14 (2012).

Статья поступила в редакцию 03.01.2016 г.

Гайсяну Ф.

Сознание как информационная система человеческого организма

Исходя из наблюдения двоичного характера ДА/НЕТ наших решений в отношении информации, получаемой от окружающей среды, обуславливающих как нашу жизнь, так и эволюцию нашего вида в процессе адаптации, определяется поле инфо-творения и мысль как информационный оператор над этим полем, что позволяет описать индивидуальное Эго как систему, принимающую и производящую информацию, на базе операционной и программируемой информационной подсистемы. Сознание оказывается, таким образом, интегрированной информационной системой, которая способствует адаптации к окружающей среде и выживанию вида, поддерживаемой информированной материей (физическим телом), чтобы сохранить функциональность в целом. На этой основе были идентифицированы две основные информационные цепи человеческого тела под контролем сознания: (1) мироощущение как цепь кратковременной реакции, обеспечивающая немедленную адаптацию к окружающей среде; (2) информационная генетическая передача как долговременный процесс, гарантирующий как эволюцию путем переноса новых адаптивных характеристик к будущим поколениям, так и выживание вида. В результате наблюдений за антиэнтропийным характером информационной деятельности, направленной на поддержание живой структуры, были выявлены антиэнтропийные, антигравитационные и направленные вспять во времени свойства, к которым мысль может получить доступ в особых условиях фокусировки, подобно антиматерии, что объясняет такие паранормальные способности, как предчувствие, психотерапия, телекинез и левитация, а в частности — рассеивание облаков силой мысли.

Ключевые слова: сознание, информационное поле, оператор мышления, дихотомии энтропийный/антиэнтропийный материальный/антиматериальный, паранормальные свойства