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Bioplasma and Solitons Shot Consciousness Minded

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Abstract

All the material presented in this thesis as well as author's implications prove that a living organism can be perceived as a complex electronic device similar to the technical devices whereas a biological material (proteins, DNA, RNA) - as components of electronic devices. These arguments allow to state that the biological system can be considered to be a quantum computer that functions on the basis of entangled quantum states and optoelectronic phenomena.Melanin and neuromelanin are implicated in the central control of all biological, physiological and psychological processes. Numerous modular communication systems and signal-ling pathways that transmit signals into the cell are generated under the influence of light. Melanin and neuromelanin function as a multireceptor of full range of electromagnetic, acoustic soliton waves, torsion fields and bio plasma, which does not receive so much information the senses, but it receives it constantly. The role of photoreceptors, receptors of hearing and touch is limited to a single reception of the stimulus, whereas melanin and neuromelanin play an integrative function, combining stimulus elements in the one whole namely movement with space and time, sound with light, space and time. From the psychological point of view, melanin and neuromelanin, would be responsible for the entire process of adaptation to the environment, mental development, the development of attention and perceptual experience, which, together with an increase of melanin and neuromelanin, acquire better sharpness and quality. Bio plasma controls these processes.

Keywords: Bioelectronics processes; Bio plasma, Bio computer; Consciousness; Perception

Bioelectronics model

Its role in the perception and mental processes. L. Bertalanffy formulated the concept of a living organism as an open system that collects and gives material substance, and maintains a constant value of relationships in terms of bulk continuous variation of material components, energy and information in a continuous flow between the body and the surrounding environment[1].

Therefore, the principal feature of the living world is organization of structures filled with mass and energy into information carrier.Information is in fact defined as the ability to organize the system or maintain it in an organized state, while the energy is defined as the ability to perform the work [2].

Human life is not just a matter of biology and biochemistry, but also provides the structure cybernetic-information and bioelectronics, which has an impact on health, disease and human behaviour.This bioelectronics structure creates "homoelectronicus" with its electronic personality. In this new bioelectronics paradigm one can notice quantum psychology and human cognition in terms of quantum processes occurring in the biological system, which is understood as a bioelectronics device that processes, stores and manages information. Quantum individual is the same individual as anatomical and physiological one, only living in the world of quantum dimension. In addition to the traditional, well-known biochemical reactions occurring in living organisms, a new reality is opened for science that functions on the basis of a model of bioelectronics life This model shows that the same particles that constitute the molecular substrate of biochemical reactions are also a manufacturer of biological structures, such as proteins, melanin, nucleic acids, bones, etc., which are an electronic material having piezoelectric , pyroelectric , ferroelectric and semiconductor properties [3].

Apart from using biochemical channels, a human biological system, in order to transfer information uses electromagnetic, caustic, solition waves; electric, electromagnetic and torsion fields as well as bio plasma. This communication does not only apply in biological processes, but also in all mental functions. Control of the human biological system is accomplished by a grid of information channels: electron, photon, phonons, soliton, spin, ionic and bio plasma. Each of these channels may in itself be a carrier of information to a biological system, or it can function as a team in the bio plasma system[4].

The biochemical model explains the complex mechanisms of mental life seems to be correct. The transmission from inanimate matter to living matter cannot be explained. He still cannot explain the nature of consciousness and the transition from inanimate matter to living one. Where is the threshold and what is the role of biochemical processes inconsistency of soma and consciousness as well as in building a mental structure? The author supports the thesis that the nature of mental processes is inexplicable as far as interactions of biochemical processes are concerned and it is much easier to describe it in the light of quantum processes[5].

Bioelectronics properties of biological structures

Studies on the electronic properties of biological structures in the various research centers have shown:Piezoelectricity for amino acids, proteins, collagen, keratin, elastin, actin, myosin[6-15].

In living organisms, and beyond piezoelectric andpyroelectrics,also the existence of biological semiconductors was found. Semiconductors occurs in materials with an ordered internal structure, such as crystals have [16-20]claimed on the basis of their research that the collagen at the water content of 10% shows electron conduction. In addition, there is also the proton and ionic conductivity. Also the semiconductors with their properties and photo-conductivity included in nucleic acids were studied [21] carried out conductivity measurements on dry nucleic acids. The size of the activation energy they received ranged from 2.5 eV to 2.7eV.

Liang and Scalco demonstrated the phenomenon of photoconductivity in the DNA, and adenosine. Thermal energy activation of photoconductivity ranged from 0.90 eV to 1.18 eV [22].Semiconductors amino acids, proteins, muscle fibreswere also demonstrated [23]. With the semiconductor properties of proteins and melanin electrons can travel over long distances without losing energy. Ion currents expire at short distances because the ions are much larger than electrons. In semiconductors the electron energy of the protein would be preserved and passed on as information.

In terms of bioelectronics, the background of bio communication in human biological system may be an electromagnetic wave, electronic and acoustic, the latter resulting from biological piezoelectric electrostriction. Piezoelectric phenomenon concerns the change of mechanical energy into electrical energy, together with the development of electricity is accompanied by an electric field [24].

Piezoelectric placed in alternating electric field is deformed by generating an acoustic wave. This phenomenon is referred to as electrostriction or quantum-acoustic effect. The ability of piezoelectric crystals to polarize at the expense of mechanical interaction and ability to deform at the expense of electric fields allows to consider them in the category of electromechanical transducers [25].

Piezoelectric properties were acquired by each body, at the moment of its creation on earth and they are required to run bioelectronics processes that are necessary for the functioning of the organism. These processes occur throughout the body, but are especially noticeable in the following systems: cardiovascular, muscular-skeletal while walking and gymnastics, breathing mechanoreceptors, barorecepction, sense ofhearing, as well as during sexual arousal, etc. Among these systems, or senses, the stimulating role is played by the mechanical energy, hydrostatic and acoustic, which polarizes bio-logical piezoelectric, and thus become carriers of information in the form of electrical field and the acoustic wave for the biological system [26]carried out the detailed measurements of the piezoelectric effects in the long bones of people while walking and the mechanical leaning, which generate the electric field. This field is needed for the body to:

- Activate the enzyme function and communication[27];
- Write perceptual experience in the brain[28];
- Synthesise the melanin[29];
- Integrate the biological unit in the hierarchy of cell-tissue-organ-organism, ecosystem. High-speed information transfer in living organisms proves that coordination at various levels of biological complexity requires minimalmediaenergy requirements and more information[30].

Physical-electronic properties of melanin in the human biological system

- Melanin in terms of electronic and physical examination is characterized by the following features:
- Donor-acceptor properties[31];
- Ability to proton conductivity [32].
- The ability to absorb all wavelengths of light;
- Photoconductor and semiconductor properties of amorphous [33-36].
- Increased resistance to light and ultraviolet light;
- Generation of electrons and photons[37];
- Large demand for oxygen[38];
- Selective vulnerability to phonons - this means that cells with melanin are selectively
- Vulnerable to acoustic waves [39].
- Can function as a sensor in the phonons and photons, the reverse process[40].
- They also have the ability to convert the electromagnetic wave into the spin fields in which solitons responsible for unconscious states are condensed conversion of light into sound phonon photon) provides information to the organism not only for biological processes, but especially the mental

processes as in synaesthesia, winter blues, in theprocess of adaptation to the environment in ADHD, etc.

- Exhibits paramagnetic properties of melanin [41].
- Shows photoconductivity melanin[42];
- Melanin is a semiconductor, which allows you to make the transformation of light into electricity. Melanin is also considered as a transmitter of electromagnetic energy[43].
- Melanin is piezoelectric under the influence of alternating electric field produces acoustic wave in addition, all of melanin bio-diversity based on physical properties such as absorption, the disappearance of light and sound, the binding of organic chemicals, storage of liquids and gases[44].

Light and electric field are the most important factors in regulating he biosynthesis of melanin, the absence of these factors results in the biosynthesis of melatonin. Melanin reduces the amount of free radicals in biological system unit.

The most important feature of melanin is its ability to absorb light as well as to absorb, retain, store and regenerate energy[45]. Moreover, melanin protects against oxidative stress by eliminating reactive free radicals-peroxyl, hydroxyl, quenching of singlet oxygen and by excited states[46]. Melanin has the intensified concentration of bio plasma as well as it plays an integrative role. In the sphere of sensory perception, melanin combines stimulus elements into one whole, namely movement withspace and time; sound with light,space and time.Moreover, melanin directs the perception of the size of objects, their arrangement in space; it determines the size, length, location, form, direction, depth and movement of an object. Thanks to melanin, one can experience the present and the future, whereas thanks to melatonin- the past and the present. Melanin and neuromelanin, would be responsible for the entire process of adaptation to the environment, mental development, the development of attention and perceptual experience, which, together with an increase of melanin and neuromelanin acquire better sharpness and quality. Melanin is strongly correlated with melatonin. The disorder of this correlation leads to different psychiatric dysfunctions. This fact is visible in such disorders as anorexia, winter depression, child hyperactivity and in various diseases such as phenylketonuria, Parkinson disease etc.Thanks to melanin and melatonin, sensory organs apart from their ability to integrate sensory information can form a coherent picture[47].

Melatonin provides information about the time of a day and the time of a year for each tissue. Melatonin functions as an internal clock. It measures the time for a seasonal phenomenon as well as for processes of adaptation and development, such as adolescence. Melatonin activates sexual desire and directs the process of pregnancy, etc.[48]. Melanin is a piezoelectric semiconductor and this property allows it to transform different kinds ofenergy into connected with the electric field electric energy. Interaction of the electric field on the piezoelectric causes electrostriction which triggers phonons that are acoustic wave. The biological system possesses transducers such as: a transducer converting electromagnetic energy into an electric signal (the sense of vision), a transducer convertingthermal energy into electric energy (pyroelectric- the sense of temperature), a transducer converting mechanical energy into electric energy and vice versa (the sense of touch), a transducer converting acousticenergy into an electric signal (the sense of hearing). The biological system in different ways provides itself withthe appropriate density of bio plasma state thanks to which melanin combines a wide range of fields and elementary particles.

The brain does not show us the length of the electromagnetic wave, but it gives the impression of a specific hue, as auditory sense changesdensity of the acoustic wave into the sound impression. These processes are possible thanks tobio plasma located in melanin and neuromelanin. It is bio plasma that is responsible for processing perceptive impressions. Melanin contains two types of free radical centres[49].

The first type is permanent andthe experimental conditions (with the exception of degradation) the level offree radicals cannot be reduced in it. Probably, the free radicals are created during the synthesis of melanin and they are captured within the polymer. The concentration of the second type of free radical centers depends on many factors such as light, temperature, pH, presence of metal ion or the paramagnetic and diamagnetic metal ions or some oxidants or redactors.Free radicals are of great importance for the biological system, yet they have a negative influence on the ageing process. Free radicals are any atoms, molecules or ions that have a single unpaired electron in an outer shell. They are chemically active so they oxidize each compound during the process of connecting or losing an electron. Therefore, free radicals have a huge chemical reactivity on other particles. They attack mainly those compounds that have double bonds in their particles such as proteins, DNA, or unsaturated fatty acids that are included incell membranes, polysaccharides, lipids and cholesterol found in blood.As a result of this process, electrons generate free radicals that attack other substances. Free radicals play an important role in the process of imprinting information to the nucleus. Free radicals (created when melanin was irradiated by UV)and precisely radical reactions,are able to change the arrangement of nuclearspinsas well as to record permanentlyinformation in the nucleus. This information is then included within the biological structure. So far, it has been claimed that this record can be done only by strong magnetic fields[50].

Free radicals are also responsible for creatingquantum states of entangled particles, atoms orinformative structures and images produced in bio plasma of melanin and neuro-melanin. The change of nuclear spins is connected with the change of density of torsion and solition fields that are responsible for the nature of mental processes. Entanglement is a phenomenon in which the properties (specifically: quantum states) of two or more objects are connected (entangled) in such a way that one object cannot be adequately described without considering the other. This leads to a correlation between the physical properties of objects even if these objects are at different distances. This phenomenon is known in the scientific world as the EPR paradox. The phenomenon of quantum entanglement can occur in a variety of micro-world objects (for instance atoms, elementary particles entangled in the shoots or spin entangled electrons). This happens immediately; however, the distance between them is not taken into consideration at all. For example, when two electrons are entangled, the change of quantum state on one of them causes the same change on the second. The first electron is given an state on purpose whereas the second is

given a corresponding Bn state. Thus, one physicist knows that another physicist sent them information regardless of the distance between them.Now let's imagine two quantum computers, which memory is com-posed of entangled electrons. In such a case, these computers can send any data and the connection between them is immediate. I my opinion, the galactic Internet will work in such a way. Why are the tangled clouds of atoms needed for a human biological system?First of all, they create the acts of consciousness. Then, they save and convertdata in a bio- quantum computer as well as they transfer the data via the biological Internet[51].

Teleportation allows to send quantum information saved in the form of the system's state system, whereas the dense coding can increase the channel capacity thanks to the exchange of quantum information. Since teleportation scheme can be extended to multiple qubits it is possible to transmit in this way the longermessage. During the process of photoreception light enters the irisfilled with melanin. According to the author, entangled quantum states are used in sensory perception, especially in the sense of sight as well as in the formation of the act of consciousness. Through annihilation process, free radicals can break entangled quantum states. This fact can influence the changed states of consciousness, eg. while taking drugs. The electron-positron annihilation process releases reduction of charges and the light impulse. Solition light that generates images on an electromagnetic wave and then transmits them to consciousness is produced while reducing quantum entangled state in bio plasma. Solition images can include human emotional states, thoughts or patterns of behaviour in the form of archetypes.

Free radicals are activated in melanin and they change the arrangement of nuclear spins. Information is recorded in the nucleus during the change of spins. At the same time entangled quantum states are generated and directed by bio plasma. Then, melanin included in the brain receives these states. Any information received by neuromelanin is perceived as a conscious act for a brain which enables proper functioning. Information recording mechanism has a significant role in transmitting the inborn knowledge through biological structures. When a new born child is no longer provided with oxygen from the placenta and starts to breathe on their own (the first breath) the level of oxygen in the arteries increases suddenlycausing oxygen shock and increasing the level of oxygen radicals. This sudden increase of the radical's levels initiates the process of imprinting the present reality in which the new born child is situated. A similar situation can be noticed as far as the sense of sight is concerned. Melanin in the epithelium of the retina and iris is formed before the birth. The first eye contact after delivery activates the development of free radicals, which register into child's biological system information about the surrounding world. Moreover, this first eye contact closes thefurther synthesis of meleninin these epithelia's. This means that information once encoded in these structures serves as a model for many biological and psychological processes such as: adaptation to the environment, reception of tonality, space, time, emotional states, one's behaviour andconsciousness of one's own body[52].

If the biological system did not have those innate patterns of knowledge, a lot of psychological functions (eg. speech) would be learnt by many years.The increase of the spin field intensity, and various entangled quantum states, affects the concentration of bioplasma and creates continuous acts of consciousness. According to the author melanin and neuromelanin in their electronic structure create spintronic device that is essential to the functioning of sensory perception. This statement is supported by the following data. In electronics, it is assumed that the spintronic device must include some key elements. First of all, it must generate spin polarization, which is understood as a quantitativeadvantage of electrons possessing a certain spin orientation. This can be achieved by the transport of electronsfrom the material in whichpolarizationpermanently exists (this is ferromagnetic material), or by a suitable optical stimulation that is possible using the selection rules in the semiconductor circuit. Secondly, you need to be able to control the spin, this is best achieved in semiconductors due to their unique physical properties (including spin-orbit coupling). However, the problem of spin injection arises here. The spin polarization should be adequately stable in time hencethe control ofspin relaxation processes is of a great importance [53].

It should be noticed that both melanin and neuromelanin fulfils the above stated conditions. When melanin is illuminated one can observe spin polarization whereas bio plasma is responsible for other activities.Melanin's role is to reduce free radicals in the biological system by pumping and directing the spins. Transferring these processes into bio plasma, we can say that consciousness and bio plasma create such a state, which is a unity in its diversity. This unity is reflected in the team control system, which is possible thanks to the grid of informativechannels: electron, photon, phonon, soliton spin and free radical - each of these channels may be a carrier of information for itself or for a biological system, or function as a team in the bio plasma system[54].

Consciousness has different degrees of information processing efficiency, and this efficiencydepends on its state. Each degree of efficiency is correlated with a given state; it fulfils a specific function. Therefore, the states of low information capacity relieve in some way the complexity from consciousness, supporting routine and automatic processes. The states of high information capacity, on the other hand,operate under the high levels of control, where they initiate the creative integrating processes. In quantum psychology, consciousness would be understood as an energetic- informative state of bio plasma, resulting from the team operation of the quantum systems in the brain, powered by the spin transfer of the angular momentumfrom neuromelanin. Collective unconsciousness should be understood as a compacted soliton state in bio plasma, made ofinteractions among non-local quantum processes in melanin, protein and neuromalanin. There is a wave process of bio plasma.Bio plasma concept is understood as a dynamic system made up of fields and particles with a negative and positive charge mutually interact-ting in a piezoelectric organic semiconductor. Bio plasma changes its electrical state under the influence of electromagnetic, acoustic, soliton waves as well as, gravitational, electromagnetic and spin fields. The result of bio plasma'sexistenceis a bio field. Bio plasma can also occur outside the body. Its presence outside the physical body can be seen in the form of a biological field which is a carrier of information for the no sphere, biosphere and cosmos here[55-60].

Bioelectronicsconcept of human biological system

In bioelectronics termsan organism is understood as a circuit integrated bybiological piezoelectrics,pyroelectrics, ferromagnetic andsemiconductors, and filled with bio plasma. This organism is directed electronically by quantum processes.In this integrated circuit designated as a human body there is a central system in the brain that can control and coordinate the psychosomatic structure. This control is accomplished by a grid of informative channels such as electron, photon, phonon, soliton, spin, ionic and bio plasma channels. Each of these channels may be a carrier of information to a biological system, or may function as a team in bio plasma [61-65].

This system is capable of transforming mechanical, thermal, electromagnetic and chemical energy into electric potential energy. The electric field generated from such transformations isneeded for the body to:

- Record information coming from the sensory perception in the brain,
- Regenerate the damaged tissues, enzyme's function and the synthesis of melanin,
- Create bio plasma, which is responsible for the integration of the entire biological system[66-70].

Signal transmission in the biological system does not have to occur only under the influence of ionic conductivity, electromagnetic and acoustic waves, electric or electromagnetic fields which, according to the theory of relativity are defined as local processes but it must be done thanks to thesoliton waves, spin fields and bio plasma which are referred to as nonlocal processes affecting the human energy-informational system and its behaviour[71].

Solitons are independent entities[72]. Soliton is defined as a moving solitary impulse of high-power, which does not blur during the contact with another particle, wave, or the field. There are solitons of light, water and sound, which can strongly interact with other solitons, but after this interaction the form and structure remain unaltered, such as when two soliton waves approach each other they "notice" themselves and penetrate each other, but they do not overlap; then they spread in the same order in which they had been connected. This means that they penetrate each other, without losing their identity. Soliton waves carry signals without the necessity of moving the environment, as a carrier wave. Only spatial relations are transmitted that is the geometry of the constellation of particles of water and air without their physical part - the environment contributes to this process only as a structural pattern[73].

Solition signals are transmitted not only to the biological structures, but also to the psychological and spiritual realm - these are our mental, emotional and conscious states. Solitons can spread into the entire universe, and they do not disappear. They have existedfrom the beginning of life, to the present. The cosmos was densely filled with solitons network, carrying the content and meaning. Information fields (solitons) can affect the energy systems almost without the loss of energy and cause large changes in the biological system. These fields and thoughts can influence each other and are associated not only with the biosphere, but also with the no sphere. Their variety of densities is infinite. The brain has the ability to generate and receive information fields, and therefore, these fields may be a carrier of information from one brain to another [74].

Brain and any replication system of a genetic code have transmitting and receiving antennas that transmit space "Directives"[75]. Soliton image of the universehas a strong influence on the development of human mental processes and social life. Solitons as independent entities, form the structure of unconscious, which includes patterns of human actions, life programs. Unconsciousness is irrational, guided by instinct and it does not show any logic rules. Consciousness is responsible for intelligent recognition of reality and for the control of thoughts and emotions.

Consciousness affects soliton states(subconscious) when they cooperate and when they are controlled by bio plasma. JanTrąbka proclaims that tubular cytoskeleton system consisting of hollow cylinders, which wallsare equipped with a hexagonal molecule tubulin functionsin all brain cell tissues. The ends of the tubulesare filled with concession. This system creates a tubular connectivity for the entire cell and brain. In living cells, not only nucleic acids and proteins but also water and enzymes have the ability to process and transmit information. Water due to the dipole structure is an important aspect of quantum [76].

Changes of the angle of aperture create a rotational motion component; dipole water starts to spin to the right or left, creating a pair of spin. In aqueous tubular cytoskeleton soliton waves are formed, which flow without distortion in a different direction, bringing information to the cell. Protein tubulins are surrounded by water dipoles. Solvation coat may be of different thickness, which determines the rise of gel physical state. Gel coat inhibits the movement of tubulin and soliton in tubular cytoskeleton. Such a phenomenon is observable at the time of anaesthesia and results in changes of consciousness, it means that the solitons, along with the eddy fields are responsible for states of consciousness[77].

Solitons due to tunnelling and superconductivity phenomenon spread rapidly and the whole organ does not respect the boundaries of cells. Solitons require the presence of the physical environment as a base medium, and therefore they cannot propagate in a vacuum, which do not require other forms of energy[78]. Solitons do not transfer molecules, but only information contained in the change of conformation,or transformation of theenvironmentof water, gas etc. Such interactions form the system of mutual communication in brainandmay also pass inthe space outside the brain. Interaction solitons is resistant to deformation which facilitates extra cranial communication[79].

Cells lens and melanin cells can be considered aswaveguides. Light in the waveguide would be used to switchto other light and could replaceelectrons that are used in transistors. In the sense of sight, there are two kinds of bio computers: optoelectronic bio computers that function with the help of solitions and quantum bio computers that are governed by the rules of quantum informatics. Solitionbio computers are responsible for processing solitionmaterial taken from the spaceand transmitted to bio plasma

giving it a high density of information. Quantum bio computers are powered by quantum braided states and they process and order a perceptive image and then they transmit it to bio plasma. In bio plasma, this perceptive image is whitewashed by solition contentgiving it thepattern of behaviour or the way of thinking and of emotional responsiveness [79]believes that bio plasma was once created and it cannot be created once again;it is unique in nature. Bio plasma is transmitted from parental organisms to the organisms of their offspring.It is a "model" and yet unique. It cannot be produced in laboratory conditions. The solition image acquiredfrom the space by bio plasma is evaluated and compared to the model. Then, bio plasma corrects the image and creates a uniqueness of the organism with its energetic-informative characteristics of personality, age, health state, illness or a way of thinking [80].

Receptor cells are managed by a bio computer

Quantum Information Science is a field of science bordering on theoretical computer science and quantum mechanics; it uses unique properties of miniature systems governed by the laws of quantum physics. Information technology shows that such phenomena as the interference of wave functions, quantum parallelism, superposition of states, quantum entanglement and coherence can be used for calculating information in quantum computers [81].

Relatively new science-spintronic-considers, besides the electron charge, also its spin and deals with the design of electronic components of the planned structure of the spin. Elementary particles are endowed with electric charge, mass and spin. Electric charge is expressed by the electric field in the space surrounding the particle; the magnetic moment (spin) is expressed in a magnetic field of the rotating particle. The spin quantum number "s" in a quantum mechanics is a counterpart of a spin. It takes half the value of elementary particles that are called fermions (electrons, neutrinos, quarks) and integer values for bosons (photon, graviton, gluons). For example, electron and quarks have the spin of 1/2, whereas photon's spin equals 1 [82].

Collective behavior of particles is different depending on how they spin. When the particle spin is complete, the particles are subjected to Bose-Einstein statistics. When the particles have the half-spin they are subjected to Fermi-Dirac statistics[83]. Quantum information science wants to use spin's properties not only to save information but also to it transform and transmit it. Spintronic is believed to revolutionize the construction of computer devices and information processing. Traditional computers make calculations using the controlled flow of electrical charges, and changes in the current's flow are treated as a carrier of information. Presently, when we use a telephone, the information is transmitted by electrons, and when we use optical fibres or mobile phones it is transmitted by photons. Spintronic shows that information can also be transmitted by spin's direction (left or right). Synchronization of spins cause the appearance ofthe memory. The difference fromtraditional computer lies in the fact that the particles can remain in a state of superposition, ie, their spin can be both positive and negative. This means that a molecule has both a state of "0" and "1" and the whole infinite sequence of values between these states. Traditional computer adds the numbers in a sequential manner (one after the other), while a quantum computer can make a huge number of mathematical operations simultaneously. The calculating machine that consists of several hundreds of atoms would be able to make billions of calculations at the same time[84].

Spintronic is looking for devices that would be able to produce spin's currents, to manipulate the magnetization and to replace ahead of tape recorders, video recorders andcomputer that constantly breaks down. Head in the computer moves just above the plate in the hard disk. The slightest strain or the presence of pollen can cause malfunction. Quantum electronics wants to resign from these mechanical parts and replace them with the magnetic field of a spin. Physical research shows that the spin current can be transmitted via the metal pipe without the transfer of a charge. Cables, depending on the metal, are better or worse for the transmission of spin information [85]**(Figure 1)**.

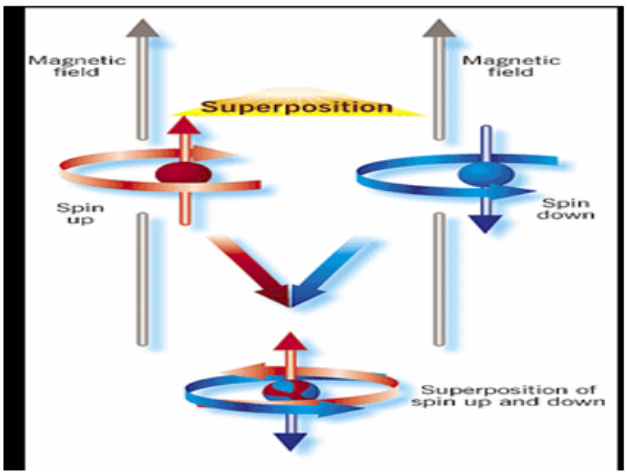

Figure 1: Shows the left and right rotation of particle's or atom's spin particle.

When the spin of the molecule is positive, its status can be read as "1"; when it is negative-as "0". The principle of super calculator's operation of the future is based on the direction of electrons' rotation ("spin") on the shells of the atom and to be more precise, on the specific properties of elementary particles. They can "spin" in different directions simultaneously and this phenomenon proves that they have different spin[86].

In quantum information science, qubits and quantum registers are the basic units of information. Qubitcan store a superposition of two base states that are marked aswhereandNumbersandare called the probability amplitudes, and the probability of reading the underlying base states from a qubit is respectively. Vectorsandform the basis of a standard two-dimensional complex space ofcube's state[87].

The system of numerous qubits creates a quantum register, which - according to one of the basic postulates of quantum mechanics - can be seen as an isolated system composed of multiple component systems. Quantum computer uses quantum propertiesof elementary particles-the basic building material of atoms. As a result, they operate almost without power supply; the

source of their energy is the matter itself. (Introduction to quantum computing[88].

The number of qubits determines the efficiency of the quantum computers. The process of adding any subsequent qubit causes the acceleration ofcalculations to double. As a result, a quantum computer consisting of 500 qubitscould operate simultaneously on2500 states! In one act of reading we would obtain the information from 2500 states whereas aclassical computer would need for this processmany centuries[89].

Atoms and elementary particles are the basic unites that play important role in quantum computers. All around us, the whole universe, can be treated as a kind of quantum computer, still processing the data. If the "quantum processors" are so common, why do we still use traditional PCs? The problem is not in the creation of a quantum computer but in our ability to control it. The nature has struggled with this issue for millions years and finally composed the quantum computer into the human biological system. As a result, it helps the organism to function properly. In short time, people will face a new reality. Human life will be force to adapt to the requirements of biological computers and many electronic devices known as readers recording information in the brain. Educational process will be dominated by devices supporting memorizing the material, whereas storage ofinformation in the brain (as in a biological piezoelectric semiconductor) will be conducted not only through the senses, but also by means of technical devices. It will resemble the process of tape or CD recording. In the new educational system, the amount of information in the brain will double toX-power; mental development will acquire a new dimension of reality, but not every psyche willaccept this style of teaching easily and this factwill often lead to pathological conditions in the personality.

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