

Informatization of Modern Society: The History, Ideology, Technologies

V. I. Talanin

Department of Computer Science & Software Engineering, Zaporozhye Institute of Economics and Information Technologies, Zaporozhye, 69041, Ukraine

Abstract The process of informatization society as well as the main aspects creation of "electronic man" are shown.

Keywords InformatiCS, Cybernetics, Computer, Information Society, Informatization

1. Introduction

Historically, the term "informatics" was formed in 1950's[1]. In the United States and the Soviet Union it were seen as a discipline that studies the structure and general properties of scientific information as well as the laws of its creation, transformation, transfer and use. Such definition equates of informatics to the bibliography and methods to find information in massive of documents.

In the United States based on the principles of cybernetics in 1962 appeared the first departments of *computer science*. Here during 1960's informatics has been defined as the theory and fundamentals technologies of computer engineering. In the form of computer science the informatics began to study the structure and general properties of information in various fields of human activity and the development on this basis of computer technique and technologies in all areas. In USSR the informatics was identified as computer science after 1982. Now in the world the informatics is understood in form of computer science[2].

Since 1970's began the gradual introduction into the mass consciousness of the idea that in history of the moment changes of "historical formations". Declared the closed of the capitalist (industrial) era and the entry of humanity in a post-industrial (information) era[3]. Information era is characterized by a rejection of the traditional material and energy productions and replacing them the industry information resources and control systems. In July 2000 on G8 summit was officially declared transition to "global information society". This society has been defined as one in which the information is understood the basic resource of life and the development of social and biological forms. In

December 2003 and November 2005 in Geneva and Tunis was World Summit on Information Society (WSIS). It was first announced that the human race is in transition from an industrial society to an information society and the next phase will be "knowledge society".

The processes of globalization covered all spheres of human activity: the economy, culture, information space, technologies and management. This creates an open information society with a network way of interaction between people in all areas of their work. The aim of this article is analysis of key aspects of the formation of the "information era" and "information society". We need to know about ideology and philosophy of informatics. To be computer literate is no longer good enough; computer understanding is now a necessity[4].

2. Physical methods of the Information Society Creation (Computerization of Mankind)

If a global analysis of the development of computer technique and information technologies it is possible to say that this development was going on two directions. Based on our observations these directions can be formulated as follows: 1) the computing direction, 2) the intellectual direction.

Development of human civilization in the technical aspect from ancient Egypt and ancient Sumeria went quietly and slowly. As society was traditional and based on the norms of religious morality, the man's needs only real instruments. For example, he needed a plow to plow the ground, the wheel to travel somewhere, simple math skills to calculate a building process, etc. All necessary calculations man's was made on paper or using a tool known as "Russian schoty". The ancestor of this instrument was the ancient abacus and it can be regarded as the ancestor of the modern computer in the "computing direction".

Change in man's relation to this technical direction was in

* Corresponding author:

v.i.talanin@mail.ru (V. I. Talanin)

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the XVI century. In this century ended ideological revolution in European society. It began with the movement Cathars (Albigensians), continued throughout the Renaissance. In the XVI century because Reformation the half of Europe the renounced Christianity and moved to the various directions of Protestantism. After that one of the main ideological doctrines is mercantilism which the theory of the necessity of financial gain. On this basis since XVII c. began the boom of the theoretical and practical development of computers, which initially focused on the calculations in the national monetary systems.

If monitored only main aspects all developments of XVII-XX cc. were increasingly improving computing mechanisms: 1) "Schickard machine" (1623), 2) "Pascal machine" (1642), 3) "Morland machine" (1667), 4) Colmar arithmometer (1820), 5) calculator (USA, 1878-1885; Russia, 1878-1885), 6) Burrows arithmometer (1893), 7) Bush differential analyzer (1930), 8) electro-mechanical calculator "IBM 601" (1935), 9) Zuse mechanical (Z1, 1938), electro-mechanical programmable (Z2, 1939), electronic programmable (Z3 and Z4, 1941 and 1945) calculators, 10) ENIAC (1946), 11) small electronic calculating machine (1951), 12) large electronically computing machine (1952), 13) TRADIC (1955), 14) "IBM 7000" (1959), 15) IBM System 360/370 (1964), 16) Apple I (1976), 17) IBM PC (since 1981).

The subsequent introduction of computers in the administrative management and the economy led to the creation of a new industrial sector: tools and electronic data processing. Initial phases of development of this industry is the creation of the first computer game StarWar (1961), text editor Wordstar (1979), spreadsheet VisiCalc (1979), virus (1980). Thus the information has become merchandise.

Further development of computer technologies has led to the fact that computers have been used for so-called "descriptive" sciences for which mathematical modeling methods were previously unavailable (biology, history, etc.). Due to the possibility of a descriptive analysis of the objects of study began the new line of research related to computer simulation of human intelligence functions: the development of "artificial intelligence". This is a section of computer science which places its aim the development of methods for the solution of problems for which there are no formal algorithms.

Technological first point from which began the development of artificial intelligence as a "thinking machine" was "Lull Machine" (1270-ies.) named by the author Ars Magna (Great Art) and designed to solve logical problems and the "revealed truth".

The next milestone was the "Analytical Machine" (1822-1853) Charles Babbage (1791-1871) which was to be able to use when calculating the results of previous operations, repeat calculations in the loop, software controlled by punch cards. The machine has not been created but important were made idea. The historical importance of "Babbage's machine" is also in the fact that it

is the first mechanism, the idea of which was popularized in the society under the slogan "help easier" live the man by F.L. Menabrea (1809-1896) and O.A. Lovelace (1815-1852).

The third milestone was the work of "An Investigation of the Laws of Thought" (1854) by George Boole (1815-1864). In this paper the author described a system of symbolic and logical reasoning. The algebra of logic or "Boolean algebra" removed the logic of life context, transforming it from the science of human thinking in the mathematical theory. In 1847, George Boole wrote that mathematics studies the operation which considered in itself, regardless from the various matters to which they can be applied[5]. As a result, won the formalism of pure mathematics which accessible only to specialists. Now in fact, mathematics is no longer applied science. Instead of using calculations to describe the real things in nature, there was a possibility to describe the non-existent, including such that it can not exist in reality, but is valid in theory.

In 1945 V. Bush (1890-1974) wrote an article entitled «As We May Think», where was first described the concept of hypertext[6]. He is also the first to use the term «web» which was later used in the name of Internet. In this article Bush described the electro-mechanical device that should give people a tool to enhance cognitive abilities.

In 1956 J. McCarthy (1927-2011) of the Massachusetts Institute of Technology (MIT) proposed use of the term "artificial intelligence". In his viewpoint artificial intelligence using techniques that are not observed in humans if this need for a particular purpose. In this case the computational procedures are called intelligent[7]. In 1959, McCarthy developed a language LISP for artificial intelligence problems.

To solve the problems of artificial intelligence required ultrafast computers. In 1957 science fiction writer I. Asimov (1920-1992) theoretically described supercomputer. In 1962 the UK was developed the first real supercomputer Atlas. In 1982 the "Time" named the computer "Machine of the Year".

From our viewpoint no need to describe and create things what can not find a parallel in the wildlife of the Earth. Therefore, if the development of computer technique in the "computing direction" no harm to humans, the development of special machines within the "intelligent direction" was an example of immoral progress.

Since the 1990s began developing computer technologies which would be able to replace a human. The changes a classical computer were based on using different physical principles of its units: 1) optical computer, 2) quantum computer, 3) neurocomputer, 4) biocomputer. The evaluation of these innovations should be viewed in two ways: first, from a purely mechanistic position (by function), and secondly, with the ideological positions (in terms of control over the person).

Optical computer processor is processing information using light. Main application areas: military equipment, criminology, information security, banking, research[8]. Current tasks: computer vision, artificial intelligence,

pattern recognition and simultaneous tracking of hundreds and thousands of targets, navigation, control of the earth's surface, communications. The main task for the civil sector: optical processor for authentication of credit cards, passports, etc., i.e. control of the person.

In 1996 IBM developed the first examples of the holographic memory. Holographic memory is a orderly, systematic perception of past experiences and ideas about the future that facilitates conscious human access to all information available to it mind[9]. The most important aspects of the method of holographic memory are: 1) conscious memories location in order; 2) address appealing to the memories; 3) output memories for mental screen (creating holograms); 4) consideration a hologram as interface in the interaction of human consciousness with the unconscious; 5) the ability to manage this interface on a level of conscious. From this we get the ability to control the unconscious, i.e. controlling a person's subconscious. Prehistory holographic memory was the ideas of the Frankfurt School that to overcome totalitarian tendencies at the level of nations should go in history and re-evaluate it. Revaluation of the so-called "uncontrollable past" is a distortion and conviction his in favor of the currently existing ideological doctrine. This process leads to the creation of so-called artificial "collective memory". In such collectivization a man destroyed as a person and loses the ability to think individually. Artificial team has no historical base of its existence. However, while this memory is maintained in society only by the mass media, there is always a danger that some people can understand the falsity of this and get out of the artificial group. To do this need take the memory for electronic control and linked the humanity in common social network. Therefore, holographic memory is the same as the collective memory and its development is an important step towards achieving full control over mankind. Therefore, the information society is a communist society, i.e. totalitarian. In this society the powers of one man delegated to the faceless team where is dominated by the so-called "herd instinct".

Almost simultaneously with the emergence of the concept of holographic memory emerged social networks (1995, Classmates.com) as pilot projects. The official beginning of their existence refers to 2003-2004 (LinkedIn, MySpace, Facebook).

In 2002 in UCLA was developed a method to control the intermolecular interactions in organic composite materials. This fact allowed to create a three-dimensional holographic television[10]. In the novel "Fahrenheit 451" R. Bradbury (1920-2012) predicted the occurrence of such systems in the form of so-called "TV family (relatives)", i.e. tool for constantly monitored with the help of continuous human presence in network and communication with these "relatives".

"Quantum computers" are based on the phenomena of quantum physics and their development is possible only if there is nanotechnology which capable of providing three-dimensional assembly of computing elements at the

atomic and molecular level.

The ideology of "quantum computer" is the following[11]. There is a quantum-mechanical way to create two separated quantum systems with a high degree of correlation. We need to create a special quantum-mechanical state of the two-particle system, i.e. EPR state. When the system is in this state cannot be said that any of subsystems is in its particular state but you can get the information on one of the subsystems, making experiments on the other. I.e., no matter how far away were two of the main system, they will be carriers of the whole, and in particular each other. Knowledge about the subject is the sum of all knowledge about its parts.

A quantum computer is required for the analysis and management of complex many-body systems like biological systems. This machine is needed for the rapid processing of large amounts of information. Man is also a many-body system. Therefore, the management of abstract complex many-body systems it is training for the management of man. If you compare the many-body system with a human society where each individual is comparable to the particle, the quantum computers will control human society.

A quantum computer is a way of obtaining information which will take the station as a whole, not destroying it. However, the ideal instrument that nature intended for information perception is the human brain. Therefore discusses the connectivity's of "quantum computer" and "neural computer".

The aim of the developers' neural computer (neural-computer interface) is the creation of artificial intelligence.[12, 13]. The problem of creating an artificial analogue of the human brain is technically divided into two parts: 1) the creation of artificial neurons; 2) implementation of the spatial structure of the dozens and hundreds of trillions of interrelationships. Reproduction of these properties in the technical equipment will create a highly information-processing self-organizing, self-adaption, non-programmed systems variable structures with abilities to adapt. I.e., will become possible to create a machine which will make decisions that are independent of its "creator", the man's. Creating artificial neural networks similar nervous system of a living organism will approach the efficiency in the processing of information as animals and people. In 2012 in University of Waterloo (Canada) was developed artificial intelligence SPAUN based neural network of 2.5 million neurons that behaves as close to the human. SPAUN able to think and able to simulate the interaction of different parts of the brain during this process.

This development continues the tradition of J. McCarthy, i.e. attempt to fully reproduce the workings of the human brain with the help of computer. From our point of view, such reproduction is completely impossible, because intellectual functions unique to biological organisms, i.e. such objects for which behavior can not accurately predict[14, 15]. Behavior and brain of machine will always be different from the behavior and brain of man[16].

However, it is theoretically possible that the machine will be able to educate themselves as long as it equals and surpasses human intelligence[16, 17]. This will be possible because the machine will deactivate the "unwanted" human emotions (anxiety, love, dreams, etc.) and morality[16, 17]. To avoid the dominance of the machine over a man we view the human brain as a simple computer and "enhance" it's from chip-implants or chip-annex[16-19]. With these ideas the machine does not become a man but a man transformed into machine, i.e. cyborg. Therefore, speaking today about the "artificial intelligence" you mean not humanizing machines but mechanization of man. A priori in this case for electronic man will be eliminated, both emotionally and mentally. Electronic man may also be called the "matrix man". In a psychological sense the matrix is the installation to create a new world with known properties and the possibility changes by their many variants. Such a person denies the stability of life, race, blood and family, fate, tradition. He denies the tragedy of life because in his life there is no place of sin and salvation from sin. Electronic man is a practical idealist who created the so-called "happiness for all".

This is in line with the concept of F. Nietzsche (1844-1900) about "superman". Also, this is consistent with evolutionary theory of Charles Darwin (1809-1882). Darwin's theory is artificial and cannot be proven but with their help to create a "something" from a real man. It is only necessary to understand that from a converted man will not a "superman" because electronic man will externally controlled.

The main property of "biocomputers" is the fact that each their cell is a miniature chemical laboratory. If the organism is programmed, this organism itself makes the necessary material. I.e. technologies of «biocomputers» suggest the following: how to made replace between the traditional biology and mechanism, i.e. modelling of "evolution in a test tube"? I.e.: how to find a way to build systems with desired properties and how to program the genes for required functions?[20]. In 2001 in Weizmann University (Israel) was created by a test sample of biocomputer for gene analysis. Its creation was the beginning of the so-called nanomedicine. Were declared the need to introduce molecular nanodevices (nanorobots) in human body to monitor his condition and for synthesis of essential drugs. However, the introduction into the human body of an alien mechanism is the controlling of this body for those who run the embedded mechanism.

Recently there has been a decision of the "technological problems" ordinary computers. In 2004 in General Electric was developed diode based carbon nanotube size of 10 atoms. This development will allow to solve the basic problem of a computer's: reducing the size of computer components while increasing their number. During the 2013 Intel, IBM and Samsung are expected processors on 14-nm technology. Then, in accordance with Moore's law to 2020 performance of a single processor for an ordinary computer will equal to the capacity of a single human brain (the computer can perform 20 quadrillion calculations per

second) and to 2060 performance of computer will be equal to total brain capacity of all mankind. H.Moravec (b. 1948) believed that the computer will be equal to human brain between 2020 and 2030 and total cyborgization of mankind will happen before 2040[21, 22]. K.Warwick (b. 1954) said that total cyborgization of mankind will occur between 2022 and 2050[16].

So, what is the main feature of the computer? The universalism. The modern computer is freely programmable for a wide range of applications. Theoretically the computer can solve any problem and to simulate any process. Due to this property for 30 last year's the computers have radically changed human civilization. How? The main thesis of modernity: a man each year to handle the increasing amount of information which are needed more powered computers. Question: what information is needed to man? "Information" is immaterial substance that interacts with the material and spiritual worlds of man. Information forms the material environment of human life and its cultural life. Use of the terms "more information" or "less information" suggests that this can somehow be measured. But a man subjectively perceives the information through a set of its properties: the importance, reliability, timeliness, etc. The subjective perception of all's is different and scale of "more-less" is relative. Therefore, there is a concept of objective characteristics of information where the key parameter is the quantity. However, if we are interested in only the amount of information we are should completely abandon from their subjective properties. Not all information is objectively measured by numbers, because all depends on the coordinate and the "zero" point. In different coordinate information in two measured reports would relate differently. Thus, in the period of the mass use of computers, Internet, computer games etc., we cannot talk about the quality of information. If information becomes popular product is the name of "mass information" which is the same for all and that "re-educated" man, transforming him from a man in a part of the "many-body system". Consequently, only special way of information formation and its subsequent use is the main feature that distinguishes the modern society of the previous societies. Information processes today's have pure technical and technological basis: the process of computerization. The psychological and critical plan perception of information is replaced by a simple sign and symbolic imagery with the help of information and computer technologies. I.e. "Information society" is not critical mass but is the "artificial intelligence" having the mass consciousness which is simple to operate. The purpose of artificial intelligence in this case is the need to make a living organism (human) as mechanism but not vice versa.

3. Ideological Methods of the Information Society Creating

Historically, the first explicit ideologue of the

informatization of humanity was R. Llull (1235-1315). He said that in every field of knowledge there are several basic concepts of from which can be formed by all the others. All knowledge is predetermined by these primary concepts. Combining these concepts in a different way, you can get all the possible knowledge about the world. The essence of his works was the possibility of reducing the entire world's knowledge to a combination their basic principles and brings them to unity as the "science of sciences"[23]. To achieve these goals, Llull offered his logical machine. It spawned the special knowledge way the so-called "lullizm"; on this way were all so-called "great thinkers" up to G. Bruno. We can say that all the later philosophers were also "lullists", since they were all disciples of those who worked before the XVII c.

The main work of Llull called "Ars Magna". This title shows the great claims of author. There is no greater than the process of author creation of something new. The era in which he lived Llull was exclusively Christian. It was known that of all possible creations is no greater than those created by God. Of all God's creatures the most difficult is the man. If, therefore, to assume that "Ars Magna" is the art of God who created the world and man, the one name of Llull work says that the author take on the function of the God, which consist in the creation of a "new world" and "new mankind".

Llull project similar to the modern Internet: a collection of "universal knowledge" with the search engines. Llull "science of science" and modern Internet for consumers are the formalization of natural language and natural science and becoming a mechanistic system that divorced from real human everyday life but formed an artificial human everyday to a man is gradually get used to the "new world". Big knowledge base and the ability to search all the answers to any questions with the help of "machine" saves one from having to look for yourself, think and finding, i.e. develop.

Rosicrucian[24-26] F. Bacon (1561-1626) in the papers "New Organon" (1620) and "New Atlantis" (1624) outlined that the nature and man not more than mechanisms which should be calculated. The goal of science is subjugation the nature and God to the man. Bacon is called the "ghost (idols) of family" as major, in his opinion, error which prevents a man to know the world. He assumed that this "error" is the human nature. In fact, he called to change human nature, i.e., to eugenics.

R. Descartes (1596-1650) divided the wholes concept of "man" on "body" as the machine and the "soul" as the consciousness. Soul, in his understanding, is the human attribute but animal only are like automat. The life of man and animal be the result of a few simple forces that need to be able to programmed for receive the "good man's". Descartes was also close to Rosicrucianism[25].

Mason[27] J. La Mettrie (1709-1751) denied the Cartesian dualism and argued that the human body and mind is a "self-winding machine" and the soul is a fiction. D. Hartley (1705-1757) constructed a theory of "associative psychology." Its essence is that the connections of muscular reactions and feelings will can modify and change the

behavior in desired direction.

After the ideological training of the next major action was to be to take the "machine" on the role of God. Since "Llull machine" could construct metascience and know absolutely everything, personification of the Absolute (God) would take their positions. All mechanists were ready to tear the science from life. These researchers stopped moving parallel with Nature, i.e., trying to know the unknowable. These researchers have created a generation gap that is filled ideology replacing natural laws of the Universe on social laws, i.e. on eugenics. The central figure of the society is the man who as "crown of creation" is able to create a mechanism of absolute knowledge. The creation of "thinking" (intellectual) machines similar to the process of Creation. But if the traditional Creator is the God and a feeling that leads human through life is a conscience, now the "creator" of "thinking machines" are the man's whose conscience is replaced by "practicability". A necessary and sufficient condition for this ideological revolution will be a gap of man's relationship with God. Only the statement that man is not a creation will be a slogan for those who wish to make a man as "creator". Therefore, all philosophers were at war with Christianity: up to the XVII c. and thereafter. I.e. should understand that the part of the "industrial revolution" which has been linked to the process of informatization was not spontaneous: making a Homo sapiens as an artificial mechanized "thing" was planned a long time before the emergence of computer.

So, it was necessary to show that the person is not a creation of God but the only developed from the dirt itself "thing". If not the process of Creation then is no God, and if there is no God then the "anything goes" and the man himself can become a creator. It was important to statement about "usefulness" and "inevitability" of the "industrial" and "scientific revolution". I.e. animal origin of man was the theory that linked the "scientific revolution" with "Ars Magna" of Llull, i.e. the art of the creation of the "new world" and "new man".

This idea was lobbied by T. Huxley (1825-1895). In 1860 he coined the term "darwinism" and formulated the "morphological proximity" of man to apes. Since 1869 Huxley was against belief in God's creation of man. In 1871 Darwin declared unproven animal or "uncreated" human origins. Also in 1871 in the masonic lodge "Red Lions" in Edinburgh (Scotland) was performed the poem based on the Darwin's book. In this poem is stated that the monkey has become king of the Universe (established a "new world") and its dominance cannot be refuted[28].

We have already shown that darwinism with Nietzsche philosophy becomes ideological factors contributing to the emergence of artificial human. "Evolutionary theory" is "eugenics", i.e. "science of improving human nature" and, that should be highlighted, about her artificial, not natural "improvement". "Evolutionary Theory" is a narration of the coup that took place in the World before the "industrial revolution". Really, the acquisition of "behavioral change" is preparatory to the "industrial revolution" period in human

history: the Renaissance and the Reformation. The weakest people adapt during this time, i.e., take the side of evil, mutate. Simultaneously, is the "struggle for existence", i.e. ruthless destruction of the traditional world from evil. The victory of the "industrial revolution" and large-scale social coup is a pseudo-natural selection: the strong evil is devour the tradition. The weakest part of surviving becomes slaves of the strongest. It's clear why darwinism gave birth to the nietzscheanism with theory of the "superman".

In 1920 in the UK was established Tavistock Psychiatric Clinic led by J. Rawlings-Rees (1890-1969). In 1922 Tavistock introduced the technique of "profiling", i.e. technology to create mass public opinion. Since this year began the practical transformation of social society to the "information society".

At the same time in 1922 the "father of journalism" W. Lippmann (1889-1974) published a book "Public Opinion". He showed that the most important thing is a picture which is created inside the human head because an external impact. Necessary to reduce complex problems to simple solutions that people believe in something that to already believe by others (as supposed). The main theme of the book was the expression of "opinion rule the world" which implies the axiom that people do not have to think but will have to share their opinion and feelings. Lippmann's book became the starting point for the formation of the concept of collective (holographic) memory. The information society is uncritical because in his consciousness is invested finished images. A standard set of images corresponds to a standard set of questions and a departure from the standard reveals the poverty of modern human souls. On the principle of universal unification and standardization of the process of globalization is based[29].

In 1924 H.G. Wells (1866-1946) called for a new global state based on the principles of eugenics.

In 1931 philosopher B.A.W. Russell (1872-1970) published a book entitled "The Scientific Outlook". The main idea of this book the following: 1) need to develop two types of education, i.e. for ordinary people and for those who carry the authority; 2) ordinary people have to be the executive and non reasoning; for this it is necessary to apply to them psychoanalysis, theory of behavior, biochemistry; 3) if the child has violated his social status should be sent to "lethal chamber"; 4) necessary to introduce the institute of social psychologists who work with children under the age of 10 years for the destruction of influencing them home atmosphere; 5) children of ordinary people from an early age to be accustomed to the "cooperation", ie to the ability to repeat what others are doing[30, 31]. In 1952, he repeated this in his book "The Impact of Science on Society" where also encouraged to artificially create the epidemics towards reducing the human population[30, 31]. By the beginning of the XXI c. been fully realized 1, 2, 4 positions. Now gradually being implemented 3 and 5 positions.

In 1932 were published the first edition of A. Huxley (1894-1963) "Brave New World". He was the grandson of T. Huxley, i.e. his ideas were not random. The slogan of this

book, i.e. universal global idea was the expression of "COMMUNITY, IDENTITY, STABILITY" and most "abusive" words are "Mom and Dad". In 1946 Huxley wrote the foreword to a new edition (Harper & Bros.). Here is quote from it: *"Assuming, then, that we are capable of learning as much from Hiroshima as our forefathers learned from Magdeburg, we may look forward to a period, not indeed of peace, but of limited and only partially ruinous warfare. During that period it may be assumed that nuclear energy will be harnessed to industrial uses. The result, pretty obviously, will be a series of economic and social changes unprecedented in rapidity and completeness. All the existing patterns of human life will be disrupted and new patterns will have to be improvised to conform with the nonhuman fact of atomic power. Procrustes in modern dress, the nuclear scientist will prepare the bed on which mankind must lie; and if mankind doesn't fit – well, that will be just too bad for mankind. There will have to be some stretching and a bit of amputation – the same sort of stretching and amputations as have been going on ever since applied science really got into its stride, only this time they will be a good deal more drastic than in the past. These far from painless operations will be directed by highly centralized totalitarian governments. Inevitably so; for the immediate future is likely to resemble the immediate past, and in the immediate past rapid technological changes, taking place in a mass-producing economy and among a population predominantly propertyless, have always tended to produce economic and social confusion. To deal with confusion, power has been centralized and government control increased. It is probable that all the world's governments will be more or less completely totalitarian even before the harnessing of atomic energy; that they will be totalitarian during and after the harnessing seems almost certain. Only a large-scale popular movement toward decentralization and self-help can arrest the present tendency toward statism. At present there is no sign that such a movement will take place.*

There is, of course, no reason why the new totalitarisms should resemble the old. Government by clubs and firing squads, by artificial famine, mass imprisonment and mass deportation, is not merely inhumane (nobody cares much about that nowadays), it is demonstrably inefficient and in an age of advanced technology, inefficiency is the sin against the Holy Ghost. A really efficient totalitarian state would be one in which the all-powerful executive of political bosses and their army of managers control a population of slaves who do not have to be coerced, because they love their servitude. To make them love it is the task assigned, in present-day totalitarian states, to ministries of propaganda, news-paper editors and schoolteachers. But their methods are still crude and unscientific...

... Great is truth, but still greater, from a practical point of view, is silence about truth. By simply not mentioning certain subjects, by lowering what Mr. Churchill calls an "iron curtain" between the masses and such facts or arguments as the local political bosses regard as undesirable, totalitarian

propagandists have influenced opinion much more effectively than they could have done by the most eloquent denunciations, the most compelling of logical rebuttals. But silence is not enough. If persecution, liquidation and the other symptoms of social friction are to be avoided, the positive sides of propaganda must be made as effective as the negative. The most important Manhattan Projects of the future will be vast government-sponsored enquiries into what the politicians and the participating scientists will call "the problem of happiness" – in other words, the problem of making people love their servitude. Without economic security, the love of servitude cannot possibly come into existence; for the sake of brevity, I assume that the all-powerful executive and its managers will succeed in solving the problem of permanent security. But security tends very quickly to be taken for granted. Its achievement is merely a superficial, external revolution. The love of servitude cannot be established except as the result of a deep, personal revolution in human minds and bodies. To bring about that revolution we require, among others, the following discoveries and inventions. First, a greatly improved technique of suggestion – through infant conditioning and, later, with the aid of drugs, such as scopolamine. Second, a fully developed science of human differences, enabling government managers to assign any given individual to his or her proper place in the social and economic hierarchy. (Round pegs in square holes tend to have dangerous thoughts about the social system and to infect others with their discontents). Third (since reality, however utopian, is something from which people feel the need of taking pretty frequent holidays), a substitute for alcohol and the other narcotics, something at once less harmful and more pleasure-giving than gin or heroin. And fourth (but this would be a long-term project, which it would take generations of totalitarian control to bring to a successful conclusion), a foolproof system of eugenics, designed to standardize the human product and so to facilitate the task of the managers"[32].

A. Huxley gave lectures on the "Human Potential" at Esalen Institute in the early 1960's. Huxley saw the world as a total "concentration camp of the mind" in which live "pharmacologically manipulated slaves" created with the help of medicine and advocacy[30].

In 1957 his older brother, J. Huxley (1887-1975) founded the movement of transhumanism. He defined the transhumanists as people who improved to learn new skills and abilities[33]. In 1966 it was refined that transhumanists are people who have a special outlook and way of life for self-improvement through the use of modern science and technology for the transition to the "post-human", i.e. to "thing" who has a fundamentally new capabilities[33].

Social ideas of Russell and Huxley began to be introduced into practice at the turn of the XX/XXI cc. But their practical source should be assumed Frankfurt Institute for Social Research (Germany, 1931). After emigrating to the United States, its members declared themselves "Frankfurt School" (FS) and were attracted by Tavistock to work together.

In 1937-1940 Tavistock and FS worked on the study of radio. T.V. Adorno (1903-1969) and W. Benjamin (1892-1940) showed that the media tools can be used to induce mental illness and regressive states[30, 31]. In 1938 was made famous radio show "War of the Worlds" to show that many people believe or during the invasion of Martians, or the invasion of German troops. Probably because of this idea grew the idea of television as the best in the second half of the twentieth century nonviolent means to "brainwashing".

In 1945 FS and Tavistock founded the project called "The Authoritarian Personality" for the study of american sources of anti-semitism[30, 31]. In 1950 the project was completed, and the following conclusions was made: 1) american family is a authoritarian; 2) american belief in a transcendent God is a authoritarian and chauvinistic; 3) american patriotism is fascism; 4) requires significant changes in popular culture that America did not become the Fourth Reich[30, 31]. From this following the one conclusion: is needed completely destroyed traditional America. The main weapon to destroy traditional America and on this example any of the traditional society were to be eros and drugs in any form[30, 31].

Officially the theories of change of USA are developed since 1945 in several projects CIA: PAPERCLIP (1945-1947), CHATTER (1947-1950), BLUEBIRD (1950-1951), ARTICHOKE (1951-1953), MKUltra (1953-1964) and MKSEARCH (1964-1973). The ideological leader of these projects was the Tavistock Institute of Human Relations which was established in 1946 in the USA. The research centers of american Tavistock became UCLA, MIT, Stanford Research Institute (SRI) and National Training Laboratories. These projects continued search for an answer to the basic question Huxley: as totally transform of man's? In special laboratories were doing experiments on people as volunteers as prisoners and hospital patients. Probably the experiments were also performed on a people who were specially stolen. Really, since 1947 in the USA and then in the World began promoting the fabulous stories about alien abductions and their medical experiments on humans. Probably this is the real kidnapping for experiments and completely brainwashed in survivors with programming them on children's stories about aliens. One of the major employees of CIA projects were D.E. Cameron (1901-1967), the founder and the second president of the World Psychiatric Association (1961-1967) and Rawlings-Rees, the founder and first president of the World Association for Mental Health (1948-1949). I.e. these projects were the official and had the support of a very high level. Tak, Cameron developed a method of introducing a false memory called «psychic driving». The method was the association of information programming and mechanism that allows coordinate this program. Cameron did on people the experiments on erasing the memory and reprogramming the psyche.

The experiments were gradually persuaded leading

psychiatrists in the difficulties of process of man's transformation if it is based only on psychedelia and pure drugs. Therefore, it became necessary to take the ideas of J. von Neumann (1903-1957) and N. Wiener (1894-1964).

In May 1942 in New York team was established known as "Project human-machine"[30, 31]. Participated in the project the engineers, biologists, neuroscientists, anthropologists and psychologists to conduct experiments on social management. It has been postulated that the human brain is a complex machine with input and output, and human behavior can be programmed on a personal and societal level. In 1947 Wiener coined the term for the name of the development team, the "Cybernetics Group" (CG). In 1948 Wiener published a book called "Cybernetics: Or Control and Communication in the Animal and the Machine". Cybernetics is the science in the framework of which have begun to develop the principles of erasing human individuality and unification of human societies.

In 1950s CG postulated the following: 1) development of computers will lead to their combination with the intelligence for programming of mankind; 2) the human mind is not sacred and the human brain is a machine whose activity can be played; 3) computer can have all the mental properties (emotions and feelings)[30, 31].

In 1964 IBM engineer D. Engelbart (b. 1925) developed the concept of the "workshop" (electronic text space) as the room where to put the "tools" (texts) were subjected to "mental structuring" and these tools are necessary for the production of knowledge. In 1984 the "Engelbart's workshop" was defined as "cyberspace". Cyberspace is the inner world of computers and computer networks, i.e. a world where the need to immerse posthumanity. We can say that the concept of Engelbart is the formulation of "knowledge society" which is to replace the "information society".

By the end of 1960s all the main experiments were completed. The results showed that the psyche can be reprogrammed and false memory can be introduced. The computer was made as drug *which more pleasure-giving than gin or heroin* (see Huxley above). The advertising of computers for young people was lobbied the ideologists of movement "beat generation", i.e. hippies etc. the Huxley, T. Leary (1920-1996) and S. Brand (born 1938). In 1966-1972 in the United States is drug boom and the final shift of national and social paradigm. Technology gradual degradation and destruction of traditional human society is well shown in the film «Pleasantville» (1998).

In 1972 S. Brand said: "Ready or not, computers are coming to the people. That's the best news since psychedelics"[30]. The computer has become one of the gods in New Age ideology which born in the 1960's and 70's. CG has created the "their own religion, the openly pagan belief system"[30]. In the 1990s Leary said that the computer is the LSD of the 1990s and declared that psychedelia and cybernetics are two sides of the same process[34].

In 1990s have been formulated positions that had to be developed quickly:

1) Creation of artificial "companions" who have full of feelings and emotions as a result of the best thinking of computer[35].

2) Appearance of computers and robots with the human intellect and their self-production of own "sense" and "values"[36].

3) Recognition of the rights of "smart cars" and the fight against the restriction of their autonomy[37].

4) Interdiction on protest of technological innovation[38].

5) The ability to download human consciousness into a computer to create posthumans[37, 39].

6) The combination of man and machine is needed for the expansion of the human mind to the level of full "deification of man" and likening each individual with God[40].

Here we want to see the main thing: the mechanization of human, creation posthumanity and interdiction on protest of technological innovation.

So, since 1990s the task of informatization is placed in the plane of creation a "new man" which "advanced" to the level of computer. How this is done the theory of Cameron and the problem of "biocomputer" are shown. Really, the main purpose "psyhic driving" (biocomputers) is their introduction into the body. The aim: to cure a cell or organism from disease. But it is possible to control the mechanism for healing the body and for the destruction of the body: the difference is in the original program. Embedded in the body of the mechanism immediately reads about this object and sends it to the appropriate database. Next someone gives a new program for the mechanism.

Symbiosis of microelectronic technology, biology and genetic engineering has allowed creating specially prepared for implantation in the human body chip-implants that can control the physiological and psychological functions of the organism. For the ideological preparation of society to upload his consciousness into a computer in 1999 and 2003 were produced such films as "The Matrix" and "The Matrix 2". The main idea of these films is the human migration from the real world into a computer program. In human implanted microchip that controls his mind and psyche. I.e. created the "e-thing" (electronics thing) which is part of the worldwide computer network: the network nodes (as "computers") are former people. These films are popularized pseudoscience about resettlement of human consciousness into a computer[41].

A person who becomes a "network node", i.e. "man-machines", is already a reality. In 2001 DARPA is stated on need for a device that can read a person's thoughts with encephalograph or other mechanism[42]. In December 2005 for the first time at Princeton University announced the achievement of the ability to read thoughts with the help of magnetic resonance imaging: the words are fixed in 5 seconds before pronouncing their aloud. Since that time the media regularly report on the continuous improvement of developments in this direction.

In 2005 by IBM and the Swiss Federal Institute of Technology in Lausanne was started Blue Brain Project[43]. Sense of the project in a computer simulation of the

mammalian brain at the molecular level. It is also expected of creation the nonbiological alternative of brain where can be upload the human consciousness. The project is expected to be completed by 2023.

In autumn 2001 Applied Digital Solutions (ADS) began mass advertising of VeriChip implant containing of man's individual number that determines everything from medical history up to home phone. Advertising begins immediately after the events of September 11, 2001. The necessity of implanting microchips in the human body began to explain "protection from terrorists". If you agree to implant a chip you are "good citizen", if you do not agree you are dangerous member of society, i.e. "potential terrorist". In order to facilitate the future pseudo-voluntary implantation of the chip in a biological organism since 2003 around the World have begun to collect so-called "biometric information" and upload them into microchips of biometric passports. The man who used a chip in the passport then easily agree to chip implantation in the body.

According to Huxley total control over a person is required to prevent any shocks in the future. "Electronic-transparent" person should have his number in the whole world but not the state. I.e. by computer destroyed the nation-state and creates a single world-wide state. Furthermore, the computer has become a tool for the collection of personal data and the creation of a global database of mankind where there is no privacy and personal life. Collection of biometric data needs because such data are unique to the individual. Further, these data can be converted to a digital code that is loaded into the microchip or stamp of human skin.

Thus, the microchip (or set of chips) which is implanted in the body is a tool of control over the person. Indelible barcode will be a label that operates on the principle of recognition of "us" or "alien" that indicates the need in a so-called "global democracy" preserve racial, national and political selection.

Technology microchip implanted in man's is constantly improving. In the early 2010's chips allow: 1) instantly locate the person at any time; 2) instantly detect any changes in the organism; 3) instantly get any information about a man from the database; 4) replace cash and credit cards as a subcutaneous wallet (VeriPay technology which presented ADS in 2004).

The microchip is the implemented «psychic driving» Cameron, i.e. real development of the computer psycho-technologies. The main activity of computer psycho-technologies being the "psycho-sensing" and "psycho-correction". Psycho-sensing defines the relation of the subject to any aspects of life. It is possible to accurately identify the secrets of man, i.e. whether it has the "wrong" or "dangerous" tendencies. Psycho-sensing disables psychological defense that includes man's if he answers questions consciously. During psycho-sensing computer "interrogates" the human subconscious so that the person does not know about this "interrogation". The subconscious responds to questions honestly because can not lie.

Psycho-correction to manage the condition and behavior of a person, i.e. corrects, directs, or destroyed it. Classical methods of psycho-correction are follows: 1) acoustic psycho-correction; 2) visual psycho-correction. Now used a software algorithm. Coding tool converts a voice signal in the noise and when listening to it is impossible to establish the fact of the speech signal. The brain is able to decode the signal and the obtained information of subject not understood. Before 2005 the concept of "galvanic vestibular stimulation" was developed; product was shown at SIGGRAPH-2005 (Los Angeles, CA, USA). With a few electrodes beneath the ear was possible to remotely control a person, that is, disrupt his balance and turn into a puppet[44].

However, classical techniques of psycho-sensing and psycho-correction are outdated. To use both this directions effectively is needed the embedded into the organism mechanism which will be continuously connected to the network. Psycho-correction can be performed by any modern audio and video sources of information. This source can be any electrical device and power grid. Since 2001 the gradually implementation of standards Power line telecommunications. Since 2006 are developed a some chips and standards for the ultra-fast data transmission over wireless networks. In this case, you can insert special chips not only in computer technique but in consumer electronics. I.e. theoretically possible to conduct of psycho-correction by any appliance if there is a chip with a speaker. Mass connection destroys privacy and will establish a communist totalitarian dictatorship globally under the slogan of democracy.

Thus, the modern process of informatization direct to cyborgization of mankind under the flag of eugenics, i.e. "improvement" of human's nature. According to A.Huxley, the Council of Europe in 2010 called on all its members to eliminate "discriminatory language". In 2009 the European Parliament banned the terms "Miss" and "Mrs". Since 2012 in France abolished the terms "mademoiselle", "maiden name" and "marriage surname". Since December 2011 in the UK abolished the terms "husband", "wife", "bride" and "groom". Strictly by A.Huxley, the word "father" and "mother" have recently begun to replace the name "parent A" and "parent B": Switzerland (June 2010), USA (February 2011), United Kingdom (December 2011), France (February 2013).

According to the work of R. Kurzweil (b. 1948), the following events are waiting for mankind[45-48]: 1) to 2014 the power of supercomputer will reach power of the human brain; 2) to 2020 the power of PC reaches the power of the human brain; 3) to 2020 special set of chips will be able to replace the entire set of human activity (from the motor functions to feelings and emotions); 4) to 2020 will be create an "electronic womb" with the help of which mankind stopped traditionally reproduced and will have sex only for pleasure (Huxley predicted in the 1930's); 5) in the 2020's begins mass use of nanorobots; 6) in 2030's nanorobots implanted in the brain the plunge humanity into "full virtual reality"; 7) in 2040's nanorobots would change the human body as you like;

8) to 2045 people will be "immortal" having the ability to overload your mind between any bodies. Although these predictions correctly called "cybernetic totalitarianism"[49], they have a good chance of being implemented.

4. Conclusions

Thus, the informatics has made the informatization, i.e. introduction of information. Computerized society is the "information society" and then, when each member becomes a node in the network total cyberspace, the "knowledge society".

According to Kurzweil etc., "e-thing" will be deified to the level of the rejected Christ. In this case God is now becoming as "biocomputer". Knowledge of new pseudo-divine laws will generate a "post-human society" where the main goal is the acquisition of the managed human immortality in the World's.

In the post-human society only large "biocomputer" can do everything on their own without having to depend on anyone, watch all, read all just born thoughts and feelings of their fellow members, record the thoughts, feelings and actions in memory (the Book of Life) punish the fellow members (the Last Judgment). The fellow members of this «biocomputer» are man-machines, i.e. "post-humans". Earthly human immortality in this case is completely achievable. For "e-things" all aspects of his life are recorded on the chips and then sent to the database. If necessary, the chips can be transplanted into another body and man-machine is immortal. However, the "immortality" manageable because once disobedience appears the man may be destroyed according to the principles of the Russell-Huxley.

"World's biocomputer" can assume 3 variants: 1) unrealistic, i.e. "collective intelligence" of man-machines; 2) possible, i.e. scenario science fiction writers (when to 2060 computers which have reached the total power of the mankind's brain will rule the world); 3) real (when part of mankind without a chip will manage of man-machines).

Probably this process cannot be stopped because the entire world's elite supports it. But you should understand the following. If we compare computers with fast arithmometer, it is useful and necessary. But the use of computer for modeling of the biological systems and management should recognize a mistake because this was the starting point to the end of human civilization. This approach is a mechanism-philosophy which turned into idealism, into metaphysics.

Mathematics can not be abstract science; it should describe the existing, not trying to comprehend the incomprehensible. Computing machines are for computing; they can not and should not get into others phenomenon, for example natural and social. Cybernetics eliminates the qualitative features of the phenomena in which grossly interferes. Elimination of such specificity unifies all phenomena reducing them to a common standard that kills

life. A lternate between machine and man is not allowed.

By the middle of XXI c. the mankind which turned into a "post-human" will cease to exist. The man's already now stops to think, act and feel bringing his time in voluntary sacrifice to the computer. The purpose of life is to achieve material wealth, comfort and uninterrupted pleasure and earthly immortality. For this is also a help of psychotechnologies that disable human consciousness and human redraws. Access to the subconscious is a access to the human soul. Psycho-technologies can talk to a soul to inspire her something and pushing to do for something. The human ear can not hear these words and man do not realize the impact. He receives a message from his subconscious takes her for his own and believes him. The thought haunts of man until he begins to conduct a dialogue with her. After the start of the dialogue man leans to the idea and as a result makes an action. In Christianity, this is called seduction man by demons.

Psycho-technologies also allow you to hear the answers of subconscious. As a result, you can build a program for the individual behavior of the individual who has ceased to be a man. Being under the constant influence of the media the people are poorly able to resist of psycho-correction. When nanorobots are implanted in the body the resistance will not impossible.

With the help of information technologies for the first time in the history of mankind was possible to realize all the utopian communist doctrines, from Pythagoras and Plato: building a society of total happiness. If an individual thinks only of satiety and pleasure, he is happy because disconnected from any external stimuli and not having the ability to make decisions. Therefore, we can say that with the help of computer science under the flag of global democracy in the world wins the communism. I.e., in fact, the human race is on the transition from an industrial society to a communist society.

Finally, we can recall the Book of Revelation: "And he causeth all, the small and the great, and the rich and the poor, and the free and the bond, that there be given them a mark on their right hand, or upon their forehead; and that no man should be able to buy or to sell, save he that hath the mark, even the name of the beast or the number of his name"[50]. I.e. the cyborgization is a stamp of antichrist according to the Christian tradition. In turn this means that all the doctrines associated with the transformation of man are satanism. We must assume that those who refuse to use technology subcutaneous wallet will not be able to sell and buy.

The ultimate goal of human development is to achieve harmony through love of neighbor. But you can not love everyone equally, true love is possible only to peers, as envied the love is impossible. Democratic identity of all possible only within the "World's biocomputer" as nodes in a network through totalitarian control over the thoughts and feelings. I.e. democratic love is totalitarianism as the highest stage of democracy and its purpose is to purging the mankind from mankind in the name of mankind[51]. Considering the history of information technology, this definition must

always remember.

Christ offers to mankind the greatest of gift: His God's love, i.e. natural life. Each person is called to respond to this in the affairs. But man succumbed false informatization charms and rejected God's gift. Thus, the man rejected his own life deciding to replace it with artificial surrogate. The man refused to God's law, i.e. from moral laws of life. Because of this there was blurring of boundaries between the concepts of goodness and evil. Information society is based on the principles of permissiveness, unlimited stupidity and neglect eternal truths. The main economic resource of the information society is a fool because he can believe anything. Society, whose members are stupid "ideal customer" which completely devoid of rational consciousness is a morally sick. His future deadly disease is a cyborgization. I.e. mankind will destroy not asteroid and not natural disasters but the temporary triumph of evil over goodness. Now, when mankind is on the threshold of his death, it is necessary to know and understand.

REFERENCES

- [1] K. Steinbuch, Informatik: Automatische Informationsverarbeitung. Berlin, Germany: SEG-Nachrichten, 1957.
- [2] D. Groth and J. MacKie-Mason, "Education Why an Informatics Degree?", Communications of the ACM., vol. 53, N 2, pp. 26-28, 2010.
- [3] D. Bell, The Coming of Post-Industrial Society: A Venture of Social Forecasting. New York, USA: Basic Books, 1973.
- [4] K. Williams, "Literacy and computer literacy: Analyzing the NRC's 'Being Fluent with Information Technology'", J. Literacy and Technology, vol. 3, N 1, pp. 1-20, 2003.
- [5] N. Bourbaki, Elements of Mathematics. Integration I. Chapters 1-6. Berlin, Germany: Springer, 2004.
- [6] V. Bush, "As We May Think", The Atlantic, N 7, pp. 1-9, 1945.
- [7] J. McCarthy, "Programs with Common Sense", in Proc. of the Teddington Conference on the Mechanization of Thought Processes, pp. 756-791. London: Her Majesty's Stationery Office, 1959.
- [8] D. G. Feitelson, Optical Computing: A Survey for Computer Scientists. Cambridge, MA, USA: MIT Press, 1988.
- [9] J. G. Sutherland, "Holographic Models of Memory, Learning and Expression", International J. of Neural Systems, vol. 1, N 3, pp. 123-134, 1991.
- [10] S. Jacobsson, "The Future of TV: 3D, Window Walls, Visible Light Communication, and More", PCWorld. 15 Apr. 2010.
- [11] J. Stolze and D. Suter, Quantum Computing. Berlin, Germany: Wiley-VCH, 2004.
- [12] S. Haykin, Neural Networks: A Comprehensive Foundation. Upper Saddle River. New York, USA: Prentice Hall, 1999.
- [13] J. Borresen and S. Lynch, "Neuronal computers", Nonlinear Analysis: Theory, Methods & Applications, vol. 71, N 12, pp. 2372-2376, 2009.
- [14] H. Dreyfus, What Computers Still Can't Do: A Critique of Artificial Reason. Cambridge, MA, USA: MIT Press, 1992.
- [15] R. Penrose, Shadows of the Mind. Oxford, USA: Oxford Univ. Press, 1994.
- [16] K. Warwick, March of the Machines: Why the New Race of Robots will Rule the World. London, UK: Century, 1997.
- [17] K. Warwick, March of the Machines: The Breakthrough in Artificial Intelligence. Chicago, USA: University of Illinois Press, 2004.
- [18] D. C. Dennett, Consciousness Explained. London, UK: Penguin, 1994.
- [19] P. McCorduck, Machines Who Think. Natick, MA, USA: A.K.Peters, Ltd., 2004.
- [20] E. Shapiro, "Programmable and Autonomous Computing Machine made of Biomolecules", Nature, N 44, pp. 37-52, 2001.
- [21] H. Moravec, Mind Children: The Future of Robot and Human Intelligence. Harvard, USA: Harvard Univ. Press, 1988.
- [22] H. Moravec, "When will computer hardware match the human brain?", J. of Evolution and Technology, vol. 1, N. 1, pp. 7-13, 1998.
- [23] P. Rossi, "Legacy of Ramon Lull in Sixteenth-Century Thought", Medieval and Renaissance Studies, N 5, pp. 182-213, 1961.
- [24] B. Bevan, The Real Francis Bacon. London, UK: Centaur Press, 1960.
- [25] F. Yates, The Rosicrucian Enlightenment. London, UK: Routledge & Kegan Paul, 1972.
- [26] F. Yates, The Occult Philosophy in the Elizabethan Age. London, UK: Routledge & Kegan Paul, 1979.
- [27] G. Garrard, Counter Enlightenment: From the Eighteenth Century to the Present. London, New York: Routledge, 2006.
- [28] M. A. Cremona and R. L. Thompson, The Hidden History of the Human Race. Badger, Calif., USA: Bhaktivedanta Book Publishing, 1993.
- [29] V. I. Talanin, "Globalization of morality", in: Philosophy and the future of civilization, vol. 3. Moscow: Sovremennye tetradi, 2005. (In Russian).
- [30] J. Stainberg, "From cybernetics to Littleton", Executive Intelligence Review, N 5, pp. 171-179, 2000.
- [31] C. White and J. Stainberg, "Laboratory of satan: "Brave New World", Moscow, N 1, pp. 103-121, 2003. (In Russian).
- [32] A. Huxley, "Foreword to *Brave New World*", in: Brave New World. New York, USA: Harper & Brothers, 1946.
- [33] N. Bostrom, "A History of Transhumanist Thought", J. of Evolution and Technology, vol. 14, N 1, pp. 45-57, 2005.
- [34] T. Leary, M. Horowitz and V. Marshall, Chaos and Cyber Culture. Berkeley, Calif., USA: Ronin Publishing, 1994.

- [35] A. Sloman and B. Logan, "Evolvable Architectures for Human-Like Minds", in: *Affective Minds*. Amsterdam: Elsevier, 2000, pp. 169-181.
- [36] D. V. McDermott, *Mind and Mechanism*. Oxford, USA: MIT Press, 2001.
- [37] F. J. Tipler, *The Physics of Immortality: Modern Cosmology, God and the Resurrection of the Dead*. London, UK: Macmillan, 1995.
- [38] H. Moravec, *Robot*. Oxford, USA: Oxford Univ. Press, 1999.
- [39] H. Moravec, "Robots, Re-Evolving Mind at 10^7 Times Nature's Speed", *Celebrum*, vol. 3, N 2, pp. 34-49, 2001.
- [40] E. S. Yudkowsky, "Levels of Organization in General Intelligence" in: *Real AI: New Approaches to Artificial General Intelligence*. Amsterdam: Elsevier, 2003, pp. 231-250.
- [41] R. Kurzweil, "Live Forever – Uploading The Human Brain Closer Than You Think", *Psychology Today*, N 2, pp. 72-81, 2000.
- [42] "Reading Minds", *The Economist*. Febr. 24, 2001.
- [43] M. Herper, "IBM Aims To Simulate A Brain", *Forbes*. June 6, 2005.
- [44] A remote control that controls humans.[Online]. Available: http://www.msnbc.msn.com/id/9816703/ns/technology_and_science-innovation/#.UOrkdKz0VNJ
- [45] R. Kurzweil and T. Grossman, *Fantastic Voyage: Live Long Enough to Live Forever*. Emmaus, Penn., USA: Rodale Books, 2004.
- [46] R. Kurzweil, *The Singularity Is Near: When Humans Transcend Biology*. New York, USA: Penguin, 2005.
- [47] R. Kurzweil and T. Grossman, *Transcend: Nine Steps to Living Well Forever*. Emmaus, Penn., USA: Rodale Books, 2009.
- [48] R. Kurzweil, *How to Create a Mind: The Secret of Human Thought Revealed*. New York, USA: Viking Press, 2012.
- [49] Lanier J. One Half of a Manifesto.[Online]. Available: http://www.edge.org/3rd_culture/lanier/lanier_p1.html
- [50] Revelation. 13:16-17.
- [51] V. I. Talanin, "True and false of humanism", in *Proc.: Humanism as the theoretical and practical problem of the XXI century*. Moscow: Rospen, 2004, pp. 121-127. (In Russian).