On Scientific and Religious Outlook in the Modern World

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Article is devoted to relations of religion and science in the sphere of world outlook. The author characterized fundamental ideas of religious world outlook and compared it with scientific views about the world and men that is results of new scientific researches. The author sets the problem of opportunity to prove religious world outlook and distinctions of ways of study of the world and men in religion and science.

Keywords: religion, science, world outlook, religious world outlook, scientific world outlook, ways of study.

Point

The world outlook of modern people is a mosaic of different opinions, ideas, conceptions and hypotheses that often disagree and are not organic with the whole view on the world. Starting from the young age the two main authorities of modernity – religion and science – struggle for consciousness of each of us, disprove and indict the opponent to control people’s consciousness.

A person has to accept views of one of the opponents and deny views of the other to save the integrity of his or her view on the world. It results in excessive rationality of those who accept scientific views and dogmatism of those who accept religious views. But the third variant is possible – to deny views of both opponents. It is an opinion of a middlebrow who desires to enjoy life and does not want to cognize the truth. Unfortunately, there are more and more people of this kind who talk about a crisis of the world outlook in the modern world.

Can religion and science cooperate in the process of development of the modern world outlook? It is a very difficult question because the answer is connected with the decision of many problems of the world outlook, which has been the subject of a dispute between religion and science for a long time. Nevertheless, development of modern science gives hope that this problem will be settled. Many discoveries in the 20-21st centuries paid our attention on notions about the world and a human being that were the subject of faith during millenaries. Growth of scientific knowledge in spheres that were inaccessible for
scientific research (for example, in the world of elementary particles and the subatomic process, in astrophysics and cosmology, in molecular biology, palaeobiology and genetics, in the process of the Earth’s life and so on), has led to the formation of the representations having obvious analogies to ancient representations about the world and a person. All this, according to many scientists, is a serious basis for overcoming the conflict that has already become a traditional one between science and religion and transition to the process of searching things in common and the consent.

For example, let us consider which of the main representations specific to the majority of religions corresponds to the modern scientific data about the world’s and person’s structure and development.

The base of any religious outlook is a representation about the Reason of occurrence of the universe. All religions assert that this Reason has a reasonable nature and it is inaccessible to the people’s knowledge. However, a person can create representations about it through knowledge of creations made by it, through the understanding of high complexity, organization, order and harmony of our Universe that display the Reason.

Such representation about the Universe receives the increasing representation in modern science. Systems of such high complexity as our Universe, the Solar system, the Earth and life on it, could not arise casually because they demand the very accurate calculation. It is proved by the researchers of universal physical constants on which the existence of the Universe and life on the Earth is based, and it is also displayed with the law of a gold proportion in the nature (Vasjutinsky, 1990; Bradley, 2001). Our world is so precisely calculated that even the slightest change at least of one of these indicators will result not only in its cardinal change, but, in certain cases, even in the change of annihilation. Certainly, a direct proof of the Creator in modern science is not present, also it, as we see, will completely be coordinated with ancient representations about impossibility of knowledge of an original cause of the Universe. However, studying of its creations obviously finds out “traces” of the presence of the Reason. As an astronomer Medler “who does not want to see in this harmony that is found out with such evidence in a structure of the star sky anything, but a case that should attribute the Divine wisdom to this case” (Fomin, 2005, 405).

The overwhelming majority of religion doctrines and philosophies assert that the Reason creates assistants or intermediaries to create our world, and they carry out the creation of the Universe and life in it. In the developed religions, having the philosophy, they represent certain abstract principles or forces in public cults – the higher reasonable beings or gods. It is interesting that these intermediaries, forces or gods, are always divided into the male and female ones who act in the form of concrete gods and goddesses or male and female principles. The analyses of this division and a further role of the beginnings in the course of creation shows that the machismo always symbolized participation of reasonable forces in the Universe creation, and female – the presence of the matter necessary for this process. And the material beginning at this stage is an immaterial substance that is rather far from representations known to us about substance and that can be called as divine. According to the Eastern religious tradition, the spiritual, divine world, or even set of the worlds consists of it.

It is interesting that during the last century science also has come to conclusion that there are different kinds of a matter. Substance is only one of these kinds and it reviles itself as energy and as a substance in different conditions. By scientific researches, it is proved that the matter can exist without those properties that are characteristic
for substance, including weight. Moreover, penetration into the world of elementary particles and sub nuclear processes has shown that substance particles arise from other condition of a matter – fields. Substance is the only one of conditions of other substances that is both energy and dense matter under different conditions.

This substance fills, most likely, all space of the Universe that recently was considered as an empty one. Physicists put forward the assumptions that the space vacuum represents the field environment more and offer various kinds of fields that could create this environment. In spite of the fact that the physicists have not created a unified field theory yet, it is possible to assert that all this theories are based on the belief that the empty space is not present in the Universe. This emptiness is actually the other kind of a matter inaccessible to our usual perception.

Space researches result to the same conclusion. In modern cosmology there is even a special term for a designation of a matter that is invisible for a person – “a dark matter”. Many astrophysicists consider that 95 % of a matter in the Universe exists in such condition. What does this matter represent? Partially (4-5 %) it consists of usual substance that does not emit radiation and, consequently, is invisible. From 0.3 to 3 % of the latent weight is made by neutrino – the elementary particles whose weight is extremely small.

The main candidates to be called “dark matter” are weakly interacting massive particles. Their feature is that they almost do not demonstrate interaction with usual substance. For this reason they are also the real invisible dark matter and, for this reason, they are extremely difficult to find out. The weight of these particles should be at least ten times more than the weights of a proton. Their searches are conducted during the last 20 – 30 years, but despite all reasonable efforts they have not been found till now.

Some astrophysicists assume that “dark energy” compounds from 65 to 70 % of “a dark matter”. We are able to say about “dark energy” even less, than about “a dark matter”. We know that it is distributed in the Universe uniformly, unlike usual substance and other forms of “a dark matter”. In galaxies and galactic cluster there is as much “dark energy” as there is out of them. It is known that it has rather strange properties. For example, “dark energy” tends to antigravitation: the rate of the Universe expansion grows at “dark energy” expense. “Dark energy” pushes itself aside, accelerating expansion of the usual matter collected in galaxies. It also has negative pressure that produces a preventing its stretching force.

Thus, the more modern science learns the nature of matter and gets into structure of a microcosm and studies a macrocosm, the more questions arises. Science has studied only substance, and the other kinds of the matter existing in the Universe in many instances remain a riddle for it. However, many scientists agree that the matter in inaccessible to the person’s perception forms “is poured” in the Universe and fills all its space. Probably, it is these conditions of a matter that were named by ancient religions and philosophies as the Divine substance.

The Universe, as the result of creation, has the beginning and, hence, the end of the existence for any religious outlook. Creation doctrines of different religions differ from each other only that some of them describe the creation of the whole system of the worlds considering our world only as a part of this system and the others understand creation of exclusively our material world, as the spiritual world is eternal for them and cannot be created. As a matter of fact, dispute is whether our Universe is unique, or if it is necessary to speak about existence of sets of the Universes?

Strange as it may seem, but this question was often discussed in astrophysics and cosmology in the 20th century. The Big Bang theory
confirms occurrence of the Universe as a result of the explosion of the superdense condition of substance. According to this theory, the Universe has arisen quickly and at once in this material form, in which it exists today. Moreover, the theory of a Big Bang does not assume new revival of the Universe after its thermal death.

However, as it turned out, the Big Bang theory could not offer an exhaustive explanation of the Universe occurrence. It has put some question. According to the answers to these questions, the other scenarios of the Universe genesis can be assumed. What was there when there was nothing? It has been mooted that the Einstein equations cannot be solved for negative time, and that is why the question “What has been there before the Universe was born?” has no meaning within the limits of the general theory of relativity. Is it true? Calculations proved that for the Universe with a zero radius many parameters become infinite.

Why does the Universe seem to be so flat (according to all available information—to within 10 in 60th degree)? Was it the same from the very beginning? Why is it homogeneous? If we look at that part of the Universe that is visible with modern telescopes and analyze average density of substance distribution in space scales, it will appear that it is identical in all directions to within 10 in 5th degree. One more problem with the Big Bang theory—it cannot explain the origin of the enormous quantity of energy required for a particles birth. And, at last, the main problem is that this theory could not explain the Big Bang cause.

All these questions have led to the further researches and were settled in theories of a quantum birth of the Universe, in particular, in inflationary theories (Linde, 1990). Without going into details, according to these theories, the Universe came into being in the course of quantum fluctuations in a uniform scalar field.

As a result, there is a set of space-time “bubbles” with different properties. The energy potential of each “bubble” is so huge that instead of an attraction there is a gravitational pushing away. It leads to its inflating. It is inflated to Universe scales for the rather short time, 10 in 35th degree of seconds.

As there are a lot of quantum fluctuations and there are many space-time “bubbles”, it is possible to say that there are a lot of universes. Universes are being born in this foam infinitely: one of them, being born, there and then disappear; others grow remaining dead; the third ones have no time and development, and the fourth universes are filled with galaxies, stars, planets and become similar to our Universe.

Consequences of the inflated Universe theories for the world outlook are very important: they return us to the very ancient representations about plurality of the worlds. And we should refuse representation that our Metagalaxy is the all Universe. In inflationary cosmology there is a concept of the Metauniverse; areas of the Metagalaxy scale are called “miniuniverses”. The Metauniverse is considered as “all existing”, and the Metagalaxy is its local area. But it is not excluded that if the uniform theory of physical interactions will be created, the concept volume of “the Universe as the whole” will be considerably expanded again.

From the religious point of view, any life is a unity of the material form and a spiritual principle that gives the necessary power to the form to live. Thus, the spiritual principle is the essence of life, “a divine spark” bringing any material form to life. Some of religious doctrines, namely Biblical religions, say that a spirit belongs only to a person. All other religious traditions identify the concept of “spirit” with a life principle in general that presents at any material form, including inorganic forms of life. For this reason, from the point of view of many religious doctrines,
all material forms in the Universe are alive, in spite of the fact that the movement and change of many of them is imperceptible for a human being. This movement can be carried out too slowly (a mineral kingdom) or too quickly (the world of spiritual beings). However, inability of a person to notice this movement does not mean that it is not present in general.

We meet similar representations and in a modern scientific outlook. Systems self-organizing theories promoted the increasing recognition of all material forms the live by science. The definition of life as a way of existence of protein bodies is exposed to the serious criticism. The basic sign of life is not the features of substance of which the body consists, but ability to change and adapt to conditions of environment independently, i.e. the ability of self-organizing. It has appeared that all known systems, including inorganic ones, have this ability.

It is possible to list the variety of the researches confirming the presence of processes of self-organizing in the inorganic nature, such as the study of spontaneous formation of minerals with more compound lattice (A. Zhabin); self-organizing research in chemical reactions, namely in self-sustaining self-oscillatory processes in some chemical environments known as the “Zhabotinsky – Belousov effect”; the study of formation of structures of escalating complexity in liquids and plasma (Taylor and Benar’s instability); the experiments showing qualitatively new phenomena of the change of external conditions in physics of a firm body (Gunn’s oscillators, tunnel diodes, thermoelastic instability) (Haken, 1977); I.N. Janitsky’s researches of the Earth’s growth process (Janitsky, 1998a, 1998b).

Besides, it was found out that the system should possess the information for self-organizing by which it will be guided in the course of the change. The study of biochemical processes in an organism has not answered what kind of information it is and where it is. However, the study of the genetic mechanism of heredity has shown that a gene has not only the material carrier – DNA molecules, but the field structure that, probably, is the main carrier of information necessary for life (Bradley and C.B. Thaxton, 1994; Garjaev and Leonova, 1996; Bradley, 2004).

“The modern level of scientific knowledge, writes E.K. Borozdin, allows defining the basic property of “Live” as the ability of self-realization of information, originally put in it, which is realized during an organism development… The information is put originally into a live organism; it is realized by this organism for the perfection and complication, for formation of new structures within itself and acquisition of new properties… Processes in the Live organism are being done purposefully and compulsorily according to the information that was put in it, and this information is the plan of ability to live of an organism during all periods of its existence” (Borozdin and Martynova, 1997, 54–55). Perhaps, it is what was called as a spirit or soul in religions.

Life development is carried out cyclically in all religions. It means that all history of life on Earth can be divided into stages. Every stage has its living conditions for development and evolving. These conditions change after certain time, often quickly and unexpectedly, that leads to death of all alive. Classical examples of such accidents are the Bible Flood, the great winter in Zoroastrism, and other displays of gods’ anger.

The end of each cycle has a deep spiritual sense. It is a kind of check of things that has been reached lately. At this moment the Higher Powers get in the evolution process to see what has been made and whether the forms of life created by them develop correctly. Many religious doctrines consider that the end of a cycle is not the end of life in general. Each time the life revives again –
In new conditions and in new forms adapted to these conditions.

In science, the concept “cycle” has appeared also thanks to theories to self-organizing of systems. A fundamental principle of self-organizing is occurrence of a new order and complication of systems through fluctuation (casual deviations) conditions of their elements and subsystems. Such fluctuations are usually suppressed in all dynamically stable and adaptive systems by negative feedback, i.e. the reaction of the system in order to limit the influence on these deviations. It helps to preserve a structure and keep a system close to the balance. But in more sophisticated, open systems the energy flows from the outside and misbalance strengthens, deviations increase, accumulate, cause an effect of collective behavior of elements and subsystems and lead to “shaking” the former order. It results in the destruction of the former structure or formation of a new order through rather short-term chaotic condition of the system. Self-organizing causes the building-up of new systems through a stage of chaos.

Thus, it became clear that systems are not stable for infinitely long time. Sooner or later they leave equilibrium and collapse. However, even the period of full chaos is not a life’s end. Passing through it the systems reconstruct cardinally, there is a new order and life goes on. This representation has theoretical and practical acknowledgement in modern natural sciences, such as: the history of geological processes on the Earth, geomagnetic poles position and rotation axis of the Earth (cycles of Milankovich), and also the climate change (Belyaev and Onoprienko, 1976; Benson, 1986; Hain, 1990; Sorokhtin and Ushakov, 2002).

The cycles in evolution of biological species were discovered as well. At the cycle beginning species come into existence fast and at the end they extinct. The studying of fossils of live organisms has called into question conceptual issues of the theory of evolution of biological species. It was found that the majority of species during the existence do not change strongly, though their morphology can change slightly according to conditions change. Besides, old kinds are replaced by new ones sharply, and the new species are kept during all their existence. “The majority of fossils – writes S. J. Guld, – are the rest of the large adapted central populations; and, in other places (i.e. away from the central populations that have remained as fossils), we find the other species and we do not expect to find direct transition. We meet this new species the very first time when it is allocated in an area of dwelling of a parental species as a successfully adapted full form, and it is a sudden come into being. Evolution is not a slow and uniform transformation of ancestors into the modified descendants, but a series of the sharp jumps, destroying a long existing and stable systems, this is a punctuated equilibrium” (Guld, 1986, 30–31).

Let us address to representations about a person. In our opinion, in this area there is also a gradual movement of religions and science towards each other. According to religious outlook, the essence of a person is not identical to its physical body. It is immortal, perfect and, more often, it is called as a spirit. It is “the divine spark” that makes a body of a person alive; from the point of view of many doctrines, it is identical to spiritual essence of any other form of life. A human being is one of many creatures of the Divine spirit; he differs from them only in degree of his manifestation.

A human being has not only a physical, material nature, but also an invisible, immaterial nature that is difficult and contains a number of intermediaries between mind and body. The quantity of these intermediaries does not matter (one soul or a lot of “thin bodies”), all religions agree that a person is a complete being...
containing the highest, divine, and the lowest, animal origin.

Today scientific representations about a human being gradually include understanding of the most complicated structure of his/her psyche with the variety of “levels”: from the lowest, animal instincts to the universal and space principles. Works of such psychologists, as K.G. Jung, R. Assagioli, S. Grof, made the invaluable contribution to the formation of new cartography of mentality of a person (Jung, 1991; Grof, 1985, 1994; Assagioli, 1995). They recognized that there is not only personal consciousness and individual unconscious in the structure of mentality, but something extrapersonal, transcendental unconscious by a person in a usual condition, but connected with all mankind and with the Universe.

It is necessary to notice that this representation was generated not on the basis of studying of a body, its brain, nervous system and the biochemical processes of a human being. It is a result of subjective research by a person him/herself, penetration into the depths of own consciousness at reduction of body work to a minimum. It is easy to notice that representation about a person generated as a result of these researches completely corresponds to ancient representations about a human being as about a microcosm.

The theory of consciousness of a person is criticized seriously today. It explains a phenomenon of consciousness of a person as a brain activity. Not only the empirical facts, but also theoretical difficulties of this explanation from the point of view of the given theory, contravene its basic postulates. Particular studying of the neurophysiological processes of the human brain has shown that a moving speed of potential of action along a nerve fibril and a synoptic transfer time does not provide a real-life speed of thinking and memory, i.e. processes of thinking and memory per a fraction of a second are faster than transfer of nervous impulses. There are many cases of normal ability to live of the people having an underdeveloped brain or its serious damages so they should inevitably lead to impairment of their consciousness.

There is one more difficult for the modern theory of consciousness problem. It is a brain behavior at the altered state of consciousness. It has been noticed by many researches of these conditions that a brain activity practically stops at this time, whereas consciousness activity becomes more intensive (Spivak and Spivak, 1996; Koekina and Rodionov, 1998; Fedorova et. el., 1999). Many doctors also conclude that consciousness functions under anesthetic and in a coma.

On the ground of the researches, many scientists more and more abandon themselves to the idea about primacy of consciousness in relation to a brain that transfers commands from a consciousness to a body. The leading American neurosurgeon Professor W. Penfild summed up his works in the book “The Mystery of Mind”: “The Mind is always above our consciousness. It is absolutely independent essence. A mind orders, a brain executes. A brain is a messenger of a consciousness.” (Penfield, 1975, 118). Possibly, consciousness is a structure that was named soul since ancient times.

The death phenomenon takes an essential place in religious beliefs. Since an extreme antiquity, death of a person was considered as the moment of transition of his soul from terrestrial, material world into the spiritual world. This transition is connected with the soul release from a body; it is considered as the beginning of a life under other conditions. Representations about the further life of a soul differ in different religious: the Bible tradition affirms eternal existence of soul in paradise or in hell; the Eastern tradition is based on the theory of reincarnation or a repeated
embodiment of the soul for its long process of development.

Many researchers investigated a belief in life of soul after death and its transformation (Kubler-Ross, 1969; Noyes, 1971, 1972; Tart, 1974; Sabom, 1982; Morse, 1991; Blackmore, 1993; Moudi, 1993). As a result, it has been confirmed that at the moment of clinical death, when neither the brain, nor heart can function, a person realizes what happens with him/her. According to these researches, from 10 to 20 % of the people who had clinical death testify continuation of thinking during this period and phenomena basically incompatible with modern scientific representations about life. In particular, the phenomena of “viewing” previous life pictures, white light, tranquility, registration of events in the real world and even visual supervision “from outside” are mentioned.

Thus, all empirical material saved up in science received as a result of clinical death studying proves that death of a person is the transition of a soul into some other condition. Science cannot study this condition yet, but the fact of continuation of human life after death of its body and comprehension of the existence without a body can be taken as an established matter today.

Last decades of the 20th century were marked by activation of scientific interest to a phenomenon of memory of last embodiments (Stevenson, 1974, 1987, 2003; Moudi, 1998). The set of cases of memoirs has been collected, fixed and checked up. A part of these memoirs has been received under the influence of hypnosis. However, the most valuable cases are those when memory of last embodiments is shown without outside interference. The part of these cases was possible to check up and confirm reliability of memoirs. In spite of the fact that any explanations of this phenomenon are not found by scientists yet, the given facts are the proof of the idea that a concept of reincarnation is not a simple invention of the ancient man.

**Conclusion**

Scientific discoveries during the 20th and the beginning of the 21st centuries take up the matter with the materialistic picture of the world. We have shown that scientists in the different areas of science came to a conclusion that the standard outlook generated within the limits of a Newton-mechanistic scientific paradigm inadequately reflects the real world. Variety of the phenomena and processes remains beyond the borders of the materialistic picture of the world and cannot be explained on its basis. It has led many scientists to a belief that the picture of the world of the ancient people named as a religious outlook contains many true representations about the world and a person that has become accessible recently to scientific research and a proof.

At the same time, it is necessary to notice that the presence of the conformity between religions and scientific representations allocated by us does not mean that the religious picture of the world is completely proved by a science yet. When it is a question of the other transcendental reality which is beyond our usual representations, science possibilities, unfortunately, are rather limited. This level of a reality defies a usual supervision, an experiment or a rational analysis. Therefore, using such methods science can only touch other reality, ascertain or assume particular phenomena, but cannot go further.

This problem is common to many branches of scientific knowledge and creates difficulties in studying of the Universe genesis, the immaterial kinds of a matter, essence of life and consciousness of a person, since all these phenomena lie outside of our usual world and demand other means of studying. Therefore, in the fields where religion gives the detailed description of the phenomenon concerning as a transcendental reality, science
can ascertain only that there is still something inaccessible to careful studying yet.

The solution of the given problem is possible only in a direction of a search of new means of knowledge adequate to the reality that science has faced today. It is possible that studying the world with the help of techniques is at the end of its resource. It seems the further development will go with the help of internal abilities of a person. If a person is similar to the space he/she must have the abilities for this knowledge.

References:

О научном и религиозном мировоззрении
в современном мире

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Статья посвящена взаимоотношениям религии и науки в области мировоззренческих представлений. Автор рассматривает основные положения религиозного мировоззрения и сравнивает их с представлениями о мире и человеке, формирующимися на основе новейших научных исследований. Ставится проблема возможности доказательства религиозной картины мира и различия способов познания в религии и науке.

Ключевые слова: религия, наука, мировоззрение, религиозная картина мира, научная картина мира, способы познания.