# Consciousness and Its Evolution: from a Human Being to a Post-Human

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*The main idea described in the paper is: the age of a person, in its physical and biological sense, may not change with the passed time, i.e. the person's body may not have any significant changes for a long period of time. It is possible when a person has carried out the experiment in consciousness. The experiment has been described.*

*Key Words: consciousness, evolution of consciousness, Planckian black hole, time dilation, post-human.*

# Сознание и его эволюция: от человека к пост-человеку

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*Ключевая гипотеза, выдвинутая в статье, такова: возраст личности в её физическом и биологическом значении может не меняться со временем, которое протекает, то есть тело человека может не меняться на протяжении долгого периода времени. Это произойдет тогда, когда личность успешно проведет эксперимент с сознанием. Автор описывает эксперимент в статье. Гипотезу сформулировано в терминах сознания. Сознание личности может находиться частично в нашей вселенной и частично в чёрной дыре Планка. Когда в определенный момент времени её преимущественное распределение будет в черной дыре Планка, тело человека не станет изменяться. Время не протекает в чёрной дыре Планка, оно там не существует. Когда же сознание личности будет развито до такой степени, что эта личность не будет стареть со временем, она, по мнению автора, станет пост-человеком благодаря эволюции сознания.*

*Ключевые слова: сознание, эволюция сознания, чёрная дыра Планка, замедление времени, пост-человек.*

## Introduction

The main hypothesis put forward in the paper is: the age of a person, in its physical and biological sense, may not change with the passed time, i.e. the person's body may not have any significant changes for a long period of time. It will take place some time after a person has carried out successfully the experiment in consciousness.

The hypothesis is stated in the terms of consciousness. The person's consciousness may be partly in our universe, and partly inside a Planckian black hole. If in some period of time it appears to be in its overwhelming distribution in the Planckian black hole, the person's body will not have any significant changes. Time does not flow inside the Planckian black hole, it does not exist there. Thus the person's body will not have any significant changes for a long period of time.

When a person's consciousness has been developed to such an extent that she or he does not become older with age, I consider that she or he does not belong to human beings anymore. She or he has become a post-human due to the evolution of consciousness.

The paper consists of three chapters. Chapter one describes the conceptions of consciousness and personal identity. Chapter two of the paper deals with black holes and warping of time. Chapter three describes the experiment in consciousness and process of becoming a post-human.

## 1. Consciousness

The main conceptions of consciousness described briefly in the paper include Colin McGinn's, Paola Zizzi's, and Ervin Laszlo's ones. They are useful because they describe consciousness as a fundamental property of reality and the most essential part of a person.

### *1.1 Colin McGinn's Conception of Consciousness*

Philosopher Colin McGinn has mentioned that consciousness is peculiar. We could not touch or see it, even study with the usage of microscopes. At the same time, it is "the most obvious reality in the world" [*McGinn*, 1996: p. 41]. Any research in the brain will not give out the solution of problem of finding consciousness.

He has proposed his conception of consciousness. According to the conception, "the nature of consciousness is a mystery in the sense that is beyond human powers of theory construction" [*McGinn*, 1996: p. 42]. Only omniscient could explain consciousness completely; but human beings are not omniscient. He has mentioned that consciousness goes beyond what could be understood by people comparing the theoretical physics and its understanding by chimpanzees.

The problem could not be solved because of cognitive limitations. The hypothesis, called transcendental naturalism (TN) by him, states that there are some things which could not be explained. These things include the way brain and consciousness are correlated, and mind-body problem in general.

The relation to space is the aspect of consciousness that is worth considering. Consciousness is not located in its usual way. It is outside of space, space in its understanding in terms of physics. It is adjacent to some abstract realm. "Consciousness is linked to matter-in-space in some way, but its properties are not those of space as we now conceive it", – Colin McGinn has summarized [*McGinn*, 1996: p. 47].

### *1.2 Paola Zizzi's Conception of Consciousness*

Astrophysicist and philosopher Paola Zizzi has written that despite the fact that everyone knows about her or his consciousness, it is very hard to tell about the subjective experience to other people. She has mentioned that a scientific definition of consciousness does not exist. The study of consciousness is highly interdisciplinary; it includes the branches of philosophy, cognitive science, biology, theoretical

physics, and mathematics. A person couldn't tell that she or he knows about consciousness. The "expert" could not be there.

Paola Zizzi considers consciousness to be a fundamental property of reality. She mentions that the roots of consciousness could be found in "the space-time at the Planck scale" [*Zizzi*, 2006: p. 472][1].

She mentions that at this scale space-time begins to loose its structure and becomes the "quantum foam", the one consisting of virtual Planckian black holes and wormholes.[2] According to Paola Zizzi, "consciousness exists, but its origin cannot be probed, just like Planck-scale physics" [*Zizzi*, 2006: p. 471]. The Planck scale could not be tested. And any attempt of examining space-time at Planck scale would lead to results that belong to another universe. Consciousness exists, but its origin could not be examined.

Paola Zizzi has corrected Colin McGinn's statement that consciousness is non-spatial. She has mentioned that people perceive space-time as a smooth continuum with four dimensions. In fact, the structure of space-time is discrete. It becomes obvious at the Planck scale. A point in the continuum with four dimensions at this scale does not have its meaning as the point. It becomes an extended object. She has concluded that consciousness is non-spatial because space-time is not a real thing at the Planck scale, it is the quantum foam.

### *1.3 Ervin Laszlo's Conception of Consciousness*

Systems theorist Ervin Laszlo has mentioned that consciousness is not only phenomenon of a human being. We know only our own consciousness, but it does not have the right to state that consciousness is limited only to human beings. Consciousness is considered to be primary in the world [*Laszlo*, 2004: chapter 8].

Ervin Laszlo has strongly criticized the materialistic conceptions of consciousness. He has pointed out that no evidence exists that a brain is the source of consciousness. The function of a brain and state of consciousness are only closely connected to each other. When the function of a brain stops, no evidence exists that consciousness stops functioning too. The vivid example of this is near-death experiences, when people had remarkable experiences while their electroencephalogram showed that their brains did not work at all.

It has been stated that the cosmos itself possesses consciousness in some form. Consciousness is considered to be fundamental. The roots of consciousness are extended to the quantum vacuum. It has been argued that "…the vacuum is not only the seat of superdense virtual energy field from which spring wave-packets we call matter, but also a cosmically extended proto- or root-consciousness" [*Laszlo*, 2004: p. 154]. It is not possible to realize this by ordinary sensory experience. The reasons are: we could not observe vacuum fields; their existence could be inferred from the observable things; consciousness of another person could not be observed.

Ervin Laszlo has mentioned that there are some approaches towards observation of consciousness. These approaches include its observation in the altered states.

[1] The Planck scale refers to a very small size case that is equal to $10^{-33}$ cm.

[2] Black hole is "maximum condensed energetic spacetime that by swirling motion create Einstein's spacetime curvature that create vortex and from the most condensed vortex space [called singularity] expelled swirling path [string] that create open or closed quanta formations" (H. Tejman Chaim's definition). Planckian means of the Planck scale.

Wormhole is "a "handle" in the topology of space, connecting two widely separated locations in our universe" (K. Thorne's definition). .

If a person identifies oneself with the vacuum, he or she, most probably, would "experience something like a cosmic field of consciousness". It means that a state of mind without any thoughts should be achieved, at least for a very short period of time.

In Ervin Laszlo's words, people practicing yoga and deep meditation could have the access to cosmic field of consciousness. According to the Vedic traditions, consciousness is regarded as a extremely large field that is the primary reality of our universe. This field could be experienced in meditation but only when "the gross layers of the mind are stripped away" [*Laszlo*, 2004: p. 155].

### *1.4 Consciousness in Tibetan Buddhism*

Consciousness in Tibetan Buddhism becomes a clear conception when we consider it in the process of a person's dying. When a person understands that he or she is dying, he or she should try to transfer his or her consciousness from the body to the "appropriate part of the space" by means of mind. Other people often help him or her to carry out this task [The Tibetan Book, 2006].

Venerable Khenchen Dalden Sherab Rinpoche has written: "When consciousness is leaving the body, touch the dying person on the top of their head, creating a little sensation around the crown chakra: even tug on some the hairs. This can make a big difference, because when the consciousness leaves the body of an ordinary individual, it will leave through any opening that is available. … Leaving through the central channel is always best because it provides a very neutral trajectory, free of anger of attachment" [*Venerable*, 2014].

Transferring consciousness in Buddhism is called phowa. Phowa is also carried out when there is "the need for rebalancing by practicing on the Buddha Amitabha" [*Venerable*, 2014: p. 38]. Every person could succeed in phowa.

### *1.5 Personal Identity*

Considering personal identity, we should take into account a person's consciousness, mind, and body. Consciousness is considered to be the most essential part of a person. Mind is an agent of interactions between the person's consciousness on one side, body and environment on another side.

A person has both material and immaterial parts. Consciousness and mind are immaterial constituents.

## 2. Black Holes and Warping of Time

### *2.1 Space as a Plenum, Cosmic Plenum*

Ervin Laszlo has pointed out that according to the recent research and conclusions, one of the fundamental properties of reality is that "space is an energy filled plenum" [*Laszlo*, 2003: p. 51].

The premise of space as an energy-filled plenum, often intuitively, was stated in a lot of ancient cosmologies. The school of Parmenides and Zeno in ancient Greece considered space to be full rather than empty as well as it was considered by Aristotle. Later it was the beginning of Newton's conception of space. In the nineteenth century the space field which carries out electromagnetic waves was regarded as the ether. Later the idea of ether was rejected. But it did not mean that space was considered as empty. Albert Einstein mentioned that according to the theory of relativity space is filled in with some physical qualities. The last years have proved the idea that

space-time is a physical energy medium. Also the idea of plenum was supported by a lot of other physicists, among them Max Planck, Max Born, John Wheeler.

It may be considered that a tiny volume is an "empty space", but it is not, in fact. David Bohm wrote: "What we perceive through the senses as empty space is actually the plenum, which is the ground for the existence of everything, including ourselves. The things that appear to our senses are derivative forms and their true meaning can be seen only when we consider the plenum, in which they are generated and sustained, and into which they must ultimately vanish" [*Bohm*, 2002: p. 243]. When we visualize a geometric point, our mental imagery includes not the point itself, but tiny volume. Space, even in its tiny volume, is not empty. It contains physical realities, both material and energetic.

### *2.2 Black Holes*

Black hole is "maximum condensed energetic spacetime that by swirling motion create Einstein's spacetime curvature that create vortex and from the most condensed vortex space [called singularity] expelled swirling path [string] that create open or closed quanta formations" [*Chaim*, 2014][1].

One more definition of a black hole is given by theoretical physicist Stephen Hawking: "Black hole: A region in space-time from which nothing, not even light, can escape, because gravity is so strong" [*Hawking*, 1998: p. 199]. This definition appears to be obsolete or partly wrong. Several physicists, among them Yakov Zel'dovich, William Unruh, Don Page etc, have proved that a black hole emits radiation [Thorne, 1994: p. 435]. Yakov Zel'dovich asserted that "a spinning hole will radiate not only gravitational waves, but also electromagnetic waves (photons), neutrinos, and all other forms of radiation that can exist in nature" [*Thorne*, 1994: p. 435].

Physicist Robert Wald also argues that energy could be extracted from black holes [*Wald*, 1992: p. 105–114]. It could be inferred that energy goes freely through black holes in both sides. Similarly, physicists Leonard Susskind and James Lindesay prove that information is conserved in black holes [*Susskind, Lindesay*, 2005: p. 81–93]. The information goes without any obstacles in both sides.

The physicists did the research to find out what it is inside a black hole. The work of Roger Penrose and Stephen Hawking carried out between 1965 and 1970 showed that "according to general relativity, there must be a singularity of infinite density and space-time curvature within a black hole" [*Hawking*, 1998].

The word "singularity" was borrowed from algebra. It means that in some point the mathematical function goes to infinity or has some other irregularities such as critical points.

At one extreme, a black hole may have the mass equal to millions of solar masses. At another extreme, a black hole exists at the Planck scale. The sphere of my research interests deals with singularities created at the Planck scale.

### *2.3 Planckian Black Holes*

In 1965 after having combined the laws of general relativity and quantum theory, theoretical physicist John Wheeler concluded that at the Planck scale, "the vacuum fluctuations are so huge that space as we know it "boils" and becomes a froth

[1] This definition is too difficult for those who do not have enough knowledge in physics, but it is the most accurate.

of quantum foam – the same sort of quantum foam as makes up the core of a space-time singularity" [*Thorne*, 1994: p. 494].

Quantum foam is everywhere, in cosmic space, in the room where a person sits, in brain [*Thorne*, 1994: p. 494]. As it was mentioned earlier, the quantum foam consists of virtual Planckian black holes and wormholes. And as it was mentioned earlier, the roots of consciousness could be found at the Planck scale.

Planckian black holes are virtual and "eternal" objects. They are quantum objects.

Bernard Carr and Steven Giddings have written about the formation of Planckian black holes: "The known laws of physics allow for a matter density up to the so-called Planck value of $10^{97}$ kilograms per cubic meter – the density at which the strength of gravity becomes so strong that quantum-mechanical fluctuations should break down the fabric of spacetime. Such a density would have been enough to create black holes a mere $10^{-35}$ meter across (a dimension known as the Planck length) with a mass of $10^{-8}$ kilogram (the Planck mass)" [*Carr, Giddings*, 2005: p. 30–37].

It has been mentioned that the Planckian black hole is the lightest possible black hole. At the same time it is much more massive than an elementary particle. It has much smaller size than an elementary particle.

### *2.4 Warping of Time*

Until the beginning of the 20-th century, the view of time was like as linear, the sequence of moments following one after another. It was the point of classical physics and common sense. It was Newton's absolute time that existed in the scientific and philosophic thinking for two centuries. In the cases when time is not linear or/and not absolute, however, we could speak about the curve or warping of time.

The most important discovery came out from general relativity is the realization that space is warped. The influence of any mass as it was showed by Albert Einstein is such as to bend the space in its vicinity, and the amount of bending is equivalent to the gravitational field. The space around the Earth is slightly warped, but this warping is so small that it remains practically undetectable. The mass of the Sun is great enough to show an effect, such as is seen in the deflection of light rays coming to Earth from stars.

It has been shown in special relativity that the old categories of time and space are incorrect. Herman Minkowski changed these categories into the four-dimensional space-time continuum in which space and time became integral functions of each other. This continuum was brought into general relativity by Albert Einstein. Thus, according to Einstein, any warping of space requires warping of time.

Einstein's revolution in relativity theory departed from the proof that order of events in some length of time is neither fixed nor absolute, meaning that events that should go in the sequence A, B, and C as defined by classical physics, may go in the order B, A, and C, or some other sequence.

Also there is no absolute time and no absolute space. For example, as the speed of a spacecraft approaches the velocity of light, time will slow down for any person travelling within that craft. The space around them will shrink, and their mass will go towards the infinity. Time does not run if the spacecraft flies with the velocity of light. It is an example of the warping of time due to relative motion.

Also there is the warping of time near a star or a black hole. It is the warping of time produced by its strong gravitation. Gravitational field distorts space and time in the vicinity. Time in a strong gravitational field runs more slowly in comparison of

outside the strong gravitational field. If the gravitational field is strong enough, time does not run, as it would be with time of an object travelling at the speed of light. At the boundary of a black hole, gravity is so strong that time does not run. Time stops to exist inside a black hole.

## 3. The Experiment in Consciousness and Afterwards

### *3.1 The Experiment in Consciousness*

The described experiment in consciousness is not a so called "thought experiment" which is the imaginative one. Surely a "thought experiment" could be carried out in this case; and it would help in understanding the experiment. I am sure that this experiment is a real one. It means the stream of person's consciousness could flow inside a virtual Planckian black hole, and this task should be carried out by means of mind.

The main idea of the experiment is to transfer the equilibrium point of the consciousness inside of the Planckian black hole.[1] It is clear that at the beginning the equilibrium point of the consciousness could be inside only for a short period of time, probably a few hours. A few years should pass before it could be there constantly.

Just after being inside the Planckian black hole for a short period of time, it would be the reverse process, during which the equilibrium point of the consciousness will go sharply in the opposite direction and would be at the lower level comparing to the level before the experiment. But it would be at this level for a short period of time, probably a few hours too. Then it would return to the level a little bit higher than it was before the experiment. A few years should pass before the equilibrium point will be inside the Planckian black hole constantly.

The experiment in consciousness deals with the mental imagery of the geometric point. The geometric point is taken in a peculiar way. It is taken on the ray going from the person perpendicularly to the surface of the Earth. The point is visualized as the point full of power, love, light, and wisdom.

In fact, it will be the mental imagery of the virtual space that can be compared with a geometric point.

The concentration in the experiment is carried out on the singular desire to reach a horizon of the Planckian black hole. Even more, the individual stream of consciousness should flow inside the Planckian black hole. The black hole itself should be visualized as a geometric point.

Individuals should empty their mind of thoughts with the exclusion of the thought about their streams of consciousness flowing inside the Planckian black hole. The mind should be empty of dogmatism. Individuals should hold the feelings of joy, love to everybody and everything, and fully developed will.

This may result in the stream of consciousness beginning to flow continuously to the visualized geometric point.

The stream of consciousness will flow towards the horizon of the Planckian black hole and later inside it. The beginning of transferring consciousness seems to be similar to the described phowa in Tibetan Buddhism. The main difference is that

[1] The equilibrium point of consciousness is the point to which the person's consciousness could be mathematically approximated: if we could calculate "the amount" of consciousness above and below the point, these quantities are equal; if we could calculate "the amount" of consciousness from the right side of the point and from the left side of the point, these quantities are equal too.

consciousness should be transferred through the entire fields of consciousness and mind in the case of the experiment.

### *3.2 Time Dilation*

Bruce Rosenblum and Fred Kuttner believe that science is based on inductive reasoning which may be wrong: "The only argument for accepting its [inductive reasoning] validity is that it has worked (in particular cases) in the past" [*Rosenblum, Kuttner*, 2011: p. 190].

Let us consider the case of time dilation. Time dilation is "a slowing of the flow of time" [*Thorne*, 1994; p. 558]. In other words, it is a difference of passed time for two people.

According to Einstein's relativity theory, if astronauts travel in a spacecraft at nearly the speed of the light, their time passes much more slowly compared to time of those stationary on Earth. Following from this, it is possible, for example, for me to be younger than my son or daughter physically and biologically. If it becomes possible to travel at this speed, inductive reasoning concerning the case that I have to be older than my children in physical and biological sense will not work. This stands as an example of time dilation due to relative motion.

Another case involves gravitational time dilation. In this case, time dilation is based on a person's consciousness flowing inside and outside of a Planckian black hole and is one of the most important results of the experiment in consciousness. Therefore, I am sure, that nowadays more attention should be paid to practical experiments than inductive reasoning.

### *3.3 Becoming a Post-Human*

A person has become a post-human when his or her time dilation is equal to the passed time of another person for some period of time.

In order to see the practical results, i.e. the person has probably become a post-human, the mentioned period of time seems should be not less than a few dozens years.

The ratio of the time dilation of the person having carried the experiment in consciousness to the elapsed time of the person not having carried the experiment should increase from year to year if we could calculate time dilation for the period of one year.

Since having carried out the experiment in consciousness, a person is in the process of changing from a human being to a post-human.

It seems it is possible to develop completely from a human being to a post-human within a person's life. Time dilation will provide favourable conditions for this.

## Summary

The result obtained in the course of the research is: the age of a person, in its physical and biological sense, may not change with the passed time, i.e. the person's body may not have any significant changes for a long period of time.

The example described in the thesis allows us to reach the state of consciousness when our bodies will not have any significant changes for a long period of time. It is the case of gravitational time dilation based on a person's consciousness.

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