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EVOLUTION OF CONSCIOUSNESS: THE MULTISUBSTANTIAL EVOLUTION OF THE OBSERVER AND THE HIERARCHY OF MODAL LOGICS IN CAUSAL DUALISM

EVOLUÇÃO DA CONSCIÊNCIA: A EVOLUÇÃO MULTISUBSTANCIAL DO OBSERVADOR E A HIERARQUIA DA LÓGICA MODAL NO DUALISMO CAUSAL*

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Abstract: The subject of the author's research is the existing and possible theories describing the development or evolution of such a mental phenomenon as consciousness. The main approaches to the formation of such theories in their historical perspective have been considered. In particular, the currently relevant theory of integrated information by Tononi combines the idea of panpsychism about the fundamental role of the mental and the theory of evolution by Spencer about the increasing level of complexity in the world. The evolutionary theories of Dennett and Dawkins are based on the Darwinian idea of natural selection. The periodization of cultural and historical stages in the development of mankind and, as a consequence, the types of human thinking by Jaspers continues the tradition of Hegel's historicism and the isolation of the spiritual principle in the development of man by Dilthey. An approach to the evolution of consciousness within the framework of causal dualism has also been considered. The article proposes a thought experiment in which the ancient Greek philosopher Socrates is transferred to the present. The question of how a philosopher would perceive the type of thinking and consciousness of a modern person has been investigated. It has been concluded that Socrates belongs to a certain type of thinking corresponding to his historical period of the evolution of thinking and consciousness.

Keywords: Socrates. Causal dualism. Pluralism. The evolution of consciousness. The evolution of thinking. Hierarchy of logics. Statement of observability. Statement of causality.

Resumo: O tema da pesquisa do autor é as teorias existentes e possíveis descrevendo o desenvolvimento ou evolução de um fenômeno mental como a consciência. As principais abordagens para a formação de tais teorias em sua perspectiva histórica têm sido consideradas. Em particular, a teoria da informação integrada atualmente relevante de Tononi combina a idéia de panpsicismo sobre o papel fundamental do mental e a teoria da evolução de Spencer sobre o crescente nível de complexidade no mundo. As teorias evolutivas de Dennett e Dawkins são baseadas na idéia darwiniana de seleção natural. A periodização dos estágios culturais e históricos no desenvolvimento da humanidade e, como conseqüência, os tipos de pensamento humano por Jaspers continua a tradição do historicismo de Hegel e o isolamento do princípio espiritual no desenvolvimento do homem por Dilthey. Uma abordagem da evolução da consciência dentro da estrutura do dualismo causal também foi considerada. O artigo propõe uma

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experiência de pensamento na qual o antigo filósofo grego Sócrates é transferido para o presente. A questão de como um filósofo perceberia o tipo de pensamento e consciência de uma pessoa moderna tem sido investigada. Concluiu-se que Sócrates pertence a um certo tipo de pensamento correspondente ao seu período histórico de evolução do pensamento e da consciência.

Palavras-chave: Sócrates. Dualismo causal. Pluralismo. A evolução da consciência. A evolução do pensamento. Hierarquia da lógica. Declaração de observabilidade. Declaração de causalidade.

1. INTRODUCTION

Was Socrates the same person as us? First of all, we will explain why we are asking this question, and why this particular legendary Greek philosopher was chosen for this question, and for example, not his student Plato or a person of another kind of occupation – the famous poet of antiquity, Olympic athlete or sculptor. When asking whether Socrates was the same person, we mean, first of all, his way of thinking, and not, say, physiology or a way of artistic expression. The subject of our study is how a citizen of the Greek polis differs from us in terms of the way of understanding and perceiving the world, and in this sense, a philosopher, of course, is the best candidate for such a comparison.

But why Socrates? One could say that his personality is too mysterious and multifaceted, and besides, little studied due to the lack of the necessary reliable data about him, as well as since he did not leave behind a single text. Moreover, as is known, many ideas were put into the mouth of a philosopher by his disciple Plato, therefore, the philosophy and way of thinking of Socrates, strictly speaking, are collective, and thinking about this historical person, we mean, perhaps, in general, the wisdom of several generations of Greek philosophers

As Razumov (2008) writes: "Socrates, not having left behind his own philosophical texts, himself deprived all his opponents of the opportunity to productively polemize with him on the conceptual level, forcing them to polemize with themselves on the level of non-"texts in the broad sense"...". He also adds: "Socrates was not just a typical Greek of his time, he also carried in himself a "man of the future".

An important component of the image of Socrates is the circumstances of his death. Long before Christ, this man (together with his disciples) presented the world with the substantiation of the idea of the immortality of the soul (the "Phaedo" dialogue) and the idea of sacrifice, deliberately going to execution, which he could have avoided. The greatness of Socrates as a man and thinker is so immense, and his role in the history of world thought is so

significant that, perhaps, there is no other historical personality suitable for comparison with a modern man more than him. In other words, if not Socrates, then who?

2. METHODS

When considering this issue, we need to face different approaches, and the consideration that needs to be discussed is whether a person's thinking evolves as well as his/her body. To do this, we resorted to the consideration of theories of this kind, as well as to a mental experiment that moves Socrates from the past to our days.

The biological evolution of a man had been stopped long before Socrates was born, and if he had been delivered to our century as a newborn on a time machine, he would probably have grown up to be a modern man, and we would not have been able to distinguish him from the rest by behavior. Perhaps, since his DNA "did not survive" the great epidemics of the past, the immunity of the "child" of Socrates would have been seriously tested, but this is a completely different question, which we will not consider here, focusing only on the mental side of the issue.

3. RESULTS AND DISCUSSION

Socrates is very modern in many ways, and if he was transferred to our time as an adult, it would not be difficult for him to realize a lot of modern social relations. He knew about the family, the state, work, law, exploitation, education, and many other things that existed in his time (he invented some of this himself), and exists to this day. In the meantime, to understand a lot of what takes place in our world, a philosopher would have to get acquainted with the history of the past more than two millennia, to realize how the world has changed both technically and socially. The question is whether an ancient Greek thinker, transferred to our world in adulthood, would have been able to comprehend everything in our modern life or not. It's not about intellectual abilities, but about the type of thinking available to him as the most advanced citizen of his time.

For example, was Socrates' consciousness as flexible as it is today? The word "flexibility" is used here not in a positive connotation, but as a synonym for the words "resourcefulness" or even "unprincipled". It should not be forgotten that Socrates adhered to a certain concept of

truth, and believed that it was achievable by rational proof. Even though there was irony in the arsenal of his method, this irony was nevertheless aimed at ridiculing the irrational, that is, it is based on the same striving for truth as with the correspondence of thought and reality.

It is the truth, as the identity of thought and reality, that Socrates esteems above everything, and even above bodily life. Plato informs us through his mouth in the Phaedo dialogue (Plato, 1896): "And when real philosophers consider all these things, will they not be led to make a reflection which they will express in words something like the following? 'Have we not found,' they will say, 'a path of thought which seems to bring us and our argument to the conclusion, that while we are in the body, and while the soul is infected with the evils of the body, our desire will not be satisfied? and our desire is of the truth".

Could Socrates have been able to accept the fact that the ultimate truth does not exist, which is quite normal for an ordinary person, and not because we know too little, but because it may not be given ontologically, and today one can believe in one system values, and already tomorrow in another? Every time with complete conviction. Jacques Louis David contrasted the philosopher's determination to be dowered to death by law with the deep despair of those gathered around him on the "The Death of Socrates" canvas (1787), although his shackles had already been removed. Even the executioner who brought the poison is shocked by what is happening. No, of course not! Socrates, who taught humanity to follow their principles to the end, who taught us all what it means to act according to conscience long before Christianity, could not accept this "flexibility" of the consciousness of modern man. After all, to accept it, he would first have to be disappointed in what became the meaning of his life – in the truth.

It was not for nothing that Nietzsche saw Socrates as one of his main opponents. But even earlier than Nietzsche, we find the harbingers of a new type of thinking in Russian literature, and above all in the works of Pushkin and Lermontov. As V.S. Soloviev (1991) points out: "The works of Lermontov, so closely connected with his destiny, seem to me especially remarkable in one respect. I see in Lermontov the direct ancestor of that spiritual mood and that direction of feelings and thoughts, and partly of actions that for brevity can be called "Nietzscheanism" – by the name of the writer, who expressed this mood more clearly and louder than anyone else, who defined this direction more clearly".

Would Socrates have been able to fully understand the soul of Onegin or, more obviously and more importantly, Pechorin (the novel was published in 1840)? Pechorin says one thing and does another. His life is full of beliefs and contradictions, and his behavior is often

unprincipled and fundamentally at the same time. Pechorin is alone among other people and unhappy with many talents, and the source of this loneliness and unhappiness is his consciousness, more precisely, his split, and as a result, omnivorousness – the forerunners of modern flexibility.

Pechorin (Lermontov, 2014) says: "I like to doubt everything: this disposition of mind does not interfere with the decisiveness of character – on the contrary, as far as I am concerned, I always go forward more boldly when I don't know what awaits me. After all, nothing will happen worse than death – and one will not escape death!" How is this way of thinking fundamentally different from the Socratic pursuit of truth? Lermontov reports through Pechorin that he feels more confident when he does not know what awaits him in the future. Therewith, Pechorin is not just an intelligent person, he is a "hero of our time", that is, in terms of thinking, he must be ahead of his contemporaries. He informs us: "I began to read, to study, and I was - also tired of science; I saw that neither fame nor happiness depended on them at all because the happiest people are ignoramuses".

The fundamental difference between Lermontov's worldview here from the Socratic view of the world is that truth for him is something useless, and may not exist at all. Pechorin does not seek to prove anything, not because he could not, but because he does not see any sense in it. Therewith, Pechorin's irrationalism, like the philosophy of life, is aimed at solving urgent, really important problems for the hero, for example, to be more confident. In this, we would say, one can see a form of adaptation of human thinking to the immeasurable complexity of the world as it appeared to man at that time. If Socrates still hopes to find out what he does not know, then Pechorin is no longer there.

Such is the "hero of our time", and to comprehend this, the personality of Socrates himself would have to experience such an internal splitting and rupture, and precisely at the age at which, it is still possible. Therefore, it cannot be ruled out that Socrates is still, in some sense, different from us today.

There are many revivals to this. For example, that the man of the ancient Greek polis with its culture and civilization differs far from not only modern man, but also from medieval man, and man of the Renaissance, and so on, which was expressed in the concept of human consciousness of each era. One could also say that every new philosophical school, every new social institution, every new art or scientific paradigm, technological innovation bring something into the culture that makes a person a little different every time, change his/her idea of the

world, about himself/herself and the like. However, this does not mean that there are such fundamental differences between all these eras that the progressive inhabitant of each earlier era could not understand the progressive inhabitant of each later one. We know that many thinkers were ahead of their time. Socrates does not lose its relevance today.

But was Socrates the same person as we are today? He is one of the brightest representatives of that time, which Karl Jaspers (1883-1969) called the axial (800-200 BC), that is, the time when rational thinking and philosophy replaced mythological thinking – when, according to Jaspers, the modern type of thinking and man was formed (Jaspers, 1991). This means, according to Jaspers, Socrates and we are people of the same type, and there are no fundamental differences between us that could not be filled. Therewith, the king of Babylonia Nebuchadnezzar I, who ruled approximately in 1125-1104 BC, according to Jaspers does not fall into the period of the axial time, and, therefore, is fundamentally different from modern man. Should we conclude that the time machine that brought him to our days would not allow shedding light on the glorified king's ideas about our world, and he would perceive the 21st century as a twisted reflection of his mythological consciousness, from which he could not to break through and realize our reality in the same way as we do?

In all this reasoning, for this article, it is important that Jaspers, unlike Marx, suggests, following Dilthey, such a cultural and historical periodization, which uses not external material factors as its principle, but the spiritual principle of a person, more precisely, the type of thinking or consciousness of a person. By this, he immanently admits that in addition to the cultural and historical formations of a person, as well as the biological stages of his/her evolution, there is another form of historical gradation of a person – according to the type of his/her thinking, or according to the form of mentality, or even according to the type of consciousness. Although the existential philosopher himself associated his periodization with the development of culture – the development of tools, the formation of mythology, the emergence of world religions, and rational philosophy – yet his concept was also one of the first to link human behavior with his worldview and the development of his thinking.

Jaspers divided history into only four stages – the "Promethean" epoch (the development of tools of labor), the epoch of the great cultures of antiquity (mythology), the epoch of the spiritual basis of human existence (axial time), and the epoch of the development of technology. According to Jaspers, each of these epochs corresponds to its type of person with its inherent form of thinking. Therewith, it is assumed that the modern form of thinking –

rational, logical, scientific – appeared precisely in axial time, and is also associated with Socrates. However, can we confidently assert that our advanced contemporary thinks only rationally? More precisely, since the time of Socrates, has not mankind invented some other forms of thinking, some other mental ideas that have changed the consciousness of man? Didn't Pechorin (Lermontov) become a product of thought, which itself arose due to the ideas of Kant, Schopenhauer, etc.?

Perhaps, keeping the general idea of the philosopher, in which Jaspers in his way expressed the historical approach, we could study the stages of development of types of human thinking in more detail from the standpoint of modern knowledge about the nature of man and his consciousness. If we, for example, would like to investigate whether Socrates was a modern type of man, and ask ourselves whether the periodization of Jaspers can be extended and whether other stages of the evolution of human forms of thought (or forms of consciousness) can be distinguished in the history of mankind, both before and after axial time. In a sense, to realize the fact of the existence of a man of the axial time, Jaspers himself had to belong to some other type of human consciousness as an advanced thinker, and in this connection, the following question arises. Or rather, several interrelated questions.

• Can we distinguish the stages of development of human consciousness not as cultural and historical (stages of development of social consciousness), but as stages of development of forms of individual thinking and consciousness?

• What principle should be laid down in such a periodization or classification?

• And finally, how should the periodization of the types of individual human consciousness correlate with biological and other forms of human evolution?

This problem addresses us at once to two topics, one of which today is called the problem of the evolution of consciousness, and the second is the problem of personality development. In this case, both problems should be connected, since the stages of development of the human personality to some extent, in a miniature of human life, partially repeat the stages of evolution of consciousness or types of thinking from an animal to an adult. Their relationship could be rough, for general reasons, described as follows. The development of any personality occurs in a particular historical period, which has its characteristic type of thinking, and earlier types of thinking are also available. The average person in his/her development reaches the evolutionarily acceptable level of development of thinking at a given moment, while the

advanced person slightly exceeds it, defining the vector of development, and the lagging one, on the contrary, does not quite reach it.

Linking both problems, one might wonder at what age Socrates, delivered today by a time machine, would have been able to shape the way of thinking for us today. At what age it would have been unattainable, and he would have remained blind to our "unprincipled" world of lonely people. It's like how real-life Mowgli children go through a certain age of "no return", after which the brain loses the necessary plasticity for language learning and socialization, and they remain feral. Not a completely correct example, but it shows that certain forms of thinking available to humanity (in this example, speech) may or may not be borrowed by an individual, depending on specific circumstances. This, of course, applies not only to speech but in general to all forms of thinking available to mankind, transmitted through culture, upbringing, education, or achieved as a result of self-development.

The problem of the genesis of human forms of thinking in childhood was available for experimental study already in the late 19th and early 20th centuries. K. Buhler, V. Stern, J. Piaget studied it in detail, and in Soviet Russia – L.S. Vygotsky, A.N. Leontiev, A.R. Luria, and their students. Despite the fact that there is still a lot of unexplored on this issue, much more progress has been made in this direction than in the issue of the evolution of consciousness from animal to human.

The cultural-historical theory of the development of the psyche and the development of personality, which was developed by L.S. Vygotsky (2005) and his followers in the 20-30s of the last century, is one of the most elaborated and scientifically grounded since it deals with the external manifestations of the psyche and the environment, in which it arises and develops. Vygotsky's approach considers the social environment as the main source of the development of the human psyche, studies the formation of the personality from the state of a child to an adult, in the process of which he interacts and collaborates with other people and social groups.

According to Vygotsky, the development of thinking, perception, memory, and other mental functions occurs through the stage of external activity, where cultural means have an objective form, and mental functions act externally, interpsychically. As the process is worked out, the activity of mental functions is internalized, passes from the external to the internal plane, and becomes intrapsychic.

According to this theory, the process of psychological development occurs stepwise through overcoming personal crises. The child as a natural being overcomes the crisis of

interaction with society, assuming certain social restrictions, after which a social personality appears on the scene, which is characterized by certain mental abilities. The next crisis, already internal, is overcome by isolating various forms and ways of thinking within the psyche itself, which opens up almost unlimited possibilities for psychological and personal growth. It is very important that Vygotsky and his followers come to the idea that the development of the psyche is associated with its internal splitting and merging again into a personality with an already more complex structure.

The theory of Vygotsky and representatives of his school is relevant in the study of personality development today, but it does not take into account the specifics of conscious processes in the modern formulation of this problem. The phenomenon of consciousness in those days seemed less problematic than today. It was only with the development of neurobiology and information technology that it became clear that consciousness is a much more complex fundamental phenomenon of nature than it seemed before. Today it is no longer possible to confidently assert that animals do not possess consciousness, and therefore it is not enough to bear in mind that animals have a psyche, and only man has consciousness as the highest form of the psyche. It is necessary to point out the very moment in the evolution of mankind or the life of a child when consciousness arises in its minimal manifestation.

The works of such philosophers as D. Chalmers (2013), T. Nagel, J. Searle, and many others have revealed the true problem of consciousness, which does not yet lend itself to scientific description, and consciousness itself cannot be recreated by the known technical methods. The expectations of the scientific community in the early and mid-20th century in this area were associated with the fact that consciousness would be the same "malleable" subject for studies, such as electricity or electromagnetism. The prerequisites in the field of technological development inspired hope for the invention of an artificial human in the foreseeable future, and neuroscience was to reveal the elements of the "soul" in the human brain. It turned out that although neurons are automata operating according to well-known mathematical principles, fulfilling a simple "if-then" condition, nevertheless, how the entire "apparatus" works together in the brain-world of the perfect system is unclear.

To explain consciousness, there must be "something else" besides the computations performed by neurons or microcircuits. Therefore, many theories of consciousness have appeared since the middle of the 20th century and up to the present time, taking into account the new circumstance that perhaps the materialistic picture of the world is not complete. These

are Chalmers' naturalistic dualism, Tononi's panpsychism, and Dennett's reaction, who sought to defend materialistic ideas and many other theories.

In this sense, looking back at the theory of consciousness of Vygotsky-Leontiev, as well as other theories that arose from the late 19th to the middle and the beginning of the second half of the 20th century – W. James, Z. Freud, K. Levin, W. Stern, A. Maslow, and others – we can conclude that for all the studies listed above, the problem of consciousness stood differently than it is formulated today. In addition, these researchers, with rare exceptions, did not consider the problem as an evolutionary one, that is, in its dynamics from animal to human. Therefore, these concepts will not be considered by us in this way.

When dealing with the problem of the development and evolution of knowledge or the evolution of forms of thinking from animal to human, it is extremely important to determine the answer to the question of what exactly is evolving. As indicated in the work "Introduction to Dialectics, or Philosophy in Science. From a thing-in-itself to a thing for us" by professor V.I. Metlov (2016), the key question for science is the following – "what exactly isevolving?". Or, in this case, this question can be formulated as follows – the evolution of what exactly leads to the fact that the forms of consciousness and thinking develop and go through various stages. This refers to the biological evolution, that is, development at the level of natural selection and DNA mutations, or should we keep in mind primarily the evolution of cultural and historical forms, or should our focus be on the evolution of meme ideas, or such a complex object as the totality of an organism and its environment, etc.? Thanks to the ideas of H. Spencer, we have the opportunity to talk about the evolution of various objects, but which of them should we focus on?

Consider below some of the existing theories that we could combine under the label – the theory of the evolution of consciousness. Although such an association should still be understood as very conditional. Evolution is usually understood as the biological evolution of living beings, but the development of a theory of the evolution of consciousness is a very difficult and even paradoxical task, since in relation to consciousness, unlike most mental abilities, such as attention or memory, etc., it is still unknown what exactly its adaptive function and value are. If the adaptive value is unknown, then consciousness cannot be inscribed in the evolutionary model. Nikolaas Tinbergen (1985), a Dutch ethologist and ornithologist, Nobel Prize winner in physiology and medicine, has formulated four basic questions in all behavioral

sciences: 1) what factors regulate behavior? 2) how is behavior formed in ontogenesis? 3) how is behavior formed in phylogeny? and 4) what is its adaptive value?

The evolution of organisms is inextricably linked with behavior, so the theory of the evolution of consciousness necessarily includes answers to the four questions of Tinbergen concerning him. Namely, the answers to the following questions:

1) What factors regulate consciousness? Or what is the causality of consciousness?

2) In what way is consciousness formed in ontogenesis? That is, how is consciousness formed in a child and develops further in the process of life?

3) How is consciousness formed in phylogeny? That is, how is consciousness formed in the process of evolution from an animal to a human?

4) What is the adaptive value of consciousness? Or, what does a conscious being gain in terms of adaptation?

All of the above issues concerning social knowledge do not have the necessary solutions today. The first question, in this case, is essentially an unsolved problem of mental causality, or, in other words, the mind-body problem. The second question is partly related to the problem of the development of the human psyche, as well as to the problem of personality development in the process of life, which are partly developed, but, as mentioned above, do not answer the question of consciousness in the formulation of D. Chalmers' "difficult problem". The third question is connected not so much with the development of the human psyche as, in fact, with the evolution of consciousness in living nature in general, which means it is more concerned with animals. This problem is not solved today either. Finally, the question of the adaptive value of consciousness also remains open, since the functional side of consciousness remains unclear.

It would seem that on the surface there is a possible methodology for studying this issue – a comparison of the biological evolution of the brain and mental processes – cognitive, emotional, volitional. There are numerous data on which parts of the brain are responsible for various mental processes – sensation, perception, representation, imagination, memory, thinking, attention, speech, reflection, emotions, affects, stress, decision-making, etc. However, a simple comparison of the biological evolution of the nervous system and the chronology of the manifestation of certain mental processes says very little about the evolution of consciousness, since consciousness still does not have external manifestations available for study or generally accepted neural correlates. Consciousness is not reduced to the listed mental processes.

Using the terminology of D. Dennett, which he partly borrowed from the Dilthey already mentioned above, we can talk about the evolution of competencies or psychic abilities, and not about the evolution of understanding. We have access to the material side of the issue, which includes the neural structure and its connection with the abilities that manifest externally, but thereby whether a person or an animal with a particular neural structure "understands" what it is doing or it does it automatically and unconsciously, we cannot judge strictly. Therefore, any evolutionary theory of forms of "understanding", or simply put, the evolution of consciousness, for the current state of science, can only be purely hypothetical. The connection between mental processes and "internal" conscious processes does not yet have solid foundations.

Meanwhile, it seems that the topic of the evolution of consciousness is extremely relevant today since it can shed light on this phenomenon itself. Any evolutionary theory is forced to compare an object at its various evolutionary stages with the external (material) circumstances of these stages. Therefore, such a theory would have to explain the behavior of not only a person but also describe the appearance of the simplest forms of stimuli and sensations in animals or newborn children – to give a clear justification for how the "sensation" of the simplest agent (the first sensory observer) stands out from the environment, thereby opposing themselves to the whole world. Also, describe all the intermediate stages. It is not surprising, therefore, that to date, several dozen competing theories of consciousness have been proposed, but meanwhile, theories of the evolution of consciousness are extremely few.

According to the article by Yoram Gutfreund (2018): "The problem of the evolution of consciousness: what prevents the inclusion of consciousness in the structure of the evolutionary process", there is currently no good theory of the evolution of consciousness: "Consciousness is one of the last biological phenomena for which we have no reliable idea how it appeared and evolved. It can be concluded that to determine the adaptive value of consciousness, first of all, it is necessary to establish a connection between the brain, behavior, and consciousness".

There are several main theories of the evolution of consciousness or forms/types of human thinking (not to be confused with theories of personality development). Since consciousness is still a "mysterious" object to study, these theories are very diverse, approach consciousness from completely different sides, differ significantly in the basic principle, and, as a consequence, in what is evolving. We will not consider creationist concepts as they are not evolutionary. First of all, it is necessary to mention the theory of the development of Hegel's

absolute idea, and precisely in that version of it that makes sense of the evolutionary theory, and not the theory of the development of personality or individual consciousness.

A German philosopher, one of the founders of historicism in general, who indirectly influenced Jaspers, described the evolution of forms of consciousness, which begins with an objective absolute idea, then transforms into its opposite – a bodily form, and then again, through negation, turns into the subjective consciousness of a person. Even though Hegel does not reveal the mechanism of these transformations, his model describes all the main features of the evolution of consciousness. Consciousness here begins with some objective form inherent in the world as a whole, that is, it originates in the same place as all-natural phenomena, and not in a single human brain. It has an objective character outside of corporeality, therefore, the transition to subjectivity (privacy) of consciousness occurs through the acquisition of corporeality, individuality, and its subsequent denial.

The main driving force behind the development of the absolute idea according to Hegel is the unity and struggle of opposites, that is, the abstract principle of his dialectic. Meanwhile, the idea itself "evolves", which changes its form, from abstract to concrete. It is very important that Hegel seeks to show the nature of the emergence of the "subject" based on objective processes. He writes: "Everything turns on grasping and expressing the True, not only as Substance but equally as Subject". Hegel G.V.F. (1992) "Phenomenology of Spirit". This position makes Hegel relevant for solving the problem of consciousness today. However, his theory of the "subject" is idealistic and therefore does not answer the question of how the subject arises in a material environment. For Hegel, the subject is already immanently present in the absolute idea itself, so the philosopher is not busy searching for criteria for the emergence of the subject, and what role the human brain plays in this.

In contrast, Daniel Dennett's model of the evolution of consciousness is materialistic and focuses on the Darwinian principle of natural selection. Dennett's theory is connected with the anti-private line in the philosophy of consciousness of Wittgenstein-Ryle-Dennett, and considers consciousness as an epiphenomenon, but therewith, which is very important, Dennett's consciousness does not appear immediately, but as a result of a long evolutionary process. Dennett (2004) writes in Kinds of Minds: Towards an Understanding of Consciousness: "I want to propose a general framework in which various constructs for the brain can be included to understand where its abilities come from. This is an extremely simplistic structure, but idealization is a price that often comes with a summary presentation. I call this structure the

Tower of Generate-and-Test. With the construction of each new floor of the Tower, organisms get the opportunity to find better and better moves and find them in an increasingly efficient way".

Dennett considers consciousness to be our convenient illusion, therefore, in his theory, it is not the forms of consciousness that evolve, but their carriers, which the philosopher calls "creatures". They differ in the sophistication of forms of adaptation to the conditions of the environment. "Darwinian creature" according to Dennett describes the evolution of bodily forms. Less successful organisms lose out to more successful ones, so they gradually disappear. The more successful ones, on the contrary, will continue to evolve. "Skinner's creature" competes already at the level of behavior, and not just the structure of the body. Therefore, there is an evolution of behaviors and the consolidation of the most successful of them. "Popper creature" can predict the future and choose behavioral models. Such a creature avoids its own death, and instead of it, its mental models perish. The "Gregorian creature" breaks out of Dennett's previous concepts and, according to the author, it arises as a form of information evolution.

Dennett's model certainly has a serious scientific justification. The forms of evolution, from teleological to informational, have material embodiments here and can be studied. However, this model has two significant shortcomings. Firstly, transitions between the "floors of the Tower" according to Dennet occur by chance. The emergence of more adaptively successful forms is the result of biological or some other roulette, which often looks doubtful since the probability of the required matches approaches zero. It is known that the synthetic theory of evolution is the most authoritative in biology today, which takes into account, in addition to natural selection (that is, chance), also gene mutations. Secondly, Dennett's evolutionary theory is still the theory of the evolution of organisms that exhibit certain forms of behavior, and not the evolution of knowledge itself. In other words, Dennett does not solve the question of the mind-brain connection and does not even strive for it.

It should be noted that Dennett also shares the views of his colleague Richard Dawkins, who developed the idea of meme evolution. According to Dawkins, the evolution of culture is built by analogy with genetics and Darwin's biological theory of evolution. Instead of genes, units of cultural information – memes – evolve here. Dawkins describes this theory in the book "The Selfish Gene" (1976). The concept of mom is original and very productive, but, unfortunately, it is connected with the problem of the evolution of consciousness only indirectly.

As already noted above, the problems of the evolution of consciousness and the evolution of culture are different.

Another important evolutionary model is not explicitly expressed but is immanently included in the theory of integral information of Giulio Tononi (2008). This is modern panpsychism and it is inherent in the idea that the world contains a certain distribution of information with different densities. Information is also integrated and there are areas in which the amount of integrated information significantly exceeds the sum of the information of the parts of this area. For example, the brain as a whole may contain incomparably more information than the sum of information in all its neurons separately. Meanwhile, information is also contained in inanimate objects, although it is not integrated into them.

Tononi's idea is a combination of two large theories – panpsychism and the theory of evolution of Spencer. It was Spencer who showed that the development of forms occurs through integration and complication. The evolution of consciousness according to Tononi is the complication and evolution of the forms of information integration. With its help, it is possible to quantify the level of integrated information close to zero (for inanimate objects), low and medium levels (for animals and modern computer technology), and high levels (for humans and artificial intelligence). Such a model certainly has its advantages. Using this theory, in particular, calculations are made, what is the probability of a person coming out of a coma, and whether it is worth supporting the life of its biological carrier. However, Tononi model has significant limitations.

We will not dwell in detail on the fact that, according to this theory, inanimate objects have "a little bit" of consciousness. This circumstance often becomes an object for jokes, but it does not carry any kind of heuristic force. An important disadvantage of Tononi's theory is that it does not explain in any way what the phenomenon of consciousness itself is, and for some reason, a certain amount of "integrated information" leads to the emergence of the subject of the experiment. This theory does not carry out a qualitative classification of types of consciousness, limiting itself to a quantitative measure of "integrated information", since otherwise, it would be necessary to associate this or that amount of "integrated information" with certain properties of consciousness. This theory does not do that yet.

For example, this theory does not solve the problem that such and such a quantity of "integrated information" leads to the appearance of the simplest sensations, and such and such a quantity leads to the ability to make decisions, etc. For such conclusions, this theory would have

to have explanations of what is a certain informational meaning (as an analog of the physical meaning) of sensations, and what is the informational meaning of decision-making. Quantitative criteria are not sufficient for such narrowing.

For example, if we compare the amount of "integrated information" with temperature (which is acceptable, because for Tononi this indicator is no less fundamental), then we could say that at a given temperature the substance has such and such an aggregate state, and at a given temperature it has such and such. Therewith, physics supplements this representation with the statement that temperature has a physical meaning of the measure of the internal motion of the particles of matter. The change in the aggregate states of things is associated with a change in the forms of this movement. At different temperatures, particles of a substance perform vibrations corresponding to energetically stable states. Therefore, the concept of temperature is not enough to describe the mechanism of change of aggregate states (phase transitions). For this, we need the concepts of internal motion, internal energy, and energy state. If temperature measurement was already available to Galileo (1597), then internal energy could be estimated only two and a half centuries later in the middle of the 19th century with the discovery of the first beginning of thermodynamics.

Thus, Tononi's theory is certainly an important step towards a scientific theory of the evolution of consciousness, but it is also far from it as Galileo's temperature measurements – from the first beginning of thermodynamics. Therewith, further research in the field of consciousness science may lead to the fact that by preserving Tononi's idea of "integrated information", this theory will discard the reference to panpsychism, since the latter deprives this approach of the opportunity to qualitatively distinguish different states of consciousness, marking them out from the completely unconscious states.

Evolutionary theories of consciousness and psychological theories of personality development are often confused. This is due to the fact that the personality in its formation probably goes through very similar stages in terms of meaning. This is a mistake, but there is also a sound grain in it. It lies in the fact that the evolutionary theory of consciousness should show how the process of evolution contributes to the development of behavior and thinking abilities, that is, in the end, and the development of the personality of an average or advanced person of the era. Therefore, when developing theories of the evolution of consciousness, it is advisable to take into account the developments of theories of personality development. Here is one such theory.

R. Kegan (1994) presented his theory of self-development, which is also mistakenly called the theory of the evolution of consciousness in his work "In over our heads: the mental demands of modern life". It is very important that Kegan identifies the stages of development of the mind, and not some accompanying material property. This American psychologist talks about six levels of development of consciousness or mind.

Level 0 in newborns who "live in a non-objective world, a world in which all feelings are considered an extension of the baby". By the age of seventeen months, they begin to recognize the existence of objects outside of themselves.

Level 1. Children develop up to the age of two when they realize that they control their reflexes and are aware of the objects of the environment independently of themselves. Their thinking is "fantastic and illogical, their feelings are impulsive and fluid".

Level 2. Instrumental Mind. The child can classify objects, other people, and abstract ideas. Thinking becomes logical and organized, feelings become stronger.

Level 3: Socialized Mind. The ability to compare categories is acquired, thinking becomes more abstract, a person already knows about his/her feelings and internal processes associated with them, and can take responsibility towards others. The perception of others is changing.

Level 4: Self-Authoring Mind. Cross-category design is available – the ability to generalize within the framework of systems thinking. A person assumes responsibility and creates his/her system of values and ideology.

Level 5: Self-Transforming Mind. Reached by about forty years. A person understands how all people and systems interact, recognizes his/her "community and interdependence with others".

Kegan's theory shows a modern scientific demand for such theories. The stages of the development of consciousness should be explained by the complication of the thinking "mechanisms" at the brain-consciousness interface, as well as explain various specific forms of human behavior. As a psychologist, Kegan explores these thought mechanisms, showing how they can become more complex, but he does not reveal their connection with neural processes.

After briefly reviewing some illustrative theories of the evolution of consciousness, touching on their advantages and disadvantages, we can list what exactly we expect from such a theory. It seems that the scientific theory of evolution from knowledge should:

1. Describe the evolution of forms of consciousness (from animal to man, and in the process of development of civilization), conscious experience, etc., presented in one form or another, and not any material properties accompanying these forms;

2. Distinguish different stages of development as forms of consciousness, describing the "mechanism" of this development of consciousness from one form to another;

3. Explain the nature of "subjective experience", or at least the expediency of "subjective experience" for evolution;

4. Connect various forms of consciousness with behavior and neural processes.

An indirect sign of a "good" evolutionary theory of consciousness should also be its fundamentality. For example, Dennett's theory seeks to combine many other scientific disciplines at once into a common semantic field, which is natural, since the theory of consciousness is at the junction of a large number of fields of knowledge – natural sciences and humanities. In particular, the philosopher seeks to explain the evolutionary appropriateness of language or religion, wishing each phenomenon to find its place in the objective picture of the world. Therefore, we will add one more to the four criteria:

5. This theory should have heuristic power to unite many scientific and humanitarian disciplines into a single system of concepts, creating the necessary link in the explanation.

As already mentioned, to date, no generally accepted theory would correspond to these criteria. However, theories continue to appear, and perhaps soon this area will receive a scientific explanation. A key feature of all the approaches discussed above, from Hegel to Dennett, is that all of these theories are monistic, either idealistic or materialistic. Dualistic and pluralistic ontologies have not yet offered their versions of the evolution of consciousness for various reasons. Earlier concepts of this kind, including religious or, say, philosophical constructions of Descartes or Leibniz, did not consider consciousness as something that appears in the process of evolution. Consciousness for them was one of the substances that have always existed. In addition, and this already applies not only to classical theories but also to modern forms of dualism and pluralism, the question of the possible form of causation between substances is still open within the framework of these ontologies. Therefore, for example, Chalmers' naturalistic dualism has not yet been expressed in any form of evolutionary theory. In this matter, Chalmers is closer to panpsychism, and in any case, he considers consciousness to be a fundamental phenomenon of nature, the same as space or charge, which deprives the very idea of the evolution of this phenomenon from meaning.

In this article, we would like to consider another possible approach to the problem of the evolution of consciousness, which is precisely pluralistic. This approach is called causal or neutral dualism/pluralism. It was formulated in the book "Causal Dualism. Reflections on ontology and the nature of consciousness" (Safronov, 2021). We will not consider this approach from an ontological point of view, since it only indirectly concerns the topic of this article, and we will only give the basic principle of the evolution of consciousness that it proposes, and the periodization itself.

According to this theory, consciousness evolves and becomes more complex. If in Dennett this complication is expressed in the behavior of the subject, then here this refers to the mental abilities of the observer. That is, the evolution of consciousness is connected here with the development of forms of thinking, and consequently, the development of forms of logic accessible to the observer. In turn, the form of the logic of thinking determines the behavior of the observer, his/her adaptive abilities, etc.

The theory has previously identified the following stages of the development of the observer's ontology, and also indicated their possible relationship with the mental and ideological stages of human development in general. These stages are also connected in the model with the hierarchy of types of logical suggestion/utterance available to the observer at a particular stage of evolution:

1. There is no observer before the emergence of life, or this can refer to an **indefinite observer**. The subject of possible observation and the observer are causally not separated.

2. Animals and hominids. A **sensual observer** arises (observes his/her own feelings). He/she possesses sensory consciousness, and can distinguish himself/herself from the observed object, but moreover he/she does not distinguish a hallucination from a real object, he/she is not able to reveal causal connections. The logic of such an observer can be called the lo**gic of the Observability Statements**: "I observe A".

3. Some animals, primitive, archaic man. A **volitional observer** appears (observes patterns), who realizes the principle of cause-effect. The complication here is because such an observer seems to include several observers of the previous type, and can correlate sensory observations, revealing causality. The multiplicity of "sensory" interpretations allows such an observer to understand the causes and manifest forms of volitional (purposeful) behavior, but he/she does not yet distinguish himself/herself from nature. There is no abstract thinking (A.F.

Losev). Animation of nature, animism, totemism. Such an observer has access to the **logic of the Statements of causality:** "A is the reason B".

4. Ancient man. In particular, antiquity. **Deceitful observer** (observes multiple interpretations of one pattern). Such an observer has access to multiple interpretations of one law. As a consequence, there is a need to prove one interpretation and method of proof – philosophy and science. Features of the period: abstract thinking, applied evidence-based religion –paganism, polytheism, myth as the reality of lies, paradoxes, logic as the science of lies. The logic of the **Truth-Statements** is available to such an observer: "I know that A".

5. From late antiquity to modern times. **Doubting/postulating observer** (observes multiple evidence, and as a result contradictions). It requires conviction in one of the proofs (axiomatics) or the absence of the need for them (postulates of faith). As a consequence of these motivations: monotheism, belief in the immortality of the soul, philosophy of consciousness, scientific method. Such an observer has access to the logic of **Expressions of conviction**: "I believe that A"**.**

6. A man of the new and modern times. **A lonely observer** (observes a plurality of equally possible beliefs and worldviews, a plurality of one's concepts of oneself and the world). A reliable method of developing sound principles of cognition is required. As signs: ontological relativity, a flexible worldview that allows confidently accepting various paradigms, a feeling of ontological loneliness (disappointment), the desire to abandon the ontology of the sixth order in favor of earlier ones (philosophical downshifting), trust in new possible forms of reason (development of computer science and the theory of artificial intelligence). Such an observer has access to the logic of **Reliability Statements**: "I hope that A".

7. A possible person of the future or artificial intelligence. **A future observer.** The complication of the ontology of the observer in different periods can be associated with the development of the brain (growth of mass, complication of its structure), the development of the "cultural" human body, and its "external" memory. However, the further development of the observer's ontology within the framework of man as a species does not have a motivation that we understand. The feeling of ontological loneliness and growing conceptual uncertainty forces a person to rather abandon complex forms of worldview in favor of simpler ones. Therefore, to achieve the ontology of the seventh order, a person needs a fundamentally new culture of thinking. Either this development can be continued by artificial intelligence. A certain logic of the **Future statement is available.**

Following this approach, the type of thinking of Socrates is associated with multiple interpretations of the same observed phenomenon, and with the search for evidence in favor of one of the interpretations and the formation of a theory. Socrates strives for the truth in his reasoning, and bases reasoning so that they are consistent. Truth for Socrates is self-valuable, and he implies that it exists. He even resolves the question of the eternal life of the soul in the Phaedo dialogue in a rational way, when already in Christian philosophy this question finds itself in a completely new category of consciousness – in the dimension of faith.

Here is an excerpt from the dialogue (Plato, 1896):

"– Then, suppose that you analyze life and death to me in the same manner. Is not death opposed to life?

– Yes.

– And they are generated one from the other?

– Yes.

– What is generated from the living?

– The dead.

– And what from the dead?

– I can only say in answer—the living.

– Then the living, whether things or persons, Cebes, are generated from the dead?

– That is clear, he replied.

– Then the inference is that our souls exist in the world below?

Such reasoning would have seemed controversial in the Middle Ages, but in our time it looks like the history of thought, and not like thought itself. Studying this text, no one today would think of looking at it outside of the historical context. Here is what D. Lebedev (1874) points out: "The first thing that attracts attention when reading Phaedo is the artificiality of its concept as a work of art. The impression one gets after reading the dialogue is such that neither the thought nor the feeling remains completely satisfied. Still not knowing how to admit why the dialogue makes such an impression (at least, this is what he constantly made on me, no matter how much I studied it), one feels that something is missing in its whole, as if two completely separate works were read, mechanically combined into one".

4. CONCLUSION

It is impossible to disagree with Lebedev that "neither thought, nor feeling remain completely satisfied". Although "Phaedo" is truly a breakthrough in human thought, this work is based on the form of thinking that is inherent in ancient man and is historically earlier. Modern man, judging the immortality of the soul, will not be able to resort to such a method of proof seriously.

In this sense, we can conclude that although the ideas of Socrates are relevant today, and that he was significantly ahead of his era, at the same time, he is a man of his era and its brightest representative from the point of view of the way of thinking and the type of consciousness.

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