



## COGNITIVE SPACE



### Philosophy of Consciousness



### On the Attributes of Consciousness

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#### **Abstract**

One of the main tasks of consciousness science is the search for the function of consciousness. The article deals with the hypothetical function of consciousness as an attribute of consciousness on the example of imagination. In the regard of the issues of the attributes of consciousness, the author analyzes the phenomenon of aphantasia, i.e. lack of imagination. Despite the lack of formalized ideas about the function of consciousness and despite the scientific trend of the narrowing research areas where subjective experience is necessary for a normal behavior of the brain, there is a tendency to expand the presence of consciousness in the world in the modern Western philosophy of consciousness. The result of this “emancipation of consciousness” is the idea of the theoretical essential closeness of a human being and other agents: animals, artificial intelligence, plants. A consequence of the “emancipation of consciousness” is the emergence of modern versions of panpsychism, which propose expanding the space of consciousness to the world as a whole. However, studies in the field of conscious cognitive processes show that the processes that require the participation of consciousness, according to the standard intuitions, in some cases, successfully performed without it. For example, the phenomenon of aphantasia shows that the tasks of imagination are performed in the absence of the ability to imagine. Therefore, it is also important to take into account the theoretical possibility of the lack of realization of the function of consciousness. This makes it possible to ask a question about the presence of consciousness in the space that is traditionally endowed with consciousness according to the dominant intuition in philosophy. In this article, by approaching the question of the attributes of consciousness, the author demonstrates the limitations of the program for the emancipation of consciousness and

offers an alternative solution to the question of the spread of consciousness in the world.

**Keywords:** hard problem of consciousness, imagination, emancipation of consciousness, subject, aphantasia.

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## К вопросу об атрибутах сознания

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Оригинальная исследовательская статья

### **Аннотация**

Одной из основных задач науки о сознании является определение функции сознания. В статье рассматривается вопрос о гипотетической функции сознания как атрибуте сознания на примере воображения. В контексте вопроса об атрибутах сознания рассмотрен феномен афантазии, т.е. отсутствия воображения. Несмотря на отсутствие оформленных представлений о функции сознания и сужение наукой о мозге пространства, в котором субъективный опыт необходим для функционирования человека, в современной западной философии наблюдается тенденция к расширению присутствия сознания в мире. Результатом этой «эмансипации сознания» являются представления о теоретической сущностной близости человека и других агентов: животных, искусственного интеллекта, растений. Следствием «эмансипации сознания» становится и появление современных версии панпсихизма, которые предлагают расширить пространство распространения сознания на мир в целом. Однако исследования в области сознательных ког-

нитивных процессов показывают, что задачи, выполнение которых нуждается в участии сознания согласно привычным установкам, в некоторых случаях успешно выполняются без него. Например, феномен афантазии показывает, что задачи на воображение выполняются в отсутствие способности воображать. Поэтому важно принимать во внимание теоретическую возможность отсутствия реализации функции сознания. Это позволяет задать вопрос о наличии сознания в том пространстве, которое наделяется сознанием согласно доминирующим в философии интуициям. В данной статье на примере вопроса об атрибутах сознания показаны ограничения программы по эмансипации сознания, а также обсуждается альтернативный вариант решения вопроса о распространении сознания в мире.

**Ключевые слова:** трудная проблема сознания, воображение, эмансипация сознания, субъект, афантазия.

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## Introduction

One of the main questions of philosophy is the question of the nature and function of consciousness. In modern interpretation, this question is known as the “hard problem of consciousness,” which indicates the ontological irreducibility of subjective experiences to the mechanics of the physical world [Chalmers 1995]. At the same time, phenomenal experience is indicated as the main attribute of consciousness [Sytsma 2014].

An attempt to describe the phenomenal human experiences in the language of physicalism encounters a psychophysical problem, one of the consequences of which is the difficulty in determining the function of consciousness and the mechanisms of its implementation: there is currently no generally accepted idea of why consciousness is needed at all.

It is obvious to the physicalist that the ideal is not able to exert any influence on the world of physical objects. It follows that consciousness as a phenomenal experience could not have any functions. However, such a position does not allow moving forward in the study of consciousness, since it rests on epiphenomenalism, i.e. the idea that mental phenomena cannot be the causes of changes in the material world. In other words, the position that consciousness exists but does not affect the world is a dead end in the study of consciousness. Therefore, one of the main tasks of the study of consciousness is the search for a possible function of subjective experiences (1), i.e. search for the moment of actualization of consciousness.

Functionalism as one of the leading theories in modern philosophy builds its theoretical base on the definition of consciousness through functional states [Block 1996]. In this case, the attributive property of consciousness is the role it performs. In this case, the function of consciousness may not depend on the material on which it is implemented. In other words, consciousness, according to functionalism, can be realized not only on the basis of the human brain, but also on the basis of the nervous system of other animals. Moreover, functionalism suggests that consciousness can also be realized on a non-biological substrate. In this sense, “the answer to the question, what is the mind?, is the answer to the question, what is the mind for?” [Priest 1991, 133].

Despite criticism from philosophers who hold other research positions (in particular, they criticize functionalism for ignoring the very problem of the existence of phenomenal experience, see, for example, [Chalmers 2013, 242]), functionalism indicates the fundamental importance of determining the role of consciousness: this approach allows the discussion of consciousness to enter the field of practice, raise the question of the evolutionary reason for the emergence of consciousness, try to indicate the moment of actualization of consciousness, etc. Thus, questions about the nature of consciousness and its functions are connected and are elements of the same problem [Blackmore 2005, 46]. This connection allows us to consider the phenomenal nature of consciousness and its po-

tential function in the context of the issue of attributive properties of consciousness.

Speaking about the properties of consciousness, F.I. Girenok in the book *Autography of Language and Consciousness* writes: “Consciousness has two attributes: imagination and image” [Girenok 2010, 8]. In a later work *Clip Consciousness* the same author notes that imagination and images are properties of consciousness [Girenok 2016, 6]. However, an attribute is not just a property but a necessary property, that is, an essential one. In other words, the term “attribute” carries a stronger semantic load than the term “property.” Most likely, F.I. Girenok in this case simply does not attach importance to the terminology, considering that in the context of the texts themselves the terms “attribute” and “property” are equivalent. Perhaps in the context of these works this is true, but this difference in terms is an occasion for us to consider the issue of attributes of consciousness. In this case, we are interested in the attribute property : without what properties consciousness ceases to be consciousness? And what theoretical consequences can the question of the attributes of consciousness lead to?

### **The problem of attributes of consciousness**

In the thesis “consciousness has two attributes: imagination and image” under the image of F.I. Girenok understands the very existence of subjective experiences, and imagination refers to the function of consciousness, its actualization. The idea of connecting imagination and consciousness is one of the most enduring in philosophy. J.-P. Sartre writes about this connection: “...imagination is not an empirical power added to consciousness, but is the whole of consciousness as it realizes its freedom; every concrete and real situation of consciousness in the world is pregnant with the imaginary in so far as it is always presented as a surpassing of the real” [Sartre 2004, 186]. In this case, “a surpassing of the real,” i.e. the ability to respond not only to stimuli from the outside world, but also to imagined objects, is one of the most likely functions of consciousness. Bergson writes about the ability of a person to model

a certain situation in the imagination and react to it : “To call up the past in the form of an image, we must be able to withdraw ourselves from the action of the moment, we must have the power to value the useless, we must have the will to dream. Man alone is capable of such an effort.” [Bergson 1911, 94]. Thus, Bergson indicates imagination as a possible species-specific trait of a human being.

Dennett in his work *Kinds of Minds: Toward an Understanding of Consciousness* offers a thought experiment on imagination: “Please imagine, in some detail, a man in a white lab coat climbing hand over hand up a rope while holding a red plastic bucket in his teeth. An easy mental task for you.” Dennett means the ability of a person to respond to internal experiences and immediately expresses doubts about the presence of this ability in the animal. “Could a chimpanzee perform the same mental task? I wonder.” [Dennett 1996, 155]. Thus, imagination is not simply associated with consciousness, but is potentially an essential species-specific trait of a human being.

But is imagination an attribute of consciousness? Is the functional consistency of consciousness necessary, or is it merely the fact that there are phenomenal experiences that we can talk about consciousness? If we define consciousness without referring to its function, then we return to a dead-end research position. Because even if we determine the function of consciousness in a person, and then somehow discover that this function is not realized in another person or even in an animal, we still cannot refuse either the first or the second in the presence of consciousness, since the ontological status of consciousness as a first-person perception prevents this: we cannot deny anyone the presence of consciousness, because in principle we do not have access to someone else’s subjective world. Of course, in this case, imagination (or other function) is by no means an attribute of consciousness, i.e. necessary property: if subjective experiences can be separated from their functions, then this function cannot be an attribute of consciousness. But is the presence of a perceiving subject enough for us to talk about consciousness?

Thus, the problem of attributes of consciousness is complicated by the fact that if a function of consciousness is detected without

empirical confirmation of the implementation of these functions, we will not be able to confidently indicate the absence of subjective experiences, i.e. on the absence of consciousness: if the function of consciousness is not its attribute, then it is impossible to talk about its absence.

Let us pay attention to one of the most interesting consequences of the discovery of the function of consciousness: after determining the function of subjective experiences, we find ourselves in the space of ethics, and the problem of subjective experiences becomes an ethical problem. If consciousness has a function, can it be implemented differently in people? And what to do if a person does not have realization of this function at all?

Common sense tells us that the subjective world of people is more or less similar. That is, we transfer our inner experience to other people, assuming that their inner experiences resemble ours. However, studies in the field of psychology of perception, neurology, and other related disciplines indicate the fallacy of this view: the subjective experience of people can vary significantly. For example, it is hard for most people to even imagine what it means to perceive sound in color. However, there are people for whom the perception of a certain sound is accompanied by the perception of a certain color [Ramachandran 2006, 72–96]. A variant of this feature is the perception of black numbers on paper in various colors. For example, the figure «5» is perceived as red, and the figure «9» as yellow: some experiences entail a parallel activation of another feeling. This mixture of feelings is called synesthesia. The example of synesthesia demonstrates the existence of psychic phenomena that cannot be considered universal for all people. In this case, the question arises: is consciousness a universal phenomenon? If we do not find any empirical evidence for actualization of what indicates the existence of a phenomenal experience, then what will it mean? If we assume that the function of consciousness is imagination, and the essential attribute of a person is precisely consciousness, then what about those who have this function implemented minimally or not implemented at all?

### **“Blind imagination”**

The ability to create imaginary images of objects, to operate with them and to respond with emotion to these images in the absence of an external stimulus is one of the most familiar and integral elements of our daily life. However, in the 19<sup>th</sup> century cases of lack of imagination have been described as the ability to create and control mental images [Galton 1880]. For a long time, this phenomenon remained poorly studied, and only at the beginning of the 21<sup>st</sup> century the studies of lack of imagination fall into the focus of “big science” (see, for example, [Faw 2009]). In 2010, an article was published that examined the case of “blind imagination,” so called by researchers of this phenomenon by analogy with blindsight [Zeman et al. 2010]. Blindsight is the ability of blind people to respond correctly to visual stimuli, despite the fact that these stimuli do not fall into subjectively perceived space. In this case, the person says that he does not see anything, but at the same time correctly determines which object is in front of him. This phenomenon shows that the ability to respond to visual stimuli from the outside world is not rigidly attached to the conscious subject and can be realized, at least to some extent, without his participation.

In a 2010 article, the authors describe a patient who has lost the ability to operate with imaginary images after surgery. He could not arbitrarily imagine any objects, although other cognitive functions worked normally for him. However, the most curious is not the lack of imagination in itself, but the fact that, despite the inability to create imaginary objects and operate on them, this patient coped with standard imagination tasks. At the same time, during the performance of these tasks, not the brain areas functioned that were activated during the execution of the same tasks on the imagination of people from the control group. It turns out that the correct execution of tasks on the imagination was possible in the absence of imagination. The authors note that their study demonstrates alternative strategies for completing tasks that have traditionally been associated with the ability to handle internal images. At the same time, one of these strategies does not need any phenomenal experiences. Therefore,



in this article, this phenomenon is called by the authors “blind imagination,” that is the task of imagination is performed, despite the absence of subjectively perceived imaginary images.

This study demonstrates various cognitive ways of coding and updating information. A patient with “blind imagination” correctly and with correct visual details described the suburbs of Edinburgh. But when asked how he succeeds, he replied: “I can remember the visual details, but I can’t see them... I can’t explain that...” [Zeman et al. 2010]. Thus, that behavior, which, as it seems to us, necessarily requires a phenomenal representation, does not need it at all. At least, the result may not depend on the presence or absence of our ability to mentally represent images. In a subsequent article, the authors of the described study proposed the name of the phenomenon under study – aphantasia, i.e. lack of fantasy as the ability to have mental images [Zeman et al. 2015].

After publishing an article about a patient with aphantasia, people with similar characteristics began to turn to the authors, which indicates that the described case of a lack of imagination is single. One of the cases of aphantasia is interesting, clearly demonstrating that imagination as the ability to operate with imagined images is neither a universal feature of a person nor, what is astounding, a condition of his normal existence. Blake Ross, an American programmer and former Facebook employee, describes his lack of imagination [Ross 2016]. He writes that he has never in his life had the ability to visualize objects and always believed that “counting sheep” is a metaphor. According to him, if he is asked to imagine, for example, a beach, then he would rather begin to think about the “concept” of the beach: he knows that there is sand; knows that there is water; knows that there is sun and, possibly, lifeguards. That is, he possesses factual information about the beach and uses propositional knowledge in order to correctly work with this information, including using it in communication: he can freely and correctly use the word “beach.” But he cannot imagine the beach: he does not have any phenomenally experienced experience – neither visual nor sound nor any other sensory experience.

His description of his life without imagination is quite detailed and demonstrates the ability of a person to cope quite correctly with those tasks that, in the traditional view, need imagination in order to be completed. That is, his experience points to an alternative way to solve such problems without using subjectively perceived mental structures. At the same time, Blake Ross was sincerely discouraged by the fact that other people have some experience in visualizing objects. Therefore, for him, imagination is about the same as synesthesia for an ordinary person is an unknown and incomprehensible experience.

Thus, even such a familiar phenomenon as imagination turns out to be somewhat “superfluous” in the list of mandatory characteristics of a person: imagination as the ability to operate with images is neither universal, nor even important for the normal functioning of a person. However, let us pay attention to the fact that the phenomenon of aphantasia in the form in which it is currently described does not indicate a lack of imagination as such. It is impossible to evaluate the imagination solely by the characteristics of the brightness or vivacity of mental images and understand only the ability to operate imagined images as imagination (see, for example: [Pylyshyn 1973]). Firstly, because the brightness or liveliness of images is a subjective assessment of people. The absence of subjectively experienced images may not be the result of a lack of imagination, but the result of a distortion of metacognition (2). Secondly, it is not obvious that one can only respond to the image of an object without an external stimulus. Instead of an image, there can be, for example, motor patterns, propositions, or spatial perceptions. Thirdly, the phenomenon of aphantasia can be based on psychological dysfunction [De Vito & Bartolomeo 2016; Zeman et al. 2016]. Therefore, it is impossible to say with certainty that if imagination is a function of consciousness, then in people with aphantasia, consciousness does not fulfill its function. The phenomenon of lack of imagination is just beginning to be studied.

We needed an example of aphantasia, not so much to find out whether the imagination is an attribute of consciousness, but to

indicate the fundamental possibility of the lack of realization of the function of consciousness and, therefore, the fundamental possibility of the absence of consciousness itself. If even imagination can be successfully replaced by “blind” cognitive processes, then what else is in the shadow of our ideas and hidden behind a screen of common sense? Thus, an indication of a possible difference in the realization of the function of consciousness draws our attention to the fact that the very effect of consciousness on behavior (if it exists at all) may not be a universal property of a person. This means that, theoretically, not every person's consciousness should be sought, because not every person can find it.

Note that this line of research provides an outlet not only to the science of consciousness, but also to ethics. If the essential feature of a person is consciousness, and imagination is a function of consciousness, but at the same time we find that this function is not realized in some person, then what does this mean? Is it possible to find ethical foundations in this space?

### **Emancipation of consciousness**

The idea of human exceptionalism was questioned in the process of accumulating scientific data on the human nature and the nature of other animals. The idea of the human specificity was replaced by the idea of the proximity of people and other species. This meant that previously assumed species-specific characteristics of humans extended to other animals. This also applies to consciousness. So, in the 20<sup>th</sup> century, some animals were endowed with higher mental functions (see, for example, [Zorina & Smirnova 2006, 283–301]). The natural result of the development of this direction was animalism [Olson 2015]. Further, this “emancipation of consciousness” expanded the space of previously considered purely human properties already into inanimate nature: the idea of realizing consciousness on an artificial object (see, for example, [Turing 2003]). This idea served as a catalyst for starting a discussion of various versions of artificial intelligence (see, for example, [Chalmers 2013, 389–412]). Further expansion of the space of consciousness led to the emergence

of modern versions of panpsychism and a discussion of the proto-phenomenal properties of matter (see, for example, [ Koch 2014]).

In the process of “emancipation of consciousness,” consciousness has made a long way from the exceptional properties of man to the universal properties of matter. Thus, the apotheosis of this process is the idea of the widespread dissemination of consciousness in the world.

However, pay attention to the fact that along this road you can go in the opposite direction. Studies in the field of conscious processes show that tasks, the implementation of which, according to traditional research settings, requires the participation of consciousness, in some cases are successfully performed without it. For example, the phenomenon of aphantasia demonstrates that imagination tasks can be completed without the ability to imagine. Despite the lack of human ability to operate with mental images, he correctly copes with the tasks of the imagination. Moreover, as the example of Blake Ross shows, the inborn lack of imagination does not prevent one from building a career and being realized as a successful subject of social interaction. That is, those tasks for which most people use a function such as imagination can be successfully solved by alternative methods. Thus, we must take into account the theoretical possibility of the lack of realization of the function of consciousness, which allows us to ask about the presence of consciousness itself. Perhaps animals have consciousness in the form of subjective experiences; perhaps you can create consciousness in an artificial medium; perhaps panpsychism is true. But it is also possible that it is on the opposite side of the spectrum of distribution of consciousness in the world from panpsychism – the absence of consciousness where it should be in accordance with the traditional principles of common sense.

D. Dennett in his work *Sweet Dreams: Philosophical Obstacles to a Science of Consciousness* discusses the “philosophical zombie” thought experiment, which proposes to introduce a hypothetical doppelganger of a person who does not have an inner world: “Nobody in philosophy thinks that there are actually any zombies, but

many philosophers think it is important to consider the (logical) possibility that there could be zombies, and what the implications of this possibility are.” [Dennett 2005, 80]. These words of D. Dennett show how selective philosophers are in the question of the distribution of consciousness in the world: none of the philosophers seriously don't even think about imposing restrictions on the distribution of consciousness on the person himself (3), although the movement is in the opposite direction, i.e. the expansion of the presence of consciousness in the world does not meet much resistance. Perhaps this vector for emancipation of consciousness may be a consequence of the paradigm of tolerance of Western culture, the basis of which is a ban on restrictions on any grounds. In this case, on the basis of the presence of consciousness. For all its ethical appeal, this paradigm has a negative property that is characteristic of any paradigm system: paradigms are basically blind to alternatives. In the case of the consciousness studies, an alternative to the emancipation of consciousness will be a vector to limit the presence of consciousness in the world, including through the idea of a hypothetically uneven distribution of consciousness in the space that is now endowed with consciousness evenly.

Studies of mental processes show that most phenomena accompanied by subjective experience do not need it: our body is able to correctly perform its functions and without accompaniment by subjective experiences. At the same time, the space of cognitive functions that do not need consciousness continues to expand. In addition, the correct execution of some tasks can be realized thanks to alternative cognitive processes that take place “in the dark,” i.e. they do not need a phenomenal experience. But if consciousness is not a necessity in human behavior, then what are our reasons for expanding the presence of consciousness in the world? It is more logical to limit this presence. Thus, we observe a contradiction between the empirical science of the brain, which narrows the space of the necessity for consciousness, and the process of emancipation of consciousness, i.e. the expansion of ideas about the presence of consciousness in the world.

### **Conclusion**

The question of the attributes of consciousness, or rather, the potential function of consciousness as an attribute of consciousness, leads us to the idea of the possibility of limiting the spread of consciousness in the world.

If the question of function leads functionalists to the conclusion that consciousness can be realized on different substrates, i.e. to movement in the direction of the emancipation of consciousness, then us – to limit the spread of consciousness. This methodological position instead of the question “Is it possible that consciousness could be implemented in different substrates?” asks the question “Is it possible that consciousness could not be implemented on the same substrate?”

An alternative to the vector for the emancipation of consciousness is a vector for limiting the spread of consciousness in the world. If panpsychism as an idea of the wide distribution of consciousness in the world is at one end of the spectrum of distribution of consciousness and gives a remote time transition from theoretical reasoning in physics, the idea of restricting consciousness as a strategy for searching for a function of consciousness and significant differences in the implementation of these functions between people gives some opportunities for modern science: psychology, psychiatry and biology.

In addition, the idea of restricting the spread of consciousness can be useful as a theoretical construct that allows one to enter the space of ethics and ask about the ethical consequences of the lack of realization of the function of consciousness. If the image, i.e. phenomenal experience is an attribute of consciousness, is its function an attribute of consciousness? What to do if this function is not realized in a person, and we cannot even indicate the presence of consciousness, which is potentially an essential property of a person and its ontological difference from all other objects of the world? Is there an ontological difference between people possible? Thus, the question of the attributes of consciousness allows us to talk about the alternatives and limitations of the program for the

emancipation of consciousness, as well as enter the space of new ethical research.

#### NOTES

(1) Note that consciousness may not have an adaptive function that appeared during evolution. The appearance of a characteristic may not be of an adaptive nature, be accidental, or just accompany the appearance of another characteristic. In this case, we are not interested in the function of consciousness, but the effects exerted by consciousness on behavior, i.e. consequences of consciousness. If there are no such effects, we will return to the position of epiphenomenalism.

(2) Although there are studies that indicate that the phenomenon of aphantasia is still not a consequence of a violation of metacognition. See, e.g., [Keogh & Pearson 2018].

(3) Dennett's program for the elimination of consciousness is not an example of such a restriction, because it assumes the absence of the "hard problem of consciousness," and not the search for its solution in the opposite direction from the emancipation of consciousness.

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