RUDN Journal of Philosophy. ISSN 2313-2302 (Print), ISSN 2408-8900 (Online) 2024 Vol. 28 No. 4 1032–1049
Вестник РУДН. Серия: ФИЛОСОФИЯ http://journals.rudn.ru/philosophy

https://doi.org/10.22363/2313-2302-2024-28-4-1032-1049
EDN: JTNOBM

Research Article / Научная статья

# "Epystemologically Different Worlds": from J. Uexküll to G. Vakariu

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**Abstract.** The research deals with the concept of "epistemologically different worlds" introduced by Gabriel Vacariu and its background in European science and philosophy, since the beginning of the twentieth century. It is shown that the accusation of plagiarism made by Vacariu against Marcus Gabriel is groundless, firstly, because Gabriel's concept of "semantic fields" (*Sinnfeld*) is not identical to the concept of epistemologically different worlds, and secondly, because in the twentieth century, similar concepts appeared, starting with the concept of "Umwelt" by Jakob Uexküll (1909). Paying tribute to the revolutionary shift produced by this concept of Uexküll, the author traces the direct and indirect philosophical references and modifications that the concept of umwelt produced in the phenomenology of the late E. Husserl, the fundamental ontology of M. Heidegger and the neurophenomenology of F. Varela. It is shown that both Husserl's concept of "lifeworld," Heidegger's "world-formation," and Varela's "structural coupling," on the one hand, go back to Uexküll's concept of Umwelt, on the other hand, can be summarized under the general notion of "epistemologically different worlds." Thus, while refusing to recognize Vacariu's priority in the creation of this concept, the conclusion is made about the productivity and heuristic value of the term introduced by Vacariu. We also propose a conventional classification of 5 stages of overcoming representativism, in which different variations of the concept of epistemologically different worlds correspond to the last three stages. However, the interpretation of the "phenomenon of the world" developed by M. Heidegger in the second part of his lectures, The Fundamental Concepts of Metaphysics, is considered logically superior. In these lectures, Heidegger draws from J. Uexküll's concept of the Umwelt and develops an original project of "philosophy of nature," embedded as a part of his "fundamental ontology." Here, he not only analyzes the difference between the animal world and the human phenomenon of the world but, on this basis, rethinks the nature of life anew as such and the specificity of the human mode of being and relation to the existent things. Heidegger's key conclusion for the concept of epistemologically different worlds is that the notion of "existence" applies only within the human world and is inapplicable to the animal umwelt.

**Keywords**: Umwelt, Lebenswelt, neurophenomenology, enaction, structural coupling

**Article history:**
The article was submitted on 01.06.2024
The article was accepted on 01.09.2024

**For citation:** Falev EV. "Epystemologically Different Worlds": from J. Uexküll to G. Vakariu. *RUDN Journal of Philosophy.* 2024;28(4): 1032–1049. https://doi.org/10.22363/2313-2302-2024-28-4-1032-1049

# «Эпистемологически различные миры»: от Я. Икскюля до Г. Вакариу

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**Аннотация.** В исследовании рассматривается введённое Габриэлем Вакариу понятие «эпистемологически различных миров» и его предыстория в европейской науке и философии с начала XX в. Показано, что обвинение в плагиате, выдвинутое Вакариу против Маркуса Габриэля, лишено оснований, во-первых, поскольку понятие «смысловых полей» (*Sinnfeld*) М. Габриэля не тождественно понятию эпистемологически различных миров, и во-вторых, поскольку в XX в. сходные по значению понятия появлялись начиная с концепции «умвельта» Якоба Икскюля (1909). Отдавая дань революционному сдвигу, произведённому этой концепцией Икскюля, автор прослеживает прямые и опосредованные философские отсылки и модификации, которые произвела концепция умвельта в феноменологии позднего Э. Гуссерля, фундаментальной онтологии М. Хайдеггера, нейрофеноменологии Ф. Варелы. Показано, что и концепция «жизненного мира» Гуссерля, и «мирообразование» человеком у Хайдеггера, и «структурная сопряжённость» у Варелы, с одной стороны, восходят к концепции умвельта Икскюля, с другой – могут быть подведены под общее понятие «эпистемологически различных миров». Таким образом, отказывая Вакариу в признании его приоритета в создании данной концепции, делается всё же вывод о продуктивности и эвристической ценности введённого Вакариу термина. Предлагается также условная классификация 5 ступеней преодоления репрезентативизма, в которой различные вариации концепции эпистемологически различных миров соответствуют последним трём ступеням. Но логически высшей на данный момент признаётся всё же интерпретация «феномена мира», развёрнутая М. Хайдеггером во второй части его лекций «Основные понятия метафизики». В этих лекциях Хайдеггер напрямую отталкивается от концепции умвельта Я. Икскюля и развёртывает оригинальный проект «философии природы», встроенный как часть в его «фундаментальную онтологию». Здесь он не только анализирует отличие мира животного от человеческого феномена мира, но заново на этой основе переосмысляет природу жизни как таковой и специфику человеческого способа бытия и отношения к сущему. Ключевым выводом Хайдеггера для концепции эпистемологически различных миров является то, что само понятие «существование» применимо только внутри человеческого мира и неприменимо к умвельту животного.

**Ключевые слова:** окружающий мир, жизненный мир, нейрофеноменология, энакция, структурная сопряжённость

**История статьи:**
Статья поступила 01.06.2024
Статья принята к публикации 01.09.2024

**Для цитирования:** *Фалёв Е.В.* «Эпистемологически различные миры»: от Я. Икскюля до Г. Вакариу // Вестник Российского университета дружбы народов. Серия: Философия. 2024. Т. 28. № 4. С. 1032–1049. https://doi.org/10.22363/2313-2302-2024-28-4-1032-1049

Not so long ago, the Romanian philosopher of science Gabriel Vacariu introduced the somewhat helpful notion of "epistemologically different worlds" (hereafter EDW) [1], and then in 2014 accused the German philosopher Marcus Gabriel of plagiarizing his ideas, especially this idea of EDW [2]. One of Vacariu's arguments was that he came to this idea based on his research and thinking in the philosophy of science. In contrast, Marcus Gabriel was primarily concerned with the history of philosophy and a wide range of general philosophical questions. We will not act here as a judge in this dispute. However, we hope to show that Marcus Gabriel had every opportunity to arrive at the same idea based only on the history of philosophy and partly on the history of science in the 19$^{th}$ and 20$^{th}$ centuries.

EDW is a kind of "attractor," a point of attraction, if not convergence, to which the most diverse lines of philosophical reflection and criticism have objectively converged. From the very origin of philosophy, an important part of philosophical reflection has been the awareness of the conditionality of our cognition of reality and the desire to study the degree of this conditionality and possible ways of overcoming or neutralizing it. Heraclitus said: "Eyes and ears are bad witnesses to men if they have souls that understand not their language." [3. P. 193], and Xenophanes asserted the relativity of sensual cognition:

> "If the god had not made light-coloured honey, I should have said that a fig was far sweeter." [3. P. 174].

That is, the subjectivity and relativity of our cognition are almost "commonplace" in the history of philosophy; only the interpretations of the nature and limits of this relativity differed.

Nevertheless, the belief that these limitations of our cognition affect only *the accuracy* of our picture of reality, which represents reality "in itself," persisted for a long time.

With the development of philosophical reflection in epistemology, this relation of "representation" between our knowledge and the world became increasingly complicated and confused. The very idea of knowledge as representation was finally "deconstructed" and remained in use only at the level of everyday representation and in science – at the initial level of empirical data collection.

In retrospect, we can already identify several steps in this deconstruction of representationalism:

1) *Cognition of "things in themselves" is possible, but accidental factors can also distort it.* By "accidental factors," we could mean both mental ("idols of the cave, the marketplace, the theater" by F. Bacon) and sensual (feelings that deceive the "barbarian souls" of Heraclitus but can be rectified by the fiery rational soul).

2) *Things in themselves are unknowable* (Kant), *but still, there is a single reality for all, with which any cognition should strive to harmonize* (pragmatic theory of reality of Ch. Peirce).

3) There is no single reality, but for each type of living creature, there is a world constituted by the types of interaction with the world available to that creature (the notion of Uexküll's *Umwelt*). Here, we can also include the late Husserl's *Lebenswelt* – although with reservations. Also, with reservations, we can include a "pluralistic universe" of William James;

4) *The very notion of "existence" is different in each "epistemologically different world"* (F. Varela's neurophenomenology and G. Vacariu's theory).

5) *The concept of "existence" in general is applicable only within the human phenomenon "world" and is inapplicable to animal (and plant) worlds* (M. Heidegger's philosophy of nature).

At first glance, this categorization raises some questions. As we can see, Vacariu's concept of EDW is just one of the last in a series of stages in the deconstruction of representationalism. It could be argued, however, that the distinction between the fourth and fifth step boils down to a dispute about words – what difference does it make whether we say that "to exist" in the human world and in the world of the fly are not the same thing, or that in general the concept of "existence" applies only in the human world? Which is more anthropocentric – to associate the concept of "existence" only with man and his world, or to extend this human concept also to the worlds of other living beings? Heidegger, in his lectures *The Fundamental Concepts of Metaphysics*, analyzes the concept of "existence" in such a way that something can "exist" only by being conceived by a human being and in a human world since "existence" involves a purely human way of interacting with things, which Heidegger defines as being "held in front of," "carried into," and constantly "present to" something. Accordingly, it is only for a human being that something can be "present." By speaking (as Vacariu and Varela do) of "existence," even in hypothetical different meanings, concerning the worlds of other living beings, we unwittingly attribute to these beings a purely human way of interacting with the world, thoroughly imbued with *logos*, intelligent speech.

Nevertheless, the term EDW, introduced by Vacariu, is useful in that it can be used as a general designation for the last three stages of this critique of representationalism since this term can well describe the understanding of the cognizable world of J. Uexküll, E. Husserl, M. Heidegger, W. James, A.N. Whitehead, F. Varela, G. Vacariu himself, as well as Marcus Gabriel and many other contemporary philosophers. Common to all these conceptions, as we shall see, is the denial of a *single* objective reality that any being's cognition

would have to "represent," that is, adequately reflect. After Kant's discovery in his "Copernican turn in philosophy" of the activity of human cognition, it became clear in the course of time that all cognition in general, and not only in man, but in any living being, is an *active interaction* with the subject, so cognition and its result depend entirely on the subject's available opportunities for interaction with the environment – opportunities both quantitative (the force of influence he is able to produce and withstand) and qualitative (the variety of the nature and types of interaction). Nevertheless, different living beings, from the simplest animals to humans, have radically different capabilities, so they will not just have different "pictures of reality" but literally "other realities" or, as we will say later, EDWs – epistemologically different worlds.

This notion is also helpful in that it helps to develop further the "Copernican turn in philosophy," i.e., to overcome anthropocentrism in epistemology further. Since cognition equals interaction, and not only humans but also animals, plants, and even individual molecules and atoms can interact with their environment, any more or less coherent system, from atom to galaxy and, perhaps, metagalaxy, must have its own EDWs. Moreover, the very act of knowing, as equal to action, acquires an important ontological dimension – to "know" always means to "create" in one way or another – and this allows us to reconnect[1] epistemology and ontology, bringing the whole edifice of philosophy back into greater coherence.

Below, we will briefly examine the last three stages of this critique of representationalism and the relationship between them.

The beginning of the third stage can be attributed to the beginning of the 20th century, when the works of the Baltic biologist Jakob von Uexküll, who first used the term and concept of *Umwelt* ("environment"), were published. The work of biologist Jakob Uexküll *Environment and Inner World of Animals* "Umwelt[2] und Innenwelt der Tiere" [4]) had a significant influence on the further formation of biology, giving rise to *ecology* as a scientific discipline and continues to be productively discussed in semiotics[3]. Uexküll made an effort to conceptualize the originally biological concept of Umwelt in its philosophical significance. The result was a concept that in many respects anticipates the EDW concept –

[1] "Reconnect" because, by and large, there is nothing absolutely new in philosophy. Parmenides spoke of the unity or equality of thinking and being in antiquity, and Hegel in modern times. Now, however, this unity is no longer asserted as a postulate of abstract speculation but as a substantiated conclusion of "practical philosophy" based on all the achievements of modern natural science, primarily biology and physics.

[2] In English-language literature on phenomenology, epistemology and semiotics the German *Umwelt* is usually left untranslated, in Russian there is no established practice yet, so we will follow the example of English-speaking authors and borrow the term "Umwelt" as a tribute to Jakob Uexküll and his associates.

[3] In 2001, the SEMIOTICA journal published a special issue devoted to Jakob Uexküll, who is defined there as a "cryptosemiotician".

*Merkwelten* – notable worlds – which Uexküll proposed in his work *Structural Elements of the Biological Worldview* [5. P. 199].

The starting point for the formation of the Umwelt concept was the discovery of biologists, perfectly formulated by the Dutch biologist Buytendijk: "Thus, it is obvious that in the animal world as a whole, the way of connection of the animal with the environment (Umgebung) is almost as intimate as the unity of the body itself[4]" [6. P. 375–376].

Uexküll summarized this new understanding of the role of the environment for animals and expressed it in epistemological and even ontological terms: "In Uexküll's eyes, therefore, 'world' is not a given thing whose presence here is independent of us. What is initially 'here' is, rather, merely "unarticulated matter that can be connected and interpreted in the greatest variety of ways. <…>. This 'pre-real matter' is <…> shaped to all sorts of disparate realities, that is, to sectionings of the world which can affect us, and which we can also affect. Before a motivation emerges, there can be no object upon which something can be projected." [7. P. 41]. Each Umwelt is not just a unique reflection of a single universe, like Leibniz's perceptions of monads. An Umwelt is a sphere of cognition and real interaction, in which both the cognizing agent and the object of his cognition-action first emerge. "Uexküll compared each Umwelt to an invisible bubble within which each species lives. The bubble is invisible precisely because it consists of relations since all relations as such, in contrast to things that are related, are invisible. The objective meaning of each world and each part within each world depends less on physical being than it does on how the relations constituting the Umwelt intersect." [8. P. 126].

Philosophers responded vividly to these new concepts of biologists, drawing from them broad and far-reaching conclusions for epistemology and philosophical anthropology. Among the most discussed at the end of the 1920s were Max Scheler's *The Human Place in the Cosmos* [9] (Russian translation: [10]) and Helmuth Plessner's monograph *The Levels of Organic Life and the Human: Introduction to Philosophical Anthropology* [11] (Russian translation: [12]).

Scheler returns to the interpretation of the Umwelt in his other works, in particular, *Ressentiment* [5]. He writes: "The 'milieu' to which we adapt our tools is in fact nothing but that corner which our vital organism has selected in the universe. It is by no means a totality which contains us as well as all other living beings and to which we have all 'adapted' ourselves." [5. P. 199].

In this interpretation of Uexküll, subsequent researchers, including the later Husserl, Heidegger, Varela, and Vacariu, would disagree perhaps only with the role attributed here to "vital organization." The point is that Umwelt, the

[4] Buytendijk, F. J. J. Zur Untersuchung des Wesensunterschieds von Mensch und Tier. In: Blätter für Deutsche Philosophie. Bd. 3. Berlin 1929/30. S. 47.

"surrounding world," is the world with which *real interaction* is possible for a human or an animal[5].

However, the interaction with the world, even in animals, is not limited exclusively by their "vitality", as in animals too, the social factor, group relations, altruism, and mutual aid play an important role. This allows individuals with weakened vitality to survive and even leave offspring. Yet this can be considered by simply extending the concept of "vitality", i.e., "viability", from an individual to a group – a flock, a swarm, etc. If we talk about humans, then their interaction with the world is determined primarily by thinking. For Heidegger, e.g., man is by nature a *thinker* (man from Indo-European *man*, "to think", "to measure"; hence Sanskrit *manas*, "mind"). Therefore, for man the "surrounding world" will be everything that they are able to cover with thought and with which they can establish relations in consciousness.

If in astrolatry people deified the stars and believed in their direct influence on life, then through this belief the luminaries exercised a real influence and therefore the surrounding world of man really included these luminaries as centers of interaction, even if a person knew nothing about the nature of stars and planets. To be in interaction with something, full knowledge of this is not necessary, although it certainly helps to achieve more[6]. Interaction with the luminaries – as well as all manifestations of abilities in the field of thinking, cognition, will, and creativity – is almost independent of "vitality" unless the ability to think is included in it, but such an extension loses the specific meaning of the original term.

We now turn to the next, fourth stage of the critique of representationalism, which includes the concept of EDW in Vacariu's version. Apparently unfamiliar with the concept of Umwelt and its philosophical interpretations of the first half of the 20th century, Vacariu also devotes much attention to debunking the idea of

[5] Recent studies of plants increasingly suggest that plants also have their own Umwelt, which they constitute. Plants not only blindly or spontaneously form the environment around them as a result of their vital activity but are also capable of exerting quite expedient effects both on the environment and on other plants, responding to changes in the environment and even to signals from other plants [13. P. 145–210].

[6] It can be objected that a person cannot influence the luminaries, so we cannot talk about "*inter*action" here. However, the Umwelt can be a magical world, a world of myth, and a pantheistic world filled with divine Essence. Man can "influence" the luminaries, for example, by strengthening with his prayers those divine spirits who animate these luminaries as bodies (e.g., the prayers of the Zoroastrians to the spirit of Sirius, Tishtrya, to help him defeat the drought demon Apaosha). In the world of physical reality, this influence may not have any effect on the star Sirius, but in the surrounding life world, which is made up of human endeavors and experiences, successes and failures, these prayers will have real consequences, the star Sirius will be endowed with a special intense status in this life world, so that the movement of Sirius across the sky will have a really more significant impact on the other elements of the life world of a Zoroastrian (than a representative of another religion or a non-believer). In this sense, we can still speak about the establishment of "real relations" with the luminaries and, in this sense, about "real interaction" with them.

"one world," which he ironically defines as "unicorn world," alluding to the fairy-tale world of unicorns and rainbow ponies. At the heart of the concept of the "one world," according to Vacariu, is the human inability to imagine one's complete non-being. Those who think they succeed in doing so are simply missing out on themselves representing it. Therefore, for each person, the world is one already in the fact that it is *theirs*. A person can be present and act in every part of it, if only by thought.

But although we cannot imagine our own non-being, we must assume that it is possible. In our absence, the world will no longer be "ours"; it will be someone else's. Since each observer is placed in unique conditions of observation – already by virtue of bodily differences – someone else's world must differ from mine in everything, even if only slightly. It can, however, differ significantly if we are considering different "houses of being," i.e., linguistically determined paradigms of world conceptualization. It can differ unimaginably if we compare the worlds of different biological species of living beings with different senses and different capabilities.

So literally, not figuratively, a *human room does not exist as a "room" for a fly*. That said, the fly's "epistemological world" is no less (but also no more) accurate than the human world.

In Vacariu's view, we need to abandon the age-old anthropocentrism, if not "human chauvinism," which recognizes only human perspective of seeing the world as the only real one. The same idea can be found earlier in the neurophenomenology of Francisco Varela: "Even the most hard-headed biologist must recognize that *there are many ways that the world is*—and not even one world, but many different worlds of experience—depending on the structure of the living being in question and the types of distinctions it can make. And even if we limit our attention only to human cognition, there are many various ways the world can be taken to be" [14. P. 9].

Vacariu also says the same thing: "Our essential *mistake* was that *we considered ourselves as the only 'observers'* (entities that interact with other elements) in the [conventional] 'world', and for this reason we believe in the 'unicorn world'" [1. P. 107].

Let us emphasize once again that the EDW concept is a development of Kant's "Copernican turn" in epistemology, i.e., overcoming ontological and epistemological anthropocentrism, according to which the human world (cognizable by man) is a single reality true for all other living beings. This particular anthropocentrism is obviously linked to moral and value anthropocentrism – the notion that man has the highest value in the entire universe, and therefore, the whole world and all beings in it were created for *man's benefit*. The oldest extant expression of this idea can be found already in the Heracleopolis theocosmogony of ancient Egypt[7].

[7] "Guarded people, the flock of god, he created heaven and earth according to their desire, he destroyed the chaos of water, he created air for their noses to live in. They are his likenesses,

Consider now Vacariu's definition of the term EDW: "The determining epistemologically different entities and their corresponding constitutive epistemologically different interactions represent the epistemologically different worlds. Each epistemologically different world has the same objective reality." [1. P. 108]. For Vacariu, as for Varela, *observation is a type of interaction*. Hence EDWs have epistemological and ontological significance. According to the concept of EDWs, "exist" is to interact with the subject in the experience of cognition under certain conditions. That is, even "being" and "existence" themselves will have different meanings in each particular EDW – Husserl already considered this in other words in the project of regional ontologies: in the expressions "to be a sign" and "to be a chair" "to be" is not understood in the same sense. "To be a sign" means to participate in some interpretation; 'to be a chair' means to enable a person to sit. At the same time, Husserl still believed that all cognizable spheres are united by a *single world* covering them[8].

Changing the conditions of the cognizer's interaction with his world does not simply change the "angle of view" or the "width of the embrasure" through which we look at the world. It changes the observed reality itself. What is real in some conditions of interaction may well be unreal in other conditions. "It means that changing the conditions of observation involves the change of the 'world'" [1. P. 103].

Various conditions of observation are a special case of different ways of interaction. "*Observation-interaction conditions*", following Vacariu, include at least three types of conditions:

1. **the possession of specific sense organs,** as well as the
2. **instruments** of observation and experimentation, as well as
3. **concepts** to realize conceptual synthesis, in Kant's terms.

"<…> it is not possible to locate two epistemologically different ontological substances within the same world." [1. P. 104].

"The microparticles and macroparticles and their corresponding forces (that differ from each other) really exist, but not in the same unique world." [1. P. 105]. "**Under different conditions of observation, the human subject observes epistemologically different worlds.**" [1. P. 105].

One of the most important consequences of the EDW theory is that "**every epistemological entity (micro or macro, neural pattern or mental**

emerging from his body. He rises in the sky according to their desire, he created plants, animals, birds and fish for them to nourish them. <...> He created light according to their desire, he floats (in the sky) so that they may see. He has erected a prayer-house behind them, – when they cry, he hears them" [15. P. 268].

[8] "For one is easily persuaded that the material world is not just any part, but rather the fundamental stratum of the natural world to which all other real being is essentially related. The components still lacking from the material world are the psyches of humans and brutes; and the novelty which they introduce is, above all, their 'mental living' with their relatedness to their surrounding world in the manner peculiar to consciousness." [16. P. 119].

**representation, human being or cell) "observes" or interacts with other entities that belong to the same EW**" [1. P. 106].

Here, however, it is necessary to clarify "interact directly." The electron is an "epistemological entity" belonging to the microcosm, so in our macrocosm, we can observe its indirect manifestations in complex experimental tools. In its world, however, the electron interacts only with other microparticles.

The denial of the reality of a single world, the "unicorn world", was one of the points of Vacariu's plagiarism accusations against Marcus Gabriel, who put forward the same idea as his own in *Why the World Doesn't Exist*[9].

However, Vacariu's thesis that no one before him had seriously challenged the idea of the world as actually unified should be recognized as erroneous. Among those not very distant in time, we can recall William James, who elaborated on the concept of a "pluralistic universe." For him, the unity of the world belonged to the philosophy of "soft temperament," while for the pragmatist, the unity of the world always remains an open possibility [17]. The full realization of this possibility would lead, perhaps, according to James, to the death of the world in the world fire of love or in the mixing of all the elements, as in Empedocles.

Let us now turn to the last step in classifying the deconstruction of representationalism in Martin Heidegger's philosophy of nature.

Following M. Scheler and H. Plessner, Heidegger in his lecture course *The Fundamental Concepts of Metaphysics* [6] (Russian translation [18]) provides a philosophical interpretation of Jacob Uexküll's concept of Umwelt, which unfolds and takes the form of an outline of the whole "philosophy of life", including "philosophy of organism," "philosophy of ecology" and EDW epistemology (this concept, as we shall see, applies to Heidegger's theory of the world as well).

Heidegger immediately somewhat arrogantly excludes Uexküll's attempts at philosophical interpretations from consideration but recognizes the fruitfulness of his biological research for philosophy: "It would be foolish if we attempted to impute or ascribe philosophical inadequacy to Uexküll's interpretations, instead of recognizing that the engagement with concrete investigations like this is one of the most fruitful things that philosophy can learn from contemporary biology." [18. P. 399]. Heidegger shows an example of such philosophical "proceedings with Uexküll's particular studies," devoting to them a significant part of his lectures *The Fundamental Concepts of Metaphysics*.

[9] Another point of accusation was G. Marcus's concept of *Sinnfeld*, the "semantic field," which Vacariu found suspiciously similar to his concept of EDW. The notion of Sinnfeld differs in meaning from EDW, as the former refers to the semantic layers of phenomenal experience and the latter to the actual possibilities of interaction. For example, this distinction is noticeable in dreams: in a dream, a person enters an entirely different "field of meaning" than in the waking state, while the EDW changes, but not so radically, because the *possibilities of the fundamental interaction* of the sleeper with the surrounding world do not disappear but are only modified.

According to the testimony of R. Safranski, Heidegger attached particular importance to these lectures and put them on the same level with *Being and Time*[10]. In his previous works, first of all, in *Being and Time*, Heidegger, in the opinion of many (in particular, K. Löwith), too sharply emphasized in the concept of *Dasein* the uniqueness of the human type of existence. Therefore, in *The Fundamental Concepts of Metaphysics* Heidegger initially poses the question of the world not from the human point of view. He tries to understand what the surrounding world is for an animal. In order then, starting from the animal Umwelt, we will come back to man, redefining both the gap and the connection between the ways of being of man and all other living beings.

Heidegger was quite aware of the difficulties involved in the necessary "transference-self" into the animal for this task. "Heidegger argued that the mode of being of nature, whether inorganic nature or organic life associated with the body, 'can only become accessible if we consider it in a deconstructive way'" [6. P. 371]. This is not easy – consciousness must somehow comprehend the unconscious, and cognition must somehow comprehend the unknowable. *Dasein* must comprehend the being (*Seiende*), for which there is no 'here' at all." [19. P. 198–199].

The whole section on the "mode of being-animal" in the *The Fundamental Concepts of Metaphysics* is the result of Heidegger's comprehension of Uexküll's book *Environment and Inner World of Animals* (Heidegger refers to the second edition of this book, published in 1921: Uexküll J. v. Umwelt und Innenwelt der Tiere. 2., vermehrte und verb. Aufl. Berlin, 1921).

Drawing on the research of Buytendijk, Uexküll and other biologists of the time, Heidegger poses a series of philosophical questions that can be organized in the following order:

1. the nature of the unity inherent in the organism,
2. *the mode of being of the living* and, accordingly,
3. *the essence of life* as such[11];
4. the difference between the animal Umwelt and the human world.

After considering these four questions, which form the basis of Heidegger's proposed philosophy of nature, he returns during his lectures to his usual topics – already on a new level: to the questions of the *mode of being of man* and the nature of the existence of the human world (the nature of the phenomenon "world").

Within the framework of this article, we have yet to have the opportunity to consider in detail Heidegger's entire concept of the philosophy of nature and his

[10] "In the second part of his lecture series, Heidegger for the first time puts forward a kind of nature philosophy – an attempt unique for him and never to be repeated later. The importance he attaches to it emerges from the fact that he places these reflections on an equal basis with *Being and Time*." [19. P. 198].

[11] "<…> we must take up the task of defining the essence of the living being, of *characterizing the essence of life*, if only with *particular reference to the animal*." [18. P. 324].

argumentation, so let us briefly formulate the main points of his arguments and the main conclusions on the above four questions.

1. *The unity of the organism* is, according to Heidegger, not of an object character, it has an *eventual nature*[12], and therefore it is not subject to the logic of cause-and-effect, but to meaningful interrelations.

The unity of the organism cannot, according to Heidegger, be deduced from the relation of its parts, it is primary in relation to the parts: "The multicellular living being is not, as has been suggested, a community of cells. On the contrary, both unicellular and multicellular living beings alike possess a unity of their own in each case, i.e., they have a specific essential wholeness by virtue of the fact that they are organisms." [18. P. 325]; that is, not an organism is a state of cells (a metaphor introduced by F. Nietzsche), but a cell and a unicellular animal is already an organism as a 'state', albeit a 'state within a state'.

Heidegger strives to grasp the essence of the organ by contrasting it with a mechanical instrument. Unlike an instrument, the organ is a living expression of the whole organism's *capacity* for a particular interaction with its environment. "*Can the animal see because it has eyes, or does it have eyes because it can see?* Why does the animal have eyes? Why can it have such things? Only because it can see." [18. P. 333].

Heidegger contrasts organ and instrument also because an instrument by nature does not belong to a particular actor. Using the example of a pen and eyes, a pen can be written by anyone who can write, eyes are only eyes as long as they are "mine". The eye, taken out of its place, does not cease to be a thing in the world, but it ceases to be an eye in its essence as an expression of the organism's ability (*das Können*) to see. This approach has interesting practical implications for transplantology since it explains the difficulties of organ transplantation due to immune response to another organ and makes clear the inevitability of changes in the whole organism receiving the organ, including the subjective sphere of memory, taste and other preferences, phobias, etc.

Heidegger refers to the special relation of an organ to a particular capacity of an organism by the separate term "subservience" (*Diensthaftigkeit*) to distinguish it from the mere "service for something" characteristic of an equipment. A crucial for Heidegger difference between organ and instrument is their relation to time: "*<...> organ and equipment relate precisely to time in fundamentally different ways.*" [18. P. 343]. "<…> organs are precisely not like things that are fabricated and made ready. For this reason, they can never be set out or set aside somewhere. With respect to what they are and how they are, the organs remain bound up with the vital process of the animal." [18. P. 343]. Academician Amosov's "law of training of function" is yet another example of the same – cells constantly die and

[12] "<…> we now have to confront quite new phenomena like those revealed above all through the investigations of Spemann, which have set the problem of the *particular kind of occurrence* involved in the organization of the organism upon a more comprehensive and more profoundly conceived basis" [18. P. 403].

reproduce, and they are produced only if there is a "request" for them on the part of the "tense function". If there is no such request, the organ will not disappear at once but will gradually begin to atrophy until only the necessary minimum remains. Necessary for what? – Life is the space of the possible, so living organisms to the last try to preserve the maximum range of possibilities, even if many of them have not been used for a long time. Therefore, cells, organs and even whole organisms are able to enter a state of dynamic rest (anabiosis, mammalian hibernation, plant spores, etc.), waiting for favorable conditions for a new awakening of vital forces and metabolic processes. However, even in this state of dormancy living systems are in a particular relation to time, precisely because they are *waiting* for better times, this waiting requires the expenditure of some forces and therefore cannot be infinite (although it may seem potentially infinite in viruses and spores of some plants and fungi). In active life, the organism and all its organs literally *create their own time* by this effort of strenuous function, the effort of self-creation, whether this effort manifests itself in the form of creative effort or in the form of strenuous resting waiting.

The mode of being of the organ seems to become Heidegger's third mode that the real thing can be in the world, along with readiness-to-hand, and presence-at-hand – the organ is not ready in the sense that it is always "out there," and it is not present in the sense that it is only "suitable" for something. The organ is not only fit, but it also "serves" a specific capacity (Können), it is inseparable from that service.

2. *The animal's mode of being* is determined, according to Heidegger, by the fact that they are "poor in world." "Poverty in world" (*Weltarmut*) does not mean that animals live in some more meager world, on the contrary, it means that their very 'world' is insufficient, they are "world-poor." "In contrast with the stone, the animal in any case does possess the possibility of transposability, but it does not allow the possibility of self-transposition in the sense in which this transpires between one human being and another. The animal both has something and does not have something, i.e., it is deprived of something. We express this by saying that the animal is poor in world and that it is fundamentally deprived of world." [18. P. 323][13].

Also, the most essential characteristics of the mode of being of animals, according to Heidegger, is the *instinctual drive (Trieb*). "This self-driving and being driven toward its wherefore is only possible in that which is capable

[13] A.P. Schurbeloew in the Russian translation of these lectures translates *Weltarmut* as "scanty world," yet the idea is not that animals have a "scanty world," but that they have "little world" compared to humans. For them the "world" is only the "surrounding world" (Umwelt), the sphere of possible interaction between the organism and the environment, while in humans this sphere is by definition much more comprehensive than in any animal – and the main thing here is not the spatial "breadth", but the richness of various opportunities to transform their environment and themselves together with it. Therefore, we will further stick to the English translation of *Weltarmut* as "poverty in world".

inasmuch as capability is in general instinctually driven [triebhaft].” [18. P. 348]. In German – Trieb, triebhaft, Triebcharakter. *Trieb* in this context means “motive” or “impulse”, but – fundamentally – not as coming from the outside, but as own motivation, coming from within, from the basis of the very being of the organ and the organism as a whole. Heidegger sees the *essence of the organ* and organism, or more precisely, the basis and nature of its unity, in this internally emanating impulse.

Heidegger then raises the question of the nature of that “selfhood” contained in the achieved (before him) notion of the organism as “self-creating.” Heidegger reserves the German word *Selbst* for the specifically human type of “self,” while he calls the more fundamental but also primitive type of self, characteristic of the animal mode of being, by the words *Eigen*, *Eigentum, Eigentümlichkeit*[14].

“Proper peculiarity is not an isolated or particular property but rather a *specific manner of being*, namely a way of *being proper to oneself* [Sich-zu-eigen-sein]. Just as we speak of the kingdom [Königtum] which belongs to the king, i.e., speak of what it means to be a king, so we also speak here of the *proper being* [Eigentum] of an animal in the sense of its specific way of being proper to itself.” [18. P. 355; 6. P. 340]. “Rather to say that ‘the animal is organized’ means that the animal is rendered capable [befähigt].” [18. P. 357]. “The term ‘organism’ therefore is no longer a name for this or that being at all, but rather designates a *particular and fundamental manner of being*. We can briefly characterize this *specific manner of being as a proper peculiarity with the capability to create organs*.” (befähigte organschaffende Eigentümlichkeit) [18. P. 357–358; 6. P. 342].

Heidegger’s term *Trieb* can also be translated as “impulse” and “burst,” its meaning is quite close to Bergson’s “vital impetus” (*élan vital*). Yet while Bergson actually absolutizes the life impulse as one of the manifestations of the original *duration*, Heidegger does not stop in his analysis of the essence of life at the concept of impulse, but continues to inquire further about the essence of life in ontological terms, i.e., about a special *mode of being of the living*, which is manifested on the ontic level of being as “impulse”.

3. *The essence of life as such* is defined by Heidegger as the capacity for *self-production*. In his search for a distinctive feature of the mode of being of an organism, distinguishing it from a machine, Heidegger immediately stumbles upon *self-creation*, which will later receive in biology and neurophenomenology a stable designation by the term *autopoiesis*: “*Self-production* in general, *self-regulation* and *self-renewal* are obviously aspects which characterize the organism over against the machine and which also illuminate the peculiar ways in which its capacity and capability as an organism are directed.” [18. P. 339–340].

[14] Schurbeloew's translation of *Eigentümlichkeit* as “property” or “self-ownership” seems not entirely successful. We will translate it as “property,” since Heidegger emphasizes clearly not possession but an essential relation to the self. As, e.g., when we say of an activity “not mine,” or someone says of a person or animal that such behavior is “not peculiar” to them.

However, Heidegger does not consider this self-creation to be the final answer to the question posed – in fact, the question about the nature of life. Since the indication of the self-creation of the organism leaves open the question about the nature of *action*, which, having received (again – from where?) the possibility of positive feedback in its interactions with the environment, becomes the "self" that is self-created in the form of the organism. By comparison, A.N. Whitehead also arrived at this primary act as the ultimate ontological principle in his philosophy of organism, and described this act as the most straightforward indivisible-in-itself act of creativity. Derrida also came to a similar idea of the primary act, self-representing itself in all forms of being, defined its nature as the primordial *differentiation* (DifferAnce).

Heidegger believed that ability as the *possibility of action* is primary concerning *any* action, so there is no need to specify what kind of action is primary for the living or constitutes its mode of being. "Being-possible" (the "possibility", das Möglichsein) is itself, according to Heidegger, the essence of life as such. "In the last analysis, potentiality and possibility belong precisely to the essence of the animal in its actuality in a quite specific sense—not merely in the sense that everything actual, inasmuch as it is at all, must already be possible as such. It is not this possibility, but rather *being capable* which belongs to the animal's *being actual*, to the *essence of life*. Only something that is capable, and remains capable, is alive." [18. P. 358]. "Being organized means being capable [Fähigsein]. And that implies that the animal's being is potentiality, namely the potentiality to articulate itself into capacities, i.e., into those instinctual and subservient ways of remaining proper to itself." [18. P. 358].

4. *Distinguishing the animal Umwelt from the human world*. If the animal Umwelt cannot be understood and explained based on the human ontology of readiness-to-hand and presence-at-hand, what is its *ontological status*? "This eliminative character of all behaviour, the way in which it leaves things to one side, is an enigma which repeatedly forces us to address the question: What then is behaviour related to and what is the nature of this relation? Or we can now also ask: Where is the ring with which the animal is encircled as such, and how does it encircle the animal?" [18. P. 383]. "But if behaviour is not a relation to beings, does this mean that it is a relation to nothing? Not at all. Yet if it is not a relation to nothing, it must always be a relation to something, which surely must itself *be* and actually *is*." [18. P. 383].

The central concept employing which Heidegger expresses the special ontological status and character of animal Umwelt is the concept of "disinhibiting ring" (Entnemmungsring). "The behaviour of the animal, contrary to how it might appear, does not and never can relate to present-at-hand things singly or collectively. Rather, the animal surrounds itself with a disinhibiting ring which prescribes what can affect or occasion its behaviour." [18. P. 387].

Heidegger's "disinhibiting ring" is a concept very close to "structural coupling" in F. Varela's neurophenomenology [14. P. 151], since both concepts

imply that the very structure of the environment is *created* by the possibilities of interaction with it on the part of the acting agent. The barriers to possible influence will appear as impenetrable dense bodies, the ways of bypassing these barriers – as the boundaries of bodies, and the areas of relatively free interaction – as "empty space" and as background.

Heidegger's "disinhibiting ring" has the advantage over "structural coupling" as it points to the source of possibilities for interaction between agent and environment – the "explosive energy" accumulated by the agent, which is waiting for the opening of a channel for its release. The ring structure emphasizes that all the instinctive impulses of the animal and their corresponding possibilities of interaction with the environment form a closed circle, a kind of self-enclosed "vortex" forming what Heidegger defined as "proper peculiarity" (*Eigentümlichkeit*), different from human "self" (*Selbst*).

On the other hand, Varela's "structural coupling" emphasizes the structural component of the relationship between agent and environment, which theoretically opens the possibility of reproducing such living systems artificially, primarily through cybernetics. In doing so, of course, there is a danger of missing the essence of life, since the initial impulse, of which Heidegger speaks, cannot be reproduced artificially. Suppose we do not pretend to comprehend and even less to recreate life as such. In that case, the construction of systems considering their structural conjugation with the environment can give these systems flexibility and the ability to self-development, similar to the properties of living systems. The development of neural networks, large language models and neuromorphic computers are the results of movement in this direction.

The difference between the animal Umwelt and the human "world" lies in the character of *openness* possessed by the human world and the things that exist in it. "The animal has a certain openness toward the world, but the world cannot become 'manifest' to it as the world. That happens only in man. Between man and his world, a free space opens. His world connection has loosened to such an extent that man can relate to the world, to himself, and to himself as something occurring in the world. Not only is man differentiated, but he can also, on his own, differentiate himself from others. And he can not only relate to different things but also differentiate between things. This 'area of play' – as we already know – is called by Heidegger 'freedom.'" [19. P. 199–200].

Heidegger once again debunks the "myth of the given" – the notion – typical for the common sense and science of modernity – that the world as a totality of things, which "exists" "out there" and only waits for human to discover, cognize and master it. According to Heidegger, the human "world" includes only that which has been *discovered* in one way or another: "According to this, beings do indeed also belong to world, but only insofar as they are accessible, insofar as beings themselves allow and enable something of the kind. This is true only if beings as such can become manifest. This implies that beings are not manifest beforehand, are *closed off* and *concealed*." [18. P. 422]. "For it is not the case that

man first exists and then also one day decides amongst other things to form a world. Rather world-formation is something that occurs, and only on this ground can a human being exist in the first place." [18. P. 431].

Heidegger describes human being-free concerning the being as "holding oneself opposite" to the being (das Sichentgegenhalten) [18. P. 515]. An animal is incapable of such "holding against" because, being enclosed in the "ring of instincts", it either rushes towards the object of desire (or, on the contrary, avoids the unwanted), or switches its attention to another object. Man can freely suspend the flow of activity, denying himself the mastery of things, and, most importantly, in this very refusal he finds satisfaction in preserving his freedom.

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