The Interpretation of Husserl’s Time-Consciousness in the Reconstruction of the Concept of Anthropic Time. Part Two

The purpose of the article is to comprehend the Husserlian model of constituting temporal modes through the ability of intentional “retentional-protentional” consciousness, as well as to clarify the possibility of interpreting its positions in the reconstruction of the concept of anthropic time. Theoretical basis. The theoretical framework of the research includes: 1) the interpretation of the phenomenological reflection of “time-consciousness” by E. Husserl in the context of solving the problem of phased-differentiation of this form of temporality; 2) the concept of anthropic time (V. Khanzhy). Originality. For the first time in the research literature, the possibilities of applying the ideas of Husserl to the reconstruction of the concept of anthropic time are considered through the interpretation of the phenomenological solution to the problem of temporality, proposed and specified in Husserl’s “time-consciousness” concept. Conclusions. According to Husserl, the structure of human time-consciousness is instantiated in three spheres of passivity: prereflective cogito, embodiment, and intersubjectivity. Within the framework of the problem of phase differentiation of phenomenological time, an analysis of the potencies of consciousness in constituting the phases of time-consciousness, namely protentional and retentional potencies, has been proposed. In the context of the reconstruction of the concept of anthropic time, several aspects of Husserl’s model of time-consciousness have been interpreted, including the paradoxical reconciliation of two quasi-incompatible ideas: the idea of the vagueness of the boundaries between temporal modes and the thesis of the formal capacity of preserving temporal units within their respective temporal phases. The property of multilevel complexity in the system of human temporality accounts for the diversity in the relationship of unique temporal units based on formal and content-related criteria (‘temporal matryoshka’).

Keywords: Edmund Husserl; anthropological paradigm of time; passivity; prereflective cogito; self-consciousness; embodiment; intersubjectivity; relationship of human and non-human consciousness; human time; human consciousness; ‘grasping-from-now’; epoché; intentionality of consciousness; temporal phases; retention; recollection; perception; protention; anticipation; concept of anthropic of time; ‘temporal matryoshka’; free will

Introduction

As can be seen from the title of the article, a certain two-stage process is assumed in the implementation of the research purpose. The first stage of the work was revealing the problem of phase-by-phase differentiation about the phenomenological time in the context of the time-consciousness model interpretation from Edmund Husserl. The first part of the article (Khanzhy & Lyashenko, 2023) clarified the functions of such abilities of consciousness as retention and memory (which substantiate the constitution of the past and its connections with the present), as well as perception (which lays the foundations for the mode of the present itself). In this (second) part of the article, we continue the development of the specified problem – it reveals the essence and role of the abilities of protention and anticipation (on which the constitution of the future and its connections with the present are based). In the future, the second stage of the research will be
implemented, which is aimed at clarifying the possibility of interpreting the key provisions of Husserl’s model in a new reconstruction of the concept of the anthropic time. However, the stated must be preceded by some more receptions regarding the fundamental provisions of Husserl’s teaching, in particular those relating to the structure of consciousness, as well as its core principle – temporality. For this purpose, we will make an excursion into the sphere of transcendental (pre-reflective or passive) components of human consciousness highlighted by Husserl.

Passivity and inner time-consciousness

A contemporary researcher of Husserl’s legacy D. Zahavi (2003) notes: "Husserl consequently operates with three different types of temporality. The objective time of the appearing objects, the subjective or preempirical time of the acts and experiences, and, finally, the prephenomenological absolute streaming of inner time-consciousness" (p. 87). The main challenge lies in reconciling the relationship between subjective time and absolute time without encountering a temporal equivalent of the 'Bradley regress'. This challenge can potentially be addressed by invoking the notion of passivity, which can be referred to as "...a primordial regularity of sense-genesis in which the ego does not participate; it characterizes a pre-reflective dimension of the experience of pre-givenness of objectlike formations; a dimension that is founding for activity" (Husserl, 2001, p. xliii). As was elucidated in the first part of our article, extensionalists (Almäng, 2021; Huang, 2022) view time-consciousness as a component of objective or cosmic time. In contrast, Husserl, through the phenomenological epoché, disputes this and asserts that the subjective experience of time is fundamentally grounded in absolute prereflective inner time-consciousness.

Husserl’s understanding of passivity and passive synthesis developed alongside the development of his philosophical system (Rump, 2021). Passivity has many aspects and functions correlated to those aspects (e.g. passive synthesis, passive genesis). Integrative and grounding aspects have already been mentioned in Part 1: passive synthesis is responsible for important aspects such as the unity of consciousness, stability, and the identity of experience through the synthesis of the parts of inner time consciousness, i.e. impression-retention-protention which "...are invariant structural features that make possible the temporal flow of consciousness as we know and experience it. In other words, they are a priori conditions of possibility of there being 'syntheses of identity' in experience at all..." (Gallagher & Zahavi, 2012, p. 87). Thus, the dynamic relations between 'cogito' and 'cogitatum' involve a horizon structured by the threefold system of inner time-consciousness of the transcendental Ego. In other words, consciousness possesses a ternary structure of time-consciousness. From this, it can be stated that, for a phenomenologist, consciousness exists only when there is time-consciousness.

A question arises: Whose time? And consequently: Whose consciousness? Human? Considering that, for a phenomenologist 1) consciousness is not just another object of study isolated from everything else (Gallagher & Zahavi, 2012, p. 28), and 2) phenomenologists are presupposed to be humans (at least traditionally), and 3) the conditions of apodicticity of the phenomenological stance do not free a phenomenologist from being human; it follows, that time-consciousness is, by definition, human time-consciousness.

What about animals or machines, for that matter? If 'machine consciousness' is possible, what would be its relation to time? Is there a phenomenology of 'machine-time consciousness'? Of course, the answer considerably depends on the definition of consciousness, delineating the necessary and sufficient conditions for its existence. For example, based on the criteria of the system
study of consciousness and the criteria of existence developed by Lyashenko (2015, 2021), it follows that if some complex system (of any nature) is somehow embodied and has a differentiated ability for perspectival detection (e.g., can refer to itself, differentiate itself from non-itself), then we can talk about its specific conscious states (i.e., consciousness) as existing. Moreover, from a functionalistic point of view, we can even discuss a thermostat’s consciousness (Chalmers, 1996), let alone something more sophisticated. Thus, what is the phenomenologically possible answer? First of all, we conjecture that humans possess something of animal nature that distinguishes them from machines (machines just do not need those aspects to function). Second, at the higher levels of realization of those 'animal' capacities, humans are different from animals.

Several aspects of passivity could help us here. Put simply, we could suggest that Husserl’s understanding of the transcendental (prereflective) aspects of human consciousness involves a threefold temporal structure, which is synchronically divided into several substructures. These include the cogito and 1st person agency ('self-consciousness'), the living body, and different levels of intersubjectivity. We are arguing that these prereflective or passive aspects could distinguish humans from machines, but not entirely from animals.

**Overview**

*Prereflective cogito and machine "self-consciousness"*

In his 1979 book, Hofstadter, while considering the possibility of 'machine consciousness', wrote:

> Awareness here is a direct effect of the complex hardware and software…., this way describing awareness – as monitoring of brain activity by a subsystem of the brain itself – seems to resemble the nearly indescribable sensation which we all know and call "consciousness"… it is quite plausible that a computer program with this kind of structure would make statements about itself which would have a great deal of resemblance to statements which people commonly make about themselves. This includes insisting that it has free will, that it is not explicable as a "sum of its parts", and so on. (Hofstadter, 1999, p. 388)

Theories of consciousness that focus on self-consciousness (related to self-reference, self-detection, awareness, etc.) are sometimes referred to as higher-order theories of consciousness (Turner, 2020). According to these theories, it is crucial that consciousness involves active self-referential self-consciousness (Gallagher & Zahavi, 2012, pp. 58-64).

However, phenomenologists mostly disagree with this perspective (Gallagher & Zahavi, 2012, pp. 51-75). For example, when I’m reading an interesting book or captivated by a fascinat-
電影，我並沒有完全迷失意識的體驗（不是昏迷或夢）。
即便我的注意力完全被劇情吸收，我仍然是意識（但非反省地）。
如果有人問我我正在做什麼，我就能回答：‘正在讀書’或‘正在看電影’。
人類的這種可能性成為 Possible 因為時間意識的特殊結構。
在人類中，意識需要反省自我意識的必要但不夠條件。

連接這反省自我意識的是‘現象學的自由意志和擁有感’－一種反省形式的經歷自己作為行動的作者、行動等。
這種感，於其生成的較高層次，可能會轉變為自我意識的自由意志，對於進行更為複雜的意識決定行動。

關於機器意識，這提出了一個引人入勝的問題：我們能真正引入類似‘反省自我意識’的觀念到機器的「意識’中嗎？
我們認為這個觀念與'機器-意識'相矛盾。
因此，機器的自我意識不需要反省自我意識來運作，並懷疑它甚至相對具備（Hall, 2020; Turner 2020）。另一個問題的另一個側面，與此相同，與某種‘機器-行動或擁有感’的機會或不可能性有關。機器的行動是指機器能夠獨立行動、做決定，並執行行動，而不需要直接的人類干預。除了技術之外，重要的是要認識到機器的行動差異於人類的行動，因為機器基於編程的算法和數據運作，而不是有意識的意圖。

關於機器時間的現象學，它是未被探討的領域。研究基因體感知和經歷時間，如果它有的話，將需要對機器的認知過程有深刻的了解和它們如何與時間的流逝相關。

現在，很清楚的是，機器不需要三個結構的時間來運作。

在實質上，三個結構的時間意識的我們（人類）經驗的客觀性進展，這種進展通過機制的無法合成來實現。機器，然而，不需要經歷性和缺乏反省性的三個結構的自我意識作為其'意識'或'自我意識'（或任何構成其認知過程的）基礎。

Embodiment

另一個固有方面的基礎與反省自我意識的客觀性進展，這在人類經驗的身體性中。在其 Ideas II, Husserl (1989)，在梅爾勒-龐尼以前和第二波認知科學（Lakoff & Johnson, 1999），分析了身體認識的特殊性。

在最近的發現中，與認知科學相符，Husserl (1989) 認為身體（如如意識本身）並非認識學研究的另一個對象；它是對意識的先決條件，與有效性和行動、移動性和肌動性性質相關。

這意味著Husserl區別了所謂的‘活生生的身體’（人類經驗中結構和感受）和特質的身體，這種身體可以被實象學研究。這些後者可以被視為專門學科的研究對象。
Husserl’s phenomenology is neutral to the famous mind-body problem (in terms of natural ontology (Lyashenko, 2022). "Each thing that appears has eo ipso an orienting relation to the Body, and this refers not only to what actually appears but to each thing that is supposed to be able to appear" (Husserl, 1989, p. 61).

Structurally-ontologically it can be said that Husserl emphasizes the constitutive role of the embodiment for the human consciousness – consciousness is specifically formed and structured by a given body and its embeddedness or embodiment into or with the given environment (Gallagher & Zahavi, 2012, pp. 147-170; Husserl, 1989; Lakoff & Johnson, 1999; Varela, Rosch, & Thompson, 2017). In short, humans don’t merely possess bodies; they exist through their bodies. In this sense, it would be interesting to compare the relationship of temporality to spatiality from different perspectives: phenomenology and cognitive science. While the latter posits that time, comprehension is derived from spatiality (Lakoff & Johnson, 1999, pp. 137-169), the former, considering phenomena through the phenomenological stance, delves into how time-consciousness, experienced through bodily (both dynamic and static) experiences, is constitutive to spatiality: "...the Body, in virtue of the constitutive role of the sensations, is of significance for the construction of the spatial world" (Husserl, 1989, p. 62).

What about machines? If we define consciousness as a result of the dynamic and symmetric relations between "the past, the present, and the body image" (Rosenfield, 1993, p. 84) we would not be able to differentiate vacuum-bot’s 'consciousness' from the human one. Human-like embodiment is not a necessity for machine 'consciousness'. Certainly, a machine is not just an abstract program (e.g., a tuple with inputs, outputs, states, and transition functions, etc.). It must be implemented somewhere in some 'object' (we could say 'body'), but there is no requirement for this object to have any kind of constitutive relation to the program itself (Turner, 2020). In short, according to the multiple realizability principle, 'machine consciousness' is, for the most part, independent of the 'object' (including environmental relations of the 'object'). This aligns with a simple Cartesian perspective. From this standpoint, 'machine-time consciousness' clearly shares an extensionalistic perspective on time.

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Intersubjectivity and the lifeworld

Another intrinsic feature of human consciousness, grounding it in the animal world (yet paradoxically forming the basis for its transcendence from nature), is intersubjectivity. Following the transcendental epoché, the transcendental ego discovers itself within a specifically structured primordial consciousness. Through further contemplation and appresentation, this consciousness evolves into an intersubjective 'space' where communities of transcendental egos collectively constitute reality (Husserl, 1960).

There are several levels of this collective intentionality; some are intrinsically passive (e.g., the lifeworld), while others involve sophisticated symbolic activity (science, religion, etc.). The basis of this intersubjective feature of human consciousness is natural, and hence, it can be and is studied biologically (Pankratova, 2023). Animals of all varieties live and function in populations. This implies that intersubjectivity is not merely reducible to subjectivity; subjectivity emerges as being partly intersubjectively structured. In essence, human consciousness is a partly collective, intersubjective phenomenon (Husserl, 1960, 1970, 2019). "The form that my collective intentionality can take is simply 'we intend', 'we are doing so-and-so', and the like. In such cases, I intend only as part of our intending. The intentionality that exists in each individual head has the form 'we intend'" (Searle, 1996, p. 26).
Machines do not require anything akin to this for their functionality. We can program them to cooperate with other machines, but this interaction does not possess any constitutive properties. It’s simply redundant for 'machine consciousness' (it has even less to do with the supposed 'inner time-consciousness' of machines').

**Human time: narrative and freedom**

Human intersubjectivity is naturally linked to temporality. From simple biological foundations, humans collectively develop a cultural reality with normativity, historicity, traditions, and narratives. Some phenomenologists (Gallagher & Zahavi, 2012), following Husserl’s (1970) later work, have developed a concept of Human time as a specific outcome of the functioning of higher-order intersubjectivity within the historicity of sociocultural interactions. Human time is viewed as a particular bridge between subjective inner time-consciousness and extensionalistic cosmic time (Gallagher & Zahavi, 2012, p. 95, p. 223). It represents the time of our narratives, the stories of our lives, constructed through different levels of socio-cultural legitimations (Berger & Luckmann, 1991, pp. 110-122). In the synchronic and diachronic overlapping of the subjective time with the time of others, humans consider themselves as humans.

The symbolic universe also orders history. It locates all collective events in a cohesive unity that includes past, present and future. Concerning the past, it establishes a 'memory' that is shared by all the individuals socialized within the collectivity. With regard to the future, it establishes a common frame of reference for the projection of individual actions.

(Berger & Luckmann, 1991, p. 120)

At higher levels of intersubjectivity, individuals are endowed with the meaning of all kinds of human phenomena. Everything is encompassed within narratives – ranging from myths to philosophy and science – covering aspects such as life and death, dreaming and wakefulness, freedom and non-freedom, etc. Interestingly, throughout most of his foundational works, Husserl seldom delves into discussions about free will, freedom, and similar themes. It’s as if he sees himself as a natural scientist who simply gathers facts from the far reaches of human consciousness. We could argue that humans possess the freedom to perform the epoché across its various levels, allowing them to access the transcendental aspects of human existence and liberate themselves from a naturalistic attitude. Isn’t this a sign of freedom? Some followers of Husserl, especially from the existential camp, have embraced this approach. However, while performing an epoché (including the transcendental one), humans discover different levels and aspects where they are not free. Humans can’t help but perceive phenomena through the temporal modes of consciousness, which are necessarily embodied and intrinsically shared and constituted with others. At the higher levels of sociocultural legitimation, everything we passively sense and actively know about ourselves is the result of various aspects of passive genesis and social construction. Freedom thus becomes a philosophical concept, a part of a sociocultural narrative, the condensed

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version of which is actively utilized by different social institutions. In the concept of anthropic time (about which – below), intersubjectivity is considered a way of objectifying meanings through the deployment of free will in the structure of temporal units associated with subjects of activity at various levels of human existence.

**Purpose**

*The purpose is to comprehend the Husserlian model of constituting temporal modes through the ability of intentional 'retentional-protentional' consciousness, as well as to clarify the possibility of interpreting its positions in the reconstruction of the concept of anthropic time.*

**Statement of basic materials**

In further explorations that stem from Husserl’s phenomenological reduction, which showed the demarcation ('bracketing') of what is not the subject matter of the concept of time-consciousness, we return to the interpretation, stated in the introduction, of such capabilities of consciousness as protention and anticipation, as well as to clarification of their potential in the constituted modes of time and the 'monolithization' them into an integrated time-prolongation.

**Protention and anticipation**

According to Husserl (2018), the inherent ability of consciousness to perceive activity allows us to establish the necessary conditions for the constitution of an "expectant" orientation to the future. This is embodied in the special property of "retention-in-grasp" not only of temporal features that are formed in primary consciousness and retention but also of those that are based by the *protentional* vector. In the first part of the article, it was demonstrated how the past is joined to the present in a single structure of consciousness, and the key role of retention in such processes was shown. Similarly, through the awareness of the present, the horizon of "throwing for the future" is constituted – "…primary, albeit completely empty expectation, initially purely passive expectation (protension)" (Husserl, 2018, p. 99). Protentional "grasping-from-now" provides the grounds for volumizing several "now" moments in the future vector. In turn, the circumstance of multi-vector perception allows the formation of a picture of a temporal object precisely as a whole. Interpreting the specified Husserlian provisions and using them as a foundation for research on the phenomenon of social expectations of the individual, modern Ukrainian researchers V. V. Khmil and I. S. Popovych (2019) rightly point out that the expectations of a person (meaning an adult, mature person) "…outline the perspective lines of his development, shape the life, project his future" (p. 59). And – a little bit further: "Expectation is existence. Existence is life", the authors conclude.

It should be especially emphasized that protention is closely (one might even say genetically) connected with memory, since the latter is paradoxically also imbued with the intentions of expectation. Therefore, we believe that the previously repeatedly emphasized key function of "now", the function of mediating time phases, can be presented here in a more fundamental way: it conceptualizes the constitution of *duration* as such. Therefore, given what has been shown, the present time acts as an actualized synthesis in which the past, which is represented through recollection, is intentionally intentionialized by the prediction of the future. The perspective as a vector into the future (in Husserl’s terminology – "[pre-] laid (gesetzter) horizon"), which opens up in the process of reproduction, turns out to be possible precisely because of the presence of
the attribute of expectation in recollection. The concretization and "revival" of the horizon in the process of approaching the actual "now" occurs through the enrichment of what is being reproduced with new eventful colors and details. Events that were only predicted before (at a time earlier) turn into "quasi-actual" (Husserl, 1994, p. 56).

At the same time, Husserl (1994) also points out important points of difference between expectation (protention) and recollection (pp. 59-60). First, a distinctive feature lying on the surface points to ways of comparing "now-intentions" with two variants of intuitive experience: recollection is characterized by the fact that in it the "now-limit" follows the process, while in expectation – the conditional antipode of recollection – there is a precession of "now-intentions" regarding the process. Accordingly, the "temporal environs" that are formed in the indicated modes of intuitive experience are constituted in a diametrically opposite manner. The second (and probably the most important) difference is as follows. Recollection anticipates and allows only the path of revealing the uncertainties of the past, which is being reconstructed, and the gradual increase in the mass share of the definite against the background of the uncertain due to the reproductive transformation of the second into the first. In turn, expectation (protention), being actualized in the present perception, necessarily includes the vector of future involvement in the present: in this process, the arrival of the expected in the "now" automatically displaces the state of expectation in the past.

The above-mentioned idea of the horizon and its role in the process of constituting time must be addressed a second time, analyzing such a human ability as anticipation (a form of imagination). In any experience, as the German phenomenologist points out, together with the so-called "core" – that which is an immediate given that is "grasped" here and now, there is a certain potentiation of the future, a constitutive "throwing" on it in the form of a spectrum of possibilities: "...Every experience has its core of actual and determinate cognition", the thinker notes, "its own content of immediate determinations which give themselves, but beyond this core of determinate quiddity, of the truly given as "itself here", it has its own horizon" (Husserl, 2018, p. 31). So, taking precisely the property of its continuity as the concept analysis of the experience, we get the following model: one or another link of a specific experience that was expected in the previous phase (at that time was potentially assumed), being actualized, acts as a valid synthesis of the core (given here and now) and the horizon (a certain range of potential future implementation options). It is clear that as we approach actualization "here and now", the spectrum of the predictable narrows, and what was possible only in the abstract is rejected, which was much further from realization than what remains as a result in a truncated circle.

It is necessary to distinguish between internal and external types of the horizon. The presence of a horizon in the first sense means that the experience is attributed to primary anticipation (Husserl often replaces this term with the concept of induction), thanks to which consciousness can be intentional about going beyond the core of a concrete given. It is very important that this mode of intentionality must allow one to go "...beyond the boundaries not only in the sense of anticipating the definitions whose appearance in this subject of experience is now expected", but also "...to the other side of this thing itself with all its anticipated possibilities of future further determination" (Husserl, 2018, p. 32). Now we are talking about the perspective of the external horizon, that is the one that is formed in the connections and relations of the perceived thing with other objects. The outer horizon (horizon of the second degree), in contrast to the inner one, is thought by the philosopher as actually infinite. Anticipation, obviously, allows not only to constitute the differences of the object perceived in concrete experience from the external.
background but also to realize the commonality of things, their properties, and relationships. Therefore, thanks to this ability of consciousness, a "pre-given throwing" is also carried out in the form of a typification of the objects of the universe, its categorization according to the existing genera and types of things. The maximum possible level of generalization ("meta-generalization") is grasped by the concept of reality, the objects of which coexist in a single space-time horizon.

The concept of anthropic time

As can be seen from the title of the article, we aim to apply Husserl’s ideas analyzed in both of its parts, interpreting them in such a way that it provides new grounds for the next stage in the development of the concept of anthropic time. In the works of the past years (Khanzhy, 2014; Zaporozhan, Donnikova, & Khanzhy, 2020), the concept of anthropic time was proposed, which, in turn, was presented as the author’s contribution to the reconstruction of the anthropological paradigm of time. In the mentioned concept, a special form of temporality was recorded in the concept of anthropic time – a system that expresses human activity both in formal (duration and order parameters) and in content (semantic charge) aspects. The first two parameters reflect the natural side of anthropic time, akin to the time of other objects in the world. Its substantive saturation, which has an existential-activity character, presents human temporal conditions as something unique against the background of other temporal objects. The formation of meaning allows overcoming the "atomic discreteness" of various acts in human activity and gives anthropic time a continuous, "fluid" essence. It is fundamentally significant that free will was put forward as a dynamic semantic principle and a mover of anthropic time. The shown essential interdependence of human temporality and freedom of will is conceptual because it is freedom of will with its development that lays the fundamental principles of the existence of a person and humanity. Through the understanding of anthropic time as a kind of formal-substantive unity created by people themselves in the process of active entry into the world, it is also possible to identify and understand the synthetic property of activity – intensity, that is, the degree of semantic saturation of a unit of duration.

The presented idea of anthropic time as a system was implemented based on the general parametric theory by systems of A. I. Uyemov (1999) and his followers, within which the system, being considered in three different aspects, is defined through three relevant descriptors: concept, structure, and substrate. The interpretation of these provisions in the methodological foundation of the concept of anthropic time made it possible to formulate the following. The concept of the system of the anthropic time was chosen to be the existential-activity content of its formation and self-organization, which means: 1) the formation of each subsystem of the anthropic time is based on the activity uniqueness of its carrier; 2) objectification of this singularity is connected primarily with the free will of the subject in the anthropic time. The structure of the anthropic time is understood to mean relations that are formed between units of the anthropic time of the same level, as well as inter-level relations that correspond to the existential-activity system-forming concept. Finally, the substratum of the anthropic time is the aforementioned units of the anthropic time, which are founded "in-der-Welt-Sein" (M. Heidegger) of one or another subject of human activity.

Based on the fact that activity in terms of duration, sequence, intensity, and, what is especially important, semantic saturation, determined by free will, is realized fundamentally differently at different levels of human existence, from the personal to the universal. It was stated...
that there are corresponding multi-level times (a conceptual model "whole-in-whole" by I. V. Yershova-Babenko (Andrushchenko, Yershova-Babenko, Kozobrodova, Seliverstova, & Lysakova, 2022, p. 192). Moreover, since each level is heterogeneous, we get a situation where single-order time units are also self-sufficient and autonomous.

In representing the system of human temporality, the use of figurative-schema modeling using the matryoshka metaphor was naturally suggested, which, we should add, contributed to the understanding of the provisions of the concept of the anthropic time. As a result, the rationalization of the shown imagery was embodied in the introduction of the special "temporal matryoshka" concept, which became a key category for expressing the structure of anthropic time (Khanzhy, 2014, pp. 220-221; Zaporozhan, Donnikova, & Khanzhy, 2020, p. 127). The structural relations of the system of anthropic time have two obvious vectors of the constitution (we do not exclude the presence of other, latent vectors, but their analysis requires separate research): the vertical axis demonstrates the relation of temporal "matryoshka" from concrete-personal to large-scale social levels, and horizontal one – interactions between different time units within the same level.

The research on the key characteristics of the human form of temporality allowed us to determine its belonging to a specific class of systems – complex, self-organizing systems. Anthropic time, presented in the mentioned perspective, is characterized by the following components of complexity and self-organization: 1) multilevel and coevolutionary nature of the subsystems interaction; 2) nonlinearity; 3) openness; 4) the presence of feedback (negative and positive) in the relations between its units ("matryoshka dolls"); 5) stochasticity and the possibility of forecasting only with a certain probability; 6) the presence of two "arrows of time" in different directions; 7) ambiguity of time phases. So, this circumstance made it possible to conceptualize the system of anthropic time on the methodological basis of synergy as a theory of self-organization of the complex. At the same time, it should be recognized that in addition to the immanent mover of anthropic time, freedom of will, external determinants are no less significant and effective – attractors of history, which are understood as objective programs that direct the development of the system of human temporality to themselves as goals.

The 'matryoshka's' principle of modeling and the vagueness of temporal modes

Even at the earlier stages in the development of the concept of anthropic time (as discussed above), it was clear that the structural relations of human temporality are capable of preparing and generating temporal phases – past, present, and future – as naturally variable and ambiguous. Moreover, this ambiguity is fundamentally resulting from such key properties of anthropic time as the multi-levelness and complexity of structural relations (Khanzhy, 2014, pp. 231-232; Khanzhy & Buchko, 2023, pp. 28-29). The following material will be devoted to the question of the possibility of using Husserl’s model in the interpretation of this feature.

If we consider Husserl’s model through the prism of our research interest, then it appears ambivalent in this regard. On the one hand, the German author traces the idea of the conventionality of the past, present, and future, the blurring of their boundaries due to the genetic intertwining of "now" and "exit from the present" in the constitutive intentionality of consciousness. But, on the other hand, if we are talking about discovering temporal components in the structure of consciousness and clarifying the principles of correlation and interconnection of the corresponding time phases, then in Husserl’s constructions one can also see the "matryoshka's" principle of modeling.
Thus, analyzing the ability of retention (primary memory), the philosopher notes that it, being in the current "now", retains a certain past duration as content. The level of retention systematization of the next order is formed when the retention that recedes into the past becomes the content of the retention that changes it. Since the next retention does not simply modify the previous one, but includes in its content the entire retention series (it acts as a "meta-retention"), then, nesting into each other, the "matryoshkas" of retentions build a complete and ceaseless "continuum of retentions". A similar type of modeling can be observed with recollection (secondary memory). Through the representation of sensations that have gone into the past, the connection of the past and present phases of time is constituted: the present grasps and reconstructs the past, so that later (already as the past) it will also be subject to reconstruction in the "matryoshka" of the next "now". Here, as in the retention mode (but exclusively in the mode of reproduction, without joining past sensations to perception in the act of "now"), the shown sequence of reconstructions flows into a continuum, this time – of the "meta-recollection" plan. In the context of the above, the question of the relationship between "matryoshkas" of mega-continuums – meta-retention and meta-recollection is also seen as quite intriguing.

Clarifying the temporal functions of perception, Husserl, once again, turns to the idea of the heterogeneity of the sphere of his direct orientation – "now". Considering this constitution precisely according to the "matryoshka" type, of course, will face significant difficulties, since the German philosopher fundamentally insists on the ideality (and, therefore, the blurring) of the boundary between "now" and "not-now". Nevertheless, the very idea concerning the heterogeneity and complexity in the structure of the present is attractive and one that potentiates the possibility of a whole palette of interpretations. After all, in perception the results are synthesized in a triune way: 1) the primary-actual activity of consciousness; 2) retention content; 3) expectations (protentions) as an orientation towards the future. This perceiving complex provides a holistic temporal-continuous picture of the object.

The possibility of constituting continuous temporal prolongation through the mediation of time phases by the "now-matryoshka" is interpreted by Husserl in one more aspect. Putting forward the ability of protention as the basis of "retention-in-grasp" of future (anticipated) intervals (in the same way as in retention "grasp" in the unit "now" the past duration is retained), and also taking into account the connection of protention with recollection, the philosopher notes that it is in the present tense (which, as already indicated, is a synthesis of the "now-matryoshka" and the surrounding "temporal environs" of the "not-now") that the past duration, reconstructed in memory, is continuously intertwined with the potential involvement of the future. To this should be added the anticipatory "nesting doll", which is correlated with the circumstance of heterogeneity of experience, in which the "matryoshka" of the directly given ("core") is continuously synthesized with the spectrum of temporal units of possible future states of the object ("horizon").

Turning back to the concept of anthropic time, it is worth noting that in the context discussed above, it is possible to consider the interrelation of anthropic time modes in at least three aspects: 1) within the framework of one 'temporal matryoshka'; 2) concerning the temporal units of one level; 3) in the context of 'internal-external'. Let’s take a closer look at the third option. Thanks to the fundamental autonomy of 'temporal matryoshkas' in the context of 'external-internal', the following phenomena may occur: a) a larger temporal unit, judged by the content saturation and intensity of events, outpaces a smaller one; b) in the 'competition' of different levels of 'matryoshkas', leadership is captured by a smaller temporal unit. In the first case, the following effects
are observed: 1) the internal experiences of the past of its present, as well as the actuality of its future; 2) the external experiences of the present of its past, as well as the future of its present; 3) the future of the external for the internal becomes a distant future, and the past of the internal for the external – a distant past (during such a 'dive into time', the content of this phase becomes weaker with each step, eventually reaching a state of unidentifiability). In the second case, the following phenomena are observed: 1) the internal experiences of the future of its present (in this case, people talk about a person who has surpassed their time), as well as the actuality of its past; 2) the external experiences the present of its future, as well as the past of its present; 3) the past of the external for the internal becomes a distant past, and the future of the internal for the external – a distant future.

Undoubtedly, the stated positions need a deeper explication. However, the indication of the main difference between the interpretation of the problem of temporality in the context of the concept of anthropic time and its understanding in Husserl’s phenomenology should be made in this article. In contrast to Husserl’s time-consciousness, which grasps the abilities intrinsic to the psyche to reveal the temporal essence of dynamic objects (primary and secondary memory, perception, expectation, etc.), the model of anthropic time in the corresponding concept is intended to comprehend non-subjective (in the sense of "immanent"), and subjective but objective time. This emphasis on the concept of anthropic time is based on the key idea, according to which, an integral property of human essential potentials is freedom of will (which is presented as an internal mover of the "production" of temporality) through human activity, which is accompanied by the active introduction of one’s own meanings into the world, about being objectified, forms the human mode of temporality. Considering this conceptual point, we believe it necessary to turn to the works of Husserl’s student Martin Heidegger and, in particular, to the materials of his discussions with the teacher. However, this intention will be realized already in the following publications.

Originality

For the first time in the scientific literature, the interpretation of two concepts, E. Husserl’s concept of time-consciousness and the concept of the anthropic time, is proposed, based on the dual use of the principle of "matryoshka" modeling. The perspective of the triple structuring of human time-consciousness according to Husserl, which is embodied in three spheres of passivity: pre-reflective cogito, embodiment, and intersubjectivity, is shown. It has been found that due to the property of "now" to capture in its content the phases of "not-now", while formally preserving its belonging to the corresponding temporal phases, it is possible to apply the "matryoshka" principle of modeling for the time-consciousness structure. It has been demonstrated that the structure of the anthropic time is constituted in a similar way (however, based on other foundations): the property of multi-level complexity, inherent in the system of human temporality, causes the formation of the characteristic of the ambiguity of time modes, as well as the diversity of the ratio of temporal units that are unique according to formal and substantive criteria ("temporal matryoshka").

Conclusions

1. As part of the interpretation of the problem of phase-by-phase differentiation of phenomenological time, the solution of which is of key importance in the context of E. Husserl’s time-consciousness model, through the gradual clarification of the role and functions of such
abilities of consciousness as retention, recollection, perception (the first part of the article), as well as protention and anticipation (the second part), the idea about the impossibility of identifying the modes of the past, present and future as unconditional and self-sufficient with a certain degree of autonomy during phenomenological time was substantiated.

2. Husserl’s understanding of passivity and the threefold structure of time-consciousness demonstrates that human consciousness exists only when there is time-consciousness. The threefold structure of human time-consciousness is being instantiated in three domains of passivity: prereflective cogito, embodiment, and intersubjectivity. Together they constitute specifics of human consciousness and human time-consciousness.

3. The possibility of 'machine consciousness' raises questions about the role of self-consciousness and agency, body, and socio-cultural reality in human consciousness and time-consciousness. While human consciousness presupposes prereflective self-consciousness, 'machine agency', operates on programmed algorithms and data. Human consciousness is specifically formed and structured by the body, and it plays a significant role in the constitutive relation between time-consciousness and spatiality. In contrast, machine 'consciousness' does not require anything like human-like embodiment. Intersubjectivity forms another indispensable basis for human consciousness. The meaning of human phenomena is found at higher levels of intersubjectivity, encompassing various aspects of human existence.

4. The protentional potentiality of consciousness is aimed at forming the conditions of the "waiting" constitution of the future. Analogous to the process of retentive "grasping" of the past in the actual (shown in the first part of the article), the future is joined to the present in a protentional way, which is expressed, in particular, in laying the "horizon contours" of the expected. Anticipation plays a role in the implementation of a similar scenario. Husserl notes that each link of concrete experience, which in the mode of the possible was predicted at the previous stage, when realized, acts as a result of the anticipatory synthesis of the "core", that is, the immediately available, with the horizon – the spectrum of potentials of further stages. Because of what is shown, the experience of the undergoing acquires the attribute of continuity and temporal significance.

5. Interpreting the shown provisions of the model in the intentionality of consciousness "grasping-with-now" and the corresponding constitution of E. Husserl’s time phases within the framework of the reconstruction of the concept of the anthropic time, the following should be noted. In the modeling of the structure of the human form of temporality, Husserl’s method of paradoxically reconciling two seemingly incompatible ideas found its response. First of all, this is a statement about the blurring of the boundaries of time modes, which is prepared by the ability of consciousness to constitute a synthetic unity of "now" and "beyond the present". Secondly, the thesis that despite the specified property of "now" to grasp the phases of "not-now" in its content (and this is relevant not only for the actual "now", but also for the "now-matryoshka dolls" of the past and future), time units formally retain their belonging to the corresponding temporal phases.

6. An attitude close to the indicated one (which, however, is based on other grounds) is also present in the concept of the anthropic time. The property of multi-level complexity inherent in the system of human temporality ("temporal matryoshka") determines the formation of the characteristic in the ambiguity of time modes, their relativity. Such an effect is observed along the horizontal and vertical axes of the constitution in the structure of the anthropic time due to the diversity of the ratio of unique temporal units according to the criteria of duration, order and, most importantly, semantic saturation (as well as according to the synthetic criterion of intensity).
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Інтерпретація гуссерлівського time-consciousness в реконструкції концепції антропного часу. Частина Druga

Meta. У статті передбачено осмислити гуссерлівську модель конституювання часових модусів через здатності інтенційованої "схопленням-з-тепер" свідомості, а також з'ясувати можливості інтерпретації її положень у реконструкції концепції антропного часу. Теоретичний базис. Підґрунтям дослідження є: 1) інтерпретація феноменологічної рефлексії "часу-свідомості" Е. Гуссерля в контексті розв'язання проблеми пофазової диференціації цієї форми темпоральності; 2) концепція антропного часу (В. Ханжа).

Наукова новизна. Уперше в дослідницькій літературі через інтерпретацію феноменологічного розв'язання
проблеми темпоральності, запропонованого та конкретизованого Гуссерлем у концепції "часу-свідомості", розглянуто можливості докладання ідей німецького філософа до реконструкції концепції антропного часу.

**Висновки.** За Гуссерлем, структура людської свідомості часу втілюється в трьох сферах пасивності: передрефлексивному cogito, тілесності та інтерсуб'єктивності. У рамках проблеми пофазової диференціації феноменологічного часу запропоновано аналіз протенційних та антиципаційних потенцій свідомості у конституюванні фаз time-consciousness. У рамках реконструкції концепції антропного часу було інтерпретовано низку положень гуссерлівської моделі time-consciousness, зокрема щодо способу парадоксального узгодження двох квазі-несумісних ідей: положення про розмитість меж часових модусів та тези про формальну здатність збереження часовими одиницями своєї належності до відповідних темпоральних фаз. Властивість багаторівневої складності системи людської темпоральності обумовлює різноманітність співвідношення унікальних за формальними і змістовими критеріями темпоральних одиниць ("часова матрьошка").

**Ключові слова:** Едмунд Гуссерль; антропологічна парадигма часу; пасивність; дорефлексивне cogito; самосвідомість; тілесність; інтерсуб'єктивність; співвідношення людської і нелюдської свідомості; людський час; "схоплення-з-тепер"; епохе; інтенційованість свідомості; фази часу; ретенція; спогад; сприйняття; протенція; антиципація; концепція антропного часу; "часова матрьошка"; свобода волі

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