

The theory of the Brain's Existom as a Theory of Generating Subjective Reality: A Hypothesis of a New Biomedical Approach to the Brain

Ramil R. Garifullin

Kazan Federal University, 18 Kremlyovskaya street, Kazan 420008, Tatarstan, Russian Federation.

***Corresponding Author:** Ramil R. Garifullin, Kazan Federal University, 18 Kremlyovskaya street, Kazan 420008, Tatarstan, Russian Federation.

Received date: May 06, 2025; **Accepted date:** May 19, 2025; **Published date:** May 29, 2025

Citation: Ramil R. Garifullin, (2025), The theory of the Brain's Existom as a Theory of Generating Subjective Reality: A Hypothesis of a New Biomedical Approach to the Brain, *International Journal of Biomed Research*, 4(3): DOI:10.31579/2834-5029/79

Copyright: © 2025, Ramil R. Garifullin. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract

This article presents the theory of the holonomic existom developed by the author as a theory of brain generation of subjective reality. This theory, in comparison with other variants of the holonomic theory of the brain, came closest to solving the problem of throwing interphase and boundary "bridges" between the brain and subjective reality. The article proposes a theoretical model that includes the basic structures and mechanisms of generating subjective reality.

The analytical studies presented in this article have shown that various contents and neoplasms of subjective reality arise on the basis of borderline-critical interphase proto-formations. These proto-formations of various levels of complexity are products of the interaction of intentional wave flows with the corresponding structures of the holonomic existom of various levels of complexity. It is shown that the dynamic alternation and combination of these resulting proto-formations is the main mechanism of brain emergence, due to which a virtual fabric of various contents of subjective reality arises. In this paper, the following basic concepts are introduced, corresponding to the structures of the generation of subjective reality: existlens, existom, intent-emitter and virtuon.

The theory of existom has allowed us to consider the problem of developing methods, psychotechnologies and biomedical approaches to the brain in a new way and to really solve the problem of mental and psychosomatic disorders of patients on new scientific positions.

Keywords: brain; existlens; existom; intent-emitter; virtuon; theory of brain generation of subjective reality; virtuon mechanism of brain emergence; holonomic existom

Introduction

In this paper, the following basic concepts are introduced, corresponding to the structures of the generation of subjective reality: existlens, existom, intention and virtuon. Existlens are multi-layered birefractive structures-codes, on the basis of which patterns of interference of a standing wave are formed – virtuons corresponding to innate meanings and concepts formed in the process of ontogenesis. Holonomic existlens are connected to each other, but they are scattered in the cerebral cortex.

Existom is an integral set of many existlens, obeying the principle of holonomy (holography), according to which each existlens retains all the integral information stored in the entire existom. Intent-emitter is a group of brain structures (thalamus, hippocampus, fusiform gyrus, etc.) that generates intentional wave flows directed at the brain's existom. An intention is a set of emitters of wave intentional flows scattered in the cerebral cortex and associated with the hippocampus, thalamus, fusiform gyrus, etc. Intention is most likely controlled by a program of neural networks of the brain or intentional cognition, that is, intentional hyper networks of the brain. Virtuon is a wave interfacial emergent neoplasm or hologram that arises as a product

of the interaction of wave flows of the intention with the corresponding structures of the holonomic existom.

In addition, virtuons are products of standing waves of varying dynamics, shape, size, phase and frequency. It is difficult for a physicist dealing with quantum mechanics to describe quantum processes in chemistry. It is also difficult for a brain researcher to describe mental processes using the studied brain structures. A physicist has to deal with an interdisciplinary field that goes beyond a certain interphase of reality, that is, to deal with quantum chemistry and this, sometimes, is not enough to study complex chemical transformations. The researcher of the brain also has to make attempts to enter this interphase reality, as a kind of boundary zone between the brain and mental processes. If he does not attempt to enter into this interphase, then he will never come close to solving the mechanisms of generating subjective reality, that is, to the problem of connecting the subjective world and brain processes.

This article presents an attempt to enter into this interphase. First, let's pay a little attention to the past research of our colleagues in the field of brain mechanisms for the formation of subjective reality. It should be noted that currently, for some reason, the holonomic theory of the brain is less popular than the neurobiological theory of the brain? This, apparently, is due to the fact that the noise wave background of the brain does not allow selectively detecting wave intentional flows of the brain carrying interference patterns of the holographic formations being formed.

Looking ahead, we note that, apparently, the noise wave background of the brain does not affect the functioning of the existom as a specific resonant biological and resonant nanomolecular apparatus of the existom. Most likely, this is provided by anisotropic liquid crystal nanomolecular structures of various layers of the existom, capable of sensitively and selectively rearranging only under certain parameters of the intensity wave field. That is why in such conditions of the brain, nanopsychology as a new science with its approaches previously developed by [1, 2]; can be very useful. The nanopsychological approach, due to its ability to control artificially introduced nanostructures, allows for high unambiguity in the interpretation of the experimental data obtained. This is relevant in conditions when the noise wave background of the brain does not allow detecting the parameters of the wave intentional flows of the intention. It is precisely because of these noises that the holonomic approach to the brain is not sufficiently applied in brain research compared to the neurobiological approach. You can read more about the role of intentional flows in my early articles [3, 4].

And now let's turn to the origins. Once upon a time, Böhm [5] he convincingly proved that what seem to us to be permanent structures are only relatively autonomous subordinate entities that manifest themselves from the wholeness of a fluid movement and then dissolve back into it in an endless process of becoming. It is on this understanding that the main principle of the holonomy of our brain is based and, in the end, the mechanism of consciousness activity and the formation of subjective reality. On this basis, Pribram made the assumption that neural holograms were formed as a result of diffraction patterns of oscillating electric waves in the cerebral cortex [6]. The representation arises as a result of dynamic transformation in a distributed network of dendritic microprocesses [7]. At the same time, there is an actual difference between the idea of a holonomic brain and a holographic one. Pribram does not assume that the brain functions as a single hologram. Rather, the waves inside smaller neural networks create localized holograms as part of a larger brain operation [8]. This patch holography is called holonomy or window Fourier transforms.

At the same time, it should be remembered that the main characteristic of a hologram is that each part of the stored information is distributed throughout the hologram [9]. Memory disappears when parts disappear that are so large that they cannot contain the whole. Pribram and others suggest that, while unconscious behavior is mediated by impulses along neural circuits, conscious behavior arises as a result of microprocesses in the dendritic tree [10]. Pribram notes that holographic memories have a large capacity, parallel processing and the ability to address content for rapid recognition, associative storage to complete perception and associative recall [11, 12]. Thus, in systems endowed with memory, these interactions lead to more and more self-determination [7].

Although Pribram originally developed the holonomic theory of the brain as an analogy for certain brain processes, several works (including later ones written by Pribram himself) have suggested that the similarity between a hologram and certain brain functions is not just metaphorical, but really structural [13, 14, 15]. Others still argue that the relationship is only of a similar nature [16]. Pribram suggests that these processes involve electrical oscillations in the brain's fine-fiber dendritic networks, which differ from the more widely known action potentials involving axons and synapses [10, 17]. These oscillations are waves and create patterns of wave interference in which memory is encoded naturally and the wave function can be analyzed using the Fourier transform.

In a hologram, any part of a hologram of sufficient size contains all the stored information. In this theory, part of the long-term memory is similarly distributed over the dendritic tree, so that each part of the dendritic network

contains all the information stored throughout the network [18, 19, 20]. This model takes into account important aspects of human consciousness, including fast associative memory, which provides connections between various fragments of stored information and the nonlocality of memory storage (a specific memory is not stored in a certain place, that is, in a certain cluster of neurons) [13, 18, 21]. In an article by neurophysiologist John Eccles, it was described how a wave can be generated at the branching ends of presynaptic axons. Several such waves can create interference patterns.

Pribram hypothesized that memory can take the form of interference patterns resembling holograms created by a laser [22]. In 1980, physicist David Bohm presented his ideas on holomovement and the implied and explicating order [5]. Pribram learned about Bohm's work in 1975 [23] and realized that since a hologram can store information within interference patterns and then recreate this information upon activation, it can serve as a strong metaphor for brain function [24]. Pribram was even more encouraged in this direction by the fact, that neurophysiologists Russell and Karen Devalua [25], jointly established that "the spatial frequency encoding displayed by cells of the visual cortex is best described as the Fourier transform of the input pattern" [26].

The theory of holonomic existence presented in this article does not abandon the important role of neurons, neural networks and hyper networks in generating subjective reality, which takes place in the theory developed by [27]. The theory of existence was developed by us on the basis of criticism and shortcomings of the theory of cognition, which failed to explain the holonomy of brain processes and came to a scientific dead end. By the way, the structures of cognition, neural networks and hyper networks in our theory of existential are considered only as structures that program the wave processes of the brain's intention interacting with the brain's existential. It is this interaction that is the basis for the formation of subjective reality, according to our theoretical model. And now let's take a closer look at our theoretical model.

Methods

A decisive role in the study was assigned to traditional scientific methods: analysis, synthesis, generalization, classification, identification of cause-effect relationships.

Discussion

Existom

Existoms are multi-layered bidiffractive structures-codes, on the basis of which patterns of interference of a standing wave are formed – virtuous corresponding to innate meanings and concepts formed in the process of ontogenesis. Holonomic existoms are connected to each other, but they are scattered in the cerebral cortex. Existom is an integral set of many existoms, obeying the principle of holonomy (holography), according to which each existom retains all the integral information stored in the entire existom. Due to the holonomy of the existom, psychic contents are preserved even after the destruction of a significant part of the existom.

The existom resonates when it is exposed to intentional wave flows radiated by the brain's intent-emitter. (The brain intent-emitter is a group of brain structures (thalamus, hippocampus, fusiform gyrus, etc.) that generates intentional wave flows directed at the brain's existom). It is the resonant properties of the existom that are associated with the rapid cause of the high dynamism of mental processes, including the processes of recognition. Despite the fact that wave flows irradiate a large number of other structures, only selected structures selectively resonate. For example, when intentional wave flows of intent-emitter are exposed to linguistic existoms, a linguistic mental tissue is generated, like inner speech, which is thinking. At this time, other non-linguistic fragments of existoms do not resonate.

Therefore, there is no need for the existoms of certain "wormholes" in neural networks and hyper networks (see the theory of cognition), which allegedly shorten the intervals of mental processes, in particular, the dynamics of recognition processes. Thus, the dynamism and speed of mental processes is due to the resonance of the existom and the filigree operational activity of the intent-emitter, which directs intentional wave flows to the existom. The

process of recognition is the process of the appearance of a virtual wave formation – a virtuon caused by the resonant interaction of the existom and the intent-emitter.

In addition, the existom, being an innate product of human evolutionary development, is a kind of analogue of the mental “genome”, which contains the main innate concepts, thanks to which a variety of cognitive and semantic spaces of various depths is formed. These formations are generated due to the filigree interaction of intention and existom, which generates virtuons, as interphase emergent proto-formations, which are the basis for the emergence of subjective reality contents.

Intent-emitter is able to direct intentional wave flows to various levels of the multilayer structure of holonomic existoms and existlens, irradiation of which by intention leads to the formation of various levels of integral holonomic structures corresponding to the simplest and most complex images, meanings, concepts (generalizations), abstract categories of science.

In fact, the existom, resonating with the wave flows of the intent-emitter, generates a kind of wave virtual formation of the virtuon, as an interphase-emergent basis of various mental contents. These contents are unambiguous correlates of sensory images, thoughts, meanings, etc. In essence, virtuons are some kinds of standing waves of varying dynamics, shape, size, phase and frequency. These virtuons, formed on the basis of the principles of holonomy (holography) and wave processes, are apparently well described in the framework of Fourier transforms. There is a possibility of detecting interneuronal wave structures and microphones in the following areas of the brain:

1. The zone of interneuronal spaces.
2. The zone of fine-fibrous dendritic networks of the brain.
3. The zone associated with the branching ends of presynaptic axons.
4. The zone associated with other dendritic networks.
5. A zone associated with small local neural networks that create appropriate localized holograms.
6. Other zones.

It is in these above-mentioned zones that there is a high probability of detecting interneuronal wave structures. The connection of these wave processes with processes in various synapses is an urgent task for further research.

Intent-emitter, working at various levels of physicality, the bodily Self, and, finally, the phenomenon of the Self, is the main mechanism for the emergence of a stream of consciousness. The stream of consciousness is not a simple superimposition of static slices of consciousness as in the cinema, but the superimposition of living slices of consciousness. When an intent-emitter is applied to a specific fragment of existlens, living slices of consciousness arise. Further, the intent-emitter directs its wave flows to another fragment of the existlens, etc. The jumping of the intent-emitter from one layer of the existlens to another is one of the mechanisms of generalization and generation of concepts.

Thus, the dynamic alternation and combination of the resulting proto-formations of virtuons is the main mechanism of brain emergence, thanks to which a virtual fabric of various contents of subjective reality arises. The study of the correlation between the structure of language and the structure of the interaction of existom and intent-emitter is one of the most urgent tasks of research in the field of mechanisms for generating subjective reality. At the beginning of its development, the intent-emitter masters the processes of the phenomenon of corporeality and the bodily Self. Based on this, the intent-emitter forms a virtuon of self-relationship.

The nano-psychological approach, developed by me in 2006, can be a correct and unambiguous method of studying the above wave processes [28]. It allows you to study mental processes and corresponding operator-controlled nano-structural transformations of the brain in real time. Controlled nanostructures can be introduced into the inter-neuronal zone and zones of probable localization of ions. Therefore, in the future, nano-psychology will allow you to control and regulate the processes of the emergence of virtuons

and mental formations (sensory images, thoughts, meanings, etc.) This approach can be one of the ways to solve the problems of various mental disorders. Nanocontrol can make it possible to adjust the structures of the existom at various levels. In other words, brain correction of various levels and structures of the cognitive process, processes of thinking and consciousness will be possible.

It was previously noted that due to the holonomy of the existom, the possibility of reproducing virtuons and their corresponding mental contents remains even after the destruction of a significant part of the existlens of the existom. That is why, in our opinion, solving the problem of Alzheimer's disease is not related to erasing information. The information is preserved and the existlens is most likely not violated. The cerebral cortex stores everything well, thanks to its holonomy. The cause of Alzheimer's disease lies in dysfunctions of the activity of the intent-emitter (thalamus, hippocampus, fusiform gyrus, etc.), therefore, measures are needed to restore the normal activity of the intent-emitter. The stored information in people suffering from Alzheimer's disease is waiting for its moment when the intent-emitter correctly “highlights” the existlens and this information becomes a fact and content of consciousness.

One of the most difficult problems of the interaction of the existom and the intent-emitter is to identify the key layers of the existom and existlens associated with the knowledge of the external and internal world. The process of cognition of the external world (noesis) how intentional wave flows (external intention) directed to the periphery of our consciousness, that is, to everything that is beyond our consciousness and brain, are well studied at the phenomenological level by Edmund Husserl. But, alas, so far, no unambiguous brain existential correlates of this process have been found. The search for existential correlates associated with the inverse intentional wave flow (internal intention) aimed at cognition of our Self, self-knowledge, self-awareness and reflection is also an equally urgent task. In any case, the task is to discover the structures of the existom and the layers of existlens that cause the generation of virtuons and mental contents of consciousness, awareness and reflection. It is shown that consciousness arises after a certain level of development of the intent-emitter, which begins to affect the deeper layers of the existom, which forms the virtuon of the phenomenon of the Ego, as the core of our subjective reality. The search for a fragment or “gene” of the existent, thanks to which the generation of the phenomenon of Self becomes possible, is one of the urgent tasks of research. Which “genotype” of the existentialist becomes the basis of the “phenotype” of our Self? In fact, this is the problem of determining the origins of the origin of the Cartesian cognition of being aware of its existlens. This is the problem of the existential mirror, previously developed by [3] as a structure reflecting the reflected. This is the problem of the priority and chosen structure of the existom, which is related to other structures of the existom. And this structure opens up at a certain stage of the development of the bodily Self. The intent-emitter, developing for a certain time within the framework of the generation of the bodily Self, gradually reaches a higher level and begins to generate the phenomenon of Self in interaction with the existential. As a result, the phenomenon of Self opens up in a child at a certain stage of development.

On the other hand, one of the urgent scientific problems is the identification of the deep structures of the existom, which make it possible to transfer the activity of the psyche from the format of an Observer (a living being) to the format of an Observer for an Observer (a human being). This is, in fact, the ability of a person not only to observe what is in the outside world, but also to observe the inner world, in particular, to observe his inner observer. This leads to the emergence of awareness as the knowledge of a human being about himself. In physics, within the framework of the theory of relativity, an Observer was discovered and this changed man's view of the universe. At the same time, no provisions have yet been developed in science on how fundamental knowledge should be transformed in connection with the discovery of an Observer by an Observer. In addition, the existential genesis of the phenomenon of existlens has not been well studied. Thus, the heuristic potential of brain research within the framework of the theory of the existom is significant.

Intent-emitter

Now let's take a closer look at the intent-emitter. The brain intent-emitter is a group of brain structures (thalamus, hippocampus, fusiform gyrus, etc.) that generates intentional wave flows directed at the brain's existom. These wave flows, in turn, are controlled by a program functioning in the cerebral cortex (neural networks, networks of nanomolecular machines, etc.)

On the other hand, an intent-emitter is a set of emitters of wave intentional flows scattered in the cerebral cortex and associated with the hippocampus, thalamus, fusiform gyrus, etc. Intent-emitter is most likely controlled by a program of neural networks of the brain or intentional cognition, that is, intentional hyper networks of the brain. The hypernetwork model (see the theory of cognition) by itself, that is, in an immanent way, apparently, it will not be able to describe the mechanisms of generating mental contents and components of subjective reality without taking into account such a brain structure as the existom. The theory of cognitom in terms of explaining the mechanisms of formation of subjective reality and thinking only on the basis of neural network and hypernetwork reductionism turned out to be unproductive and even came to a dead end. The mathematization of hypernetwork processes is not the basis for the description and emergence of real mental neoplasms, emerging meanings, etc. So, will it ever be possible to mathematically calculate the future mathematical discoveries that will occur in the brain of a mathematician? It's impossible. The generation of mental and mental neoplasms is an unpredictable process with a high degree of uncertainty, inaccessible to mathematics.

The theory of cognitom [27] is fundamentally related to the study of long-term memory processes. These processes are associated with the growth of axons and dendrites caused by gene expression and protein synthesis. The phenomenon of stream of consciousness and becoming consciousness are not related to these memory processes. Therefore, it is very incorrect to extend the theory of cognitom about the growing hypernet to the processes of generating subjective reality and consciousness. It is also incorrect to look for the reasons for the origin of consciousness generation mechanisms in hyper networks.

The basis for the formation of subjective reality and the content of consciousness is existens. Therefore, cognitom [27], at best, can probably be considered only as one of the components of controlling the brain's intent-emitter, although the creators of the theory of cognition do not yet think so. Studies concerning the neural (including specific neurons) and neural network activity of the cerebral cortex, observed during various processes of consciousness and thinking, most likely indicate only brain activity caused by the work of programs that control the brain's intention.

Intentional wave flows are classified into:

1. Afferent wave intentional flows. These flows are the result of the intentional conversion of electrical oscillatory signals coming from afferent neurons connected to analyzers and receptors of the human body. These streams are divided into two types:

a) There are sensory intentional wave flows. The intent-emitter directs them to the structures of the existom that form visual, auditory, tactile, and olfactory virtuones. It is they who allow us to have the illusion of a natural perception setting, thanks to which we perceive and feel external objects and their properties as obvious objects and their properties themselves, although all this is only a mental virtual model of objects and their properties. The conscious perception and sensation of these objects and their properties occur on the basis of the generation of virtuons of self-relation, that is, the alternation of the virtuon of the object and the virtuon of the virtuon of this object. As a result, there is a dynamic alternation of the vision of the object itself and the emergence of thoughts about this object, that is, a conscious sensory perception of the object is generated. Moreover, the vision of the essences of this subject does not depend on our subjective attitude to this subject. The fact that the piano has exactly three legs, not four, is seen by everyone in the same way and it does not depend on the mood and upbringing of the perceivers. Separately, we note that it is incorrect to identify the mental model

of an object that we actually see in our subjective reality with the corresponding virtual one.

b) There are apperceptive intentional flows. In this case, the intention also directs these flows to the structures of the existom that form visual, auditory, tactile, and olfactory virtuones. At the same time, the interaction of the intent-emitter is more complex, since the virtuon of the object is formed, on the one hand, under the influence of the emotionogenic processes of the brain, and on the other in comparison with other virtuons. As a result, there is an alternation of the vision of the object (generated on the basis of a virtuon) and thoughts about the object (generated on the basis of a virtuon about a virtuon), besides, all this is compared with other objects, that is, comparative reflection takes place. There is a conscious subjective and apperceptive image of the object. Individual subjectivity leads to the fact that we all see the same object in different ways. In this case, everyone's vision of the piano will be different, especially for the pianist, although the three legs of the piano will remain in the perception of all perceivers.

2. Efferent wave intentional flows. These flows are the result of the intentional conversion of electrical oscillatory signals coming from afferent neurons connected to analyzers and receptors of the human body. These streams are divided into two types:

a) There are sensory intentional wave flows. The intent-emitter directs them to the structures of the existom that form visual, auditory, tactile, and olfactory virtuones. It is they who allow us to have the illusion of a natural perception setting, thanks to which we perceive and feel external objects and their properties as obvious objects and their properties themselves, although all this is only a mental virtual model of objects and their properties. The conscious perception and sensation of these objects and their properties occur on the basis of the generation of virtuons of self-relation, that is, the alternation of the virtuon of the object and the virtuon of the virtuon of this object. As a result, there is a dynamic alternation of the vision of the object itself and the emergence of thoughts about this object, that is, a conscious sensory perception of the object is generated. Moreover, the vision of the essences of this subject does not depend on our subjective attitude to this subject. The fact that the piano has exactly three legs, not four, is seen by everyone in the same way and it does not depend on the mood and upbringing of the perceivers. Separately, we note that it is incorrect to identify the mental model of an object that we actually see in our subjective reality with the corresponding virtual one.

b) There are apperceptive intentional flows. In this case, the intent-emitter also directs these flows to the structures of the existom, which form visual, auditory, tactile, and olfactory virtuones. At the same time, the interaction of the intention is more complex, since the virtuon of the object is formed, on the one hand, under the influence of the emotionogenic processes of the brain, and on the other in comparison with other virtuons. As a result, there is an alternation of the vision of the object (generated on the basis of a virtuon) and thoughts about the object (generated on the basis of a virtuon about a virtuon), besides, all this is compared with other objects, that is, comparative reflection takes place. There is a conscious subjective and apperceptive image of the object. Individual subjectivity leads to the fact that we all see the same object in different ways. In this case, everyone's vision of the piano will be different, especially for the pianist, although the three legs of the piano will remain in the perception of all perceivers.

2. Efferent wave intentional flows.

These flows are even more complex and are the result of the intent-emitter converting electrical oscillatory signals coming from the efferent neurons of the cerebral cortex, activating and controlling various brain processes, as well as the intent-emitter itself. Thanks to these flows of intention interacting with various layers of the existom, virtuons are generated on the basis of which ideas, imagination, thinking, reflection, etc. arise. In this case, the intent-emitter itself works in more complex dynamic modes and algorithms.

It is this level of the intent-emitter's work that is associated with a high level of human thinking development. The most complex synthesis and installation of concepts of various hierarchical structures of the existom takes place. As a result, various virtual developing mental contents of consciousness, cognitive space and subjective reality are generated. These contents develop in the context of human activity, which, with its motives and goals, acts as a necessary mechanism for the development of thinking, but not sufficient. The mechanisms of brain processes are sufficient, the key place among which is occupied by interaction in the existential-intention system. Now let's try to figuratively describe the above.

The existom of the brain can be considered as a kind of complex and multi-layered set of "strings" (existlens), some of which begin to "sound" only when they are resonantly affected by vibrations emitted by the intent-emitter of the brain. Moreover, these fluctuations of the existom can be heard, even thanks to individual existlens. Therefore, the destruction of a significant part of the existom does not stop the generation of virtuons and contents of subjective reality.

Everything is based on existlens – integral multi-layered strings of the brain. Existlens are multi-layered biodiffractive structures-codes, on the basis of which patterns of interference of a standing wave are formed – virtuons corresponding to innate meanings and concepts formed in the process of ontogenesis. Holonomic existlens are connected to each other, but they are scattered in the cerebral cortex.

These living psychic contents are generated by the filigree musical playing of the intent-emitter, which directs its wave intentional flows to the existential. The multilayered and hierarchical structure of the existom and existlens allows you to have mental contents of various levels of mental emergence, generalization, abstraction and logic. Thus, the development of thinking boils down to the development of perfection and the art of filigree intention management, generating and directing its intentional wave flows to the existential.

The intent-emitter of the brain, figuratively speaking, is a "musician" playing on certain "strings" of the intent-emitter under the direction of a "conductor". The controlling structure of the brain's intent-emitter is a kind of "conductor" of the brain, controlling the "musician". The intent-emitter of the brain plays according to the "notes" created by the cerebral cortex. The "conductor" of the brain looks at these "notes" as a key component of the intention.

Further, these waves of intention begin to resonate on the "strings" of existlens. That is, fluctuations in the "strings" of the intent-emitter cause fluctuations in the "strings" of the existom. As a result, not just waves begin to radiate from the existom, but more complex wave formations begin to arise. New emergent brain formations arise, which are proto-formations of various components of subjective reality: thoughts, images, sensory images, meanings, etc.

Consequently, a virtuon is generated as an unambiguous correlate and carrier of the phenomenon of thought itself. And the dynamic synthesis and alternation of the appearance of a virtuon of primary thought and a virtuon of secondary thought about primary thought create a virtuon of awareness [3]. Mindfulness is the result of a dynamic alternation of thought and thought about this thought, that is, the appearance of the phenomenon of attitude to the mental contents of objective reality.

All this becomes possible, on the one hand, thanks to the filigree play of intent-emitter on the existom, and on the other, the most complex multi-layered structure of the "strings" of the existom formed by the evolution of the human brain.

Thus, if a biological cell is a factory of proteins and biochemical substances synthesized by reading the genome. If our organs are syndicates assembled on the basis of the properties of these factories, then our brain is a kind of "concert hall of the conservatory" in which the "conductor" of the brain and the "musicians" of the brain, perceiving the world around them, with the help of their "instruments", create "sounds" of the brain, which turn into "music" subjective reality only when these sounds become the highest form of

emergence, that is, a work of 'musical art'. (These syndicates synthesize a variety of biochemical substances necessary for the survival of the body).

Conclusions

1. The analytical studies presented in this article have shown that various contents and neoplasms of subjective reality arise on the basis of borderline-critical interphase proto-formations. These proto-formations of various levels of complexity are products of the interaction of intentional wave flows with the corresponding structures of the holonomic existom of various levels of complexity. It is shown that the dynamic alternation and combination of these resulting proto-formations is the main mechanism of brain emergence, due to which a virtual fabric of various contents of subjective reality arises.

2. A hypothetical model has been developed according to which semantic formations arise in a group of specific virtuon neurons and neural networks immersed in the space of a wave packet (standing wave) of a virtuon. The activity of virtuon neurons and neural networks is synchronized by this virtuon. Thanks to these virtual groups of neurons and neural networks, feedback is carried out, which regulates the activity of the intent-emitter, which in turn forms a new form and state of the virtual, changing the state of activity of virtual neurons. This leads to a new state of intention. This is a closed cycle of activity due to which successive virtuons are generated, on the basis of which emerging semantic formations and consciousness are generated. Virtuon neurons, as it were, "probe" the changing virtuon and immediately, thanks to feedback from the intent-emitter, change the previous state of the virtuon. Perhaps this is the key mechanism for generating various emerging mental contents and semantic formations that form the emerging subjective reality and the emerging consciousness.

The above hypothesis is confirmed by the fact that there are studies according to which electromagnetic wave packets are able to synchronize and change the activity of groups of neurons [29].

3. Virtuon is a standing wave that changes and is "probed" by the receptors of the intentional system and intent-emitter, which are the basis of the human psychic self and the phenomenon of our Self. A virtuon is a kind of virtual touch screen through which, through feedback, the operation of the intention changes.

4. Intentional wave flows are a collection of waves, which is an overlay of intentional waves of various levels of complexity. In this set of intentional waves, on the one hand, there are intentional waves formed due to various sensory analyzers (visual, auditory, etc.), which, interacting with the existential, form a sensory virtuon, which is the basis for the emergence of a sensory image. On the other hand, in this set of waves there are intent-emitter s associated with emotionogenic selective mental processes and states. It is precisely with the hierarchy of emotionogenic intentional waves of different levels of complexity that interact with the existential that the generation of virtuons is associated, on the basis of which thinking and semantic formations of various levels of complexity are formed. The alternation of the activity of sensory intentional waves and emotionogenic intentional waves, leading to the alternation of sensory and emotionogenic virtuones, lead to the alternation of sensory and emotionogenic images. This alternation becomes the basis for the generation of subjective reality, as well as mental modeling of the processes of observing phenomena occurring outside and inside the human mental world.

5. A virtuon is a key virtual formation or a cerebral psychic control panel, acting on the structures of which, the intentional system of the brain controls the generation of subsequent virtuons, which become the basis of the processes of consciousness of thinking. These subsequent virtuons also become the brain's mental model for creating the next new virtuons. So, by replacing each other, virtuons form the phenomenon of becoming consciousness and thinking.

6. One of the key mechanisms for generating subjective reality is recursion, as a phenomenon of reflection of the reflected.

7. The installation of sensory images and representations takes place in the outline of intentions. The emotionogenic-intentional process is the canvas within which thinking takes place! Intention is a tool for generating

existences and their installation, on the basis of which mental and thought processes are formed.

8. The generation of the observer's virtuon as the basis of a more stable mental model alternating with less stable virtuons as the bases of mental models of observed objects is justified. The observer's virtuon is a key virtual formation or brain psychic control panel, acting on the structures of which, the intentional system of the brain controls consciousness and thinking in the process of observation.

9. More stable virtuons, formed due to long-term memory, are the basis for the formation of the phenomenon of the inner psychic observer, that is, the emergence of the phenomenon of the Ego. Thus, the generation of the phenomenon of Self is associated only with the alternation of stable virtuons and less stable virtuons. The disappearance of these stable virtuons, as a result of which only unstable and dynamic virtuons remain, leads to the disappearance of the phenomenon of Self in the human mental content. Stable virtuons are the basis for generating the image of Self. Only these stable virtuons are able to have the most interaction with other unstable virtuons. That is why the key image of Self is able to have the most interactions with other images.

10. The basis of the direct intentional flow is the brain processes associated with the generation of a virtuon of various sensory and semantic levels of complexity:

- a. The primary virtuon as a product of the generation of some real non-psychic model of objects located outside the brain. These non-mental models are localized in the brain.
- b. The secondary virtuon as a product of the generation of the mental model of the primary virtuon. This product is unconscious.
- c. Recursive virtuon as a product of generating a mental model of a secondary virtuon. This brain process and product underlie the phenomenon of awareness. Recursive virtuon as a standing wave of the highest complexity, which changes and is "probed" by the receptors of the intentional system and intent-emitter, which are the basis of the human psychic self and the phenomenon of our Self.

In addition, awareness is based on the alternation of unconscious basic relatively non-dynamic brain processes and unconscious dynamic processes. Non-dynamic processes are associated with the virtuon of the phenomenon of our Self (I). Dynamic processes are associated with virtuons formed in the process of perception and thinking.

The theory of existom has allowed us to consider the problem of developing methods, psychotechnologies and biomedical approaches to the brain in a new way and to really solve the problem of mental and psychosomatic disorders of patients on new scientific positions. This theory has opened up the possibility to look at the limitations and advantages of the brain mechanisms of psychotherapy as a method of verbal and non-verbal programming of the human psyche on a new basis. In addition, thanks to the theory of the existom, which revealed the key structures and mechanisms of generating subjective reality, opportunities have appeared in the field of developing selective wave (electromagnetic, ultrasonic, etc.) effects on the brain in order to correct thinking and various mental processes.

Acknowledgments: This paper has been supported by the Kazan Federal University Strategic Academic Leadership Program (PRIORITY-2030)

Statement of Ethics: Not applicable.

Conflicts of interest Statement: The authors have no conflicts of interest to declare.

Author Contributions: Not applicable.

Data Availability Statement: Not applicable.

References

1. Garifullin RR. Nanopsychology as a new basis for cognitive science. In: Actual problems of modern cognitive science: Proceedings of the seventh All-Russian scientific and practical conference with international participation; Ivanovo; 2014. p. 23–24. Rus.
2. Garifullin RR. About the Nanotechnological Approach to The Brain. International Journal of Biomed Research. 2023; 2:4.
3. Garifullin RR. I and proto-I. Philosophical and psychological foundations of reflection. 2019. Rus.
4. Garifullin RR. Understanding How Semantic Structures of Individuals with Drug Addiction Transform as a Key to Effective Psychotherapy. Addictive Disorders & Their Treatment. 2021; 20:4: 500–506.
5. Bohm D. Wholeness and implicative order. London: Rutledge; 1980.
6. Unterseher F. The Holography Guide: Creating Holograms. In a Simple way (Second ed.). Ross Books; 1996. p. 354–359.
7. Pribram KH. Prolegomenon for a holonomic brain theory. In H. Haken & M. Stadler (Eds.), Synergetics of Cognition. Springer Series in Synergetics, Berlin, Heidelberg: Springer; 1990; 45. p. 150–184.
8. Vanderwert LR. Chaos theory and the evolution of consciousness and mind: A thermodynamic-holographic resolution to the mind-body problem. New ideas in psychology. 1995; 13: 2: 107–127.
9. Andrew AM. The Decade of the Brain - further thoughts. Cybernetes. 1997; 26:3: 255–264.
10. Pribram KH, Meade SD. Conscious awareness: Processing in the synaptodendritic web. New ideas in psychology. 1999; 17:3: 205–214.
11. Velmans M. Is the world in the brain, or the brain in the world? Behavioral and brain sciences. 2003; 26: 4: 427–429.
12. Dolev S, Hanemann A. Holographic brain Memory and Computing. In Latin American Optics and Photonics Conference, OSA Technical Digest. Optica Publishing Group; 2014. p. 16–21.
13. Bókkon I. Dreams and neurography: An interdisciplinary interpretation of development of homeotherm state in evolution. Sleep and hypnosis. 2005; 7:2: 47–62.
14. Pryzda M. The Electromagnetic Nature of Consciousness: A Review of Ten Electromagnetic Field Theories of Consciousness by Shelli Joye. The Viola Institute; 2018.
15. Willshaw DJ, Buneman OP, Longuet-Higgins HK. Non-holographic Associative Memory. Nature. 1969; 222: 5197: 960–962.
16. Hinton GE, Anderson JA. (Eds.) Parallel models of associative memory (Updated ed.). Lawrence Erlbaum Associates; 1989. p. 115–116.
17. Pribram KH. Quantum holography: is it relevant to brain function? Information sciences. 1999; 115:1–4: 97–102.
18. Forsdyke DR. Samuel Butler and human long-term memory: Is the cupboard bare? Journal of Theoretical Biology. 2009; 258: 1: 156–164.
19. Borsellino A, Poggio T. Holographic aspects of temporal memory and optomotor responses. Kybernetik. 1972; 10: 58–60.
20. Gabor D. Holography, 1948–1971. Science. 1972; 177: 4046: 299–313.
21. Gabor D. Holographic aspects of temporal memory and optomotor responses. Nature. 1968; 217: 584.
22. Pribram KH. The neurophysiology of remembering. Scientific American. 1969; 220:1: 73–86.
23. Srivastava V, Edwards SF. A mathematical model of capacious and efficient memory that survives trauma. Physics A: Statistical mechanics and its applications. 2004; 333: 1–4: 465–477.
24. Pribram KH. Recollections. Neuroquantology. 2011; 9 :3: 370–374.
25. Longuet-Higgins HK. Holographic model of temporal recall. Nature. 1968; 217: 104.

26. Baev KV. Solution of the Problem of Central Pattern Generators and a New Concept of Brain Functions. *Neurophysiology*. 2012; 4:5: 414–432.
27. Anokhin KV. Cognitome: in Search fundamental neuroscience Theory of Consciousness. *Neuroscience and Behavioral Physiology*. 2021; 71: 1: 39–71.
28. Garifullin RR. Nanopsychology as a new science. Nanophilosophy as a new worldview. In: Man facing a global challenge. Kazan: Philosophical Society of Tatarstan; 2006. p. 101–06. Rus.
29. Gepshtein S, Pawar AS, Albright TD. Spatially distributed computation in cortical circuits. *Science Advances*. 2022; 8: eabl5865.

Ready to submit your research? Choose ClinicSearch and benefit from:

- fast, convenient online submission
- rigorous peer review by experienced research in your field
- rapid publication on acceptance
- authors retain copyrights
- unique DOI for all articles
- immediate, unrestricted online access

At ClinicSearch, research is always in progress.

Learn more <https://clinicsearchonline.org/journals/international-journal-of-biomed-research>