

## Unraveling the Psyche: A Critical Analysis of Historical and Contemporary Theories in Light of Neuroscientific Advances

Mir Mahmoud Seyyedvalilou<sup>1</sup> , Marziye Alivandi Vafa<sup>2</sup> , Seyed Mahmoud Tabatabaei<sup>3</sup> 

1. Department of Psychology, Faculty of Educational and Psychology, Tabriz Branch, Islamic Azad University, Tabriz, Iran

2. Assistant Professor, Department of Psychology, Faculty of Humanities Tabriz Branch, Islamic Azad University, Tabriz, Iran,  
[m.alivand@iau.ac.ir](mailto:m.alivand@iau.ac.ir)

3. Full Professor, Department of Physiology, Faculty of Medical Science, Tabriz Medical Sciences Branch, Islamic-Azad University, Tabriz, Iran

### Article Info

#### Article type:

Research Article

#### Article history:

Received 9 Feb. 2024

Received in revised form 21  
Apr. 2024

Accepted 23 May. 2024

Published online 01 Sep. 2024

#### Keywords:

Psychological Phenomenon,  
Philosophical-Scientific  
Theories,  
Pre and post-Renaissance  
Neuroscience,  
Conceptual-Theoretical Model

### ABSTRACT

**Objective:** It can be asserted that the interplay of psyche, mind, and awareness represents a paradox of totality and emptiness. The internal experience is intimately felt, akin to the neck vein, yet remains elusive, more distant than cosmic expanses. Humanity has long sought to deconstruct and understand the origins and essence of psychological phenomena. Shakespeare and Sartre highlight the significance of this inquiry. This study aims to analyze the philosophical and scientific theories regarding the mind's origins, roots, and nature, encompassing both pre and post-Renaissance perspectives and Neuroscience.

**Methods:** The intention is to propose a conceptual-theoretical model that clarifies this phenomenon. A descriptive-analytical research methodology utilizing content analysis has been employed.

**Results:** Findings reveal that before the Renaissance, the study of human nature was situated within philosophy, with psychology viewed as a branch thereof. However, the evolution of scientific psychology from the late nineteenth into the twentieth century paved the way for the Renaissance of Neuroscience, particularly from the 1970s onward, with significant advancements in understanding the mind through developmental theories and research findings.

**Conclusions:** In conclusion, the mind is recognized as a sophisticated process integrating memory, intelligence, awareness, and philosophical consciousness, arising from complex cerebral interactions and neural dynamics. This creative inner reflection symbolizes the highest transcendent process, with the mind's diverse aspects emerging from the interplay of the brain, body, and existence throughout an evolutionary trajectory.

**Cite this article:** Seyyedvalilou, M. M., Alivandi Vafa, M. Tabatabaei, S. M. (2024). Unraveling the psyche: a critical analysis of historical and contemporary theories in light of neuroscientific advances. *Iranian Journal of Educational Research*, 3 (3), 205-236.

DOI: <https://doi.org/10.22034/3.3.205>



© The Author(s).

DOI: <https://doi.org/10.22034/3.3.205>

Publisher: University of Hormozgan.

## Introduction

It might be confidently stated that the combination of psyche, mind, and awareness embodies both everything and nothing—a paradoxical juxtaposition of the all-encompassing and the void. As the inner manifestation is the sole tangible and perceptible feeling inside us humans, it is closer to me in the context of the neck vein.

For ages, humanity has been on a quest to dismantle the underpinnings and decipher the fundamental question of the origin, roots, and essence of the psychological phenomenon (Damasio, 2019, p. 52; Searle, 2014, p. 10). In the words of Shakespeare and Sartre, this is the question. Psyche and Eros refer to mythical lovers from ancient Greece, identified in Roman mythology as Cupid and Psyche. In this enchanting and symbol-laden tale, Eros or Cupid (the deity of love), offspring of Aphrodite or Venus, becomes infatuated with a captivating maiden named Psyche. Despite experiencing all the joys and blessings the world has to offer; Psyche is denied the delight of beholding herself. This action triggers the merciless jealousy of her mother, Aphrodite. Nevertheless, in the end, with the involvement of Zeus (the paramount deity in ancient Greek mythology) or Jupiter (the chief deity in ancient Roman mythology), a harmonious resolution unfolds in the celestial realms. The union of Psyche and Eros (Cupid and Venus) gives rise to Pleasure. The tale of Cupid and Psyche serves as an allegory conveying the notion that, As the human spirit undergoes the purification of enduring suffering and sorrow, it will be met with the companionship of joy (Durant, 2013, Volume 3, p. 552). Regarding this myth, it is recounted that: The myth tells the tale of Psyche (the soul) and her love Eros, also referred to as Cupid or Amor (the god of love). A comprehensive account of it is presented in the book *Metamorphoses* by Apuleius, written in the 2nd century AD. The narrative draws inspiration from the myths of ancient Greek and Roman civilizations. This story, despite its high level of interest and readability, seems to be rich in philosophical symbolism. (Grimal; quoted from Salehi Alameh, 2017, p. 99).

To break down and unravel the essence of this myth, one may adopt a perspective similar to that found in Julian Jaynes' analysis in his work "The Origin of Consciousness in the Breakdown of the Bicameral Mind," aligning with other mythological narratives. In this piece, Jaynes proposes a categorization of human consciousness throughout history into two overarching phases. The first phase encompasses the magical, mythical, and transcendental, involving early humans with dualistic and schizophrenic mental attributes (delusional and hallucinatory). The second phase

represents the gradual evolution towards cause-and-effect reasoning in explaining phenomena, characterizing modern humans. The early human being has conceptualized their understanding of the phenomena in the world through the lenses of magic, myths, and folklore, creating imaginative and speculative frameworks.

Until pre-Renaissance, the exploration of human nature was done in the field of philosophy. Psychology, specifically referred to as Ma'arif al-nafs (the science of the soul), was regarded as a subset of philosophy. From this viewpoint, one can categorize the historical exploration of the phenomenon of the mind and psychology into two broad periods:

A) The first period consists of two sub-periods: 1) The philosophical course of ancient Greece and Rome (from the fifth century BC to the sixth century AD); and 2) The period on Islamic civilization from the sixth century AD to the Renaissance - the fourteenth century AD. Over approximately two thousand years, the main subject of psychology, namely the phenomenon of the psyche and the nature of the spirit, was examined through philosophical methods, especially with an Aristotelian metaphysical approach or regarding religious narratives. This course is recognized as the age of metaphysical psychology or pre-scientific psychology.

B) Second Phase: Following the Renaissance, particularly from the time of Descartes onwards, there was a shift in focus from the study of the soul to an examination of the mind and its processes. Notably, there was a detailed exploration and experimental investigation into the relationship between the mind and the body (physicality). Consequently, empirical analysis took the place of rational inquiries. Scientific psychology originated and developed from the depths of philosophical psychology, reaching maturity, as stated by Hergenhahn, 2018: p. 218).

From the 19th century to the mid-20th century, the rise of positivism set the stage for the emergence of behaviorism. Concurrently, in the latter half of the 19th century, figures like William James, utilizing introspective methods, steered psychology toward autonomy from philosophy. Overall, attitudes toward the concept of the psyche, its equivalents, and related aspects have evolved progressively over time with cultural development and the emergence of diverse paradigms in human thought matrices. This evolution spans from intuitions and magical perceptions to mythical, narrative, wisdom, and philosophical discourse, advancing further into philosophical, philosophical-scientific, and ultimately scientific perspectives.

What has been studied so far regarding the comprehension of the theoretical foundations of the “psychological phenomenon” in the two primary scientific approaches (psychology) involves the examination of manifestations of psychological behaviors, states, activities, fields, and the corresponding laws through empirical and quasi-empirical methods. This scrutiny is particularly focused on three components: effect, comparison, and relation. On the flip side, matters concerning the mind and psyche, especially from a philosophical psychology standpoint, have not predominantly revolved around Wittgensteinian linguistic games. Instead, there has been a consistent tendency to connect one term with another and define and describe a particular term using alternative words. The collective endeavors spanning from Aristotle to Kennedy, including figures like Farabi, Ghazali, Ibn Sina, Mulla Sadra, Descartes, Hume, Berkeley, Bergson, and others, in the domains of both psychology and philosophy, have been unable to decipher the enigma surrounding the phenomenon of the mind. The occurrence of consciousness does not stem from spontaneity and the immediate creation within the realm of existence. Instead, it has unfolded through evolutionary processes in the tapestry of being over countless millennia. In the realm of neurology, the concept of the human mind is acknowledged as the singular cognitive super-system that arises from and is organized within the structure of the brain. It not only possesses self-awareness but is also designed to recognize its own existence and the creative process of its own formation. In this situation, the mental phenomenon is located at the core of this development.

This research is about understanding how our minds work, especially looking at the history and nature of the human psyche. The focus is on the complex nervous system and the brain’s role in our evolution. The study aims to answer basic questions about the psychological phenomenon, both before and after the Renaissance and the advancements in neuroscience. The goal is to explore the origins, roots, and nature of the mind in a clear and straightforward way.

1) Exploring the Phenomenon of the Psyche Descriptively and Analytically in the Prehistoric and Historical Context:

Part A – Descriptive- Analytical Investigation of the Phenomenon of the Psyche in the Prehistoric Context

Stage One: Zombie Human

1- Evolution; 2- Life (evolution of life and biological processes); 3- Lend of organization theory (quantum mechanics, quantum chemistry, chemistry, biochemistry, cellular and molecular

biology); 4- Genetics; 5- Gender; 6- Neurology, neuroanatomy, the central nervous system in interaction with hormones and endocrine glands (neuroendocrinology); 7- Neuronal circuits and layered perceptron neural networks.

## 2- Primitive Human (Beautiful Savage).

1) Biological and Evolutionary Anthropology; 2) Homo faber (Tool-making human); 3) Precision grip evolution and the emergence of skilled tool-making hands (Acquiring the ability to transform thought into action); 4) Gradual distancing of primitive humans from the animal world and progressive mastery of natural forces (The gradual ascent of humans and the revelation of freedom as the result of the Hegelian historical process).

## 3- Early Human - Prehistoric Era (Evolutionary and Cultural Anthropology)

1- The Human Evolution: Biological, Social, and Cultural; 2- "Language and Thought (Thinking Human); 3- The Dawn of Awareness: Imaginary, Delusional, Magical, Mythical (Mythical Tale of the eros and psyche).

B: Descriptive-Analytical Investigation of the Phenomenon of the Psyche in the Context of History.

Ancient Period: In two aspects: A- Philosophical (Ancient Greece and ...), B- Metaphysical Era (Religious) and C- In the context of the soul, including: (From the first millennium BC to the sixth century AD; 2- Islamic Civilization: (In the framework of psychology: Kindi, Farabi, Ghazali, Avicenna, and Mulla Sadra); 3- Christian Civilization (Scholasticism, Thomas Aquinas); 4- Eastern Buddhism.

Fifth Stage: (From the Renaissance to the end of the first half of the nineteenth century): 1- In the philosophical-scientific context (Mind-Body relationship: Descartes, Berkeley, Kant); 2- Phenomenology of Edmund Husserl.

Sixth Stage: The gradual emergence of scientific psychology (pre-Renaissance neurosciences): The second half of the nineteenth century to the first half of the twentieth century. 1- William James (I and me, and I as the phenomenon of the soul or Pure Ego = I (Soul/Mind)); 2- Freud (A- Theory of primary topography or the mind as an iceberg structure including: Unconscious, Preconscious, Conscious); (B- Theory of psychodynamics or psychoanalysis including: Id, Ego, and Super Ego); 3- Jung and the thermodynamic concept of the psyche; 4- Other psychologists (conceptual definitions for the psyche).

Seventh Stage: Descriptive-Analytical Investigation of the Phenomenon of the Psyche from the Perspective of Origin, Roots, and Nature (Gradual Emergence of the Foundations of the Renaissance of Neuroscience) in the 1970s:

1. The 1970s (Gradual Emergence of Information Processing Psychology, Cognitive Psychology);
2. The 1990s (Neuroscience Revolution): (Emergence of Imaging Technologies and Brain/Central Nervous System Studies: PET, CT-SCAN, MRI, f-MRI, etc.).

Eighth Stage: Renaissance of Neuroscience (Descriptive-Analytical Investigation of the Phenomenon of the Psyche from the Perspective of Origin, Roots, and Nature, Post-Renaissance of Neuroscience):

1. Eric Kendel (In Search of Memory - Emergence of Novel Mind Knowledge); 2. Antonio Damasio (Nuclear Self, Expanded Consciousness, etc.); 3. Theories of Awareness (John Searle, etc.); 4. Thomas Nagel (Mind and Cosmos); 5. David Chalmers (How Mental Phenomena Arise - Concept of Qualia); 6. Bertalanffy (Systems Theory); 7. Santa Fe Institute (Complex Systems Theory); 8. The Brain as a Complex System (Journal of the Manifestation of Psychological Phenomena); 9. Other Neuroscientists in the Field of the Phenomenon of the Psyche.

- 2) The theory of formation levels and the principle of projection in explaining the phenomenon of the Psyche:

Research suggests that in living things, there are different levels of how things come together, as explained by Needham and other researchers. This indicates that everywhere in the world, whether it's living or not, there are different mixtures at various levels. For example, rules or laws found at one level don't necessarily apply to a lower level. It's essential to understand that the whole thing doesn't tell us everything about its parts. For instance, table salt has qualities that chlorine or sodium alone don't have. Similarly, big molecules like glycogen don't show the characteristics of their individual parts. This idea can be applied to different parts of a cell's structure or how many cells work together in a tissue. These levels of organization exist from small things like cells to bigger structures like tissues, organs, and systems, up to complex living organisms. Also, in the animal world, we see more organization among individuals of the same species, genders, races, and so on (Majd and Shariatzadeh, 2018, p. 8).

In the creation system, each thing that exists has its own set of rules and principles related to how it comes together. For example, the rules about tiny particles like atoms, such as oxygen and

hydrogen, which usually exist as gases in pairs (O<sub>2</sub> and H<sub>2</sub>), combine to make water molecules (H<sub>2</sub>O) at a higher level. This water has specific rules, laws, and special qualities (it's a liquid that supports life) that the individual gases (oxygen O and hydrogen H) don't have.

The rules and features of each level in any system are unique to that level. This is a crucial idea: the whole thing isn't just the sum of its parts. So, even though living and non-living things are made up of the same tiny particles, there's a significant difference in how they're put together.

The origin and roots of the psychological phenomenon are found in the mix of various brain factors like genetics, gender, hormone levels, personal and family history, ethnicity, and collective heritage. This phenomenon is also linked to the circuits in our brain that process information. Awareness happens in clear consciousness, semi-consciousness, and unconsciousness. Language, both spoken and non-verbal, and social-cultural relations are part of expressing emotions, communicating thoughts, controlling realities, storing information, preserving history, and showing identity. Based on the principle of emergence, it means that complex things come from putting simple things together. In nature, you can see this everywhere, like with water and its characteristics. The tiny building blocks of water are quite different from the way water behaves and its special qualities.

Following the principle of emergence, complex structures come from the interactions of simpler basic elements. This leads to the development of more complicated things. In this process, complex phenomena like life, awareness, memory, and consciousness emerge from basic building blocks, allowing them to appear at more advanced stages of development.

### 3: The Phenomenon of the Psyche: Perspectives on Origin, Roots, and Essence (Before and After the Renaissance of Neuroscience)

The phenomenon of the psyche is like a multifaceted and labyrinthine compass called the thousand-fold torus, comprising aspects and layers such as awareness (consciousness, semi-consciousness, and unconsciousness), cognitive domains of thinking (realistic, imaginative, fantastical, etc.), language domains (oral and non-oral), and so on. The phenomenon of the psyche, in the overall context of its formation, encompasses neurology and neuroanatomy of the brain, interactions with genetics, gender, hormones and endocrine glands, personal past, present, and anticipated future experiences, the environment (current, familial, birth, and growth), heritage (national, local, regional, national, continental, and global), and a certain type (the human species



Homo sapiens – human thought), manifesting within the Earth in the solar system within the Milky Way galaxy as part of the cosmic matrix of existence.

The essence of the phenomenon of the psyche lies within levels of awareness—conscious, semi-conscious, and unconscious. Consciousness results from a precise process occurring in the alert mind, allowing for the fundamental ability to be self-aware and comprehend the world, akin to Schopenhauer's idea that “the world is akin to desire and will,” granting us the capacity for intentional action. Within this framework, the state of alertness is contingent on the coordinated functioning of the brain, particularly the cerebral cortex, which is regulated and strengthened by areas such as the thalamus, hypothalamus, reticular formation, and brainstem.

In this context, awareness can be likened to a field of vision with defined limits influenced by genetic factors, gender, past experiences (including events and work history), education, and environmental factors (such as geography, ethnicity, national identity, and cultural heritage). These factors contribute to shaping the boundaries of awareness, leading to a spectrum from explicit awareness to partial awareness and unconsciousness. The indistinct edges of awareness dynamically influence sensitivity, mobility, and functioning within the intricate layers of the brain, ultimately giving rise to the fundamental aspects of the phenomenon of the psyche.

Throughout a span of at least a hundred thousand years, the human brain has undergone three broad stages in its transition from these awareness matrices:

1. Before these three stages, there is the sensory-motor animal stage.

First Human Stage: The appearance and expression of basic consciousness in early humans took on a magical, mythical, and imaginative nature

During these millennia, the human brain has gradually evolved from the sensory-motor stage of animalistic discontinuity. However, due to the lack of scientific understanding of the causes and effects of existential phenomena, there have been references and speculative inferences resembling schizophrenic and schizotypal illusions. The concept of cognition, which is the foundation of all our understanding, although seemingly simple and understandable, is, in the words of Saadi, “easy and difficult to attain.” This is because “the concept of cognition seems to us a unique and self-evident concept, but when we inquire about it, it shatters, becomes diverse, and transforms into countless concepts, each raising a new question.” Thus, the history of the evolution of human cognition unfolds through manifestations of the process of illusions, imaginations, ideas,



discoveries, and perceptions in the pre-Renaissance era. These take various forms in the matrices of magical, mythical, and transcendental modes, shaping the history of human knowledge and culture.

The second phase of human development is characterized as the modern awareness stage (cultivated awareness). However, within this second stage, specifically the Renaissance period (spanning from the late 14th to the early 15th century), philosophical theories grounded in scientific and empirical methodologies gradually emerge. These theories aim to systematically define and elucidate the phenomena of existence, along with their causal relationships. Thus, the second human stage, characterized by awareness grounded in cultivated imagination derived from empirical observations, becomes evident in the realm of human cognition.

The third stage of human development is the stage of awareness upon awareness (meta-cognition) in postmodern humans. It is a transformative stage from the imaginary cognitive animality to human scientific cognition.

Evolution in us has placed the formation of the most complex structure of the central nervous system with the highly complex and specialized cortex, especially the prefrontal cortex (with the ability to judge values, plan, and foresee the future, making us aware in a unique position, recognized among beings, the Earth, and even the universe). In the midst of this, evolution (development) has placed a center of coordination or awareness in the rule of the brain, namely the hypothalamus, for our emotional life, similar to awareness. And all human emotional life, meaning the conversion of all conditional reflections and physical pains, etc., into moral (psychological) pains, is made possible in this center.

Cognition, viewed through the lens of biological cognition, is a phenomenon that emerges in tandem with the maturation of the authentic neural system in the brain. Cognitive neuroscience, inherently inseparable from the individual mind (subject), is contingent upon the entirety of one's existence and serves behavioral aspects (psychology).... Human cognition surpasses animal cognition significantly, yet it does not dismiss it, as our cognition is fundamentally cerebral" (Moren, 2016, p. 87). In addition:

There appears to be little distinction in structure, chemistry, and function between the synapses and neurons of humans, snails, and leeches (Kendel, 2018, p. 37).

This is because the biochemical foundations of animal and human brains, particularly in primates and specifically in chimpanzees, show substantial commonalities. These shared foundations are cognitive underpinnings that, over evolutionary processes spanning hundreds of thousands of years, have transformed the human species into a complex maze of a thousand illusions (animal) and imaginary-schizotypal (primitive and wild humans).

The human brain, like that of animals, is open/closed, and its cognition is constructive/translational. There is almost no difference between the cognitive system of chimpanzees and humans. The difference lies in the number of neurons and the organization of the brain. Based on this organizational difference, the irreducible qualities in humans emerge, which we refer to as thinking, awareness, and psyche (Moren, 2016, pp. 88-87). In other words:

We are monsters in terms of brain growth (Gregory, 1970, p. 218). Because the human brain is recognized as the most complex and magnificent organized structure in existence, which not only knows itself but is also emerged to understand the world and its phenomena (Seyyed Valilou, 2022, p. 52). In such a way that:

A human has at least a hundred billion neurons, several times more than the cortical neurons in the most evolved animals. Humans have billions of synapses. The organization of the brain is even more complex. The cognitive equipment of the brain has developed new abilities. Its learning and memory capabilities are extraordinary. The development of astonishing cognitive and behavioral strategies at an entirely new level, in which language, thought, and consciousness emerge and take shape (Moren, 2016, p. 88).

Nowadays, thanks to the Renaissance of neuroscience, it has become possible to elucidate the physicochemical, cellular, molecular, and neurobiological aspects of brain functions in the expressions of psychological phenomena. From basic particles to humans, the manifestation of evolutionary stages represents the pinnacle of consciousness emerging from unconsciousness. The marvel of humanity unfolds when the brain becomes aware of its own unconscious state. The process of awareness over unconsciousness is a significant and expansive journey, wherein awareness transforms from explicit understanding to semi-awareness and unconsciousness, navigating through its ambiguous and undefined borders.

#### 4: Elements Equivalent and Consistent with the Phenomenon of the psyche:

In ancient Greek mythology, the term “Psyche” represented a captivating goddess of beauty. She was the object of affection for Eros, the Greek god of love and desire. In Persian, the equivalent term is “Ravan,” denoting a dynamic and lively essence with the underlying notion of “flowing.” Meanwhile, certain meanings have garnered attention across different periods, including perspectives like animism in a magical context, the concept of spirit from a phenomenological viewpoint, the notion of mind from a philosophical standpoint, awareness from a philosophical-scientific angle, memory from a scientific perspective, and so forth.

During this period, significant synonyms for the psychological phenomenon, each viewed from different angles such as the mind, awareness, and memory, have been explored in the history of science and philosophy. From the nineteenth century onward, terms like sensation, perception, ego, self, conscious, unconscious, individual unconscious, collective unconscious, and others have emerged as terms and topics of study in various scientific disciplines, including psychology.

In Wittgenstein’s view, it is essential to recognize that the issue of the mental phenomenon and its interchangeable elements like breath, mind, memory, awareness, and others is a nearby and familiar matter (even closer to humanity than the jugular vein). Nevertheless, it remains more elusive and intricate compared to the concepts of existence and the universe.

#### 5. Theoretical Insights into the Origins and Essence of the Phenomenon of the Psyche: Synonyms and Homogeneities Explored

Across the timeline of human culture and understanding, a multitude of perspectives and ideas have been put forth from both philosophical and scientific standpoints to elucidate phenomena like the mind, consciousness, awareness, and more.

##### A) Philosophical Perspectives on the Psyche: Unraveling the Phenomenon of Mind and Awareness

**René Descartes** (1596-1650), a key proponent of the dualistic perspective on the mind-body relationship, was a French philosopher, physicist, and mathematician. He played a significant role in shaping this philosophical approach, asserting that the mind is a fundamental entity that doesn’t need a specific space for its existence and isn’t reliant on any material substance. Descartes viewed the pineal gland, situated in the brain, as the link between the mind and the body, pointing to its natural vibrations as evidence of this connection.

While Descartes' philosophical views are no longer widely accepted today, the significant and impactful aspect of his ideas lies in the integration of mathematical principles into studies of experimental physics and mechanics. His emphasis on using mathematics in empirical research played a crucial role in paving the way for the emergence of subsequent modern sciences. This contribution stands out as one of René Descartes' most notable achievements, influencing the development and success of contemporary sciences that rely on mathematical applications. Therefore, Descartes is aptly referred to as the father of modern philosophy, particularly in the field of the modern philosophy of science.

**Team Crane**, an English philosopher, outlines a key element in the understanding of the phenomenon of the psyche called "Phenomenal Presence – From 2001 to the Present." In Crane's analysis, he elucidates the qualitative and qualitative characteristics of phenomenal presence, which serve as distinctive aspects of the mind. Essentially, phenomenal presence, within this context, is a philosophical-technical term denoting a directional quality. Crane's psychological approach finds its origins in the analytical philosophy tradition, drawing from the influences of Bertrand Russell, Ludwig Wittgenstein, and phenomenology by Edmund Husserl. It presents a logical, mathematical, and normative interpretation through the lens of psychology. To put it differently, this psychological perspective doesn't necessitate a separate mental structure. Logical, mathematical, and cognitive structures all hold a superiority based on the abstract conceptualization of the mind's organization. In his article titled "Facing the Problem of Awareness-1995," Australian philosopher Chalmers divides the study of awareness into two categories: A) the easy problem of awareness and B) the hard problem of awareness. He then delves into the exploration of the problem of awareness through this classification. Within the realm of the easy problem of awareness, cognitive science methods, grounded in neuronal and computational mechanisms, can explore aspects like the recognition of cognitive states, attention, the differentiation between mental states during sleep and wakefulness, reactions to external stimuli (sensations and perceptions), diverse mental states, and more. These aspects fall within the scope of the easy problem of awareness and can be studied using the appropriate tools in neuroscience, cognitive science, and related fields. Conversely, the hard problem of awareness, due to its mental and subjective nature, continually involves experiences such as emotions, feelings, thoughts, and perceptions. Examples include perceiving the delicacy of a red flower, the

sound of rain falling, the beauty of a child's laughter, the excitement of passionate and romantic love, and the feeling of longing (melancholy, nostalgia for past events, places, and people). These conscious, unified states fall within the purview of the hard problem of awareness. They are exclusively, as articulated by William James over a century ago, derived from the feeling and perception of the self ("I") and can only be comprehended and perceived by the self. "To the self" is deemed unattainable and mentally unreachable from this self-awareness and perception. In Chalmers' formulation, the fundamental question here is how these qualitative and qualitative aspects of awareness emerge from the physical processes of brain organs!

**Chalmers** introduces a dualism to elucidate this paradox. According to this theory, awareness is an irreducible quality inherent in physical entities, specifically the brain. Consequently, Mills posits a psychophysical principle that coexists with physical processes. From Mills' standpoint, since consciousness is phenomenally present in all entities across various levels in the world, it fundamentally implies a form of panpsychism in the cosmos (existence and the universe). Essentially, this implies that the universe, at its essence, possesses consciousness as an integral element.

**Jerry Fodor** (1935), together with Hilary Putnam and Noam Chomsky, explores the realms of awareness, cognition, and psychology through a theoretical framework grounded in computational calculations based on circuits, patterns, and neural configurations. This theory seeks to elucidate the operations of the mind and psyche in lower-tier hierarchical systems involving sensation and perception. Yet, it falls short in higher tiers, such as elucidating abstract thinking, the manifestation of consciousness, and the complexities of the mind. Fodor himself explicitly concedes that, "Given the current circumstances... consciousness appears to be the ultimate enigma of the mind" (Fodor, 2000, p. 99).

**Martin Heidegger**, born in Germany in 1889, stood out as one of the most prominent philosophers of the twentieth century. He particularly highlighted the term "Dasein" in the German language, a compound of "Da," signifying both "here" and "there" (akin to the Arabic term "هناك" meaning "there"), and "Sein," meaning "being" and "existence." According to Heidegger, human consciousness has its roots in a singular source, often described as primordial or primal beginnings. However, he contended that this consciousness is influenced by the spirit of the time, or more precisely, the historical and geographical context that shapes and defines 'Dasein' through

language (Heidegger, 1986-c2011, p.32). In simpler terms, Heidegger's philosophy suggests that language plays a fundamental role in revealing the essence of our existence, acting as a medium within the metaphysical structure of language. The resurgence of language involves a return to an internal, psychological, and mental realm.

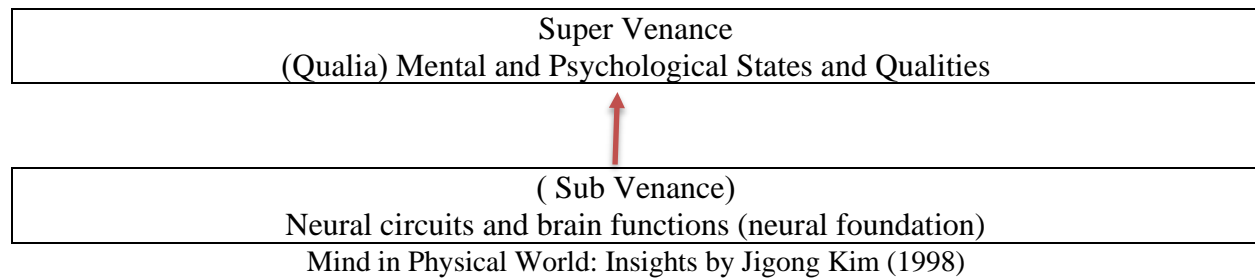
Affected by Heidegger's thoughts in formulating the idea (language as the dwelling place of existence, mind - psyche), philologically, one can also point to earlier contributors like Schleiermacher and Wilhelm Dilthey concerning the concept of hermeneutics.

**William Lycan**, born in 1945, is an American philosopher known for his perspective that consciousness, encompassing the mind and psyche, goes beyond being a mere cognitive process; instead, it is an internal sensation. Lycan views the mind, psyche, and consciousness as subjective inner feelings that perceive sensory experiences. Regardless of the qualitative nature of mental states, Lycan's theory of inner feelings is all-encompassing. While there may be some parallels with the views of Franz Rosenzweig, a German orientalist who explored higher-order thoughts, the two theories fundamentally differ. Lycan's concept of processing inner feelings involves a form of self-monitoring that relies on an internal attention mechanism, resembling sensory perceptions more than cognitive processes. He defines higher-order perception (HOP) as a specific representation with an alternative representation of its content. Lycan argues that, compared to Higher-Order Thoughts (HOT), HOP offers the potential to explain non-conceptual representations, providing a non-cognitive narrative of phenomenal consciousness. Higher-order perception, according to Lycan, is a unique and distinct form of representation that underscores the first-person perspective of phenomenal consciousness (Cavana, Nani, 2014, p. 83).

**Ji-Gon Kim**, born in 1394 in Daegu, South Korea, and now a Korean-American philosopher, serves as a professor of philosophy of mind and epistemology at Johns Hopkins University and the University of Michigan. He has explored the subject of the mind within the context of physicalism.

**Jigong Kim**, when elucidating how the mind and psyche function within the context of physicalism, employs the term "supra-mentality" to describe the interaction between the super vein of the mind and body. To put it differently, the term "Super Venance" (mind-psyche) contrasts with the sub-vein (neural foundation), signifying mental and psychological states and characteristics.

This implies the dominance of the super vein and the influence of neural impulses over the sub-vein.



**Colin McGinn**, a British philosopher born in 1950, and a scholar in psychology and the philosophy of mind, as well as a professor at Oxford and Princeton, believes that the understanding of the mind poses a challenge that surpasses human cognitive abilities. McGinn expresses that we find ourselves at an epistemological standstill concerning the awareness of the mind and psyche. While acknowledging the real existence of the mind-body problem, he argues that we lack the necessary conceptual and experiential tools to fully explain it. There is also a perception that our knowledge of the mind-body issue exceeds our capability to address it explicitly. In simpler terms, we intuitively comprehend the problem, but we struggle to articulate it. Furthermore, McGinn highlights a significant and inexplicable gap between firsthand experiences (I) and third-person experiences (me). According to him, concepts like awareness, mind, and psyche function as philosophical paradigms that naturally extend beyond the boundaries of our cognitive capacities and perceptual abilities (Cavanna & Nani, 2014, p.56) (McGinn, 2019, pp.7-8).

**Thomas Nagel**, an American philosopher and professor at New York University, gained prominence in the contemporary field of philosophy of mind and psyche through his renowned 1974 article, “What Is It Like to Be a Bat?” In this piece, Nagel argued about the inherent nature of subjective experiences, particularly the challenge of expressing the subjective experience (I) in objective physical terms (Me). Nagel posited that a bat’s subjective mental life is primarily influenced by the perception arising from sound reflections, which differs significantly from human perceptual modes, predominantly visual and less auditory. Nagel expanded on his research in the philosophy of mind and psychology, leading to the creation of the book “Mind and Cosmos.” In this work, he presents a somewhat extreme and relatively radical perspective on psycho-physical



reductionism. Intriguingly, he concedes that the world may possess consciousness, and we, as beings, have inherited a trace of cosmic awareness. In summary, Nagel suggests that “The entirety of the cosmos, beyond its physical manifestations, has taken the form of another entity known as mind and psyche” (Nagel, 2013, p. 23).

**Daniel Dennett**, an American philosopher and cognitive scientist, is considered one of the most thought-provoking figures in the field of philosophy of mind, consciousness, and awareness in the late 20th and early 21st centuries. Dennett addresses topics such as subjectivity, qualia, inner personal experience, Cartesian theater, homunculus (brain puppet), and more. He associates these concepts with temporal and spatial processes and assigns them to specialized domains and the overall functionality of the brain.

In Daniel Dennett’s view, the cognitive processing of the brain has developed over the course of cognitive evolution, taking on a widely parallel architecture. The brain, operating within a system of multiple processes and a continuous flow of information, functions simultaneously and asynchronously during processing. Dennett labels this type of mechanism for brain processes as the “multiple drafts” and calls the theory of awareness that stems from it the “multiple drafts model.”

“In light of this, Dennett contends that consciousness is distinct from both material existence and reliance on inherent characteristics. Rather, consciousness involves the realization of specific information contents, successfully achieved by its drafts in the struggle for attaining ‘cerebral fame.’ This viewpoint draws a clear distinction between conscious and unconscious processes, asserting that conscious processes enjoy widespread recognition across the brain, while unconscious processes are confined to specialized domains without adequate recognition” (Cavanna & Nani, 2014, p.27).

According to Dennett: “A cognitive neuroscience theory of consciousness must focus on the subject of consciousness. Consciousness, philosophically speaking, is considered the central executor, meaningful only to subjects. When compelled to analyze functional features, it treats qualities (qualia), inner experiences (conscious inner experiences), the hypothetical imagining of zombies, subjectivity, Cartesian theater, and others as incidental and relative, attributing them solely to multiple drafts distributed in space-time within the brain” (Dennett, 2001, p.235-236).

**Alva Noë**, born in 1964, educated at Oxford and Harvard, and a professor at the University of California, Berkeley (Department of Cognitive Science and Brain), has introduced the theory of perceptual awareness. According to him: conscious perception (skill); bodily activity as a whole deeply depends on the interaction between the body, brain, and environment. Alva Noë's theory of sensory-motor cognition emphasizes the active life awareness of a skillful organism.

In Alva Noë's theory of sensory-motor cognition, intricate mental representations of the external world take form in the gestalt-like image structure—a model where the mind and psyche act as a mirror reflecting the world. According to this theory, perceptual awareness is not merely the outcome of neuron firing and processing in the cortical cortex but is a state resulting from the body's overall response to the world. In essence, all sensations, such as sights, sounds, smells, and other complex sensations, lead to active bodily actions to explore the environment, resulting in perceptual awareness. While the organizational role of the nervous system and brain as elements and processing-executing-control systems plays a part, overall, perceptual awareness represents the active life of a skillful organism. From the theory of perceptual awareness within Alva Noë's sensory-motor framework, it is inferred that beings with different sensory-motor skills inevitably have different perceptual worlds.

**David Rosenthal**, who earned degrees from the University of Chicago and Princeton University, serves as a philosophy professor at the Center for Interdisciplinary Cognitive Studies. He has proposed the theory of higher-order awareness and analyzed the concept of awareness from two perspectives:

A. Animal Awareness: This pertains to the neurobiological processes associated with wakefulness and alertness. According to Rosenthal, animal awareness, considered as the primary form of awareness, can be explored and elucidated by examining various levels of brain activity.

B. Higher-Order Awareness: This form of awareness is directed towards conscious content. It represents a central and foundational issue in contemporary philosophy and neuroscience.

In line with Rosenthal's Higher-Order Thought (HOT) theory, when an individual engages in verbal communication, they are essentially making a conscious report of a mental state during awareness accessibility. It's accurate to say that humans possess the ability and advantage of using language to convey thoughts of higher-order awareness. Animals also show varying degrees of this kind of awareness based on their evolutionary levels. While animals cannot directly connect

their thoughts related to higher-order mental states through the language we humans use, they can express their inner mental states through a distinct and specific form of language.

In simpler terms, Rosenthal's Higher-Order Thought (HOT) model addresses a complex awareness issue, such as Chalmers' problem of consciousness or being in qualitative states. It clarifies that all observable features of awareness within the cognitive realm (thinking) or higher-order conscious thoughts are detailed and expounded upon. Essentially, conscious states are portrayed as a derivative of elevated thinking. In summary, distinct behaviors are linked with specific conscious mental states.

**John Searle**, born in 1932 in Colorado, USA, stands as one of the contemporary philosophers specializing in the philosophy of mind and language. According to Searle, the qualitative dimension of consciousness (mind-psych) is inherently tied to its subjective or mental nature. Essentially, conscious states exist only when personally experienced and, in the absence of an individual's involvement, conscious experience (conscious-mental-psychic) is non-existent. Searle employs the term "first-person ontology" to characterize this aspect of consciousness, distinguishing it from the third-person ontology of atoms, molecules, and fundamental physical entities that can exist independently of conscious entities. Consequently, Searle contends that a physical perspective is inadequate for explaining consciousness. He asserts that consciousness (mind-psych) is consistently a biological phenomenon generated by biological processes, capable of interacting with other biological processes. According to him, all mental phenomena are rooted in the brain, emerging from low-level neuronal processes, and at higher levels, mental states (psychic-consciousness) manifest as a result (Cavanna & Nani, 1396, pp. 118-119). In summary, John Searle maintains that while the qualitative states arising from biological cognitive phenomena have their foundation in biological processes, they cannot be simplified to low-level neuronal processes, despite originating from the amalgamation of these processes at higher levels. This perspective is termed "biological naturalism" in John Searle's approach.

**Hilary Putnam**, born in 1926, pursued studies in cognitive science, specializing in the philosophy of mind, language, and mathematics at the University of Pennsylvania and the University of California. He served as a professor at Harvard University.

In articulating his perspectives and theories on the philosophy of mind, psychology, and language, Hilary Putnam authored numerous works in the form of both books and articles. One notable work, titled "Mind, Language, and Reality" (1975), comprises a series of articles that scrutinize the mind and psychology as a functional organization and a computational system. In his work "Representation and Reality" (1988), he critically evaluates his own theory regarding mental and linguistic states as a functional organization within a computational system, delving into the intricate nature of psychological and mental states. Additionally, in 2001, through the development of "Mind, Body, and World," Putnam investigates and dissects themes such as the correlation between reality and perception and the interconnection between the body, mind, and the world. Throughout this exploration, he considers the perspectives of three influential thinkers: William James, John Austin, and Ludwig Wittgenstein.

**Paul Churchland**, born in 1942, and Patricia Churchland, born in Canada, are philosophers from Canada and the United States who are recognized for their eliminative materialist perspective. They challenge traditional psychological concepts, particularly those related to the mind, in the field of psychology. They draw comparisons to the phlogiston theory regarding fire, initially proposed by chemists to explain the nature of fire but later rejected by scientists like Priestley. Instead, they interpret the process of fire and the combustion of substances as the amalgamation of materials with oxygen.

In the eliminative materialist standpoint, according to the theory of neuro philosophy, the concept posits that all mental states are neurophysiological occurrences resulting from neural firing patterns, functional processes, and computations within the brain and its neural circuits.

Within the Churchlands' perspective on the unity of the brain and mind, contemporary knowledge from disciplines such as neuroscience, neurophysiology, neurobiology, and brain science support the notion that behavioral capacities and mental states align with specific physical processes within the brain's structures. They argue that these capacities and states have a connection to the particular physical processes occurring in the brain's structures, as evidenced by modern disciplines like neuroscience, neurophysiology, and brain science.

Mikhail Reshetnikov: Non-material theory of the psyche , like information

Mikhail Reshetnikov proposes a non-material theory of the psyche, specifically focusing on the significance of information. According to Reshetnikov, psychologists, physiologists, and psychiatrists have long neglected the crucial concept of information in their theories and hypotheses. In the contemporary scientific landscape, information is viewed as a non-material element, representing the natural human psyche without initial immersion in the social environment and without a child's brain being programmed based on the material surroundings of society.

Notably, Norbert Wiener, the founder of cybernetics, emphasized that information is distinct from both matter and energy; it is purely informational. The material aspect is attributed solely to the carriers of information, whether biological, paper-based, electronic, etc. Therefore, information is considered to have a structural nature associated with the ideal category and class. Despite being non-material, information assumes specific quantitative and qualitative characteristics and can carry emotional loads such as neutrality, threat, correctness, incorrectness, etc. However, these attributes only manifest in the presence of a subject. Reshetnikov underscores that the understanding of information, whether in different subjects or uniform instances (such as the impact of September 11, 2001, causing mourning in the United States and joy in the population of Liyva), essentially relies on the perception of a subject (real evidence). Living beings, particularly humans, are identified as the sole entities capable of perceiving, storing, producing, and conveying non-material information (Reshetnikov, 2023, p.2). In essence, information serves as a biological interface to a non-material nature within a biological substance.

B - Elaboration on the phenomenon of consciousness (related to the mind and awareness) from a scientific viewpoint (scientific theories regarding awareness, the mind, and psyche):

Francis Crick and Christof Koch: Establishing the neurological basis of consciousness (mind and psyche).

Francis Crick, born in England in 1916, co-discovered the DNA double helix structure alongside James Watson and Maurice Wilkins in 1962, leading to their joint Nobel Prize recognition. Christopher Koch, born in Kansas in 1956 and educated at the Max Planck Institute in Tübingen, Germany, collaborated with Crick in researching consciousness.

Over a decade, Crick and Koch jointly explored the neurobiological underpinnings of consciousness, with Crick proposing that humans result from the active output of brain neurons and Koch suggesting that humans emerge as products of information processing from the brain's computational activities.

**Antonio Damasio**, born in Lisbon in 1944, stands out as a distinguished neuroscientist in consciousness research. His focus lies in the intricate interplay between organisms and their environment, highlighting the profound connection between mental states and qualities. According to Damasio, consciousness, mind, and psyche are shared through our behaviors in interactions with others.

From these perspectives, a crucial distinction emerges: the brain is viewed as a physical and material foundation, while consciousness, mind, and psyche are tied to processes stemming from the activities of neural circuits and synapses.

Damasio contends that the brain is captivated by the body, serving to maintain balance and homeostasis amidst constant changes in internal (body) and external (world) environments. The brain leverages chemicals in the bloodstream for various effects, inducing calmness, excitability, hunger, or sexual desire. Certain substances, like oxytocin, play a vital role in behaviors such as sexual intercourse and bonding with family. Damasio underscores the serious nature of the brain's immersion in a chemical environment (Damasio, 2019, pp. 252-251). In the words of the researcher, "Humans are essentially biological cultural robots" (Seyyed Valilou, 2022, p. 158).

6- Neuro-Existentialism and the Neuro-Naturalism Theory (a theory centered around the fundamental existence of functional structures in the brain-body-being, intertwined with the matrix of the phenomenon of the psyche)

Neuro-naturalism is derived from the outcomes of research by Benjamin Libet and other studies aligned with his work. Libet, a pioneering figure, primarily focused on the concept of will and conducted laboratory experiments. In his 1986 experiments, Libet found that approximately 550 milliseconds before our conscious decision-making, brain waves manifest as if foreshadowing that choice and subsequent action. This experiment revealed that about half a second later, the individual's hand would initiate movement in response to a task. Essentially, the brain's potential readiness precedes the execution of an action.

For instance, when we decide (in simpler terms, when we want to do something), such as tying our shoelaces, it takes around 150 to 200 milliseconds to complete the action. However, the potential readiness that the brain decides for this action occurs roughly 550 milliseconds earlier. In other words, about 350 milliseconds before we consciously desire or decide to undertake an action, the brain has already activated the potential readiness and issued the command. These comprehensive findings from Benjamin Libet's experiments, conducted over 40 times from 1986 onwards, led him and his colleagues to propose the theory of neuro-naturalism.

Existentialism has undergone three waves thus far. The initial wave, led by thinkers like Søren Kierkegaard, Guard, Dostoevsky, and Nietzsche, focused on critically examining the role of theological narratives. The second wave, represented by figures such as Jean-Paul Sartre, Simone de Beauvoir, Merleau-Ponty, and Albert Camus, emerged post-World War II to challenge the authority of state-cities and nation-states. The third wave, reacting to critiques of the second, abandons the idea of human choice, leaving individuals lost in boundless existence. This existential being is subject to psychological states and qualities dominated by the biochemical processes of the brain, as demonstrated in Benjamin Libet's experiments, where free choice and will are considered non-existent. Our genetics, gender, brain biochemistry, childhood events, and past bind us to involuntary dependence. Faced with such a being, the question arises of how we can expect freedom and the power of choice from it.

Hence, the drama of the human condition arises from awareness, as it involves information obtained in a deal (evolution) in which none of us participated, and from which we did not choose (lacking previous choice). The improvement of existence comes at the cost of losing the innocence of that existence. The emotional response to what is happening serves as an answer to a question never asked and raises suspicion in the Faustian deal that we could never negotiate. Nature (evolution) has orchestrated the deal for us (Damasio, 2019, p. 440).

"We don't come into the world with specific social norms; instead, we develop within particular social norms in the world (within specific paradigms). These function like learning programs guiding us on what information to acquire and assimilate, and how to structure ourselves within those contexts—similar to language learning programs. Consequently, ethical capability can be likened to linguistic ability; a recognized mechanism shaping human interaction with the environment" (Donato & et al., 2023).



The theory of evolutionary neuroscience, also known as neuro existentialism, within psychology, psychiatry, and neuroscience in recent decades (within the last half-century), asserts that our psyche results from the neuronal, biochemical, and cognitive processes of our brain. Thus, the psyche is condensed into the activities of neurons.

In simpler terms, establishing human agency in the age of neuro existentialism and neuro naturalism means stating: "Human implies a cultural biological robot" (Seyyed Valilou, 2022, p. 158).

7- Existence has intelligence, consciousness and psyche (similarity of neural networks of the brain with galactic networks):

consciousness, awareness, psyche, and similar concepts are found within the realm of qualitative information. Existence encompasses matter, energy, and information, where matter, energy, fields, etc., have quantitative characteristics, while information is qualitative. In this holistic cosmic unity, precise mathematical and physical laws govern with constants that are highly accurate.

In an article, Italian astrophysicist Franco Vazza from the University of Bologna and neurosurgeon Alberto Fletti from the University of Verona compared the neural networks of the human brain with the networks of cosmic galaxies. They highlighted remarkable similarities between these two systems in a 2020 article published in the Frontier Physics journal.

"We have presented a thorough comparison between neuronal networks and the cosmic web, focusing on the most intriguing complex networks in nature. Our goal was to assess the level of similarity between these two physical systems that exist tangibly" (Vazza & Fletti, 2020, P.P.6-7). These scientific analyses provide a clearer understanding of the fundamental dynamics of these two super-systems. Both the brain, with its immense neural networks comprising one hundred billion neurons, and the cosmos, with even larger networks of one hundred billion galaxies, show a form of intelligence, awareness, and consciousness.

## Discussion and Conclusion

Memory, consciousness, mind, and analogous elements are equivalent and uniform constituents within the framework of psyche occurrences. Memory, defined as an organism's capability to receive, process, retain, and recall information, underscores its pivotal role. Given the inescapable destiny of entropy in any system, the evolution of awareness has become imperative in allowing

living systems to confront and manage the inherent entropy within their system. Thus, the significance of awareness in counteracting the entropy within the dialectical course of life becomes paramount. Within the evolutionary process, awareness has developed to secure the organism's survival, with Damasio highlighting its distinctive feature as a selective force: "As distinct beings equipped with a brain, we are consistently exposed to internal and external stimuli, and, through processes occurring at three levels (pre-self, core-self, and extended-self), we gain awareness of emotions, feelings, and consciousness at various levels" (Damasio, 2019, p. 405).

Within the psyche matrix, emotions emerge as noteworthy components, serving as the impetus for initiating feelings and functioning as warning signals during emotional processing. The widely recognized six basic emotions - fear, anger, sadness, disgust, surprise, and joy - as identified by Darwin and extensively studied by Ekman and others, are acknowledged as shared emotional experiences. Exploring the interplay between emotions and memory, it is observed that the reinforcement and reconstruction of memories occur during the learning of novel events when accompanied by varying levels of emotion. Emotions, through their impact on the heightened closure of neuronal circuits and synaptic spines, contribute to enhanced memory retention, facilitated recall, and the effective representation of acquired information.

Hence, the entirety of the body is interconnected; our thoughts and psyche are embodied within us, and our body language often communicates our emotional states more effectively than spoken words. This extends beyond external body parts to include internal organs, which also wield considerable influence.

The use of awareness holds significant transformative and evolutionary implications within the structure of the psyche matrix, with unconsciousness preceding the development of awareness. In different phases of the evolutionary timeline for living organisms, awareness did not exist in its contemporary form, and unconsciousness, particularly in the evolution of the central nervous system, had not yet fully developed in higher mammals. Survival, the struggle for survival, and the evolutionary progression of emotions and feelings played integral roles. Essentially, unconsciousness predates awareness. This form of unconsciousness has undergone various stages in history, ranging from mythological attributions to divine will and the fate of humans. By the early 20th century, Sigmund Freud introduced concepts such as the subconscious, semi-consciousness, and subsequently, individual unconsciousness. Subsequently, Carl Gustav Jung

interpreted these concepts through various ancient patterns that influenced both individual and collective behavior.

In the ongoing evolutionary development of living organisms, particularly following the appearance of hominins (human ancestors), the intricate structure of the psyche progressively becomes more intricate. The advancement of the nervous system, especially post the era of primates and hominins, facilitated smoother and more effective access to the reservoirs of the mind and psyche. Throughout this progression, unconscious mechanisms associated with the regulation of bodily homeostasis have become more adept in the brain stem and hypothalamus during the early stages of evolution. The unconscious coordination of the brain stem and hypothalamus governs vital functions, including the heart, lungs, kidneys, internal glands, and the immune system, ensuring the continuation of life without conscious awareness. Concurrently, mechanisms of awareness play a more pronounced role in aiding living beings to navigate environmental challenges, particularly unforeseen changes and issues related to survival.

Humans, having traversed the evolutionary journey from single-celled organisms to our current state, carry the entire potential of that evolutionary path. Over millions of years, evolutionary processes have progressed from single-celled life forms with physical and chemical sensitivity (attributed to the sensitivity of organic molecules) to humans with intricate unconscious-aware processes in their minds and the complex structure of their psyche. These processes gradually unfold at various levels of the self. In the words of Antonio Damasio: "Self-levels and the emergence of consciousness in their own evolution take three forms: (1. Pre-self or Self-Proto); (2. Self-nuclear or Self-Core); and (3. Self-extended or Self-Extended), forming through gradual processes at different developmental levels" (Damasio, 2019, p. 434).

From the point of sperm coagulation and its subsequent development, and later during the formation of the embryonic nervous system, a pre-self (Self-Proto) takes biological shape within us. However, after the evolution of this central nervous system, even during the embryonic phase, it is likely that the self-nucleus (essential core) emerges through sensory interactions of the embryonic self within the mother's womb, responding to various stimuli. This gives rise to a form of initial, somewhat indistinct awareness (second-order or raw awareness). Following birth and throughout infancy, as interactions with the external environment increase, and with the gradual evolution of neural-brain structures, the self-core or essence (Self-Core) undergoes further

development. As a result, initial awareness forms within the circuits of interconnected neural networks (perceptron), and with ongoing growth, the self-extended (Self-Extended) (expanded awareness or life narrative) takes shape in the broader realm of the psyche and mind.

Essentially, the origin of the primary aspect of our mental and psychological selves, rooted in fundamental awareness, reveals the most basic sense of self, a potent and essential essence perceptible only to the individual. This awareness progressively brightens our mental and psychological perception, illuminating our understanding of ourselves, our surroundings, and even the universe within us. Under the influence of this awareness, we continually see, know, and comprehend more than ever before. The elements of this awareness mechanism encompass feelings, perception, memory, reasoning, and language.

As humans, we have involuntarily evolved in the process of evolution, developing a sophisticated nervous system that encompasses the capacities for feeling, perception, learning, reasoning, and language. Thus, the tragic narrative of human existence on Earth's stage unfolds.

Despite the millennia of suffering and tragedy in the evolution of intelligent humans (*Homo sapiens*), with hardships evident in the natural world and even in their own collective conflicts, human awareness, managed not in a Hobbesian sense but rather in a Kantian manner, may potentially alleviate the tragic aspects of life through the understanding brought by science. Perhaps the conscious world and existence, through human awareness, aim to manifest their profound awareness.

Mental and psychological images refer to similar concepts of mental representations. Essentially, these representations exist at a level higher than emotions and subsequent perceptions. They manifest in the sensory processing streams of vision, hearing, smell, taste, and somatic sensations (touch, muscle, temperature, pain, visceral, and vestibular), undergoing a transformative process where quantitative information is converted into qualitative experiences in the visual, auditory, olfactory, gustatory, and somatic cortexes (V1,V2,V3,V4,V5...).

These mental and imaginative patterns can be categorized into two types:

A. Conscious mental and imaginative patterns: These can only be consciously accessed through the first person (I), involving one's own patterns and imaginations, yours, or his/hers. This is because they represent qualities or qualia.

B. Unconscious mental and imaginative patterns: Not all mental and cognitive images processed and generated by the brain are conscious. Metaphorically, there is an underlying layer beneath consciousness and the conscious mind, comprising multiple layers where mental and cognitive images are processed and formed, yet they do not receive conscious attention. In essence, the mental imagery programs generated by the active and dynamic brain persist without interruption, even during sleep stages like dreaming.

Concerning the origin, roots, and nature from a neurobiological psychology and mind perspective, we can initially focus on sensory organs. Nervous impulses arising from the brain's interaction with bodily sensations or external stimuli are received, transformed, reinforced, and transmitted to perceptual and cognitive regions. These impulses, taking the form of neural patterns, generate maps in interconnected neural circuits across various brain regions, particularly in the cerebral cortex. While these brain maps don't precisely correspond point-to-point with the intended object, the brain is a creative and highly trainable system. Its neural patterns and brain maps are directly linked to its parameters, structural designs, and acquired training. Consequently, as the brain is a creative, trainable, and sophisticated system, it doesn't simply mirror its surrounding environment through point-to-point processing like a basic mirror. Instead, it constructs, processes, and deduces a world based on its parameters, structural designs, and learned training. In its most unique cases, it stands out, and in its most general instances, it aligns with brains having similar designs.

**The overarching challenge within the neuroscience paradigm of the Renaissance lies in the absence of a unified and comprehensive theory.** The difficulty arises when formulating new models, specifically concerning the qualitative distinctions between cognitive and emotional states. The proposition is that thoughts show a mental neutrality, adept at self-representation through symbolic means and computations. Despite the stark contrast between our emotions and those of animals, emotions such as anger and distress seem qualitatively distant from conscious thought. In essence, it is suggested that emotions may not find their optimal expression in cognitive methods, such as statements, images, and comparisons. This poses a significant hurdle in the development of models, as articulated by Ferdnberg and Silouman (2009, p. 550) and Friedenberg and Silverman (2006, p. 552).

As an example, it is important to recognize that fear serves as an adaptive emotional response, guiding us away from perilous situations. While emotions like fear interact and impact one another,

they inherently differ in essence. Currently, within the Renaissance neuroscientific framework, there lacks a unified model that comprehensively explains these emotional dynamics. In response to this gap in research, the presented model in this study, known as the "Theory of Formation Levels: A Creative and Transcendent Psychogenic Model," aims to fill this void.

*Seyyed Valilou's conceptual-theoretical model regarding the origin, roots, and essence of the phenomenon of the psyche: In consideration of the research documents and discoveries from post-Renaissance of Neuroscience, a conceptual-theoretical model is proposed within the framework of the following theory:*

***Theory of Formative Levels of the Creative and Transcendent Psyche:***

*In accordance with this theory of integration, the psyche arises from intricate combinations and representational processes, encompassing neuronal aspects (quantum oscillations - string theory in quantum physics), protein oscillations (follicle effect), fractals, microtubules, synapses, neuronal circuits, and perceptron neuronal networks. Through engagements with sensory inputs, these processes give rise to neural impulses and intrinsic cognitive activities, ultimately forming a distinct environment and surface structure resembling an internal mirror representation as the most elevated process of existence. The creative internal mirror patterns, shaped by genetic, gender-based, experiential, learning, and environmental influences on the holistic structure of the organism (body-brain-psyche) in an individual, become apparent. This is because neural representation patterns in each person are intricately linked to the specific rules of their brain, constructed, addressed, and ultimately reflected in those foundations.*

Fundamentally, the psyche is the most elevated process, encompassing abstract and singular components like memory, consciousness, awareness, and the philosophical concept of the mind. It arises from the intricate processing and functions of neural structures in a comprehensive and holographic manner. This emergence is a result of complex interactions in neural networks, neuronal circuits, synapses, microtubules, fractals, protein vibrations (phosphorylation effects), and quantum vibrations (string theory in quantum physics) during engagement with sensory inputs and internal cognitive processes. The reflective portrayal of inner creative activity in the supreme transcendental process is evident, and ultimately, the evolutionary journey unfolds the remarkable expression of the mind's facets, multidimensionality, and organizational levels, all originating from the interactions among the brain, body, and existence.

In conclusion, the psyche theory of formative levels, encompassing the origin, roots, and nature of the phenomenon of the psyche, can be succinctly outlined in the table 1. This theory is organized in the structure of a hierarchical order as table 1.

**Table 1.** Theory of Formative Levels of the Creative and Transcendent Psyche

Formative Levels of the Creative and Transcendent Psyche	
13-	The expression of numerous aspects and intricate occurrences in the formative stages unveils an internal creativity and transcendence through the interactions of the brain, body, and existence.
12-	The expression of the most elevated transcendental processes related to memory, alertness, awareness, mental (philosophical framework), and psyche (scientific and psychological framework) aspects, occurring during activities and overall brain interactions in a holistic state, is reflected in the form of an internal creative representation akin to a mirror.
11-	Operations within the cortex, interactions between the cortex and thalamus, reciprocal influences between the thalamus and cortex, as well as cortical-subcortical dynamics, all contribute to the representation of emotional, cognitive, and various functions across different levels of awareness, semi-awareness, and consciousness.
10-	Engagement in cortical circuitry across the six layers I, II, III, IV, V, VI at the conscious level.
9-	Engagement at the level of circuits, nuclei, and subcortical components interacting with each other on a subconscious level.
8-	Elaborate neural networks consist of a vast array of interconnected neuronal circuits, constituting the essential components of brain nuclei.
7-	The interconnected neural circuits that form active neuronal clusters play a crucial role in the organization, shaping, storage, and formation of short-term and long-term memories, as well as the representation of these memories through recall and other retrieval processes. Each neural pyramid acts as a gateway to conscious awareness.
6-	The formation of memory foundations occurs at the synapses between pre- and postsynaptic neurons in the central nervous system, facilitated by various mechanisms.
5-	Neurons function as frameworks where lower-level elements are structured, creating a coordinated, dynamic, and harmonious system. They engage with one another in interactions while organizing and carrying out responsive and reactive activities within the system.
4-	Microtubules and their interconnected networks in the structure of nerve cells and neurons.
3-	Fractals, particles, and vital molecules form the structure of the nerve cells in the brain.
2-	Protein vibrations (Frolic effect) in the structures of neural complexes.
1-	Quantum fields, elementary particles, and quantum oscillations.

### Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

### Ethics statement

The studies involving human participants were reviewed and approved by the ethics committee of Islamic Azad University. The patients/participants provided their written informed consent to participate in this study.

### Author contributions

All authors contributed to the study conception and design, material preparation, data collection, and analysis. All authors contributed to the article and approved the submitted version.

### Funding

The authors did (not) receive support from any organization for the submitted work.

### Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.



## References

- Cavanna, Andrea Eugenio & Nani, Andrea(2014). “Consciousness: Theories in Neuroscience and Philosophy of Mind:”. ISBN: 978-3-662-44087-2; ISBN:978-3-662-44088-9(eBook). Doi:10.1007/978-3-662-44088-9.Springer Heidelberg New York Dordrecht London. Library of Congress control Number: 2014950510.
- Damasio, Antonio (2019). In search of Spinoza, happiness, sadness and the brain with emotion, translated by Reza Amir Rahimi, Tehran: Mehrovista Publications.
- Damasio, Antonio (2019). Understanding the incident, translated by Taghi Kimiaei Asadi, Tehran: Negah Maazeresh Publishing House.
- Denett, Daniel (2001).“ Are We Explaining consciousness yet?”. Center for Cognitive Studies, Tufts University, Med Ford, MA02155,USA, Elsevier Science B.V. Alrights Reserved. PII: S0010-0277(00)00130-x.
- Donato, Francesca; Corrado, Simona domenica; Donato, Annalidia; volpentesta, Luigina & donato , Giuseppe(2023). “The History, Not so Short , of Neuro Ethichs”. *Medicina Historica*, 2023;Vol.7,N.1:e2023009.
- Durant, Will (2016). The Awakening of the Mind, translated by Rehane Asgari, Tehran: Atr Kaj Publications.
- Durant, Will and Durant, Ariel (2013). History of civilization, translated by the group of translators (Amir Hossein Arianpour and others), 7th edition, 2nd volume (Ancient Greece), Tehran: Scientific and Cultural Publishing Company.
- Fodor, Jerry(2008).“ The Language of Thought Revisited”. Forth Coming in *Philosophical Psychology*”. Oxford, England: oxford University Press, ISSN: 0199548773.

- Fredenberg, J. and Siloman, Gordon (2008). Cognitive science: an introduction to the study of the mind, translated by Mohsen Patheh Hal and colleagues, Tehran: Publisher of the future research center of defense science and technology.
- Friedenberg, hay & silverman, Gorden (2006). “Cognitive Science: An Introduction to the study of Mind”. (Manhattan College), Thousand Oaks, London, New Delhi.
- Grimal, Piyer (2017). Asatir Jahan, translated by Mani Salehi Allameh, first edition, second volume, Tehran: Mohajer Publishing House.
- Heidgger, Martin (1986- c2011). “Gesantausgabe”. Language the Home of Existence.
- Hergenhahn, BR (2018). History of Psychology, translated by Yahya Seyed Mohammadi, Tehran: Neshar Arsbaran.-
- Kendel, Eric (2018). In search of memory: the emergence of new knowledge of the mind, translated by Salamat Ranjbar, Tehran: Age publication.
- Majd, Ahmad and Shariatzadeh, Seyyed Mohammad Ali (2018). Cellular and molecular biology, Tehran: Aizh Publications.
- MC Ginn, Colin (2019). “Problems in Philosophy”. The Limits of Inquiry, Blackwell, Oxford, UK & Cambridge USA.
- Moren, Edgar (2015). The Nature of Nature; Translated by Ali Asadi, Tehran: Soroush Publications.
- Moren, Edgar (2016). Method: Knowledge of Knowledge, translated by Ali Asadi, second edition, Tehran: Soroush Publications.
- Nagel, Thomas (2013). “Mind & cosmos”. University Press, Oxford.
- Searle, Jan (2014). Knowledge of Knowledge, translated by Reza Amir Rahimi, Tehran: Aghat Publications.

Seyyedvalilou, Mir Mahmoud (2022). Genealogy (discourse on the method of applying Descartes' intellect) in Tahaft Al-Falasafeh Ghazali, first edition, Tehran: Farhoosh Publications.

Seyyedvalilou, Mir Mahmoud (2022). Journey into your inner self, Tehran: T-ara Publishing.

Vazza, Franco & Fletti, Alberto (2020). "The Quantitative Comparsion Between the Neuronal Net Work and the Cosmic Web". Journal of Frontiers in Physics. Volume 8article 525731. Doi:10.3389/fphy.2020.525731.