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# Integration between Psychology and Spirituality: A New Paradigm for The Essence and The Nature of The Psyche

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### ABSTRACT

Here, we present a new paradigm explaining essence and origin of psyche. It integrates and unifies different approaches in psychology, biology, and ancient philosophy. It further introduces spirituality to psychology. Concepts of spirit and soul are analyzed as wave function, information potential, and quantum state in accordance with quantum mechanics. The brain is considered as a wave analyzer that processes information received from cloud of soul. The interaction between information present in the soul and brain produces the conscious mind. Information that does not interact with brain and is not immediately retrievable is called the unconscious and accessible information that does not interact with the brain is the preconscious. The soul is divided into three parts: Animal soul, human soul, and guiding spirit.

The animal soul is the energy of magnetic field that has emerged from all electromagnetic fields of all cells and organs. According to Freud, interaction between animal soul and the brain produces the id. The human soul and guiding spirit are two quantum informational states; when they interact with the brain, they produce the ego and superego, respectively.

This new approach affords a new interpretation of life and death. It considers life to be a workshop for intellectual growth and spiritual evolution and views physical disease as an indicator of unresolved conflicts and traumas. Psychological difficulties are an indicator of spiritual deviation from one's personal path. Therapeutic intervention's purpose is restoring the wellbeing that allows individuals to continue their journey of life with love, happiness, and freedom.

#### Keywords

Psyche, Mind, Soul, Spirit, Conscious, Unconscious, Id, Ego, Superego.

#### Introduction

The words psyche, mind, soul, and spirit are often used interchangeably with no concrete idea of their true meaning or nature. The basic meaning of the Greek word psyche was life in the sense of breath. Derived meanings included spirit, soul, and ultimately self in the sense of conscious personality or psyche [1].

Unlike many other words and phrases, there is no clear evolution for the use of the word mind. Its meaning was more dependent on the context of its usage rather than any single meaning. While

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the religious believe the mind houses the spirit and an awareness of God, scientists are of the view the mind is the generator of ideas and thoughts. It was not until the 14th and 15th centuries that the concept of the mind was gradually generalized to include all mental faculties, thought, volition, feeling, and memory. In the late 19th and early 20th centuries, psychology was regarded as a respected science. In the early 1900s, Sigmund Freud introduced his psychoanalytic theory and despite much advancement in the study of psychoanalytic theory, Freud's basic thoughts have continued to shape views on the theory of the human mind.

Freud's personality theory (1923) postulated that the mind was structured into three parts, namely, the id, ego, and superego, which all develop at different stages in our lives.

According to Freud's model, the id is the primitive and instinctual part of the mind that contains sexual and aggressive drives and hidden memories, the superego operates as a moral conscience, and the ego is the realistic part that acts as a mediator between the desires of the id and the superego.

The three parts are theoretical constructs of our mental life's activities and interactions [2]. Freud's earlier, topographical model of the mind divided the mind into the three elements: The conscious, preconscious, and unconscious. The conscious comprises events of which we are aware, the preconscious includes events that are in the process of becoming conscious, and the unconscious are events of which we are unaware [3].

The notion of the unconscious continues to play a role in modern psychology as researchers strive to understand how the mind operates outside of conscious awareness. The iceberg metaphor is a commonly used visual metaphor when attempts are made to relate the ego, id, and superego to the conscious and unconscious mind. In the iceberg metaphor, the entire id and part of both the superego and the ego are submerged in the seven-eighths underwater that represent the unconscious mind. The remaining portions of the ego and superego are in the one-eighth above the water in the area of the conscious mind [4].

The cognitive tradition of research on unconscious processes, which is very empirically oriented, has been based on relatively few theoretical assumptions. Cognitive research has revealed that automatically and clearly outside conscious awareness, individuals register and acquire more information than what they are able to experience through their conscious thoughts [5].

However, to date, no theoretical model has explained the nature or the origin of the three parts of the psyche, the nature of the conscious and unconscious, and the relationship between spiritual dimensions of humankind and the psyche.

In this article, a new theoretical model is proposed in which the spiritual realm is explained and expressed by employing the same terms and concepts of quantum mechanics in which the spirit is information potential when it interacts with the body to transform it to a quantum state, which corresponds to the soul. The proposed theoretical model describes the essence and origin of the three parts of the psyche, namely, the id, ego, and superego, and further sheds light on the nature of the conscious, preconscious, and unconscious.

## The need for spirituality in psychology

Despite the fact that caregivers are in agreement that spirituality plays an important part in medical care, conventional medicine has not addressed the mental, emotional, and spiritual needs of the individual effectively.

Conventional medicine has long recognized that patients and/or caregivers' belief in the effectiveness of a particular treatment affects the outcome of that treatment. Known as the placebo effect, this has a real and measurable effect on patients [6].

However, considering conventional medicine's focus on biomechanical treatments, it has been unable to justify incorporating the placebo effect into its treatments even though it is often used in practice [7].

Empirical research has validated that spirituality is a life-long process and has an effect on the quality of life, health, healing, and illness. Lack of spirituality knowledge could thwart spiritual and psychological care.

Patients whose spiritual needs are not met may not be truly healed regardless of their physical condition at the end of treatment [7,8]. Consequently, it is imperative for healthcare professionals to understand spiritual dimensions and individuals' spirituality because it is a universal phenomenon that concerns them. Furthermore, health providers need to be spiritually educated so as to increase their awareness and knowledge of their own spirituality so as to enhance their clients' spiritual care, better address their clients' spiritual concerns, and increase their spiritual wellbeing.

Moreover, in many instances physical cure is impossible. Yet patients may need spiritual comfort, which can be provided. An integrative understanding of healthcare appreciates the importance of meeting these spiritual needs [9,10]. It is evident that humans are not mere simple biological machines: They are also spiritual beings who are inevitably, in some sense, oriented toward the transcendent, whether defined as the universal principle, anima mundi, cosmos, God, or something that is simply greater than the individual alone. Beliefs about spirituality affect interpretations of life, from birth to death, from self-worth to one's life philosophy. Thus, spirituality cannot be isolated from human nature.

Spirituality may be defined as a complex and multidimensional part of the human experience, which transcends all in the concrete world that involves cognitive, experiential, behavioral, religious, and philosophical aspects and qualities pertaining to the spirit/ soul. Spiritual needs are related directly to the spiritual nature of humankind. Therefore, there is an unfulfilled need to understand the spiritual aspects of humans.

#### The quantum nature of the soul

Although there is much consensus that life, as we know it, involves some deeper animating force inherent in all living beings, there is no universal agreement on the nature, origin, and purpose of the soul.

According to spiritual disciplines, spirit is essentially formless intelligent energy, which has become individualized by the splitting of God's energy when it animates the physical body become soul with an expressed individuality, which is in many religious and philosophical systems. It denotes the inner essence of a being, which comprises its locus of sapience (self-awareness) and metaphysical identity. Souls are usually described as immortal (surviving death in an afterlife) and incorporeal (without bodily form); however, some are of the view souls have a material component and have even attempted to establish the weight of the soul.

As described by quantum physics in relation to particle-wave duality, the soul can become identified with the physical body and take on its nature. According to the first axiom of quantum mechanics, every system can be described by a wave function or quantum potential that is a function of all the particle coordinates and possibly time. Bohm explained the concept quantum potential to shed light on why and how quantum particles act under the influence of the quantum potential. This leads to the notion of an "unbroken wholeness of the entire universe," which proposes that the fundamental new quality introduced by quantum physics is nonlocality [11].

Hence, Basil and Hiley referred to the quantum potential as information potential, given that it influences the form of processes and is itself shaped by the environment as a form of "quantum intelligence" [12] that guides the physical world intelligently as the soul does to the body.

The quantum potential constitutes an implicate or hidden order and may itself be the result of yet a further implicate order (superimplicate order) [13]. The implicate order is expressed by a quantum state, which is a set of mathematical variables (information) that describes the system maximally.

While each cell and each organ have a specific quantum state, the whole body also has a quantum state. The quantum state of the individual living cell is the mathematical expression of the superimposed mixed states of the cell, the organ, and the whole body to form the implicate order that informs each single cell of its structure and function.

Therefore, the quantum state is the soul that informs and determines the properties of the cell, which is guided by its location in space. The superposition of all quantum states of the cells in one organ determines the soul of the organ. Furthermore, the superimposition of all organs and tissues in the body determines the quality of the soul of the person.

#### The nature of the psyche

Generally, it has been well accepted by traditional neuroscience that the psyche is generated in the brain. Functional neuroimaging is employed to study the neuroanatomical correlates of various cognitive processes that constitute the mind. Evidence from brain imaging indicates that all the mind's processes have physical correlates in brain function [14].

However, such correlational studies have not determined whether neural activity plays a causal role in the occurrence of these cognitive processes. They also have not determined whether neural activity is either necessary or sufficient for such processes to occur.

Identification of causation and of necessary and sufficient

conditions requires explicit experimental manipulation of that activity. If manipulation of brain activity changes consciousness, then a causal role for that brain activity may be inferred [15,16].

The holonomic brain and quantum consciousness theory was initially developed by neuroscientist Pribram in collaboration with Bohm. This branch of neuroscience proposes the notion that human consciousness is formed by quantum effects in or between brain cells. It further describes human cognition by modeling the brain as a holographic storage network [17,18].

The experiments conducted by Pribram on Lashley's engram experiments employed lesions to determine the exact location of specific memories in primate brains [19].

Pribram removed large areas of the cortex and demonstrated that memories were not stored in a single neuron or exact location in the brain, but were spread over an entire neural network.

Lashley suggested that brain interference patterns could play a role in perception, but was unsure how these patterns were generated in the brain or how they led to brain function [20].

Pribram noted these processes involve electric oscillations in the brain's fine-fibered dendritic webs, which are different from the more commonly known action potentials involving axons and synapses [21-23].

These oscillations are electromagnetic waves and create wave interference patterns in which memory is encoded naturally. Furthermore, the waves may be analyzed by a Fourier transform [24,25].

Gabor and Pribram among others noted the similarities between these brain processes and the storage of information in a hologram, which can also be analyzed with a Fourier transform [26]. Synchronized neuronal currents induce weak magnetic fields around them. The dendritic webs create a magnetic cloud, which is specific for the specific circuit. In a hologram, any part thereof with sufficient size contains the entire stored information.

Pribram et al., noted the similarities between an optical hologram and memory storage in the human brain. According to the holonomic brain theory, memories are stored within certain general regions, but stored non-locally within these regions [27].

This theory postulates that a piece of long-term memory is similarly distributed in the magnetic field over a dendritic circuit so that each part of the dendritic network is exposed to all the information stored across the entire magnetic field [28].

This model allows for important aspects of human consciousness including the fast-associative memory that creates connections between different pieces of stored information. The model also posits the nonlocality of memory storage: A specific memory is not stored in a specific location but every cluster of neurons is specialized to process certain information present in the magnetic field around the cells [29,30].

The magnetic field around the neurons can be detected by employing the superconducting quantum interference device (SQUID), which is a very sensitive magnetometer used to measure extremely subtle magnetic fields, based on superconducting loops containing Josephson junctions. Magnetoencephalography uses measurements from an array of SQUIDs to make inferences about neural activity inside the brain. This demonstrates that we can obtain information on a neuron's function from its magnetic field. If part of the brain is injured, another part slowly takes over its function because the information is not stored in the neuron but in the magnetic field around the neurons. With time, patients can regain their memory after temporary memory loss due to brain injury. The magnetic field guides the reconstruction of the right circuits, which are able to process the information present in the magnetic field.

The brain is the tangible floppy disk on which we save our data by creating new neuronal connections. Subsequently, this data are uploaded into the spiritual quantum field of the human soul.

### Three parts of the soul

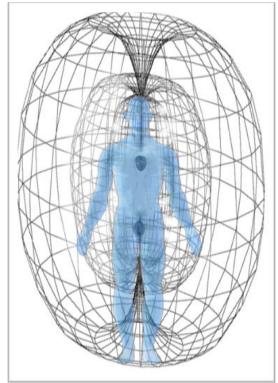
Every human being presents a biological complex, which is subjected to the energetic forces that guide genetic, metabolic, physiological, and psychological functions. These forces are called the soul.

The soul is made of three different components, which combine energy and information: Animal soul, human soul, and guiding spirit.

The animal soul is the magnetic field inherited from our parents that guides anatomical and physiological functions. Like every magnetic field that has two poles, the bio-magnetic field stems from two main poles that were originally formed from the fusion of the magnetic field between the magnetic male energy of the spermatozoa and the magnetic female energy of the ovum. This is the original prenatal essence, which is nourished and developed during pregnancy. After birth, the life and mind of new born babies are nourished by the prenatal essence received primarily from their mother and from the postnatal essence received from food and air as well as both parents' love.

This field comprises the energy that affords life, order, and vitality to the body. Thus, it is the cause of life, self-nourishment, growth, decay, movement, rest, perception, sensations, emotions, and instinctive intellect. It is also the primary motivation in life. It is mortal as it vanishes with death to transform to other less sophisticated forms of life such as insects, plants, and minerals.

The animal soul is an apple-shape magneto-electric field that exists in all living organisms to control and regulate the bio-electric activity of all cells (Figure 1).



**Figure 1:** The author's artistic presentation of the shape of the magnetic field of the animal soul.

This magnetic field can be measured by a SQUID magnetometer, which is able to obtain information about the function of the body without any physical connection with the body. A magnetoencephalogram measures the magnetic activity of the brain while a magneto-cardiogram measures the activity of the heart.

The animal soul is divided into three components: The vegetative soul, the sensitive soul, and the intellectual soul. The vegetative soul comprises two major poles and a magnetic field. It is present in all vegetative organisms and animals and is the source of life and vitality. According to Indian culture, the sensitive soul is related to seven chakras, which are related to emotional aspects. Furthermore, each chakra is related to one of the seven aspects of life.

The emotions of the first chakra are related to territorial and material aspects, the second to sexuality and productivity, the third to social life, the fourth to familiar life, the fifth to self-realization, study, and work, the sixth to a spiritual path and mission in life, and the seventh to religion and faith in God.

The intellectual soul is related to 12 standard meridians, which are also referred to as principal meridians (Figure 2). This is a concept in traditional Chinese medicine that refers to a path through which the life-energy known as qi flows [31].

The interaction between the information present in the magnetic field of the animal soul and the brain generates the id, which is the expression of the primitive and instinctual part of the animal soul.

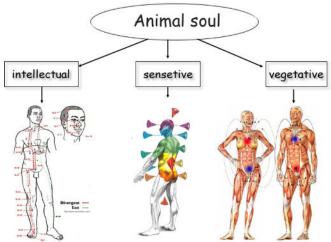


Figure 2: Three types of the animal soul.

The principle that motivates the animal soul is that of survival, which is guided by pain and pleasure. People want to realize their drives immediately. This leads to a high level of alertness. This is the biological component of the personality and is the innate energy of the psyche, the libido, in which all drives and impulses such as hunger, thirst, sex, and aggression are found. Its presence in the body is the factor that separates man from a complex machine, which is different to the philosophical perspective of other complex physical mechanisms.

The human soul is an immaterial and independent quantum state and is the source of consciousness, identity, transcendental wisdom, and the spark of light. When it animates, the physical body becomes the spring of love and compassion, which searches for meaning, purpose, and truth in life. It is immortal, joins to the body at birth, and is guided by the resonance principle. Therefore, it grows and evolves during an individual's lifetime in the sense that it moves from identifying with physical bodies to identifying with God [32].

The interaction between the human soul and the brain manifests as the ego, which is the rational part of the mind. Its presence in the body affords the factor separating man from other animals.

The guiding spirit is also an independent quantum state. It is the source of intuitive intelligence, morals, and religion, which searches for beliefs and values. It joins to the person at the moment of name attribution, which is guided by the resonance principle. The pronunciation of one's name creates a specific vibration that attracts the spirit with certain qualities. The guiding spirit is related to the Jinn world, to gods, deities, and demons, which for many ancient cultures are considered supernatural. It does not mean they are transcendent to nature, but that they appear so in relation to human's perception of nature because of their invisibility. They are natural in the classical philosophical sense because they consist of an element, undergo change, and are bound in time and space [33,34].

The interaction between the guiding spirit and brain manifests

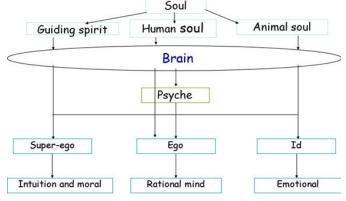
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as the psyche's superego, which is related to morals, intuition, fantasy, and creativity.

The origin of the psyche

Whereas the soul is the energetic aspect of an individual, the psyche is the functional aspect formed from the interaction between the energy of the soul and the brain. The three parts of the psyche comprise the id, ego, and superego, and originate from the interaction of the three parts of the soul and brain. The interaction between each part of the soul produces a specific part of the psyche (Figure 3).

Figure 3: Soul–psyche relationship: The three parts of the soul interact



with the brain to produce the three parts of the psyche.

The information is stored in the soul as a vibration, which when it interacts with the brain becomes the conscious. The information that does not interact with the brain, but it is easily accessible is called the preconscious. The information in the soul, which is difficult to recall but present is the unconscious. Each of the three parts of the soul has a conscious, preconscious and unconscious (Figure 4).

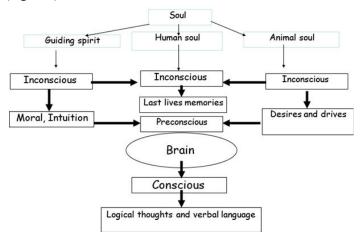


Figure 4: The relationship between the three parts of the soul and three types of unconscious.

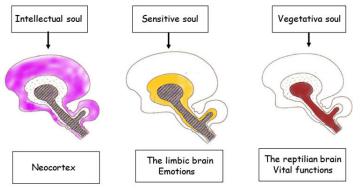
The three parts of the soul interact with one another in such a way that every part is influenced by the other parts. However, the interaction between the animal soul and the human soul allows the person to control the impulses and instincts of the animal soul. The interaction between the guiding spirit and human soul allows intuition and innovation to be realized.

#### The site of interaction of the soul on the brain

Each one of the three parts of the soul has its own vibration and interacts with a specific part of the brain.

The interaction between the three parts of the animal soul and the brain occurs primarily in three parts of the brain:

- The information of the animal soul is processed in the reptilian brain, which is instinctive and reflexive. It controls our basic physical responses when we are threatened. It also orchestrates balance, arousal for movement and action, and all basic vital bodily functions such as breathing, digestion, circulation, sleep, heartbeat, sexuality, and movement.
- The sensitive soul related to chakras is processed in the limbic emotional brain, which governs our emotions including attachment to others and social functions. It is the seat of motivation, attention, and affective memory. It registers strong emotions such as fear, terror, rage, and joy. It also reacts mainly in terms of pleasure and pain. Vastly connected to the neocortex, it influences all neural circuits and the subsequent processes.
- The intellectual soul, which is related to standard meridians, is processed in the cortical regions that are involved in the limbic system and includes the hippocampus as well as areas of the neocortex including the insular cortex, orbital frontal cortex, subcallosal gyrus, cingulate gyrus, and parahippocampal gyrus (Figure 5).



**Figure 5:** The correlation between the three parts of the animal soul and the parts of the brain.

The human soul and guiding spirit interact with the cortex area of the brain. The human soul is motivated by the principle of intellectual growth and spiritual evolution. The left hemisphere of the brain is the site of the human soul considered to be adept at tasks that involve logic, language, and analytical thinking. It is responsible for languages, critical thinking, and reasoning.

The principle of intuition and creativity motivates the guiding spirit. The right hemisphere of the brain is the site of the guiding spirit, which is best at expressive and creative tasks. Some of the abilities popularly associated with the right hemisphere of the brain include recognizing faces, expressing emotions, music,

imagination, intuition, creativity, and reading emotions.

#### The purpose of life

This model connects us with the wisdom of ancient spiritual cultures and sheds light on the real essence of humankind and the purpose of life. The human soul is the real essence of the human being who came to explore new horizons so as to learn, grow, and evolve. During people's life in the physical world, they constantly enrich their soul with thoughts, desires, and emotions. Psychological conflicts and traumas spring from unfulfilled desires, which when not well processed create energy blockages in the chakras and meridians of the animal soul. When low vital energy is present, these blockages become physical disease with time. Psychological and physical disturbances are signs of non-acceptance and ignorance of life's real purpose.

Therefore, difficulties, obstacles, conflicts, and problems are stimuli of intellectual growth and spiritual evolution. If people's desires draw them downward into a life of the senses, if their time is spent in useless pleasures and self-gratification, and/or if they have no higher aspiration than that of accumulating wealth, money, cars, attention, emotional warmth, and sex, then their human soul may be likened to low vibration frequency that appears in the spiritual realm as dense, heavy, and dark energy. After people pass into the life beyond the grave, they gravitate to that realm of spiritual dimension, which is closest to the dense physical plane. If their behavior is driven by higher aspirations and self-awareness based on principles of love, and they feel the need to serve others, share with others their property, and give of themselves to others, then their human soul will have a higher vibration linked to happiness during life and they will experience a sense of freedom and fulfillment after passing to the spiritual dimension.

Therefore, the purpose of therapy is to free the body from energy blockages, solve psychological conflicts, complete the learning process, enable personal fulfillment and spiritual growth, and realize wellbeing.

## Conclusion

In this article, a new model, which is based on a systemic model, considers the interconnectedness of physical, psychological, social, and spiritual aspects. Consequently, the different approaches in psychology, biology and in ancient philosophy are unified.

The soul is the unifying and integrating essence that creates an indivisible whole between body, psyche, and spirit, which are intertwined.

The soul is described by employing concepts of quantum physics. The spirit is information potential. When animate, the body becomes a soul, which is a quantum state, with very precise information that guides the structure of the body and its functions. The soul is energy and information with different frequencies that give the distinctive parts of the soul-diverse attributes and distinct characteristics. The soul is divided in three parts: The animal soul is the magnetic field that with its energy vitalizes and organizes the physiological functions. Furthermore, it guides genetic expression and when it interacts with the brain, produces the id of the psyche.

The human soul is the quantum state, which when it interacts with the brain generates the ego, which is related to consciousness and self-awareness. The guiding spirit is our source of intuition and innovation. When it interacts with the brain, it generates the superego. Furthermore, it is related to innovations and morals.

The unconscious mind is a reservoir of feelings, thoughts, urges, and memories that are present in three parts of the soul. It does not interact with the brain because it is outside of our conscious awareness. The preconscious consists of anything that could potentially be brought into the conscious mind.

Personality is related to the human soul, which is unique to humans. It gives rise to the conscious mind, which contains all the thoughts, memories, feelings, and wishes of which we are aware at any given moment. This is the aspect of our mental processing that affords us the possibility to think and talk rationally. This also includes our memory, which is not always part of consciousness but can be retrieved easily and brought into awareness.

This model allows one to redefine the purpose of life, the usefulness of life's difficulties that causes conflicts and traumas in order to create a new purpose for psychological and physical therapies. Effective therapy occurs when psychological causes are identified so as to resolve psychological conflicts and complete the learning process in order to enable intellectual growth and spiritual evolution, enhance vitality, and restore homeostasis and wellbeing.

#### References

- 1. Liddell HG, Scott R. A Greek-English Lexicon. New York: American Book Company. 1987.
- 2. Sigmund F. The Standard Edition of the Complete Psychological Works of Sigmund Freud. Vol. 19. Translated from the German under the General Editorship of James Strachey. In collaboration with Anna Freud. Assisted by Alix Strachey and Alan Tyson, Vintage. 1999.
- Carlson, Neil NR. Psychology, the science of behaviour: The psychodynamic approach. Toronto: Pearson Canada. 2010; 453.
- 4. Carlson NR. (1999-2000). Personality. Psychology: the The science of behavior (Canandian ed, p. 453). Scarborough, Ont: Allyn and Bacon Canada.
- 5. Augusto LM. Unconscious knowledge: A survey. Advances in Cognitive Psychology. 2010; 6: 116-141.
- 6. Kaptchuk TJ. Powerful placebo: the dark side of the randomized control trial. Lancet. 1998; 351: 1722-1725.
- Barfod T, Hog E, Olesen SG. Four aspects of placebo. Studies in Alternative Therapy. Odense, Denmark: Odense University Press. 1996; 3: 110-126.
- 8. Benson H. Timeless Healing. New York, NY: Scribner. 1996.
- 9. Randall F, Downie RS. Palliative Care Ethics: A Good

Companion. New York: Oxford University Press. 1996.

- Lerner M. Choices in Healing: Integrating the Best of Conventional and Complementary Approaches to Cancer. Cambridge, Mass: MIT Press. 1994.
- 11. Bohm D, Hiley BJ. On the intuitive understanding of nonlocality as implied by quantum theory. Foundations of Physics. 1975; 5: 93-109.
- 12. Hiley BJ. Information, quantum theory and the brain. In: Gordon G. Globus (ed.), Karl H. Pribram (ed.), Giuseppe Vitiello (ed.): Brain and being: at the boundary between science, philosophy, language and arts, Advances in Consciousness Research, John Benjamins BV. 2004; 197-214.
- 13. David P, David Bohm. The Implicate Order. Appeared in: Sunrise magazine. Theosophical University Press. 1993.
- 14. Cavanna AE, Nani A, Blumenfeld H, et al. Neuroimaging of Consciousness. Springer-Verlag Berlin Heidelberg. 2013.
- 15. Farah MJ, Murphy N. Neuroscience and the Soul. Science. 2009; 323: 1168.
- 16. Velmans M, Schneider S. The Blackwell Companion to Consciousness. 2008; 560.
- Forsdyke DR. Samuel Butler and human long term memory: Is the cupboard bare. Journal of Theoretical Biology. 2009; 258: 156-164.
- 18. Andrew AM. The decade of the brain further thoughts. Kybernetes. 1997; 26: 255-264.
- Pribram HH. Recollections. NeuroQuantology. 2011; 9: 370-374.
- Pribram KH, Meade SD. Conscious awareness: Processing in the synaptodendritic web. New Ideas in Psychology. 1999; 17: 205-214.
- 21. Pribram KH. Quantum holography: Is it relevant to brain function? Information Sciences. 1999; 115: 97-102.
- 22. Vandervert 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: 107-127.
- 23. Berger DH, Pribram KH. The Relationship between the Gabor elementary function and a stochastic model of the inter-spike interval distribution in the responses of the visual cortex neurons. Biological Cybernetics. 1992; 67: 191-194.
- 24. Pribram KH. Consciousness reassessed. Mind and Matter. 2004; 2: 7-35.
- Gabor D. Holography, 1948–1971. Science. 1972; 177: 299-313.
- Longuet-Higgins HC. Holographic model of temporal recall. Nature. 1968; 217: 104.
- Borsellino A, Poggio T. Holographic aspects of temporal memory and optomotor responses. Kybernetik. 1972; 10: 58-60.
- 28. István B. Dreams and neuroholography: An interdisciplinary interpretation of development of homeotherm state in evolution. Sleep and Hypnosis. 2005; 7: 47-62.
- 29. Gabor D. Holographic model of temporal recall. Nature. 1968; 217: 584.
- 30. Novella S. What is traditional chinese medicine? sciencebasedmedicine.org. Society for Science-Based

Medicine. Retrieved 13 May 2015. 2012.

- 31. Yogananda P. Inner Culture magazine. 1939.
- 32. Benjamin W, McCraw RA. Philosophical Approaches to the Devil Routledge. 2015.
- 33. Lebling R. Legends of the Fire Spirits: Jinn and Genies from Arabia to Zanzibar I.B.Tauris. 2010.

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