

A Perspective on Human Psychological Ability Nature Part Two: Human Environmental Sensitivity to Invisible Reality

Prof. Dr. Samah Khaled Zahran
Prof. of Personality and Social Psychology
Ain Shams University
Cairo, Egypt

Abstract

In this theoretical article, I discussed human sensation and perception to invisible reality in the light of environmental sensitivity and evolution. I explained what environmental sensitivity is, and who sensitive personalities to extra-sensory simulations are. Then I discussed psychological phenomena in the evolutionary tree, up to the human being with its relationship to coherence and consciousness. After each part, I represent a conclusion/suggested hypothesis, if possible. Then, at the end of this article, I represented an overall speculative suggested conclusion, or picture.

Keywords: Environmental Sensitivity, extra-sensory stimulations, psychic (Psi), evolution, coherence, consciousness, interconnected universe.

Many people perceive that humanity has reached a critical juncture in these early years of the 21st century. We are on the threshold of a new stage of social, spiritual, and cultural evolution. We are evolving out of nationally based industrial societies toward an interconnected, information-based social, economic, and cultural system that spans the entire planet. The path of this transition is not certain; it is proving to be filled with numerous shocks and surprises. (Craty, M., Deyhle, A. and Childre, D., 2012).

1. Environmental sensitivity

1.1 What is sensitivity?

Sensitivity, generally, refers to susceptibility to stimulation. More specially, refers to responsive behavior to weak stimuli, having a low threshold, also means feelings of another. Finally, refers to one who is easily hurt or offended. (Reber, A. 1995).

Sensitivity includes perception and internal processing of external influences. (Pluess, M., 2015). Researchers often use the word “sensitivity” when theorizing that certain persons may more readily affected by various influences than others may. The dictionary offers a four-part definition: (1) capable of perceiving with a sense or senses; (2) responsive to external conditions or stimulation; (3) susceptible to the attitudes, feelings, or circumstances of others; and (4) registering very slight differences or changes of condition. (Jawer, M. 2005).

Sensitive person is one who is emotionally labile, easily moved by events, also h/she is one who posses certain paranormal abilities in communication and perception. (Reber, A. 1995).

1.2 What is Environmental sensitivity?

Environmental sensitivity is a fundamental trait found in most organisms to register, process, and respond to external factors. Environmental sensitivity features at least two different perspectives, the first describing developmental processes - as change over time in response to past experience - and the second, immediate reactivity; response to current experience. The developmental perspective refers to developmental or phenotypic plasticity, the ability of an organism to adapt its phenotype over time to the conditions of the particular environment. (Pluess, M., 2015).

Evidence points about wide variability of sensitivity among individuals within the different stages of person's life. Women generally exhibit markedly greater sensitivity across all five senses. The perception of pain varies considerably from person to person. Hormones also influence personal circumstances, genetic conditions, and age. (Jawer, M. 2005).

Individual differences in the behavioral response to environmental factors, seen across many species, nonhuman primates to humans. Species tend to react as hawks and doves, coping as strategies proactive versus reactive. Similar behavioral differences have been described in humans in many psychological frameworks, including extra- and introversion, behavioral activation and inhibition, high and low reactive temperament, physiological stress reactivity, sensory sensitivity, resilience and vulnerability, reaction norms, and developmental plasticity. (Pluess, M., 2015).

1.3 Environmental sensitivity components:

Since the late 1990s, researchers have proposed at least three theoretical frameworks related to variability in environmental sensitivity. The first is sensory processing sensitivity (SPS) by Aron. SPS based on a personality perspective, suggesting that about 20% of people have a high-sensitive personality trait defined by greater awareness of sensory stimulation, behavioral inhibition, deeper cognitive processing of environmental stimuli, and higher emotional and physiological reactivity. The second concept is Belsky's differential susceptibility theory. According to this theory, individuals differ in their environmental sensitivity, with some being generally more and some generally less susceptible to both negative and positive environmental influences. Belsky's theory posits that such fundamental differences in susceptibility represent two alternative developmental strategies; the plastic strategy is characterized by adaptation to the environment; high susceptibility, and the fixed strategy reflects relative inertia in response to environmental factors; low susceptibility. Finally, Boyce and Ellis concluded in their biological sensitivity theory to context that individuals differ in bio-behavioral reactivity to the environment. (Pluess, M., 2015).

1.4 Environmental sensitivity and sixth sense:

Recently, researchers begun to focus on the idea of extraordinary sensitivity and environmental sensitivity; J. Palmer in 2003 coined the term: highly sensitive person (HSP); which describes individuals who born with a tendency to notice more in their environment and deeply reflect on everything before acting. (Jawer, M. 2005).

Environmental sensitivity individuals also tend to have rich inner lives (with complex, vivid dreams) and come across as highly perceptive, creative, and intuitive when able to surmount what often is a natural inclination toward shyness, fearfulness, stress, and withdrawal. Many parallels have noticed among them, including the following:

Women are disproportionately affected. Fibromyalgia occurs seven times more often in women than in men, while migraine is three times more common in women. The sex hormones appear to play a role in both fibromyalgia and migraine. It is not uncommon, for example, for fibromyalgia to begin after menopause. In contrast, the overall incidence of migraine is reduced after menopause—and migraines generally stop during pregnancy. Ninety percent of persons with fibromyalgia experience moderate to severe fatigue. People who have migraine headaches are two to three times as likely to become depressed. Individuals who suffer from depression are three times as likely to get migraines. Both fibromyalgia and migraine appear to run in families, suggesting that a genetic predisposition may be present. (Jawer, M. 2005).

Hartmann has attempted to explain a broad range of sensitivities through the organizing principle of boundaries. He proposes a spectrum of personality types from thick boundary to thin.

Characteristics among thin boundary persons are:

Less solid or definite sense of their skin as a body boundary;

An enlarged sense of merging with another person when kissing or making love; Sensitivity to physical and emotional pain in oneself as well as in others;

Openness to new experience;

A penchant for immersing themselves in something whether a personal relationship;

A memory, or a daydream, an enhanced ability to recall dreams, dream content that is highly vivid and emotional; A tendency to experience nightmares; Thin boundary processing is more like dreaming, less straightforward but more flexible, with more connections between regions and thus the proclivity to explore all kinds of side connections. (Jawer, M. 2005).

A need for deep connections with other people is one of five areas of extreme sensitivity identified by Kazimierz Dabrowski (1902-1980). Dabrowski studied gifted individuals and noted these recurring traits, which he called over excitabilities:

Psychomotor: surplus of energy, restlessness, curiosity.

Sensual: strong reaction (either positive or negative) to sensory stimuli, aesthetic awareness.

Imaginational: strong visual thinking, vivid fantasy life, remembers dreams, enjoys poetry or metaphorical speech.

Intellectual: intense focus on particular topics, enjoys questioning and complex reasoning, problem solving.

Emotional: heightened emotional reactions need for strong attachments, empathetic, difficulty adjusting to change.

Dabrowski's work merits attention because he captured the traits of highly Sensitive Persons, the Sensory Defensive person. (Jawer, M. 2005).

Wilson and Barber suggested the concept of fantasy-prone personality; by studying a group of 52 females who fantasize a large part of the time, who typically 'see', 'hear', 'smell,' 'touch,' and fully experience what they fantasize. Fantasy-prone persons also tend to see themselves as psychically sensitive, reporting such perceptions as telepathy, precognition, being out-of-body, and seeing or hearing apparitions. Another anomalous talent reported is the sense of having a powerful influence on electrical appliances. The fantasy prone personality is not pathological; most work, love, and socialize within the broad average range of adjustment. Later researchers agree with this assessment. (Jawer, M. 2005).

Thalbourne suggested the concept of transliminality, which he defined as a tendency for psychological material to cross thresholds in or out of consciousness. Studies by Thalbourne demonstrate correlations among nine factors now considered components of transliminality:

- Paranormal belief and experiences
- Creative personality
- Mystical or religious experience
- Magical thinking
- Manic-like experience
- Absorption
- Fantasy-proneness
- An interest in dream interpretation
- A heightened sensitivity to environmental stimulation. (Jawer, M. 2005).

Elsewhere surveyed individuals who described themselves as sensitive, his survey examined both environmental and psi sensitivity. While no single factor in a person's background is likely to distinguish him/her as sensitive, the author found eight demographic or personality factors to be significant:

1. being female.
2. being a first-born or only child.
3. being single.
4. being ambidextrous.
5. appraising oneself as an imaginative thinker.
6. appraising oneself as introverted.
7. recalling a plainly traumatic event—or series of events—in childhood.
8. asserting that one's presence causes televisions, lights, computers, etc to malfunction. (Jawer, M. 2005).

Irwin suggested that sensitivity appears to correlate with trauma, which he explained as a defense mechanism, an escape from stressful awareness of an aversive environment. Terr, also, who is an expert on trauma, has likewise identified absorption and dissociation as coping mechanisms that certain children resort to in order to mentally escape from intolerable situations. (Jawer, M. 2005).

Finally, to conclude, I will adopt Jawer's view about sensitivity, as following:

The concept of sensitivity may have a genuine neurobiological basis. This might follow that individuals having a certain degree or configuration of sensitivity could register (either consciously or unconsciously) anomalous influences in the environment that bypass most other people. (Jawer, M. 2005).

I may add to Jawer words, that sensitive individual, fantasy prone personalities adopt defensive mechanisms that resort them from high stressful situations; by detecting very flight simulations, to enable their receptors to feel further events.

2. Extra-sensory Stimulations

2.1 What is stimulation?

Stimulation is any change that is sufficient to excite a receptor or a receptor system. Broadly, any event arouses an organism. More specially, a particular event that, when applied to a sensory receptor or receptor cell, causes it to become active. (Reber, A. 1995).

Stimulus is a term theoretically, historically oriented as a most objective topic produced by psychology; (Stimulus-response theory). This helps to specify stimuli as; stimuli must characterize in physical terms. Stimuli must fall within the range of receptivity of the organism. Stimuli must evoke a response from a receptor. Stimuli may be external or internal. Many examples of stimulus as anything: any event, any occurrence, any change in a thing, any percept, or concept, internal or external. This thing has some impact or effect on an organism, so that its behavior modified in some detectable way. (Reber, A. 1995).

2.2 What is extra-sensory stimulation?

Spontaneous human experiences are good examples of these kinds of stimulus. (Radin, D. 1997); when you sense what is happening to your loved ones thousands of miles away, when you think about someone and find h/her calling you on the phone, when you have intuitive information about future events, when you sense any stimulus with your remote sense.

Therefore, I may identify extra-sensory stimuli as stimuli that activate our remote sense (6th sense), to feel further events, then to react adequately. It is any stimulus that captured by sensitive ones' receptors beyond the current field, or current moment.

The scientific challenge is to take these raw experiences and tries to figure out what they mean. (Radin, D. 1997).

2.3 Characterize extra-sensory stimuli

The best way used to test these stimuli was Ganzfeld lab tests.

Ganzfeld is a German word meaning whole field, developed by Gestalt psychologist to study the nature of visual image. In a Ganzfeld psi experiment, the participant, say Jill, the receiver, stay in an isolated room from any five sensory stimulus room, that prevents her to interact with her five sensory with the sender in another room. Many people in Ganzfeld condition describe that a pleasant dreamy state of awareness evoked to them within a few minutes. The sender, say Jack, in another room tries to send mentally an image to Jill, after a sending period, Jill attempts to match her mental impressions with one of four pictures, one of which was a real target image. (Radin, D. 2006).

Therefore, in psi labs extra-sensory stimulations conducted as distance images, sounds, and feelings, that activate receptors, then responses as images, thoughts, feelings. Such reactions tested through MRI, EGG rays, skin conductance monitors, many of these stimuli-responses tests telepathy, clairvoyance, presentiment, precognition, and gut feelings. All were highly significance results.

The journal science also published a study by two physiologists who reported finding significance correlations in brain waves between isolated identical twins, these sorts of studies known as Distant Mental Intention on Living System (DMILS). (Radin, D. 2000).

2.4 Psi sensitivity and evolution

To what extent may sensitivity to extra-sensory stimuli affect our evolution?

Sensitivity in last two decades described in evolutionary and development theories, rather than psychopathology. Environmental sensitivity facilitates conditional adaptation to the environment, but an individual's degree of adaptation depends on the presence of genetic factors that maintained by natural selection. Differences in environmental sensitivity are beneficial from an evolutionary perspective and reflect variability in the propensity for conditional adaptation to the environment. (Pluess, M., 2015).

Therefore, to conclude, and suggest number three hypothesis in our article, (H3) : Stimuli that captured by sensitive ones as a defense mechanism for adaptation, represents genuine neurobiological basis, that developed by natural selection; to assist such individuals to overcome not only current high stressful situations, but also further ones. Therefore, such kind of adaptation may lead eventually to quality evolution.

3.1 What is evolution?

Evolution is a continuous process. It is a process of accumulating change, a progression of change; one leading to more advances or complex form, growth and development. It is a process of heritable change in populations of organisms over multiple generations. (Hubbs, C. 1986). (www.nature.com), (www.differencebetween.net).

There are six aspects of evolution: inheritance, adaptation, domestication, speciation, and extinction. (Shtulman, A., Calabi, P., 2013).

Evolution often explained in terms of change frequencies resulting from the natural selection of randomly occurring variations, but, of course, it involves more than that. Biological forms, including those with complex architecture and sophisticated functions, are not only the outcome of evolutionary process; they are also the outcome of the developmental ones. Any evolutionary change in the mature, adult form of animals and plants somehow related to modifications of developmental process. (Kampourakis, K. and Minell, A., 2014).

All living things change through time, in order to survive in their environment. Adaptation involves short-term changes to suit the habitat and environment, while evolution is a long-term process where in changes occurs in the genetic level for a better functioning and survival as a race. (www.differencebetween.net).

In his paper about the nature of evolution, David L. Alles hypothesized evolution as a general characteristic of the universe. Our universe is an historical system with a beginning, cumulative change through time, and a potentially intelligible end. (Alles, D. 2005).

In Steve Hawking's words, in 1988:

Space and time are dynamic quantities; when a body moves, or forces acts, it affects the curvature of space and time and in turn, the structure of space-time affects the way in which bodies moves and forces act, space and time not only affect but also are affected by everything that happens in the universe. (Alles, D. 2005).

Thus, every moment in the history of the universe is unique. Universe is a dynamic place that is constantly changing irreversibly on the largest and the smallest scales. Each star is unique itself. Solar systems evolve along with their central stars. Planets evolve. The planet earth has evolved with the evolution of life. Our atmosphere, the very air we breathe evolved in an intricate dance between life and inanimate molecules of carbon dioxide and oxygen. (Alles, D. 2005).

3.2 Evolution and sixth sense

Darwin's theory of evolution by natural selection, made it clear how an animal physical features can shape by the demands of recurrent problems posed by the environment. An evolutionary approach to behavior involves an analysis of particular recurrent problems faced by the members of a given species and a search across species for correlations between common behaviors and common environmental conditions. (Alles, D. 2005).

Thus, may psychic abilities; sixth sense (remote sense) lead to human evolution, if we consider these abilities as adaptive tools for environmental problems that may lead to human evolution, quantity and quality? May psi become a factor of evolution? To what extent may environmental sensitivity to psi experiences by sensitive personalities, lead to such leap?

Lucadou, W. in his paper about complex environmental reactions, assumed- by his scientific design- that recurrent spontaneous Psychokinesis (RSPK) may consider as an immune reaction of the whole system caused by an unconscious problem, which acts like a virus, disease that leads to disintegration of the system. (Lucadou, W. 2011).

In his paper, Alexander Temkin suggested that clairvoyance could help living beings to win the struggle for life, which means that by this way it could become a factor of the evolution, in particular, of the mind quantum properties evolution. (Temkin, A. 2010).

In this paper, Temkin asked if the quantum mind – that enables us to entangle with the whole being- is a result of evolution, or suddenly appeared? In mouse lab experiment, mouse is able to think when h/she can reach the food, but when the mouse uses a tool to solve the problem, that means h/she uses quantum mind and consciousness to create a suitable solution. The researcher suggested that animals who possess creativity and clairvoyance abilities, may have the ability to control their future, somewhat, during the development of evolution for these abilities. Human beings too, may develop their ability to map their future by the evolution of mind to quantum mind, with other sixth sense, or paranormal abilities. (Temkin, A. 2010).

3.2.1 Non-human beings, Mammals and Psi

Are there psychic (psi) pets? If we postulated that consciousness is a universal phenomena, and the whole universe totally connected, to what extent may animals detect further events?

Examples of psi animals are many; as horses find their way home with an injured rider on their back, and cats cried at the remote death of human whom they are familiar with. (Sheldrake, R. 1999).

Telepathy, as one example of psi abilities, which refers to the ability to transfer information, may found at very primitive, non-human beings, as most forms of life have no sight, hearing, taste, smell, and have only some of the sense of touch at most. However, they are not only able to communicate with one another, but able to communicate well if they are an unvoiced pact among them. Like amoebas, foraminifera, and sponges. Some of sponges' cells bring food and digest it, while some are sex cells; some are cells that build support skeletons. Yet, if a sponge cut and macerated to separated individual cells, which compose it, the gruel gets together and organizes itself, and complete sponge appears, to go back into business again. (Xiong, J. 2010).

Some researchers reasonably asking: How do the primitive lives keep in touch with one another if the telepathy abilities excluded at all?

Plants are also likely to have some telepathy; Cleve Backster wrote an article, titled evidence of the primary perception in Plants, he found in his experiment- as he is an American polygraph expert- that the plants near the brine shrimps presented a different state on the detector when the shrimps died. (Xiong, J. 2010).

Another observation about animals' spontaneous psi phenomena made by Rhine and S. R. Feather in 1950s and 1960s, they described five categories of behaviors suggesting psi: 1. Behavior that suggests a reaction to impending danger to the animal itself or its master. 2. Behavior that suggest a reaction to the death of a master at a distance. 3. Behavior that suggest anticipation of the master's return. 4. Homing behavior involving the ability to return home after removal to a distance regardless of direction. 5. Finally, psi trailing, involving cases in which an animal left behind trails its owner to a totally new location, or home, which the animal has never visited previously. (Xiong, J. 2010).

Rhine and Feather collected 54 cases of dogs, cats and birds, for several months, and their results proved animals' telepathy. Rhine and other researchers also did some experiments studying animals' psi abilities; as animals' owners succeeded to give them instructions when they were separated from them, or distributed by noises, as well. Many experiments and observations forcefully support the view that animals have psi abilities. (Xiong, J. 2010).

To conclude, in evolution scale, psychic (psi) phenomena found from primitive forms of life, up to complex developed ones, from one cell, up to more complete organs and systems, among plants and animals kingdom. Psi is their detector, their sensation to communicate, arrange their surrounding environment and adapt to their own condition.

The question now is if psi is a universal phenomenon, how will it look like in human being?

3.2.2 Human Brain and Psi

Is there a role of temporal lobes in spirituality, psychical experiences (psi)?

A Canadian neurosurgeon Wilder Penfield opened such kind of stimulation studies. Penfield and other investigators had shown that deep temporal lobe stimulation in the area around the amygdale and hippocampus of the limbic system produces feelings of intense meaningfulness, of depersonalization of connection with the whole universe, out of body, and déjà vu experiences. Penfield felt that the psychical responses were not hallucinations in the sense of psychotic or schizophrenic hallucinations, because in all cases the subjects always talked to the doctor and never to the voices. (Comings, D. 2010).

In addition to previous areas, Arzy and coworkers 2006, in Switzerland reported that the stimulation of the left temporal-parietal junction repeatedly produced a creepy feeling of the presence in another person in their extra-personal space, an epileptic focus in this area could contribute to the sensation of being close to a supernatural being. (Comings, D. 2010).

Twin studies, also show a significant genetic component to spirituality, the spirituality genes selected because the social cohesiveness that spirituality fosters has a strong survival value. The neurobiology of spirituality suggests that our rational brain needs to step back to give the spiritual brain space to have benefits and feelings that do not always make rational sense. (Comings, D. 2010).

Comings defined spirituality as a sense of being connected with something greater than one, not necessarily something supernatural is. As such, an enhanced sense of spirituality would be an important factor in the evolution of humans, as a social animals where working as a cohesive group provides more satisfaction and reward than working as individuals. This is especially likely to be the case when environmental factors become extreme, as during the ice age. Division of labor with different individuals in the group being responsible for different survival skills would provide considerable selective value. (Comings, D. 2010).

To conclude, some researches pointed at the biological organs of psi ability in human. However, human also benefit h/her psi abilities for more adaptation, communication. Adding human imagination to this ability, human morals, ethics, through years of environmental reactions, may lead to quality change in human being. In addition, human being psi ability is not limited to h/her surrounding environment; otherwise, it wide spread globally, so the question is how to discover it more, for more wisely, developed, evolved behavior.

3.2.3 Evolution and Psi dreams

In the evolutionary tree, dreaming or REM sleep did not appear before mammals and birds. Birds, such as parrots, reported to exhibit telepathic behavior, which fits with the link between telepathy and the brain circuitry for dreams. The limbic system, which is important for REM sleep, sometimes called mammalian brain. (Powell, D. H., 2009).

The fact that mammalian and avian offspring needed more protection for survival could also have been a driving force for the natural selection of psychic abilities. Jon Tolaas developed a theory that helpless newborns spend much of their time dreaming because that state lets them psychically detect threats and silently communicate them telepathy to parents, even when they are outside ordinary communication range. (Powell, D. H., 2009).

This finding strengths the link between psychic abilities and the brain's circuitry for dreaming. This link may result from common evolutionary roots. In other words, psychic abilities appear to be an evolutionary development that partially buried but resurfaces in modern man when evolutionary newer areas of the brain are less active. (Powell, D. H., 2009).

Throughout history, psychic dreams have been a strong and recurrent theme. The ancient Egyptian built temples for inducing prophetic dreams. Australian Aborigines believe that knowledge first acquired during dreamtime. (Powell, D. H., 2009).

Alejandro Parra, in his book about, the hidden world of dreams, pointed those individuals, who work with their creativity, or who are dedicated to solving problems seem to have inspirations, sometimes come from dreams and they are hidden in the form of spontaneous knowledge, or symbols that are articulated appropriately to inspire the creation itself, or smooth the created piece. The dreamer just copies it from h/her own dreams. (Parra, A. 2010).

Consistent to Tolaas' theory, offspring with telepathic dreams - whom their mammalian's parents leave to obtain food, alone and at risk of snatching by a predator- may have an increased survival rate and more of their genes may pass down to further generation. In addition, when a baby is in the womb, dreams are not necessary to protect the baby, but they may serve another purpose; hypnotized people accurately described traumatic events that occurred externally when they are in the womb, which means that these individuals psychically accessed the past. This also raises the possibility that a dreaming baby can access external information while within the womb. (Powell, D. H., 2009).

Most spontaneous telepathic and precognitive experiences occur during dreams. Precognition or clairvoyant dreams before birth may aid the newborn's ability to orient to the outside world. Dreams before birth may help baby to prepare psychically for the chock of what lies ahead. Yet babies adapt remarkably well to the world after birth. An ability to preview the external world would be more important for mammals than reptiles because the limbic system renders mammals more emotional and vulnerable to traumatized. (Powell, D. H., 2009).

Another function of dreaming proposed by Michel Jouvet, he proposed that dreaming permits the testing and practicing of genetically programmed behaviors in sleep. Dreams are the perfect way for inexperienced baby mammals to learn safely, since they are paralyzed while dreaming. (Powell, D. H., 2009).

The brain expansion occurred mainly between 1.9 million years ago and 500,000 years ago. The brain doubled in size during that time, resulting in a brain only 15% smaller than modern man's does. During the subsequent 425,000 years, the brain grew the remaining 15%, which led us, Homo sapiens. The association cortices that expanded the most are in temporal, parietal, and frontal lobes. They are often called neocortices, because they are evolutionary the newest. Our frontal lobes grew to occupy close to one-half of our brain's total cognitive capacity, making us better able to anticipate the future, set goals, and avoid problems. (Powell, D. H., 2009).

Since psychic information strongly associated with dreaming, brain imaging of dreaming state provides more clues to what brain activity is associated with psychic abilities. Psychic information comes as a perception, rather than logical analysis. Dreams tell us something by showing it to us, in symbolic form. (Powell, D. H., 2009)

To conclude, in the evolutionary tree, mammals and birds have dreams, however they functioning them for adaptation; to avoid risks around in their environment. Human beings experienced psychic dreams throughout the history. Studies' findings strongly pointed at the link between psychic dreams and the brain's circuitry for dreaming, which refers to the evolutionary roots with such kind of dreams. Precognition or clairvoyant dreams before birth may aid the newborn's ability to orient to the outside world. Dreams before birth may help baby to prepare psychically for the chock of what lies ahead.

During 450,000 years ago, our brain developed to which called neocortices, the newest evolutionary area, our frontal lobes grew for cognitive capacity, making us better able to anticipate the future, set goals, and avoid problems.

Dreams are very important source of spontaneous knowledge, instead of analytic knowledge, in dreams we reflect our perception to the received information, more than our ability to analyze the information. Because of all above dreams is very important topic in studying psi experiences type, evolution, and neo-areas.

3.2.4 Evolution and coherence

One of the scientific understandings of the last century is the phenomenon of coherence; the universe is wholly and enduringly coherent. Coherence indicates a quasi-instant connection among the parts or elements of things, whether an atom, an organism, or a galaxy. This kind of coherence observed in fields as diverse as quantum physics, biology, cosmology, and brain and consciousness research. The new picture that has emerged is that all living systems interconnected at a deep fundamental level and communicate with one another via biological fields and nonlocal mechanisms. Although the nature of these interconnecting fields not yet fully understood, there is considerable scientific data that substantiate their existence through observation of their effects. It also has become increasingly clear that invisible magnetic influences emanating from the sun and earth profoundly affect life on earth from birth to death. It reliably shown solar and geomagnetic cycles not only correlate with human health indicators, but also with such major societal conflicts as violence, crime, terrorism, and war. (Craty, M., Deyhle, A. and Childre, D. 2012).

The concepts and understanding of coherence in physics is not new. The new is our increasing understanding of how coherence functions in the human system related. The Institute of HeartMath (IHM) has identified a psychophysiological state that is the underpinning of optimal function they termed heart coherence. Numerous studies have shown that learning how to shift into this psychophysiological state quickly improves cognitive performance, focus and effectiveness, self-responsibility, and social cohesion. (Craty, M., Deyhle, A. and Childre, D. 2012).

IHM, a nonprofit research and education organization, established the Global Coherence Initiative (GCI) as a science-based, co-creative initiative to unite people in heart-focused care and intention and to facilitate the shift in global consciousness from instability and discord to balance, cooperation, and enduring peace. A primary goal of GCI is to determine the effects of collective emotional responses that reflected in the earth energetic fields' ionosphere and geomagnetic field. The first overarching hypothesis of GCI is that all living systems interconnected at an energetic level and communicate with one another via biological fields, including nonlocal fields, when certain conditions met. From this general hypothesis, the second overarching hypothesis is that not only humans affected by planetary energetic fields, but also conversely, the earth's energetic systems also influenced by and act as a carrier wave for collective human emotions and consciousness positively or negatively. Thus, much of the planetary information field environment made up of the collective consciousness of the inhabitants. (Craty, M., Deyhle, A. and Childre, D. 2012).

The third hypothesis is that large numbers of people intentionally generating heart-coherent positive emotional states of care, compassion, love, and appreciation will generate a coherent standing wave that can help offset present and future planetary-wide standing waves of stress, fear, discord, and incoherence. Embedded within the above overarching hypotheses is a related hypothesis that human emotions and consciousness interact with and encode information in planetary energetic fields, including the geomagnetic field, thereby communicating information between people at a subconscious level, which in effect, links all living systems and gives rise to a form of collective consciousness. Thus, a feedback loop exists between all human beings and the earth's energetic systems. It further proposed that when coherently aligned individuals are intentionally creating physiologically coherent waves, they encode information in the planetary scale energetic fields, which act as a carrier wave, thereby positively influencing all living systems contained within the field environment and the collective consciousness. This in turn will create a mutually beneficial feedback loop between human beings and the earth's energetic systems. (Craty, M., Deyhle, A. and Childre, D. 2012).

There is experimental evidence that human bioemotional energy can have a subtle but significant, scientifically measurable, nonlocal effect on people, events, and organic matter. For example, research conducted in IHM laboratory has confirmed the hypothesis that when an individual is in a state of heart coherence, the heart radiates a more coherent electromagnetic signal into the environment that detected by nearby animals or the nervous systems of other people. Of all the organs, the heart generates the largest rhythmic electromagnetic field, one that is approximately 100. Authors have also found that there is a direct relationship between the heart rhythm patterns and the spectral information encoded in the frequency spectra of the magnetic field radiated by the heart. Thus, information about a person's emotional state encoded in the heart's magnetic field, which communicated throughout the body and into the external environment, finally, authors concluded that evidence of heart to- heart synchronization across subjects, which lends credence to the possibility of heart-to heart bio-communications. (Craty, M., Deyhle, A. and Childre, D. 2012).

The law of coherence helps us understand the physical force behind the increasing complexity of the evolutionary process, from quanta, to cells, to self-awareness and collective consciousness. The coherent electromagnetic field is the inner glue of every system, the intelligent energy-information communication that assures a cooperative and synergic behavior to all the components of the system, as a whole, allowing harmonious evolution and unity of consciousness. (Montecucco, N. F., 2007)

Neuropsychological experiments show that the different brain areas communicate with more or less coherence according to different states of consciousness: high values correlated with states of psychophysical integrity and well-being, whereas low values with states of conflict and depression. If we expand isomorphic these brain discoveries, we will have four main general states of coherence: from disaggregation to unity, which represents an important element, in the General System Theory, to differentiate between inanimate and animate system, and to understand how billions cells become a single living organism, and then how billions of human beings could eventually generate planetary consciousness.

In this light, the resolution of the global ecosystem crisis implicates human transformation from a low to a highly coherent state of consciousness. The key to the entire process seems to be the coherent nature of consciousness. (Montecucco, N. F., 2007).

It seems that the essence of the living state is to build up and extend the coherent spatio-temporal platform for communication starting from the energy of the sun initially absorbed by green plants. Living systems are thus neither the subjects alone, nor the objects isolated, but both subjects and objects in a mutually communicating universe of meaning. (Ho, M. W., 2017).

In contrast to the neo-Darwinist point of view, their capacity for evolution depends, not on rivalry or on might in the struggle for existence. Rather, it depends on their capacity for communication. Therefore, in a sense, it is not individuals as such which are developing but living systems interlinked into a coherent whole. Just as the cells in an organism take on different tasks for the whole, different populations unfold information not only for themselves, but also for all other organisms, expanding the consciousness of the whole, while at the same time becoming more and more aware of this collective consciousness. Human consciousness may have its most significant role in the development and creative expression of the collective consciousness of nature. (Ho, M. W., 2017).

To conclude, we are living in a coherent universe. Numerous studies pointed at how much we all interconnected. Therefore, our article hypothesis four (H4), is : The more we are aware of coherence law in nature- from things to living systems, up to human beings- the more we evolved in harmony with the whole.

3.2.5 Evolution and consciousness

Energy provides the underlying basis of matter, and consciousness is the driver of evolution. In that over eons, as consciousness and self-awareness increased, the physical form responded by becoming a more refined vehicle; Evolution is part of this natural law in action. (Ray, G., 2008).

Consciousness may regard as the most basic building block of nature and constantly present at all levels of fabric of reality. Our brain is not a standalone information-processing organ; it acts as a central part of our integral nervous system with recurrent information exchange with the entire organism and the cosmos. (Meijer, D.K.F. and Geesink, H. J. H., 2017). While, information is the communication or reception of knowledge or intelligence, and knowledge obtained from investigation. (<https://www.merriam-webster.com/dictionary/information>).

Information flux postulated to provide the basis for the existence of consciousness at the different scales of the universe. Consciousness may define, as a state of a semi-stable system that developed in a cooperative and cyclic operating mode so that it has become causally self-observant. Thereby, it cannot only predict aspects of the local environment, but also can integrate memorized information and future-directed projections into a personal worldview that serves individual survival, development and social communication; which called Quantum information, like energy, never lost. (Meijer, D.K.F. and Geesink, H. J. H., 2017).

Life is not possible without a continuous integration of internal and external information. Information from the outside world is essential to the maintenance of vital processes, since all biological systems feed on information, a living system does not just detect and generate information, and it transforms it. Biological cybernetics display the following features: A) Instantaneous and generalized.

- B) Capable of receiving every type of information from the environment.
- C) Able to receive the same information selectively over different fractions of biological orders of magnitude.
- D) Must incorporate information of various parts of the organism and the whole configuration at the same time.
- E) Protected against an excess of information and apply some kind of information quality control.

Finally, F) Ensure minimal loss and distortion of information, and therefore ensure a maximum fidelity of transmission. (Meijer, D.K.F. and Geesink, H. J. H., 2017).

Many scientists have earlier suggested that basic information reaches our brain from outside, since the nervous system may also function as a receiver of subliminal signals. One could regard this as a physically defined extrasensory perception.

Yet, the alternative view is that we have to take into account a sixth sense in the form of a vibration, resonance sensitive macromolecular apparatus in each of our cells. (Meijer, D.K.F. and Geesink, H. J. H., 2017).

Brain organization evolved via increasingly precise responses to stimuli, turning the brain into a better and better organizational reflection of the material environment, even operating by the same governing principles. (Deli, E. 2016).

The universal force of electromagnetism controls all biological response, as Hawking noted. Indeed, living systems are under the continuous influence of electromagnetic fields and it proposed that the native, non-trivial, photon/electron vibrations exhibited by such scalar fields shared with resonating proteins and nucleotides that control cell function throughout the hierarchy of living systems. Cellular plasma water generally supposed to act as a transfer medium for internally and externally applied electromagnetic waves to biomolecules. The cellular plasma exhibits a highly arranged 3-D geometric structure and under the influence of such fields act as a liquid crystal, which exhibits surface interactions with macromolecular structures, such as DNA and proteins. (Meijer, D.K.F. and Geesink, H. J. H., 2017).

A new physical worldview shows that mental operations are analogous to the physical world, and that just like photons, emotions carry energy. Photons are the fundamental interactions of fermions, and in the brain, sensory stimulus triggers energy imbalances, called emotions, the forces of mental interaction. Therefore, emotions motivate thoughts and actions that recover the energy-neutral state of the brain. Material interaction generates a temporal evolution that culminates in the emergence of the intelligent mind. The entropy of both elementary constituents (material and mental particles) of the universe continuously changes between the poles. Matter and mind are the prime building blocks of the universe, and intelligent life is a microcosm of the universe, the mind is an active participant in cosmic evolution. (Deli, E. 2016).

More recently, Randall postulated the Randall–Sundrum model, also called five dimensional warped geometry theory (2006), imagining that the real world is a higher dimensional universe described by warped geometry. In the block universe according to Minkowski, our actual universe, being all our moments, past, present and future, coexist, but we cannot directly see or experience that fact. We experience our moments serially, one after the other, such that only the present moment is what's actual for us. All times are equally real: the movement of time considered just an illusion of human perception. (Meijer, D.K.F. and Geesink, H. J. H., 2017).

Quantum entanglement is a phenomenon in which particles appear as connected over vast distances. When actions performed on one of the particles, corresponding changes observed on the others simultaneously. Quantum tunneling is a phenomenon in which a particle tunnels through a barrier should not be able to acting according to classical physics. These quantum phenomena allow for processes so rapid, and cannot explain with classical physics. Therefore, they may help explain ultra-fast subconscious mental processes. (Isaac, T.M., 2017).

Rather, quantum wave resonance is a more likely mechanism of extremely rapid information processing in the brain. This means, instead of signals sent between neurons in the brain, a wave pattern encompasses all neurons, as well as the mental field, transmits the information instantaneously. (Isaac, T.M., 2017).

Dr. Dirk K.F. Meijer, a professor at the University of Groningen in the Netherlands, hypothesizes that consciousness resides in a field surrounding the brain. This field is in another dimension. It shares information with the brain through quantum entanglement, among other methods, and it has certain similarities with a black hole. Meijer also uses the wave-particle nature of matter in quantum physics to explain the relationship between the mental field and the brain. Essentially this principle holds that electrons and photons exist in the form of waves, but can also behave like particles. Meijer hypothesizes that the mental field is in another dimension; that we cannot directly perceive their information aspects traditionally, instead it is a hidden fourth spatial dimension, which cannot be observed in our 3-D world, but can be mathematically derived. (Isaac, T.M., 2017).

He clarified that this fourth spatial dimension is not time; time commonly described as the fourth dimension. Rather, this is a concept of space-time that includes four spatial dimensions, plus time; a four+one space-time structure. (Isaac, T.M., 2017).

A new physical view expected to form an interconnected system that incorporates consciousness, and based on the smallest unit of energy; the elementary particle. In this, elementary particles classified and fitted into a regular and well-characterized grid. Fermions, called matter, form space. Bosons are the go-between fermions by executing the changes and rhythms of the universe.

In other words, fermions are subjects, whereas bosons may consider the verbs of the physical world. In the material world, decoherence as the collapse of the wave function of elementary particles, produces measurable changes in physical qualities, such as speed or position, and in the brain stimulus changes neuronal activation pattern and leads to cognitive, behavioral changes. Evolution increased neuronal complexity and produced mind intricacy of the human brain, which organizes a whole body into an orchestra. Complex electromagnetic flows and oscillating rhythms conspire to make the mind much more than simply the cortex, the amygdale, and the other structures that constitute the brain. Sensory stimulus increases oscillation frequencies, a syntactic coding for projecting information about the environment to the cortex back and forth. (Deli, E. 2016).

The evolution of the cortex dramatically changes the dynamics of the brain and forms an advanced homeostatic regulation, which always recovers an energy-neutral resting state, known as the default mode network DMN, which turns it into a self-regulating system. Festinger's cognitive dissonance theory (1957) shows that even core beliefs may sacrifice in order to maintain mental congruency. There is a strong correlation between intellectual abilities and the complexity, convolution, and overall size of the neocortex. Since old associations may reconnect in a novel way, experience can accumulate in the immensely complex neuronal connections of the cortex. Hence, large mammals with convoluted cortices display emotional stability, compassion and kinship, and form close-knit, stable social groups. The neuronal activation pattern of the brain gives rise to thought processes, the manifestations of consciousness. (Deli, E. 2016).

In the brain the direction of information (energy) transfer in the limbic structures is highly dependent on frequency, neocortical-limbic transfer occurs during slow theta waves (4–10 Hz), and data, transfer reverses during gamma frequencies (30–130 Hz), as reported by Buzsaki, 2011. The frequency dependence of energy flow means that low brain frequencies intuitively increase the degrees of freedom, whereas high brain frequencies are more deterministic and therefore allow fewer degrees of freedom. Since low- and high-frequency bands determine opposing energy-information flow, they may consider as opposite energetic poles of the brain's operation. (Deli, E. 2016).

There is a direct link between consciousness' structures and specific correlative brainwave states. This interconnection suggests that the human brain adapts to the new structure by adding a corresponding brainwave that aids in explicating and interpreting the new world coming into view. This suggests that the higher brainwaves in the known spectrum were yet dormant and inaccessible to early humans, and, as mutation occurred, there was a reciprocal unfolding of ever-higher frequency waves. This determination also reveals a profound relationship between the developmental growth of a human being, and the development of the species at large, shedding new light on the symmetrical recapitulation of ontogeny and phylogeny. (Kozlowski, M. & Kozlowska, J. M., 2017).

Solar and geomagnetic influences' affect human health and behavior, and they are coupling among the human nervous system and the resonating geomagnetic frequencies, which called Schumann resonances that occur in the earth-ionosphere, resonant cavity and Alfvén waves. These resonant frequencies directly overlap with those of the human brain and cardiovascular system. (Craty, M., Deyhle, A. and Childre, D. 2012).

Mammals and birds, which populate most regions of Earth, are emotional electrons. Cortical insulation gives rise to the self, or ego, the source of cognition and self-awareness. Emotional electromagnetism, as attraction and avoidance, aids the formation of complex social, often hierarchical structures. The dominant emotion supported motivation in the preservation of the ego. Emotions are the tools of survival; with them dangers avoided or overcome, and opportunities found. (Deli, E. 2016).

Animals with more sophisticated emotions appear later in evolution, and these animals exhibit great evolutionary advantages. The discrete energy changes lead to the Heisenberg uncertainty principle, and the Pauli exclusion principle that drives territorial needs and competition. Emotions dramatically improve homeostatic regulation, such as the ability to maintain constant temperature. Emotional electrons form a trusting state, allowing the feeling of oneness in mating as well as birth and care of their offspring. (Deli, E. 2016).

The Big Bang gives birth to material particles and evolution begets consciousness. Evolution appears to be a random process, but over time, it forms an arch that spans between the formation of material fermions and the emergence of intellect. Intelligent life arises wherever the necessary minimal conditions for biological evolution met. Intelligent occupants of the cosmos should be similar not only in the structure of their minds, but in the biological building blocks of life, and in their emotional sophistication as well. (Deli, E. 2016).

The physical basis of consciousness opens a new dimension of understanding that can revolutionize the social sciences and technology as well as the healing of mental diseases. The realization that the mind is an inalienable part of the infinite universe, therefore itself is infinite, will increase social cohesion and goodwill. The human mind operates according to the same organizational principles, the same physical and mathematical laws, as the cosmos. This tells that there is some form of cosmic intelligence, which manifests in sophisticated self-regulation. (Deli, E. 2016).

Meijer and Korf in earlier work (2014, 2015), reported that our brain studied under a wide variety of experimental condition, shows extremely rapid response times, that are not compatible with the known period of synaptic transmission and processing of action potentials. For example, subliminal stimulations of less than 50 milliseconds, the time lag of unconscious to conscious experience ranges from 0.3-0.5 sec. so this implies that information processing by the brain is faster than the rate of overall neural transmission/ action potential propagation. Consciousness determined by physical laws of matter and energy in producing energy and matter. (Meijer, D.K.F. and Geesink, H. J. H., 2017).

After all, the extremely rapid function of cortical structures requires:

A non-local, field like, connective mechanism, which cannot explain by relatively slow neural transmission mechanism, multiple external fields to which our brain exposed that may influence its function, which requires an orchestrated receptive apparatus having both wave receiving and transmitting properties, receptive here thus has a double meaning: that of receipt and recipe, strong attractor/standing waves that are powerful enough to induce coherent resonance patterns with cortical brain structures known to be correlated with conscious states, bidirectional flow of information between internal and external electromagnetic fields enables to build up a personal mental model that is instrumental in simulations of actualized representations of the individual status as a basis for quality control of the whole organism. (Meijer, D.K.F. and Geesink, H. J. H., 2017).

To conclude, when we are talking about consciousness, we are talking about information; information provides the basic consistence of consciousness. If we hypnotized (H5) that the whole universe is conscious, from the primitive cell to the human being, we may conclude non-local connection that coherent the whole reality, and enable instant, spontaneous action, when an imbalance occurs inside the cell, then the whole system. The evolution of the human brain's cortex advanced such process of regulation. The new physics of entangled quantum universe, explains sixth sense in the form of a vibration, resonance sensitive macromolecular apparatus in each cell.

4. The overall picture (overall suggested speculation):

If I summarize my previous suggested hypotheses and conclusions, through the article, I may organize them as the following:

Each system in the universe feeds on information. Living, or non-living; atom as example of non-living being realizes its balance well, when the ratios among its components are equal, which is information that give the atom its balance. When these ratios disrupted, for one reason or another, atom realizes other information, which drives it to act for regaining its balance. Atom was aware its status in both conditions.

The same with any living system, from cell to organ up to the whole being; all universe systems and components are conscious and aware its status of balance or imbalance. Related to this, any unit activity produces energy, waves, as electromagnetic waves surrounding such activities, these waves form entangled, crossed chains, which interconnect all the universal components. Each being in such vast universe pick up or capture, from such entangled net any sign that enables balance, adaptation, to save the being in each moment.

We are, as human beings, embedding in this quantum entangled coherent universe. Our mean, key link, to this universal harmonic orchestra, is our 6th sense; our antenna, remote sense, that enables one to act as antenna receiving, producing or emitting magnetic radiation, detecting flight stimulations far from the current surroundings; to enable us to adapt, not only to the current situation, but also to the coming events.

In quantum new physics, we are all coherent entangled ones, and through the evolutionary tree, we are not the only being whom have such remote sense. In spite of this, we may achieve quality leap- evolution- through this sense; as in psychic state, we enlarge our self from self-centered to the whole around, we melt our selfish concentration to live in harmony, in balance with the whole.

Therefore, we are what we perceive; if we develop our perception from self-actualization need, concentrating on ours only, to self-actualization through the whole, we may balance between others, self-awareness, belonging need, and ours. The evolution then, as new Darwinism's suggested would develop from struggle and fight to coherent peaceful relationships that are in harmony with nature's law.

The more we discover such process, the more we move ahead to the looking forward quality leap.

References

- Alles, D. (2005). The Nature of evolution. University of California press. Vol. 67, No1 (Jan.), pages 7-10. www.jstor.org/stable/4451774, Accessed 31 October 2017.
- Comings, D. (2010). The Neurobiology, Genetic and Evolution of Human Spirituality the Central Role of the Temporal Lobes. *NeuroQuantology*, Vol.8, Issue4, pages 478-494. ISSN 1303 5150, www.neuroquantology.com , accessed 20 October 2017.
- Craty, M., Deyhle, A. and Childre, D. (2012) The Global Coherence Initiative: Creating a Coherent Planetary Standing Wave. *Global Advances in Health and Medicine*. Vol. 1, No 1, March 2012. Pages 64-77, www.gahmj.com. Accessed 15 November 2017.
- Deli, E. (2016). Consciousness, a Cosmic Phenomenon—A Hypothesis. Research Essay. *Journal of Consciousness Exploration & Research*. Published by Quantum Dream, Inc. December 2016, Vol. 7, Issue 11, Pages 910-930. ISSN: 2153-8212. www.JCER.com. Accessed 11 October 2017.
- Ho, M. W. (2017). Gaia and the Evolution of Coherence. First presented at the third Camel ford Conference on The Implications of The Gaia Thesis: Symbiosis, Cooperatively and Coherence, November, pages 7-10, 1989, The Wade bridge Ecological Centre, Camel ford, Cornwall; revised 10.8.93. Science and society archive. <http://www.i-sis.org.uk/gaia.php> . Accessed 1 December 2017.
- <https://www.merriam-webster.com/dictionary/information>. Accessed 11 November 2017.
- Hubbs, C. (1986). *Compton's Encyclopedia* (1986). Evolution, volume number 7, (E). By Compton's learning company, division of encyclopedia Britannica. Library of congress catalogue number: 85-71612. USA printed university of Chicago. P. 345a.
- Isaac, T.M. (2017). A new theory of consciousness: the mind exists as a field connected to the brain. https://www.theepochtimes.com/uplift/a-new-theory-of-consciousness-the-mind-exists-as-a-field-connected-to-the-brain_2325840.html. Accessed 11 October 2017.
- Jawer, M. (2005). Point of view: Environmental Sensitivity: A Neurobiological Phenomenon? *Seminars in integrative medicine*. Elsevier Inc. Pages 104-109. doi:10.1016/j.sigm.2005.10.003. <https://positivedisintegration.com/Jawer2005.pdf>. Accessed 9 November 2017.
- Kampourakis, K. and Minell, A., (2014). Understanding Evolution: Why Evo-Devo Matters, *Viewpoint*. Vol. 64, No. 5, *Bioscience*. <http://bioscience.oxfordjournals.org> , accessed 30 October 2017.
- Kozlowski, M. and Kozłowska, J. M. (2017). Consciousness, Schumann Field, Alpha-Omega & Bohm's Pilot Wave. *Journal of Consciousness Exploration & Research* Published by Quantum Dream, Inc. July 2017, Volume 8 ,Issue 6 , pages 441-484. ISSN: 2153-8212. www.JCER.com . Accessed 11 October 2017.
- Lucadou, W. (2011). Complex Environmental Reactions, as a New Concept to Describe Spontaneous Paranormal Experiences. Vol. 21, Issue 2, June 2011, pages 263-285. *Axiomathes journal*. Online ISSN 1572-8390, print ISSN 1122-1151. Accessed 20 November 2017. <http://doi.org/10.1007/s10516-010-9138-4>. Springer Netherlands <http://link.springer.com>.
- Meijer, D.K.F. and Geesink, H.J.H. (2017). Consciousness in the Universe is Scale Invariant and Implies an Event Horizon of the Human Brain. *NeuroQuantology*, September 2017, Volume 15, Issue 3, Pages 41-79, doi: 10.14704/nq.2017.15.3.1079.
- Montecucco, N. F. (2007). Coherence, Brain Evolution, and the Unity of Consciousness: The evolution of Planetary Consciousness in the Light of Brain Coherence Research. *The Journal of New Paradigm Research*. Vol. 62, 2006- Issue 1-2. Pages 127-133. <https://doi.org/10.1080/02604020500412790>. Taylor& Francis
Online.<http://www.tandfonline.com/doi/full/10.1080/02604020500412790?scroll=top&needAccess=true>
Accessed 1 December 2017.
- Parra, A. (2009). *EL Mundo oculto de los sueños. Metáfora y significado para comprender toda su riqueza. Capitulo 3: El potencial creativo de los sueños.* Page 147. Libro de edición Argentina. Queda hecho el depósito que marca la ley 11.723. Editorial Kier S.A. Av. Santa Fe 1260 (C 1059 ABT) - Ciudad de Buenos Aires. Impreso en la Argentina. www.kier.com.ar.

- Pluess, M. (2015). Individual Differences in Environmental Sensitivity. *Child Development Perspectives*. Volum9, Issue 3, Version of record online: 23 Apr 2015. Wiley online library. Pages 138-143 <http://onlinelibrary.wiley.com/doi/10.1111/cdep.12120/pdf>. Accessed 9 November 2017.
- Powell, D. H., (2009). *The ESP enigma. The scientific case for psychic phenomena.* Walker & Company. New York, ISBN-10: 0-8027-1606-7. www.walkerbooks.com Pages 133- 142.
- Radin, D. (1997). *The consciousness universe. The scientific truth of psychic phenomena.* Harper Collins publishers Inc, SanFrancisco. ISBN 0-06-251502-0 (cloth). Page 23.
- Radin, D. (2000). Is there sixth sense? *Psychology today*, July/August 2000. Pages 45-51.
- Radin, D. (2006). *Entangled minds. Extrasensory experiences in a quantum reality.* Simon & Schuster. United States. ISBN-10 1-4165-1677-8. Pages 155-116.
- Ray, G. (2008). Evolution, a Theory That Shook the World. *Journal of spirituality & paranormal studies*. October, vol. 31, Issue 4, pages 196-204. ISSN 1932-5770.
- Reber, A. (1995). *Dictionary of psychology.* The Penguin, new edition. "Sensation", published by, the Penguin Group, England. Pages 708-709.
- Reber, A. (1995). *Dictionary of psychology.* The Penguin, new edition. "Stimulation", published by, the Penguin Group, England. Page 756.
- Sheldrake, R. (1999). Dogs, Telepathy and Quantum Mechanics. *Nature*, Vol.401, 28 October, www.nature.com . Accessed 30 October 2017.
- Shtulman, A., Calabi, P. (2013). Tuition vs. Intuition: Effects of Instruction on Naïve Theories of Evolution. *Merrill-Palmer Quarterly*, April 2017. Vol.59, No.2 Pages 141-167. Wayne State University Press, Detroit, MI 48201.
- Temkin, A. (2010). Possible Role of Clairvoyance in the Evolution: Quantum Mind as a Factor and a Subject of the Evolution. *NeuroQuantology*, Vol.8, Issue4, pages 546-549. ISSN 1303 5150, www.neuroquantology.com . Accessed 20 October 2017.
- www.differencebetween.net/science/nature/diffences-between-adaptation-and-evolution/#ixzz4xCOptRl. Accessed October, 31, 2017.
- www.nature.com/subjects/evoultion, Accessed October, 31, 2017.
- Xiong, J. H. (2010). *The outline of parapsychology.* University press of America. ISBN: 978-0-7618-4945-2. Pages 83-86.