Exploration

Self-Awareness and Memory

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ABSTRACT

It is theorized that the brain has only frequency codes, carried by induced signals, including stimulations from light, sound or other senses, which travel through atomic composition of brain material and dissipate, creating tiny "gaps" or "holes" in atomic structure. These gaps or holes are assumed to be within the cellular and molecular composition in the interior of the brain. The true nature of memory is, in my view, the transformation or conversions of self-awareness signal into those frequencies of earlier received signals by passing through the infinitesimal gap in atomic structure created by said earlier signals.

Key Words: consciousness, self-awareness, memory.

Introduction

Few theoretical physicists have argued that classical physics is intrinsically incapable of explaining the holistic aspects of consciousness, but that quantum theory provides the missing aspects (Searle, 1997)**.** However, some physicists and philosophers consider the arguments for an important role of quantum phenomena to be unconvincing. Physicist Victor Stenger **(**1992) characterized quantum consciousness as a "myth" having "no scientific basis" that "should take its place along with gods, unicorns and dragons."

The association of brain activity to conscious intentions was supposed to be the basis of the functional microstructure of the cerebral cortex. The nerve impulse causes the discharge of source molecules by the course of exocytosis; it was presented as a quantum mechanical model for it is based on a tunneling process of the trigger mechanism. **(**Schwartz, Stapp and Beauregard, 2004)

Contemporary basic physical theory differs profoundly from classic physics on the important matter of how the consciousness of human agents enters into the structure of empirical phenomena. The new principles contradict the older idea that local mechanical processes alone can account for the structure of all observed empirical data.

Several investigations and theories relating to brain function and physics were postulated as early as in 1955, 1958 and later (Bohm, Bohr)**.** The only acceptable point of view appears to be the one that recognizes both sides of reality—the quantitative and the qualitative, the physical and the psychical—as compatible with each other and can embrace them simultaneously. (Pauli, 1955)

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In a complementary procedure, averaging techniques have been used to record the electrical fields generated by the brain in the willing of a movement, the promptness potential. In exquisitely designed experiments, Libet has discovered that in conscious willing has a cerebral activation about 200 ms before the movement.

From pure basic physics point of view, a reader would be interested to know that while reading this manuscript, the words on the page are only a reflection of light. In other words, the reader receives light from the page. This reflected light induces or stimulates neuron "spike" in the brain, which re-activates the previously registered audio signals, i.e. Memory. Memory is reactivation of previously registered signals which were received through neuron spikes. Since childhood and early, a word, name or description of a thing exists in Inertia in the human brain before reactivation.

Except for a new word, the searched meaning is again the reflecting light of the printed word from a Dictionary page or an audio description, which is then superimposed or juxtaposed with the new word visual. This phenomenon of brain mechanism is examined in many disciples concerning memory and perception. Normally, humans are inclined to assume that the memory functions like recording apparatus, which is a false assumption. The molecular mechanisms essential to the induction and continuance of memory are very dynamic and consist of divergent phases covering time periods from seconds to a lifetime. (Schwarzel & Mulluer 2006)

The optic nerve contains retinal ganglion cell axons and support cells, leaves the eye socket orbit through the optic canal, leading towards the optic chiasm, which is situated at the base of the brain underneath the hypothalamus (Colman, 2006). An axon usually transmit neuron signal, an electrical impulse away from the neuron's cell body or soma. Large numbers of axons of the optic nerve terminate in the lateral geniculate nucleus (LGN), which is the primary relay center for visual information received from the retina and it is situated inside the thalamus of the brain. (Goodale, & Milner, 2004).The optic radiation or the geniculostriate pathway is a set of axons from relay neurons in the lateral geniculate nucleus of the thalamus suppose to transmit visual information to the visual cortex.

The critical question in cognitive neuroscience is about encoding and representation of information and mental experiences. It is not clear how the neuronal changes implicated in more intricate examples of memory, mainly declarative memory that necessitates the storage of facts and events (Byrne 2007). Memory Encoding is assumed as a biological event beginning with perception, passing through the brain to hippocampus where all sensations are collected into one single experience. Encoding is accomplished with a blend of chemicals and electricity. Neurotransmitters are released when an electrical pulse crosses the synapse which connects nerve cells to other cells. (Mohs, 2010).

From basic physics point of view, all brain activity is of sub-atomic phenomenon, Whether an induced electrical discharge or internal self-induced electromagnetic activity, both manifest out of atomic compositions of brain matter. Fundamentally, there is no freely available signal, one of the atoms of sodium, potassium and calcium do discharge a small fraction of its own negative charge of the value of below 30 to above 50 mV. There are about 100 billion neurons in the brain, each of which forms synapses with many other neurons. The cell fires an electrical pulse

called an action potential, when the potential changes considerably. The charged atoms such as sodium, potassium and calcium direct the synaptic activity (ScienceDaily, 2011).

In human brain, the memory capacity is the ability to store and recollect information and experiences. Since last century, scientists have formulated multimodal theories on Memory. Studies of memory provide interdisciplinary link between Cognitive psychology and neuroscience. Encoding of memory involves the spiking of individual neurons induced by sensory input, which persists even after the sensory input disappears. Encoding of episodic memory involves persistent changes in molecular structures that alter synaptic transmission between neurons. The persistent spiking in working memory can enhance the synaptic and cellular changes in the encoding of episodic memory (Jensen and Lisman 2005; Fransen et al. 2002)

Simple Methods & Results

Individuals from normal life (not patients) were questioned several times about their recollections of condition in deep sleep and the condition between sleep and waking state. Also several electroencephalography EEG data was analyzed which was observed, again of the normal individuals.

Repeated questioning on recollection of condition in deep sleep and before and after waking up does confirm the "self-induced" signal is indeed related to old term "ego" and I, Me, including denials as well. The self-awareness brainwave signals are active from 5Hz frequency and above and not before in 0 to 4 Hz frequencies. The self-awareness has also a "witness" function, which then allows individual to recollect and recount. In 0 to 4 Hz frequency, the individual is in Deep Sleep and never narrates that condition (Katkar, 2013)

From 0 to 12Hz to 40Hz and above appear in fully awake conditions. The self-induced data signals have content related to I and Myself, including denials as well. 'I" is "Self Awareness" though "I" is manmade audio signal within a language. The self-awareness brainwave signals are active from 5Hz frequency and above. There are 1000s of sounds in the languages spoken around the world which correspond to "I". Verily, the self-awareness signal is creation of the consciousness in the womb or before. Conversion of this into those induced signals is sensitivity to the world of information caused by receptor neurons. Above statement means that the consciousness as self-awareness signal has to convert further from 5 Hz frequency.

Since it is not possible to enter into live brain to observe the source of brain or thought activity, an uncomplicated parallel is drawn from a Movie screen mechanism. The pictures of the physical world and the characters in effect are only light rays projected on the screen. They are the light frequencies on the film frames captured during shooting. The light from the projector passes through the film frames and converts according to matrix of dots into those light frequencies which were received during shooting, these then in totality covering screen appear as images and action (Katkar, 2013)

Similarly, the data created by laser light on a Compact Disc is stored in a series of tiny dents and planes (called "pits and lands") and programmed in a spiral data track into the top of polycarbonate layer. The programmed information is read by an inbuilt infrared semiconductor laser beam of 780 nm wavelength by a lens through the bottom of the polycarbonate layer. The reflected laser beam from "pits and lands" of a CD are converted into audio visual signals of the intensities of laser beams into different frequencies corresponding the "pits" dimension and remain original when reflecting off the "lands".

It is theorized that the self-awareness signal passes through the infinitesimal gap or hole within the atomic structure. This changes the frequency of self-awareness into the frequency of the received energy, which created the gap. More precisely, it is theorized that the self-awareness frequency converts into the frequency, which correlates the dimension of the gap or hole in atomic structure. In other words, the self-signal becomes the signal of the object earlier perceived. This conversion and reversal to self makes individual believe, having memory of the object.

The normal brain function is millions of times conversion of consciousness through self-awareness, into frequencies of objects and sounds perceived. It is further theorize that when this activity is hyper and self-awareness signal is not coming back or does not reverse, the individual mental health is disturbed. Such condition of loss of self-awareness creates health and behavioral problems.

So, does the world around send any information of its own natural condition?

In the brain there is no projector, no light, no film to register external light, no screen to project the image of the physical world. Neither there is any mechanism of a compact disc for recording and reading. The image projected on the movie screen and in the brain correspond the light reflected from the bodies.

In other words, in visual perception, the reflected light from the physical world, including humans etc, may not carry any information. Indeed, it is assumed that the light after reflecting does not carry any physical, physiological, chemical, biological, molecular or atomic information of the body perceived. At the instant of impingement and reflection (in light speed) the initial frequency of light is changed, effectively, attenuates and changed frequency has the color attribute. Color and luminosity are the attributes of light. Neither there are "physical bodies" on the screen nor in the brain (Katkar, 2013).

Fundamentally, the assumed memory of physical world is, in my opinion, self-imposed "false memory". This false memory held strongly or obsessively in the brain is conflict prone and creates disturbed mental conditions. It can be inferred that this memory, only for practical reason, embedded in the day-to-day lives of individuals, helps organize life.

The memory reactivations from 5Hz up to 12 Hz appear between wake-sleep states. This is the condition where an individual is neither fully awake nor in deep sleep. The narration of images, called dream, are of different intensities hence the individual can sometimes narrate those images clearly and at other times he or she cannot recollect the images.

The above two states of dream images correspond to high and low intensities of brain frequencies. Between 8 Hz and 12 Hz of brain waves do carry certain intensity of image resolution, which then, the individual recollects and narrates. The low intensity of image resolution, which appears between 5 and 8 Hz of brain frequency, is not clearly remembered. The individual may express indistinct recollections of some images, which are obscure visuals, manifested just after deep sleep condition. In other case, the frequencies are near to waking state as the intensity is higher hence the possibility of remembrance. In a few other cases, due to higher frequency activity, between 8 and 12 Hz, individual experiences ad-mixture of visual data which creates a non-cohesive image display or dream sequence. The energetic activity corresponding induced signals by sense perception is in fact consciousness is active in energetic form. In other words, active consciousness is energy.

Discussion

Research shows that these negative charge (neuron signals) carrying the light frequency information rest in the nucleus of lateral geniculate, with the frequency codes. When the external stimuli re-activate these past codes, the brain has the faint image of that physical perception. These electromagnetic frequencies are extremely weak. Since childhood, humans are creating a self-imposed embedded program through juxtaposing descriptive audio induced (language) signals with visual light produced signal in center of brain and these reactivate as memory. These, in pure physics terms do not represent the physical world. Indeed, in my view, the physical world does not have its own means to send its own information, either in light form or audio form.

The supposed memory of physical world was tested simply by asking the individual to walk in one's own house by closed eyes, where every object is in memory held by the individual as his/her own known physical environment. The individual could not walk freely more than three steps in bedroom to bathroom or in sitting (drawing) room to kitchen or in other places. This establishes that there really is no information of physical world in the brain and it also elucidated that by open eyes, the light frequencies from each object of one's own environment invoked the previously available frequency codes, giving individual a sense of assurance of having "knowledge" of physical surrounding to move freely.

According to basic physics mentioned earlier, the initial charge emission does in fact activate or excites other atoms in immediate vicinity, which appears as a network of neural activity. Whichever may be the cell, as described in five divisions of neurons within the retina, which are photoreceptor cells, bipolar cells, ganglion cells, horizontal cells, and amacrine cells. The basic circuitry of the retina is supposed to incorporates a three-neuron chain consisting of the photoreceptor, a rod or cone, bipolar cell, and the ganglion cell and the first action potential seems to occur in the retinal ganglion cell, which is the direct path to transmit the visual information to the brain (Purves, 2008, Ramachandran, 1998) which again must be understood as a subatomic emission out of one of the atoms in the cell composition, either out of calcium atom or potassium or sodium atom.

The signal travels around 3 to 5 centimetres inside brain and terminates or dissipates in the atomic structure, creating, in my opinion, infinitesimal hole. Fortunately, the signals dissipate, otherwise they will excite billions of atoms, which in return will radiate and brain will become degenerate and burn off. In such case, Human being, after developing five senses, will not survive, even childhood.

Samples of EEG signals show distribution of electromagnetic radiation of energy emissions. The amounts of energy observed are delta waves. A delta wave produced from deep sleep called slow-wave sleep is a high amplitude brain wave with a frequency of oscillation between 0–4 hertz (Walker, 1999; Kirmizialsan, 2006) and Alpha of 8–12 Hz detected strongest neural activity in the occipital lobe during awake and relaxed condition (Cantero et al. 2003). Theta wave is of 4–8 Hz (Cantero et al. 2003), and Beta is of 13–30 Hz and Gamma waves in 30–70 to 100 Hz frequency band (Berger; Gray, 1929, Fries P 2001, Llinas, Yarom, 1986). The brain activity or Mu waves are electromagnetic oscillations in the frequency range of 8–13 Hz and appear in bursts of at 9 – 11 Hz (Oberman et al. 2005, Churchland, 2011).

It appears that all memory activation is dependent on a stimulus. A single external stimulus or even a self-induced becomes the cause of re-activation of latent memory. In fact, consciousness is self-awareness signal converting into inactive signal. Keeping self-awareness frequency cutoff from conversion into objective signals during wakeful state is the most extraordinary function which will lead to ultra or supersensory perception (if mastery achieved - author has experienced twice). The first few experiences will be perception of existence in a non-dimensional condition and other is of no-gravity state or floating state.

Conclusion

Human brain parts are inactive after death and the live brain is in my view only energetic activity. The true nature of *Memory* is theorized as the transformation or conversions of self-awareness signal into objective frequencies by passing through the infinitesimal gap in atomic structure created by earlier received signals. Above 5Hz, the self-awareness signal is transforming into objective frequencies and also having subjective function as witnessing, which declares, I see, I know etc.; and even in the negations. On the other hand, the self-awareness signal in 1 to 4Hz is subjective and not converted into objective signals. The research continues on how to keep self-awareness frequency from conversion into objective signals during wakeful state, which may lead to ultra or supersensory perception if mastery is achieved. In my view, the active human brain is an extraordinary *"Game of Energy"*.

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