Approaching Psychosis through Quantum Physics

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Developing This Theory

In 2005 I began searching for neurological markers that might correlate with various religious and social belief systems (Irish & Cohn, unpublished data). While the study did not yield results consistent with the original hypotheses, my interests in the structural role of the brain, as well as quantum movements were piqued. I began reading about theoretical mathematics and physics, and I was surprised to find many theories, while intending to investigate consciousness, did not commonly integrate with other sciences that traditionally explore consciousness such as psychology and social work. My belief in a more integrated science, as well as the unknown, has led to my application of the Quantum theory of consciousness proposed by Persinger & Koren (2007) to psychotic experiences had by individuals diagnosed with schizophrenia.

Currently, there are two primary treatments for schizophrenia: pharmaceutical (which influence chemical relationships in the brain) and psychotherapeutic, which largely focuses on assisting individuals manage activities of daily living (National Institute of Mental Health, 2009). The theory proposed here offers an alternative means of conceptualizing psychosis, which could potentially change approaches to treatment as well as hold implications for future etiological research on schizophrenia.

Understanding Psychosis through Physical Differences in Brain Matter

Structural differences in the brains of research participants diagnosed with schizophrenia have been located (Brown, 1986; Karson et al, 1988; NIMH, 2009). NIMH (2009) suggests that many people suffering from schizophrenia have less grey matter, and neural ventricles tend to be larger (Karson et al, 1988); such structural abnormalities differ from those found in individuals with affective disorders (Karson et al, 1988; Brown, 1986; NIMH, 2009). Also, malfunctioning neurotransmitters (dopamine and glutamate) creating chemical irregularities may also function to create the symptoms of schizophrenia (NIMH, 2009). Perhaps some of these structural differences allow for unique circumstances, on the quantum-level, such that

consciousness is altered in a way that allows perceivable access to a hypothetical universal plane, or the fourth dimension of time. Though it may sound bizarre to harp on such crude anatomical reasoning; as is true with any object, volume, density and spatial relationships interact to determine the object's function.

Quantum Neuroscience & Consciousness (Persinger & Koren, 2007)

The brain is a most unique piece of living matter to explore, in that Persinger and Koren (2007) have found many relationships between the physical properties of the human brain and the earth, as well as the entire universe. For instance, the resonant frequency of the human brain (about 7Hz) is within the same frequency range of the earth itself. Though, this may simply be due to the fact that the earth itself, and humans, are primarily composed of the same thing: hydrogen. Further, Karson et al (1988) interestingly found that the neural Alpha frequency in the brains of un-medicated individuals with schizophrenia is considerably lower than in control groups composed of individuals without schizophrenia (less than 10.2 Hz). Alpha frequency is different than resonant frequencies; resonance refers to peaked oscillations occurring as energy is cycled, while alpha frequencies refer to EEG outcomes which indicate a specific state of mind, commonly associated with a state of relaxation.

The brain, like all other matter, exists in four dimensions: the usual 3-Ds of space and time, and also the fourth dimension of the xt-plane of Euclidian geometry (Persinger & Koren, p.159). Persinger & Koren (2007) describe the relationship between these dimensions with the equation: $s^2 = (x^2 + y^2 + z^2 - c^2t^2)$; where x, y, and z, are the three known dimensions of time and space, and where c is the velocity of light, and t is a given duration of time. When applied to the human brain using only three dimensions, this equation generally produces an "imaginary" or *i* solution. Yet, when considered with the fourth xt-plane of Euclidian geometry, the outcome is a real number ($.69 \times 10^{-9}$) When these 4 dimensions are combined into a mathematical equation there is a wavelength corresponding to 20.7 cm, which is roughly the wavelength of neutral Hydrogen (H) at about 21 cm (Persinger & Koren, p.160-161).

Further, if one regards the brain in terms beyond electromagnetic properties, which are the primary domain of pharmaceutical interventions, and simply regards the shape and volume, or consumption of space and time, moving at the speed of light, as represented by $s = (s^3)/c^2\,t^2$ it appears

that the length of a proton or electron, equals its width. Specifically relevance may be found in the notion, "a whole is much more than the sum of its parts" (or in this case, much less). Or, akin to Persinger & Koren (2007) this may suggest (1) the human brain not only exists in four-dimensions, it functions along a wavelength that is consistent with the wavelength of the entire universe (2) the brain may have access to a currently immaterial dimension, given appropriate electromagnetic circumstances that may allow for enough expansion in space and enough temporal summations which would allow such information from a "universal" plane existing throughout time to emerge at an appropriate level of space and time familiarly perceivable to human beings ($10^{-2}s$) (p.160). The value ($10^{-2}s$) is commonly associated with perceivable human consciousness and awareness.

Further, it is suggested that transcerebral and electromagnetic waves travel from a rostral to caudal direction every 10ms-20ms, and arguably Persinger & Koren (2007) state that this indicates consciousness is a series of blunted quantum-states, as opposed to a slow and steady stream (p.161). Though, because the human mind exists at 50ms, it exceeds the threshold of resolution, which otherwise might make such blights perceptible. In other words, the stream of consciousness seems continuous because our brain, as an entity, exists at a frequency out of the quantum range, when in fact consciousness is a series of quantum-level fluctuations propelled by ultra-tiny changes in direction. Persinger & Koren (2007) support this notion by further suggesting that during these quantum punctuations, perhaps information from this "universal" plane may have an opportunity to be consciously accessible, albeit to an undetectable degree. However, it is hypothesized that given appropriate circumstances, such "universal information" exchanged during these brief gaps in consciousness may achieve recognition in the human mind, but only given a large space of hydrogen-sources occurring in temporal sequences of about 1 nanosecond, and recognition would only come to human consciousness if the sum of the serial duration of the sequence could be integrated into 20ms increments, which represent common neuronal processes and consciousness, such as perception of the physical world (Persinger & Koren, 2007).

If this were to occur, it is still likely that such information would get muddled in our current, more readily perceivable information database that is the mind; unless that information was "markedly incongruent" (Persinger & Koren, 2007). It is suggested that the brief, exchange between

interfaces would allow for "universal information" to enter human consciousness; such information is likely to contain information from vastly different times and places, as a wavelength existing at a frequency found resonant throughout the entire universe likely carries information from across the existence of the universe, and from all portions of time and space, and from many different perspectives (Persinger & Koren, 2007). In theory, one could tap into the experience of a place in an unknown galaxy, 10,000 years ago and if that experience was reasonably incongruent with the information generally taken in, one may even be aware they are experiencing it. This may have implications regarding the content of some select hallucinatory experiences, as many individuals with schizophrenia exhibit differences in the physical matter in the brain (Brown, 1986; NIMH, 2009) seemingly conducive to this type of activity on the quantum level.

This approach is currently in a very nascent, theoretical state, which is likely its greatest limitation. Quantum Neurophysics are far from gathering necessary empirical data, as the necessary technology to fully understand such methods are not yet available. Thus, Quantum Neurophysics is beyond the collection of falsifiable data. However, Persinger and Koren (2007) were able to test various magnetic fields in order to confirm the theoretical mathematics applied to develop the theory in its current state.

Implications for further research might indicate a need for a more a non-assumptive exploration of the hallucinatory experiences of psychosis; particularly in individuals diagnosed with schizophrenia. Rather than attempting to forge a crass divide between 'real' and 'unreal,' perhaps more may be learned when the assumption shifts from restrictive dichotomous structures and instead bends more toward a notion found as a historic inspiration for scientists; a notion that begs explorers to consider all as potentially real, especially when little is understood.

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About the Author

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