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Quantum Cum Synaptic-Neuronal Paradigm and Schema for Human Speech Output and Autism

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Abstract : Objective: To improve the current modified Broca-Wernicke-Lichtheim-Kussmaul speech schema and provide insight into autism. Methods: We reviewed the pertinent literature. Current findings, involving Brodmann areas 22, 46, 9,44,45,6,4 are based on neuropathology and functional MRI studies. However, in primary autism, there is no lucid explanation and changes described, whether neuropathology or functional MRI, appear consequential. Findings: We forward an enhanced model which may explain the enigma related to autism. Vowel output is subcortical and does need cortical representation whereas consonant speech is cortical in origin. Left lateralization is needed to commence the circuitry spin as our life have evolved with L-amino acids and left spin of electrons. A fundamental species difference is we are capable of three syllable-consonants and bi-syllable expression whereas cetaceans and songbirds are confined to single or dual consonants. The 4 key sites for speech are superior auditory cortex, Broca's two areas, and the supplementary motor cortex. Using the Argand's diagram and Reimann's projection, we theorize that the Euclidean three dimensional synaptic neuronal circuits of speech are quantized to coherent waves, and then decoherence takes place at area 6 (spherical representation). In this quantum state complex, 3-consonant languages are instantaneously integrated and multiple languages can be learned, verbalized and differentiated. Conclusion: We postulate that evolutionary human speech is elevated to quantum interaction unlike cetaceans and birds to achieve the three consonants/bi-syllable speech. In classical primary autism, the sudden speech switches off and on noted in several cases could now be explained not by any anatomical lesion but failure of coherence. Area 6 projects directly into prefrontal saccadic area (8); and this further explains the second primary feature in autism: lack of eye contact. The third feature which is repetitive finger gestures, located adjacent to the speech/motor areas, are actual attempts to communicate with the autistic child akin to sign language for the deaf.

Keywords : quantum neuronal paradigm, cetaceans and human speech, autism and rapid magnetic stimulation, coherence and decoherence of speech
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