The Bio-Pacer Neural-Sensory Augmenter Technology: A Promising New Treatment For Alzheimer's Disease

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In this paper, I present a brief appraisal of the Bio-Pacer Neural-Sensory Augmenter holo-technology based on two years of my own clinical observations and investigations with this software based tool. I begin by providing a brief description and appraisal of the technology. On the basis of this appraisal, as well as a consideration of the most pertinent research directions currently being pursued with Alzheimer's disease, I conclude that the technology is sufficiently developed to warrant immediate clinical trials with early stage Alzheimer patients.

My research discipline is Health psychology (i.e. psycho-neuro-immunology), and my Doctorate, which was completed in the Psychiatry and Behavioral Science Department at the Auckland School of Medicine, New Zealand, focused on the relationship between changes in consciousness and changes in physical/mental health in a clinical setting using psychological interventions derived from Health psychology. Therefore my area of expertise and interest falls in the fields of cognitive neuroscience, psychological-immunological relationships and quality of life (functional) testing.

Bio-Pacer Neural-Sensory Augmenter Holo-Technology

The fundamentals of the Bio-Pacer technology were conceptually worked out by Dratch in the 80's and subsequently developed in the early 90's and have undergone continual rigorous testing and further refinement since then. It is an astonishing new form of active holographic wireless neuro-stimulator technology which produces a variety of tangible outcomes at a distance or through headphones, including regenerative changes in neuro-anatomy and neurochemistry.

This technology, which is totally unique, is neither magnetic, scalar, psychotronic nor radionic. It does not use "pulse shaping" or the Russian concepts of overlays, nor "silent sound", "EEG" entrainment, or other forms of suggestive programming. It is instead, a low power radio-frequency (RF) form of "neural-communication" and is the outgrowth of over a decade of research into Cetacean interspecies communication.

Basically, using spectrum analyzers and sensory translator programming to interpret cetacean communications, the inventor, Bob Dratch, found that dolphin and whale communications, under certain conditions, fall in the holographic spectrum, and that they can use sonic holograms to interface with their environment. Bob also measured the neural holograms in dolphin brains and based some of the tested holographic energy patterns (holoforms) on those. After developing later the software that was capable of steering the RF electro-magnetic field patterns Bob found by generating neural holoforms, it was possible, using this system, to condition the brain and nervous system wirelessly.

Dratch (2008) summarizes his technology as follows:

> "We have effectively taken the work of the original pioneers such as Adey, DelGado, Schapitz and numerous others and created a precision based low-powered technology with a novel wireless interface using holo-sensory concepts for interacting with the central (cortical and sub-cortical structures) and peripheral nervous systems, with a particular emphasis on non-invasive and/or non-contact approaches. Towards the completion of the current evolution of this particular cycle of research and development, I and the testing team have reliably and repeatedly positioned neural holoform information into the test nervous system, creating patterns, creating information, suppressing patterns, suppressing information and making corrections."

Dratch's work shows that the human nervous system (brain-nerve pathways) works by way of holographic frequency space signal reception and processing and that by transmitting low power coherent and appropriately tuned holographic frequency space waveforms towards the

human nervous system, people for instance can experience spontaneous remission from psychological issues they have been experiencing.

> "Over the last 25 years exploring energy and consciousness, I've looked into published research of beneficial uses of neural technologies for actually helping to restore neural functionality, help with motor control, or achieving feelings of wellness - it is clear to me that one can achieve peace, stability and security through repairing a damaged mind and body." (Dratch, 2008)

In order to understand how the software works, it is necessary to briefly look at one of the major theories of quantum physics known as the holographic principle - originally championed by two of the world's most eminent thinkers: physicist David Bohm, a protégé of Einstein's, and Karl Pribram, a highly-respected neurophysiologist from Stanford University. Their holographic model received dramatic experimental support in 1982 when a research team led by physicist Alain Aspect in Paris demonstrated that the web of subatomic particles that compose our physical universe, possesses what appears to be an undeniable "holographic" property.

Miller and Webb (1993) state that the gist of the holographic paradigm is that there is a more fundamental deep reality. There is an invisible flux not comprised of parts, but an inseparable interconnectedness. The holographic paradigm is one of reciprocal enfolding and unfolding of patterns of information. All potential information about the Universe is holographically encoded in the spectrum of frequency patterns constantly bombarding us.

Of particular interest to this paper is Pribram's (1997) assertion that our current lack of understanding of cognition and how the brain encodes memories is due to the fact that the actual mechanism is drastically different from conventionally accepted ideas. His "Holonomic Model" (Pribram, 1987, 1997) proposes that cognitive functions are guided by a matrix of neurological wave interference patterns. Put simply, the wave interferences form holographic patterns that determine our level of cognitive functioning. Pribram's ideas concerning how the brain encodes memories in a holographic form is also supported by the research of DeValois and DeValois (1980) who found that the spatial frequency encoding displayed by cells of the visual cortex was best described as a Fourier transform of the input pattern.

The cutting-edge holographic technologies underlying terabyte data storage also point to the relationship between memory encoding and holographic frequency space signal processing and provide clues as to the efficacy of the model. So it is clear that much of the underlying explanation of Dratch's technology has solid scientific basis. An interested reader can be directed to various scholarly references which further elaborate the actual science behind it, and how it achieves such remarkable changes in the person's perception and neurochemistry.

A Promising New Direction For Alzheimer's Disease

Despite a substantial knowledge base, Alzheimer's disease continues to be poorly understood and, as yet, incurable. We do know, however, that it is a progressive, degenerative disease of the brain, which causes thinking and memory to become seriously impaired and that it is the most common form of dementia. Since individuals are affected differently, it is difficult to predict the symptoms each person will have, the order in which they will appear, or the speed of the disease's progression.

From discussions with neurologists specializing in Parkinson's and Alzheimer's disease, I have noted several factors that are well accepted. The first is that acetylcholinergic cells die off leading to cognitive loss, the second, that chronic, high-level glutamatergic neurotransmission leads to neurotoxicity and cellular death, thirdly that Amyloid (alpha-B) protein molecules appear to accumulate in Alzheimer brains and are indicated in the development of plaques and tangles which kill off neurons. RNA splicing and general oxidative damage appears to play a role, GABAergic systems are also involved and in late stages when brain cells degenerate and die, the brain markedly shrinks in some regions.

Finally, in terms of treatment, symptoms are attenuated by non-steroidal anti inflammatory drugs (NSAIDs). NSAIDs suppress the action of cyclooxygenases (COX), which catalyze synthesis of prostaglandins. The latter are intermediaries in the postsynaptic signal transduction cascade of cells with NMDA-type glutamate receptors. They may also potentiate glutamatergic transmission by inhibiting astrocytic reuptake of glutamate. Both mechanisms can potentiate excitotoxic cell death. Acetylcholine is thought to also be a promising way to slow the progression of the disease via the modulation and control of subcortical cholinergic and GABAergic input to the CA3 region of the hippocampus.

My personal opinion is that the Biopacer technology is relevant to the treatment of Alzheimer's disease since holoforms can be created for genes, gene triggers, proteins, catalysts or any other substance and the methodology exists whereby the holo-waveform can be directed wirelessly and non-invasively into affected areas. The methods by which cellular damage can be remediated or repaired exists, and the wave form of neurotrophic factor which is responsible for new dendritic connections and neuronal plasticity has been well tested.

Because the ratio of neurotransmitters present can be easily targeted and corrected in each specific lobe using the Biopacer, it is likely that we will find that the memory and personality losses associated with Alzheimer's disease may be significantly slowed or even reversed. In one piece of anecdotal research we noted a significant improvement in memory and recognition functions, indicative of neural regeneration in the frontal temporal lobes in an elderly CVA patient with mild dementia.

Dratch has precisely fine-tuned the Biopacer technology to the point where it is possible to control neurotransmitter inhibitor generation, and focus on synaptic firing threshold adjustments. Basically, we are at a stage now, where it can be used to assist people with various nervous system disabilities. With advancing age, stroke, Alzheimer's, Parietal Dementia, or Frontal-Temporal Dementia, the neural circuits become scrambled, blocked or inaccessible. Dratch explains that a "neural circuit" (a reverberant information pattern similar to how the lyrics of a music piece can get stuck in one's mind) could be created or un-done using the Bio-Paced Neural-Sensory technology.

With disease conditions proper neural circuits are lost. The elderly, for instance, can easily lose their way, or not remember to get up and go eat or take care of necessary bodily functions. All of those functions are stored in neural circuits. A proper sequence of neural circuit activations could contain something like "remembering how to get up in the morning, get dressed, have breakfast and go to work". An aberrant behavior "habit" lodged accidentally into a neural circuit sequence could be corrected or removed. Therefore, by controlling access to these circuits properly, non-pharmacological solutions are possible. That means immense breakthroughs are now on the horizon in terms of the successful treatment of numerous neurological diseases, issues and conditions.

Currently, Biopacer modules are being developed for the use of a laser to assist in the wireless transfer of the RF holographic information holoforms to a distant user. A holographically driven diagnostic/remedial "magic finger™" handset for use in neuro-psychological analysis and stimulation is being designed. The prototype of a wearable low powered RF "Bio-Paced Neural-Sensory Device" has been designed to function as a "portable neural stabilizer". It's design resembles a conventional hearing aid device. In Parkinson's disease, for example, where neurological problems result in tremors, the non-invasive ear-piece "bio-pacer/stabilizer" would function as a cortical pacer capable of synchronizing catastrophic episodes within the hemispheres and lobes, and reducing the likelihood of seizure events, wirelessly and without invasive surgery.

Therefore, we already have a matured and developed technology with further product development plans which could work as an adjunct to or even replace pharmacological approaches, thus reducing the incidence of side effects associated with the use of compounds such as L-dopa in Parkinson's, as well as ameliorating the suffering and progressive decline

associated with Alzheimer's disease or even depression. Dratch, in collaboration with his testing team have already learned methods of tuning and balancing to reduce stress and distress, depressions and other negative feelings, and as such, could be used to significantly improve the quality of life of neurological patients and their caregivers.

Alzheimer's is the end product of a long process of degenerative changes in the brain so a multi-systems approach to slowing its progression and potentially reversing it would be the soundest approach to restoring a higher state of coherence in the patient. The concept of harmonic resonance and how non-linear dynamic living systems can evolve to more complex states of physiological coherence is proposed by Dr. William Bauer of Case Western Reserve University School of Medicine and Chief of Otolaryngology, VA Medical Center in Cleveland, Ohio. This material is presented in Appendix A.

I can personally attest to the efficacy and clinical veracity of this technology as I have, over a two year period, demonstrated that the low power radio frequency hologram generated using the technology can be precisely steered. The technology employs only fractions of a watt of radio wave power (microwatts) to control symptoms or create sensations at a maximum distance of 60 feet which means that issues around the heating of cortical tissue are overcome. The fact that Dratch's unique scanning method can produce a holoform which mimics the pharmacological action of many unique products means it will be possible to explore a wide range of approaches to this complex debilitating problem without having to worry about the blood brain barrier and the necessity of administering precursor substances. Most importantly, our testing over the last decade has not shown any negative side effects associated with the technology

My conclusion is that Biopacer Neural-Sensory Augmenter Holo-technology is sufficiently developed to warrant its therapeutic efficacy appraisal with Alzheimer's Disease in randomized clinical trials.

Appendix A

Dr. William Bauer of Case Western Reserve University School of Medicine and Chief of Otolaryngology, VA Medical Center in Cleveland, Ohio

Boosting The Brain To a Higher Order of Coherence

The idea that electrical stimulation might boost creativity and other high-level mental functions became plausible when we understand how the electricity is interacting with the neurons in the brain. This interaction is explained by:

"Basically, absorption of electromagnetic energy increases the kinetic energy of molecular constituents of the absorption medium. There is much evidence that the molecular organization in biological systems needed to sense stimuli, whether thermal, chemical, or electromagnetic, may reside in joint functions of molecular assemblies or subsets of these assemblies. these assemblies form complex flow patterns that can undergo sudden transitions to new self-maintaining arrangements that will be relatively stable over time.

Transformation of complex flow patterns into larger hierarchical patterns is salutary...Because these patterns are initiated and sustained by continuing inputs of energy, they are classified as "dissipative processes." For this reason, they occur far from equilibrium, meaning there is an organizing and building process....

In summary, the mechanism of tissue interactions with electromagnetic fields may be as follows: an electromagnetic field of the correct magnitude and frequency causes a "perturbation" or repositioning of the molecular plasma membrane enzyme systems by favorably altering stereoscoping configurations of molecules in much the same manner as a chemical catalyst holds molecules in the correct orientation for chemical reactions.

The best known cell-membrane enzyme is adenelyate cyclase which converts ATP (adenosine triphosphate) to cycliclase (adenosine monophosphate) which then acts as a second messenger intra-cellularly. In other words, an electromagnetic field may act in the same way as a hormone upon the cell membrane."

That is, electromagnetic fields, provided they are of the correct magnitude and frequency, can act on the brain cells in the same way as many brain chemicals do, causing them to alter and grow in size and dendritic length (the process of converting ATP to cyclic-AMP Bauer mentions above is the key to cellular growth).

So, according to Bauer, electromagnetic fields of the correct magnitude and frequency act as an energy influx upon a dissipative structure--setting up fluctuations that cause the brain to reorganize at a higher level of complexity and coherence, to grow, to escape to a higher order.

References

- A. Aspect, J. Dalibard and G. Roger "Experimental Test of Bell's Inequalities Using Time-Varying Analyzers", , Physical Review Letters, Vol. 49, Iss. 25, pp. 1804-1807 (1982) doi:10.1103/PhysRevLett.49.1804
- William Bauer: boosting The Brain to A Higher Order Of Coherence. Quoted in Harvey, Ruth S. "The Miracle of Electromedicine". National Institute of Electromedical Information, Inc. digest Bulletin, Winter, 1985.
- Bob Dratch, (2008) Bio-Paced Neural-Sensory Augmentation System - utilizations in neurological prepatterning and mitigation. http://pacer.bob-dratch.org
- Miller, R. A., Webb. B., "Embryonic Holography," Psychoenergetic Systems, Stanley Krippner, Ed. Presented at the Omniversal Symposium, California State College at Sonoma, Saturday, September 29, 1973. Reprinted in Lyttle's journal Psychedelic Monographs and Essays, Vol. 6, 1993. 137-156.
- Karl H. Pribram, "The Implicate Brain", in B. J. Hiley and F. David Peat, (eds) *Quantum Implications: Essays in Honour of David Bohm*, Routledge, 1987 'Holonomic Brain Theory and Motor Gestalts: Recent Experimental Results', (1987)
- Karl Pribram, 1997, "Holonomic Brain Theory and Motor Gestalts: Recent Experimental Results"
- Russel L. DeValois and Karen K. DeValois, "Spatial vision", *Ann. Rev. Psychol*, 31, 309-41, (1980)