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The Physics of Biological and Cognitive Sciences

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1. Introduction

For the last 25 years, the writer has been investigating the ways that living systems interact with coherent frequencies of electric, magnetic and electromagnetic fields and potentials, both endogenous and externally applied. This work is seen as complementing the already extensive knowledge of the molecular and biochemical mechanisms involved in living systems and water. Coherent frequencies offer a means of cognition, whereby living systems can know about themselves and their environment in the widest sense including sensation and perception and, possibly a means of conation whereby the interactions of mind, desire and will can impinge upon the human organism.

2. Biology

The writer's laboratory found in the early 1970's that there were anomalous magnetic effects associated with enzyme systems suggestive of the sort of long-range order associated with low-temperature superconductivity. Subsequently, the involvement of magnetic flux quanta phenomena and of the magnetic vector potential effects in water and living biological systems from cell cultures to humans led to the conclusion that they must be regarded as a macroscopic quantum systems1.

These results support the theoretical work on the application of QuantumElectroDynamics (QED) to condensed matter by Preparata and Del Giudice2 which predicts domains of intrinsic ground-state coherence in water. The involvement of the geomagnetic field in 'water memory' and its 'erasure' by shielding imprinted water with a steel (mumetal) box, points to water having the properties necessary for the basic element ('qubit') of a quantum computer and, by implication this must be available to living systems, all of which are so water dependent.

3. Complementary Medicine

Work with electrically hypersensitive patients has given the writer an insight into the extremes of sensitivity of which living systems are capable as evidenced when their regulatory control mechanisms fail. Identical reactions can be triggered in a patient by chemical means and neutralised electrically, or triggered electrically and neutralised chemically; the autonomic nervous system appears to be the first system involved. Chemical toxicity in these patients and also in *in-vitro* cultured cells is manifest through the appearance of the chemicals' frequency signatures in the living systems' frequency imprints. It has been possible to re-program the frequency imprints of a cell culture and have these transmitted to the daughter cells.

These coherent frequencies in living systems may be found anywhere in the electromagnetic spectrum from milliHertz to gigahertz and beyond. Coherent frequencies also can be measured in most chemicals containing traces of water. One exception is the 100% halogen saturated molecule. The writer's sensitivity threshold for detecting the chemical frequency signature of sodium chloride as its solution is successively diluted comes at a concentration of about 0.3 ppm by weight.

In 1982, the possibility of producing a clinical effect from previously inactive water (saline or alcohol) in a sealed glass ampoule by exposing it to an external magnetic field of a patient specific frequency was the first direct evidence that the scientific basis of homoeopathy must be sought in physics and not through chemistry. Each successive dilution and succussion of a potency generally

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The interactions between frequency synchronised tadpoles, frequency imprinted water or, homoeopathic remedies can be detected over distances of several metres. This interaction represents an example of cognitive communication at a modest distance. With any action at a distance, filters can be interposed. Optical filters showed an exchange of bio-photons was involved.

The measured bandwidth at the acupuncture points is a little less than $\pm 2\%$ so, there are about 60 distinct frequency values possible per decade. Over the 14 decades from 1 milliHertz to 100 GHz, this represents an alphabet of at least 840 distinct characters potentially available for bio-communication. From the work with hypersensitive persons, it was seen that their mental, visual, oral, handwriting and artistic capabilities and their personal interactions were affected when their individual reactions were triggered by chemical signatures, or imprinted frequencies whether in water or generated by an oscillator. This implies that coherent frequencies are involved in such activities.

5. Conclusion

There must be a biological, cognitive and conative Uncertainty Principle whereby as the details of the biochemical reactions involved become known with greater and greater precision, this is at the expense of knowing less and less about the coherence, intention and physical timing of these processes. Living systems are too well organised to have to rely upon random processes for the control of their activities.

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