

Energy Fields in Motion: Bioresonant Synchronicity

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All matter in the universe is composed of atoms and their corresponding protons and electrons. Atoms are electrically and magnetically charged particles of matter in constant motion. This particle motion is in wave patterns or frequencies. All matter has identifiable and unique inherent frequencies.

The electric and magnetic fields of atoms have different frequencies because photons in atoms are emitted/absorbed by electrons, which are in complex motion. An electron emits a photon stream while orbiting and spinning, in a corkscrew or helix stream of photons. Photons (light quanta) are a mass transfer mechanism. The flowing particles or flux quanta (photon) exchange mass due to their motion resulting in an electric and a magnetic field.

The weak wavelength photons represented by the radio wave frequency range of the electromagnetic spectrum have the ability to affect biomatter. Radio frequency energy and light act on the outer electrons in matter. Applied energy fields causing electron excitation on individual atoms into a higher energy state produce radio waves. When electrons move back down to a lower energy level, they release photons.

The hydrogen atom, the most abundant atom in the universe, is in itself a source of radio emission. In the hydrogen atom, the hyperfine splitting of its ground state: there is a small difference in energy (5.9×10^{-6} eV) for a neutral hydrogen atom in its ground state depending whether the proton and electron spins are aligned. When the atom changes from one state to another a radio photon with a $\lambda = 0.21\text{m}$ is produced.

Hydrogen atoms are also very abundant in the human body especially in the fat and water of human tissue. Approximately 63% of all atoms in the human body are hydrogen atoms due to the human body's high water content.

The action of the MRI on the hydrogen atoms in human tissue provide us with a visual example of how radio waves, close to the frequency of ordinary FM radio stations, can effect biomatter. Radio waves used in MRI imaging cause the hydrogen atom nucleus to flip in its spin and change alignment. The nuclei then relax and re-emit the radio waves at different frequencies depending on the chemical environment of the molecule. When the radio waves are turned off, the nuclei return to the state of low energy, returning to their natural position and give off photons. The photons produce energy signals that are analyzed by a receiver in the MRI machine.

Sound waves of radio frequencies are also waves of mechanical energy creating pressure that oscillates particles of matter within its path. Vibrations emitted from sound energy have the ability to synchronize oscillating matter with like frequencies or corresponding harmonics.

One example of the synchronization of oscillating matter in biological tissue is the effect on the human eardrum (tympanic membrane) of sound wave pressure moving through the atmosphere, causing the three bones of the middle ear to resonate. The terminal bone of the three-bone array, the stapes or stirrup, oscillates a flexible layer of tissue at the base of the cochlea. This pressure sends waves rippling along the basilar membrane, stimulating some of its hair cells. These hair cells send out a rapid-fire code of electrical signals about the frequency, intensity and duration of a sound through auditory nerve fibers that run from the base of these hair cells to the center of the cochlea. From there, the electrical signals travel to the brain, where they are interpreted as sound.

Entrainment is the mutual phase locking, or synchronization, of two oscillating entities of matter. Harmonic entrainment is the process whereby oscillators of different frequencies develop a harmonic relationship between the two frequencies.

Resonant entrainment of oscillating systems is a principle of physics. If a tuning fork designed to produce a frequency of 400 Hz is struck (causing it to oscillate) and then brought into the vicinity of another 400 Hz tuning fork, the second tuning fork will begin to oscillate at the same frequency. The first tuning fork is said to have entrained the second or caused it to resonate.

The physics of entrainment of biological systems is illustrated in the electromagnetic activity of brain waves. The electrochemical activity of the brain results in the production of electromagnetic wave forms that can be objectively measured with sensitive equipment. Brain waves change frequencies based on neural activity within the brain. Because neural activity is electrochemical, brain function can be modified through the introduction of specific chemicals (drugs), by altering the brain's electromagnetic environment through induction or through resonant entrainment techniques.

Cells are highly structured, electrically charged entities that can be modeled as solid-state electronic systems. Their frequency windows can be tuned to receive incoming signals, amplify instructions through biological polymers and respond as frequency transmitters. Cells will respond to any energy stimulus. They will obey the established laws of physics that govern the effects of matter and its relationship to energy fields from any source, such as electrical signals, magnetic fields, electromagnetic fields and heat, light and acoustic resonance. Given the cell's integrated semiconductor nature, they conduct and process incoming vibrational stimuli converting energy from one form to another.

The intracellular structure with its cytoskeleton is attached to the nuclear envelope that interfaces with the nucleosome of chromatin with DNA wrapped around the histones in the nucleolus, within the nucleus of the cell. Thus, the cell's nucleus and its contents are a matrix within a matrix. In the cell, the filaments and fibers of the cytoskeleton extend beyond the cell surface across the cell membrane, linking systems together with molecular structures such as glycoproteins, anchor proteins, integrins, cadherins and proteoglycans. These molecular proteins form a network of continuous tensional communication structures linking matrix to matrix to matrix throughout the biological system.

The tissue matrix system consisting of the nuclear matrix, cytoskeleton and extracellular matrix function coherently to sense and respond to stimuli. The membrane proteins of the extracellular matrix serve as transfer stations that control attachment, enzymatic activity, intercellular joining, cell-cell recognition and signal transduction. The water molecules on the surface of these membrane proteins provide the electro conductive surface that propagates energy fields.

The most abundant protein in the extracellular matrix is collagen. Collagen fibers provide the structural adhesion from cell to cell within their biological systems. These collagen fibers are composed of chains wound around each other in an array of triple helical collagen fibrils forming a super helix. Collagen fibers and their bound water molecules act as a network of communication conductors among cells by means of piezoelectric interactions and phonon / photon transduction of electromagnetic signals throughout the body. These conductors connect matrix to matrix to all other matrices everywhere else in a dynamic communication network of energy transfer. These molecular arrays of collagen fibers, with their liquid crystalline semiconductor properties, generate the piezoelectric potentials that act as a self-regulating signal system to modify the response of the lattice structure of tissues to mechanical vibrations and stress. These crystalline lattice-like structures of the living matrix include the lipids of cell membranes, actin and myosin molecules of muscle fibers, components of the cytoskeleton as well as the collagen molecules of connective tissue.

These highly structured matrices form a coherent pathway allowing oscillations to move extremely rapidly throughout the matrix system. Physicist Herbert Frohlick (1968) was among the first to point out that a coherent state in living systems acts as a superconductor at physiological temperatures. He proposed that metabolic energy is not being lost as heat but stored in the form of coherent electromechanical vibrations called coherent excitations. These vibrations now known as Frohlick Oscillations occur at the microwave and visible light frequency range of the electromagnetic spectrum.

"Evidence of the existence of these coherent excitations in biological systems came from the study of biophotons (Popp et al, 1981; Popp, 1986). Nearly every living organism emits light at a steady rate from a few photons per cell per day to several photons per organism per second. Increasing evidence shows that biophotons are emitted from a coherent photon field within living systems, providing proof that organisms are emitters and receivers of coherent electromagnetic signals, which may be essential for their functioning."

— Fritz-Albert Popp. 3rd Cameford Conference. The implications of The Gaia Thesis: Symbiosis, Cooperativity and Coherence, November 1989.

A wide range of electrical and magnetic field frequencies generated by the brain, the heart and the striated and smooth muscle systems continuously flow through the entire body. For example, the heart has a 3-5 Watt contractile power that transmits rhythmic electrical potentials that flow along the neurovascular system. These electrical potentials generate pulsed magnetic fields that can be detected from as far as 4 meters in distance from the body.

Conclusion: the body resonates with bioelectric currents, electromagnetic fields, frequencies, vibrations and energies in the endless interaction of communication within the living matrix. This state of dynamic interactions of resonant energy fields is characterized by heart rhythm coherence that displays a sine wave-like rhythmic pattern inducing entrainment and synchronization between physiological systems. The biological coherence and harmonious functioning of the cardiovascular and neurological system as well as all other systems that comprise the structure and function of the biological system respond to internal and external energy fields — in the homeostatic endeavor of bioresonant synchronicity.

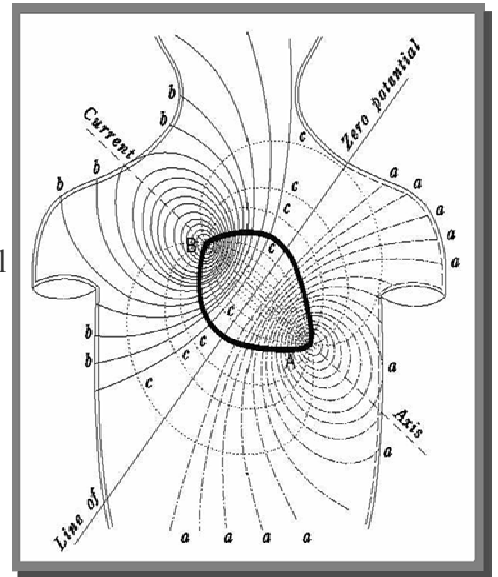


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