



Matrix Communication

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Abstract

This presentation summarizes biophysical aspects of the human organism—the system that is attempting to understand itself and create unified theories. Discoveries in the fields of quantum physics and quantum biology are giving new insights into the nature of the perceiver of the natural world. A difficulty has been that those who study quantum physics often have little understanding of biology, and biologists have been reluctant to venture into the quantum world. One of the first to connect these realms was the Hungarian Nobel Laureate, Albert Szent-Györgyi. His basic discovery was published in both *Science* (*Towards a New Biochemistry?*) and *Nature* (*The Study of Energy Levels in Biochemistry*) in 1941. His remarkable insight was that proteins are semiconductors, rather than insulators, as had been thought previously. Moreover, when many proteins are organized into parallel arrays, as in crystal lattices, some of the electrons cease to belong to particular atoms only and become mobile—they are able to move about extremely rapidly, conducting energy from place to place within the organism. The semiconductor nature of proteins and other biomolecules has been confirmed, both by Szent-Györgyi and by others. It has also been recognized that the bulk living matter is crystalline, or to be more precise, liquid crystalline in nature. Herbert Fröhlich was a second major contributor to the application of quantum physics to living processes. He concluded that giant dipolar molecules such as proteins, nucleic acids and lipids in cellular membranes, which can have enormous electrical fields of up to 10^7 V/m across them, should vibrate intensely and coherently at characteristic frequencies and create a physical situation analogous to a Bose-Einstein condensation at body temperature. This discovery provided for both theory and research on the movement of free electrons in cloud- or gas-like form through the tissues of the body at physiological temperatures. “The crucial distinguishing feature of Bose-Einstein condensates is that the many parts that go to make up an ordered system not only behave as a whole, they become whole: their identities merge or overlap in such a way that they lose their individuality entirely.” (Zohar, D., 1991. *The Quantum Self*). A third piece of the puzzle fell into place in 1972, when Mark Bretscher discovered

that cell membrane proteins connect the cytoskeletons of all cells in the body with the connective tissue matrix in which they are embedded. This means that the crystalline semiconducting protein arrays forming most of the living body form a physical and energetic continuum extending throughout the organism, even into every cell and nucleus. The global nature of this semiconducting *living matrix* as well as its sensitivity to environmental energies are taken into account in developing a unified and holistic theory of perception, consciousness and the subconscious.