

Conscious Particles, Fields and Waves

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Intelligent Particles

"In some strange way an electron or a photon [or any other elementary particle] seems to 'know' about changes in the environment and appears to respond accordingly," says physicist Danah Zohar.

A group at the Weizmann Institute in Israel has done a variation of the famous "double-slit" experiment. They used electrons, instead of photons, and observed how the resultant interference pattern (which indicates wave-like properties of the particle) dissipated the longer you watched the electrons go through the slits. As a wave the electron passes through both slits simultaneously but if, according to E Buks, it "senses" that it is being watched, the electron (as a particle) goes through only one path, diminishing the interference pattern. Elementary particles (such as photons and electrons) appear to possess a certain degree of "intelligence" and awareness of the environment. Renowned plasma and particle physicist, David Bohm, says "In some sense a rudimentary mind-like quality is present even at the level of particle physics. As we go to subtler levels this mind-like quality becomes stronger and more developed."

Consciousness appears to be as fundamental a property to elementary particles as properties that make it "matter" or a "physical force" (for example, mass, spin and charge). And just as mass, spin and charge differ from one particle to another; it is probable that different particles have different degrees of consciousness.

Conditions for Manifesting Consciousness

Bohm says that "a particle has a rich and complex inner structure which can respond to information and direct it's self-motion accordingly". This is more evident in more massive particles and condensates which behave as super particles. Zohar says there is no reason to deny that any structure - biological or otherwise, that contained a (Bose-Einstein) condensate might possess the capacity for consciousness.

A single isolated particle would have some degree of consciousness (or awareness of the environment). However, low-energy and low-frequency elementary particles (as described currently in the physicists' "Standard Model") easily lose their property of consciousness when they become entangled with other particles and decoherence sets-in. This state is analogous to the state of a demagnetized metal object. Although all the individual atoms are in a sense magnets, no magnetic fields are observed. However, once the atoms in the metal object become aligned with their north and south poles pointing in the same direction they begin to exhibit the property of magnetism.

In the same way, when groups of particles are in the same quantum state, i.e. when they

are in a state of quantum coherence, the property of consciousness is exhibited. A state of an extremely low degree of consciousness (for practical purposes - no consciousness) is exhibited by inanimate matter at macroscopic scales in our highly decoherent low-energy classical universe.

Hence, elementary particles will exhibit their intrinsic degree of consciousness when isolated or when a group of particles share the same quantum state. This means that bulk matter in a non-coherent state is effectively unconscious. The study of conscious particles is referred to as "quantum metaphysics" by this author.

Particle Memory

In 1959, physicist Richard Feynman pointed out that all the words written throughout the history of the world could be contained in a cube of material one tenth of a millimeter wide - provided those words were written with atoms. Now, scientists have done just that, creating an atomic-scale memory by using atoms of silicon in place of the 1s and 0s that computers use to store data. Scientists at the University of Wisconsin at Madison have been able to read and write at room temperature to a memory unit that uses a single atom to store a bit. The memory density of this memory unit is comparable to the way nature stores data in DNA molecules.

How much information can an atom store? Scientists have written the word "OPTICS" on a single atom, demonstrating the huge information capacity that exists even in an individual hydrogen atom. This was done by sending one of its electrons into a "Rydberg state", in which it no longer exists as a cloud of charge enshrouding the nucleus but instead becomes a 'wave packet' that circles the atomic nucleus like a planet around the Sun. By applying a series of pulses a set of wave packets can be created that combine with each other like water waves and cancel each other out at specific places to form patterns around the atom. Carlos Stroud of the University of Rochester and Michael Noel of the University of Virginia point out that an electron in an $n=50$ Rydberg state has 2,500 possible states of angular momentum which can be combined in various ways - evidencing the enormous potential for even elementary particles to store and transport vast amounts of information.

Can a person's memory with all its visual, audio, tactile and other information be conveyed in a wave-particle? It is remarkable that however complicated a wave, it can be described as a combination of many simple sine waves of various frequencies and amplitudes. This is how an entire orchestra can be heard from the single vibrating cone of a loud speaker. When switched on and off at irregular intervals, or modulated in intensity or in frequency, waves can carry a large amount of information. The higher the frequency the greater the amount of information the wave may encode. Storing memory in wave interference patterns is remarkably efficient, and would be able to accommodate the vastness of human memory. For example, holographic encoding of wave-interference patterns would enable all of the books in the US Library of Congress to fit onto a large sugar cube

The Physical-Etheric Nucleus

Each subtle body has a nucleus - which metaphysicists Charles Leadbeater and Annie Besant have called a "permanent particle". Leadbeater calls the nucleus of the higher etheric double a "physical-etheric atom". According to Leadbeater and Besant, information about the relevant subtle body is stored in this particle (its composition, frequency, structure and associative memories). In this way the experiences that the subtle body has gone through in a particular universe are stored or are linked to this nucleus - which can be transferred more easily to another universe and body through microscopic wormholes.

The particle is analogous to DNA in the biomolecular body. DNA is referred to as a "bioparticle" in the medical literature and it stores or links vast amounts of information about a particular life-form. Hindu metaphysics describes these particles or nuclei as "bindus" and Tibetan yoga "drops".

The physical-etheric nucleus is transferred to higher energy bodies when the subtle body dies - serving the same purposes as a "black box" flight recorder in an airplane in preserving information about a particular life's experiences. This nucleus is also responsible for the life review in a near-death experience. According to Besant, the permanent particles are used to preserve within themselves as "powers of vibrations" (i.e. different frequencies and waveforms) the results of all experiences through which they have passed. By the end of one life in the physical body, the permanent particle (or physical-etheric nucleus) would have stored up "innumerable powers of vibration" (i.e. a set of waveforms of different frequencies).

A personality is simply a "packet of self-organized information". If this information can be transferred from one body to another that personality "lives" on. Information stored in the physical-etheric nucleus allows the personality and its associated physical-etheric body to be "reconstructed" or "resurrected" in a similar physical-etheric body later - in a process analogous to a teleportation. According to plasma metaphysics, the physical-etheric body provides an electromagnetic matrix which plays a critical role in the morphogenesis of the physical-biomolecular body. This provides a basis for reincarnation or a resurrection (depending on which religion interprets it).

The physical-etheric nucleus enables the transfer of information from one body (in one universe) to another body (in another or the same universe) during the (physical) death process. If not for this transfer, the experiences in the physical (3d) universe may be difficult to access or reconstruct at a later date. The information about our self has to be "uploaded" to another "player" (i.e. a body) to continue our personal existence. The advances in Science suggest that the nuclei of the various subtle bodies can carry a large volume of complex holographic information about their corresponding bodies and experiences.

Conscious Fields

According to quantum electrodynamics, particles are basically excitations in a field. Hence, all particles have fields associated with them and all fields have particles associated with them. Fields associated with (conscious) super particles would exhibit consciousness and intelligent behavior. Conscious fields would not have any form - in the way that a physical, tangible object has.

Conscious Waves

As quantum physics has shown, elementary particles also behave as waves - depending on the experimental set-up. Bose-Einstein condensates can behave as super particles - and therefore also as waves. If a gas is cooled to a few millionth of a degree above absolute zero, the atoms lose their identity as individual particles (analogous to what happens in a plasma) and behave as a single entity, a kind of "super atom" with characteristics similar to a laser. They then take on the weirdness of quantum objects - including wave-particle duality and the ability to quantum-tunnel out from one place to another. Conscious particles can therefore also propagate as waves.