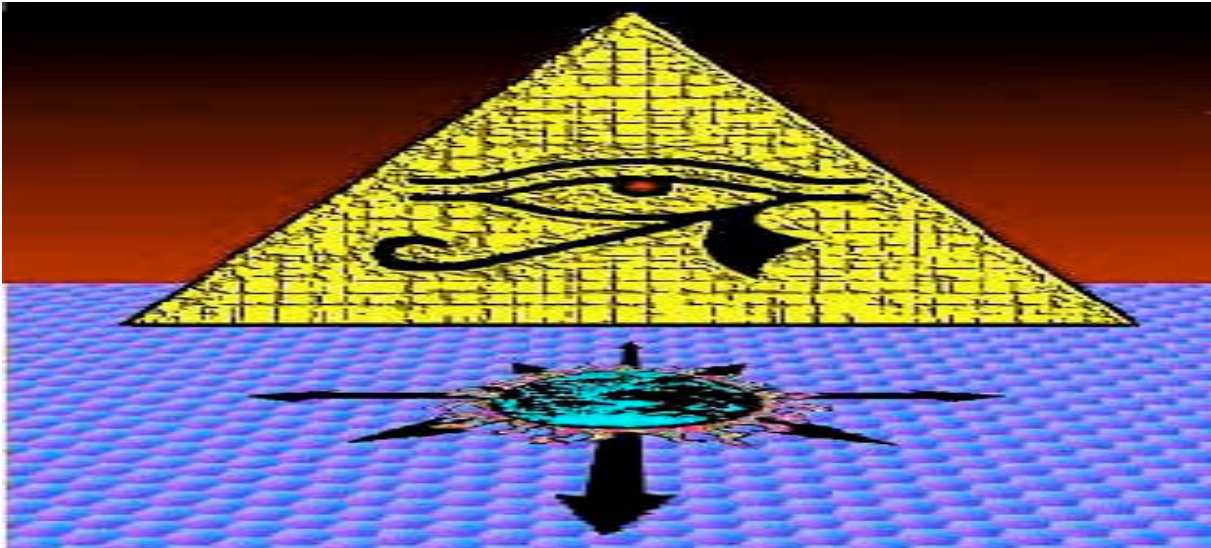


“SCIENCE OF QUALITY SERIES n° - 1 ”

“Transformations in the perceptions of time and space shape a new historical understanding of the world in order to amplify the level of scientific investigation of Bio-Quantum Physics ” .

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“For the ancient alchemy The visual perception can be extracted by a fluid permeating all space like an aether. In the modern approach to bio-quantum physics, the existence of an exceedingly informative matrix can be seen as an interface between subject and object of perception.”

Note: The ancient figure of Alchemy holds of a double representation of space-time:

- 1) Euclidean space pyramid of exteriorisation of perception
- 2) IPER- FLAT base of interiorisation of information domain

Renaissance of Alchemy in the Bio-Quantum Physics of Space-Time

Abstract : The ancient art and science of alchemy, throughout the industrial age of science and technology, are looked upon as mere junk of the past, e.g. a dark and bizarre cloud upon the sky-light brilliance of more recent knowledge. The reductive vision of contemporary science and technologies is fundamentally due to lack of knowledge caused by the arbitrary splitting between the subject and object of perception. This separation was considered an absurd idea by the ancient Arabic conception denominated "Al" (article) and "khemi", e.g. the old Egyptian science of matter transformations and transmutations. In fact, alchemy and esoteric comprehension in science and art, both belong to a global perspective where the observer needs to be considered an integral part of the observation for conscious scientific results. In fact, alchemists used a “philosophical stone” (i.e the matter of mind) as enlightenment to search fore hidden knowledge of the transformation of matter into gold. A similar integrated perception of reality is now becoming the leader in the frontiers of Bio-Quantum-Physics (1). Thus, modern science is embedded in the ancient intuitions of space-time structure, where interpretation is within the context of the perception of events that are becoming.

Article :

Ancient alchemy believed that visual perception is integrated within other sensations like touch, smell, and hearing, all modelled in the brain and based on external information. This conceptual tradition of alchemy and ancient esoterism , was the basis of Hippocrates' belief (Greek island of KOS, 460 BC) regarding the brain's ability to perceive. In fact, Hippocrates did not believe in the

existence of an external, isolated, objective substance existing outside an integrated space-time generated by the mind that effectively fabricates perceptions and sensations as a reply to external stimuli. Of course the ancient paradigm of alchemical sciences assumes that “something” existing in the external world can be the cause of a simulation generated by the perception organs of the brain. As a result, the reality that we know can be conceived as a mind-product of an integrated input of various senses (smell, taste, touch, sound, sight) coming from a space-time projection of the world in mind images.

Only within reductionistic classical physics, born at the beginning of the industrial age, is the observer split from observation in a way that space and time are conceived as two absolute entities. Isaac Newton (1642-1727), conceived of time and space existing independent of the mind. In this way, it is possible to measure the speed and the acceleration of motion as in mechanics. In fact, classical mechanics is the science through which true motion happens only where an object is moving without physical change, in an independent reality of absolute space, and where time can be enumerated by means of a succession of single instants; each of them without duration e.g. as a pure numerical unidirectional and reversible time-flow . This concept of instants of a measurable clock-time, can be conceived only if the instant of the present it is identical to every previous successive instant. Therefore, this concept assumes a perfectly stable identity during the object's motion in time. This method of mechanical thought excludes a priori, every event of change during the motion of an object in absolute external space. To accept this paradigm, it is necessary that virtual absolute space corresponds to the existence of absolute mathematical time which flows equably, without relation to anything existing in the external space of the subject. Only in this arbitrary concept of a Newtonian space/time, the mechanical motion of an object becomes completely independent of subjective perception (2), (3).

Now I would like to point out that in the age of alchemy, light was a question of perception and nobody thought about its speed because vision is considered immediate. This does not mean an infinite velocity of light, but a simultaneity of perception due to the anticipation of the brain's construction of images.

However after the measurement of the speed of light as a constant (Michelson-Morley, 1887), Einstein's work on special relativistic physics, changed the frame of reference so that time and space are no more viewed as independent dimensions. Einstein's discoveries have shown that, due to relativity of motion, our space and time can be mathematically combined into one “four-vector frame” of space-time. Therefore, the invariance of the speed of light, (forgetting for a moment the need to understand better the effective brain-perception of information), established a limit for information travel .

Scientific thinking *in special relativity is based on the declaration: “no objects, as well as no information”*

EXTENSION OF THE ENERGY CONSERVATION LAW

To day is encouraged additional ways of thinking about organized communication in living systems, through the redefinition of the boundaries and roles of space-time. This framework is seen in relation to the role of brain-information. In this innovative perspective, a first consideration is that the information in the brain is not a subjective factor. This is because brain is a purely objective body, and only mind can be considered in subjective interpretation. A second originates in the idea that DNA cannot be the only molecule that stores and communicates information. This is because DNA needs an interactive reply to actuate the living forms of cells and organisms. Therefore, in

relation to living systems, *information energy and fee-energy and matter energy*, are all to be considered in Bio-Qu. Physical science development, as mutually interdependent factors differently codified as functions of total energy.

Referring to these preliminary considerations, it will be necessary to extend the “**Energy Conservation Law**” which until now has been limited to a mechanical approach. In fact the word *energy* comes from the Greek *’énérgēia*, that means "operation". This term is itself a compound of *’en* and *’érgon*, "work". Because in modern physical science the notion of energy is associated only with mechanical work, energy is commonly defined as "the capacity of an agent for doing a quantity of work" in order to understand the production of motion against resistance. As a consequence, this reductive mode of scientific thought is based on an action/reaction, therefore doesn't includes in explicit terms, the communication of information that is the basis of evolution of living systems.

Finally if we considered that the life is a product of the whole universe, we need to revise the “Law of Energy Conservation”. It is necessary to go beyond the previously restricted approach of mechanical thought in order to build up the **Bio-Qu. Phys** science in the context of the “**Gaia Theory**”. We must include “information” as a new virtual energy (**I**). This is because (**I**) can be transformed into other forms of quantum energy codified in terms of communication all over the geo-organism of the Universe. Consequently, taking into consideration “**information energy**” as a part of the total energy-matter **Bio-Qu. Phys.** transformation, we obtain the global variation (**www.**) of the sum of all the transformation of energy components must be equal zero. So that if we add all the different codifications of energy in relation to the all possible combinations of the space time coordinates in syntheses, we sum up :**1) the Vibration-Energy, (E), and 2) the codified-energy like Matter (M), plus 3) the Information energy (I).** (5)

At this point, because the global variation (**www.**) of any constant (**K**) is equal to zero we obtain:

$$\langle \mathbf{E\ total = (E) + (M) + (I) = K} \rangle; \text{ i.e. at any time } \langle \mathbf{www. [(E) + (M) + (I)] = 0} \rangle$$

This equation gives three different solutions that can be the basis of a co-evolution of differentiated “**Habitats in the Universe**” where space–time co-ordination will be different.

$$(1.) : \langle +w. (I) = - w. (E) - w. (M) \rangle .$$

(1.) *The addition of information energy corresponds to enriching the minimum of the other components of energy. This result is nominated the "PRINCIPLE of FERTILE EVOLUTION", that we consider the fundamental reason for the direction of the evolution of life on earth.* (1)

$$\bullet (2.) : \langle +w. (E) = - w. (M) - w. (I) \rangle$$

(2.) -This formula can be considered a model for the stellar evolution of energy emission in solar type stars.

$$\bullet (3.) : \langle +w. (M) = - w. (I) - w. (E) \rangle$$

(3.) This formula can represent the evolution of matter in the axi-symmetric space/time of rotating Black Holes where hyper-rotation can create additional matter.

Certainly these formulas, all embedding information energy (**I**), need to be organized into a massive research program (6) that can be developed through a European IDEAS project (7) of Bio-Quantum Physics in the near future

Now I would like to emphasize that a unified field concept of space-time is not possible after the introduction of codified information energy. It permits breaking the complex cosmos into different space-time habitats of a co-evolutive-interconnected universal organism. In fact, taking information energy into consideration creates a new method for interpreting **Bio.Qu.Phys.** The changes in time and space coordinates can generate three complementary habitats for developing the multi-dynamics

of the evolution of the Universe. **As a final consideration**, I would like to say that artists recognised the need for a new expression of art-communication not connected with a three-dimensional perspective of space-time. As a matter of fact, painters like **Salvador Dalí** and **Vasily Kandinsky** and other modern art protagonists, did not abandon their original ambition to anticipate intuitively the conceptual changes in the mind-evolution of humans. They tried to incorporate the paradoxes of science into new paintings in order to describe the world, outside of the traditional split between subject and object in order to communicate purely mental information. This resulted in awareness that their current thoughts and emotions are an inextricable part of any description and shape of the world. Therefore modern art was born, not from any bizarre vision, but from the artists' increasingly acute awareness of the elusive complexity of what at first seemed so simple in the traditional method of external three-dimensional observations of the world.

Salvador Dalí : Clocks



Kandinsky: Abstractism



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