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Elimination of Quantum Indeterminism

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Abstract: ***Ignorance of the systemic characteristics of the electron determines ignorance of the dialectical process of determination that it carries out with the external system.***

Keywords: quantum indeterminism, deterministic interaction, system, expansion, action, contraction.

1. The Wave - Particle Combination

The aggregation between the bodies is the result of an interaction between the information they are equipped with, consisting of the positional design made by sensor elements and the value of the fundamental force associated with these elements. In this study I examine information structures produced by the electro - magnetic force.

The recognized information, that is, which gives rise to a mutual attraction between two bodies, can give rise, once the contact has been made, to development, in the context of one of the bodies that we will call "dependent" on an expansion, which involves the transformation of mass into energy, [1] or, in both bodies, of a contraction, that involves the transformation of energy into mass.

The first case occurs when the attraction, in which the recognition is identified, does not find obstacles to its motor manifestation due to the presence of opposing repulsive forces as it happens in the second case in which the attraction must overcome perhaps opposite ones to give rise to the recognition, thus giving rise to the transformation of energy into mass which manifests itself as an increase in the forces of aggregative connection [2].

From this it already appears that if the attraction develops in two phases, the first without encountering opposing forces and the second overcoming opposing forces, the transformation of the system occurs first to an extended form and then to a contracted form. However, if the two directions of movement are orthogonal, there is a stationary motion of one body around the other.

If the aggregative bond reaches a certain level there is the production of what is called "gluement" or "entanglement" in which the components lose their individuality and the aggregation behaves as a unit. [2].

In this organizational unit that we will call "system" there is a hierarchical relationship in the definition of the response to external stimuli; organization therefore equates to hierarchization, differentiation in the elements of force which is opposed to the entropic homogenization of the thermodynamic ensemble. There is therefore, in the organizational unit, a dominant component and a gregarious component.

The gluement process can be iterated through cross - systems bonding. Through the iteration process, the system reaches a certain dimension in correspondence with which also the "enlargement" occurs due to the bonding of peripheral elements with external elements which are consequently "incorporated" in the system, a condition that allows selective development of "functionality" of the system.

Through the iteration and expansion of the gluement process, we therefore arrive at a complex system in which both sensory and state information of all components circulate in a network of connections arranged in layers of different stiffness. The different rigidities correspond to different importance in the definition of the response to an external stimulus. The system has therefore an internal structure of hierarchical coordination that allows it to move like a wave, which already represents an elementary form of contraction, i. e. strengthening of the bonds that leads to an almost parallelism of the motion and consequent reduction of shocks. The system also has the ability to change, in response to external stimuli, its macroscopic state from that of extension to that of contraction and vice versa [2].

According to general relativity the mass variations are infinitely smaller than the corresponding energy variations; they take place within a different space - time metric. It follows that the realization of a state of contraction following a dialectical interaction between opposing forces of short duration is not perceptible at our level of perception of reality [3].

De Broglie believed that all bodies have a simultaneous form of wave and body [4]. However, this condition is absurd [5.] In reality, as we have seen, there is no contemporaneity between the two forms but, to realize this, a certain permanence of the contraction phase is required. This condition is not realized in experiments with the double slit at Young.

2. Elimination of quantum indeterminism

In the first years of the last century, Heisenberg produced a theory that electrons do not always exist, they exist only when they interact with something external.

However, in the attempt to provide quantum physics with a solid theoretical basis, two theories called matrix mechanics and wave mechanics were set up, the first considering the particle as the only reality of the electron and the other considering the wave as the only reality.

We consider that by detecting the values taken from some variables that can characterize the electron on the occasion of its appearances, it was possible to determine, for each variable, the values assumed in correspondence with the substances of which the electron was the satellite. However, the detected values were not unique, that is, there was a "spectrum" of the values that the variable could assume and the theories produced did not give information on which value of the spectrum would occur in a subsequent interaction.

Consequently, the "chance" was introduced as a determining element, albeit tempered by the "probability" of the occurrence of a value of the variable determined on the basis of its frequency of appearance within the data collected. It is this "indeterminism" of quantum mechanics that clashes with the "determinism" of classical physics.

But we can believe, given the different modes of appearance of the electron, as an electronic cloud and as a corpuscle that the electron constitutes a system that can therefore modify its state condition on the basis of information coming from the outside. Therefore, when an action arrives from the outside, the system contracts, which does not mean that it collapses, as it would happen if the interaction were gravitational: it means that through its complex organization of detection and coordination it assumes a structure equipped with information, which interacts with the external system.

Therefore a dialectical informative interaction arises on both sides that sees a selective modulation of the values of the variables that determine an increase in attraction and this until reaching a maximum value of attraction that we define as full recognition in which there is aggregation. The value assumed by the variables is therefore determined by the dialectical information interaction.

Schrödinger was the first to approach the truth in the case of the electron by producing the "wave function" [6] which in his idea was to constitute the wave associated with the electron in the same way that De Broglie associated a wave to each particle. Of course this was not yet the solution, because it did not eliminate the uncertainty in the value of the variables in correspondence with every appearance of the electron, but in any case this meaning of the Schrödinger wave function was rejected by the "deniers" who wanted to interpret it as a diagram of the probability of appearance of the various values of the variables. This despite Einstein affirming that "God does not play dice" and Schrödinger himself ridiculed the negation hypothesis through the famous thought experiment universally known in the field of physics with the name of the experiment of the "Schrödinger's cat" in which it was shown as the negationist vision of quantum mechanics provided paradoxical results in its consequences in the macroscopic field.

Therefore the electron is not only always present, but constitutes a system capable of the operations of expansion and contraction, that is mass - energy and energy - mass transformations thus giving rise in the second case to an informative interaction with the external action that eliminates the uncertainty and can also determine, as we have seen, the enlargement of the system.

The electron therefore has within itself the possibility of producing all the values of the spectrum, as on the other hand also foreseen by the current quantum theory, but the selection is not random, it is the result of a deterministic process

At this point it is necessary to observe how the result achieved through the application of the latest advances in organization theory, relating to the absurdity of quantum probabilistic theory, can also be reached through other possible considerations in the current state of scientific knowledge.

In fact, let's consider the product of a chemical reaction, for example sodium chloride NaCl. From our point of view, this is the product of an information interaction with prevailing sensors with a positive electric charge on one side and a negative electric charge on the other that takes place between the two atoms of chlorine and sodium. It involves the modulation of the values of the variables, a dialectical process that leads to the assumption of the value of the variables that maximizes the recognition attraction.

Suppose instead that this dialectical action does not take place and the interacting electrons assume random values of the variables. Under these conditions, each repetition of the synthesis reaction should give rise to a different product, first of all in the strength of the aggregation and then in the characteristics induced by the variables. In reality this does not happen; repeating even infinite times the synthesis reaction always appears only one of the characteristics defined by the spectrum. Chemistry contradicts the quantum hypothesis currently dominant.

Furthermore, these results have already been obtained on the level of philosophy. In fact, given that the process of "recognition" that initiates the dialectical development of information involves the mutational structure of the electron, the absence of the latter determines the impossibility of producing the determination in the same way as the absence, on the level of the mutational capacity of a component of the Hegelian dialectic, the thesis or the antithesis, determines the impossibility of the production of determination. Indeed, a rare case of coincidence between the two disciplines, the same words with the same meanings.

Thus, finally, any differentiation with the behavior of macroscopic bodies disappears where the alternation of the conditions of expansion and contraction is perhaps the most important manifestation of being. In particular in the field of human relationships, in competitive areas, in clashes, in battles, the defensive mechanisms of contraction and the attack mechanisms of action are fundamental tools of behavioral strategy, even at the level of fundamental instincts, such as courage or fear.

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