69. MODELS OF INFORMATIONAL PROCESSING WITH SPECIFIC FUNCTIONALITIES IN INTERNAL ORGANS

The construction of living organisms is also subject to the rules of the coherent space of information, which is carried out on multiples of four levels of complexity. The basic rule is given by the preservation of the ecosystem balance necessary for the planet to create the sustainability and the global metabolism (GAIA theory), which assures the earth the conditions of survival in the cosmos. The survival of the planet in the cosmos depends on the stability of the dissipative system specific to the planet, which is stable between certain limits of existence that can be ensured by the existence of the green blanket of vegetation which in turn needs the rest of the ecosystem for maintenance.

From this point of view, the human species is needed due to the potential of technical creativity that allows the discovery of intelligent means of protection. The need can be modified if the human species produces ecosystem imbalances that destroy the conditions of existence of the initial dissipative system. The other species are needed to ensure the zero ecological footprint that is needed to stabilize conditions of existence. Each species has its own role, and within the species each member of the living group also has its own role.

From the point of view of the theory of algebraic fractals and of the coherent space of information this system is an organic type system with sustainability and metabolism, on at least **six clusters** of four successive layers. **The first cluster** is the one that describes the existence relationships of the initial dissipative system. **The second cluster** concerns the formation of life. **The third** refers to the generation of relationships between living species. **The fourth** refers to the formation of an ecosystem capable of modifying and improving the conditions of stability, development and efficiency of the existing ecosystems at the planetary level. At the same time, a new direction appears related to the formation and specialization of the organs necessary to fulfill certain tasks for the species in the ecosystem. This direction will generate the **fifth cluster**. **The sixth cluster** related to social organization also appears, and the process can continue.

All these stages and levels follow a similar pattern but starting from another reference. In the following I will describe the pattern on the development of the organism in order to meet certain objectives related to survival and on the development of the components and functionalities of the organs that specialize for this purpose.

Element	**Organic tree**
Mineral	1) Osteomuscular system
Plasma	2) Cellular metabolic system
Liquid	3) Digestive system
Gaseous	4) Circulatory system
Gaseous	5) Respiratory system
Undulatory	6) Nervous system
Synchronicity	7) The biorhythm system
Integration	8) Immune system

Table 1 organic trees

Complex phenomena can be described in a similar way on a level of complexity, but they differ functionally or anatomically on the next level of complexity. The phenomenon is well known and studied in biology or species evolution. It is due to the informational packages on several levels of complexity that are made with the help of other choices of local solutions, from the package of possible solutions. For example, the multiplication of individuals of a species can be done by specialized organs, or by replication, budding, cell differentiation, etc. If it is done through specialized organs, they can be formed of different tissues: a differentiated wing, a cartilaginous, venous type formation, etc. it can be unisexual, parthenogenetic, or bisexual. It can be done with the help of other symbiotic species with the basic species as in the case of pollination. Each solution in the graph tree of possible solutions may or may not be consistent and durable over time and may ensure survival for a limited or unlimited period. The limited lifetime is given by the use of a solution from a possible package of solutions that represent the functionality, but does not ensure the optimal informational packing. There are immortal species such as "tardigrades" that withstand enormous stresses without being affected, or the jellyfish Turritopsis Nutricula that is immortal.

The various organic functions, such as breeding, are ensured by the development of combined organs from tissues belonging to the various functional trees. The phenomenon is visible starting from the specific cellular differentiation of embryogenesis and passing through the obligatory phase of the development of the three dermal leaves, exoderm, mesoderm, endoderm. This stage is common to most pluricellular species and represents a stabilization phase and informational consistency that allows further evolution. Between the stabilization stages that ensure specific levels of communication, all species can communicate through specific languages. Between the stabilization stages that ensure specific levels of communication, all species can communicate through specific languages. These can be chemical, biochemical, on recognizable frequencies, through the emission of sounds, colors, smells, attitudes, shape and appearance of the bodies, .. going up to the social, scientific languages, etc. The leap in communication will be done due to the typology of structured or circulating information, specific to each stage between two levels of informational stabilization.

Immortality or unlimited resistance to improper conditions of life are given by the informational packages included in the system of memories and internal programs, which ensure all the options of survival and multiplication. Paradoxically, immortality can only be ensured if there can be no further evolution. Evolution allows testing of different variants of informational structures and application programs, eliminating non-performing individuals and selecting the best ones. Survival, evolution, optimization, stabilization are possible only if they occur at ecosystemic level. The ecosystem is the only stabilizing and sustainable factor. Collaboration between species can be symbiotic and collaborative by ensuring the trophic chain concomitant with the zero ecological

footprint, which can allow the survival and evolution of the ensemble, starting from the planet Earth and going to the individual of a species. In this period of evolution we still depend on the trophic chain for survival, but it is possible that evolution has a level of structuring, in which we feed directly on energy and circulating information without being necessary to destructuring it by digesting the substances and information associated with them from what we consider to be FOOD. During that period the functional structures will also evolve, but history is preserved in the evolving structures. The starting point will be what exists at this stage:

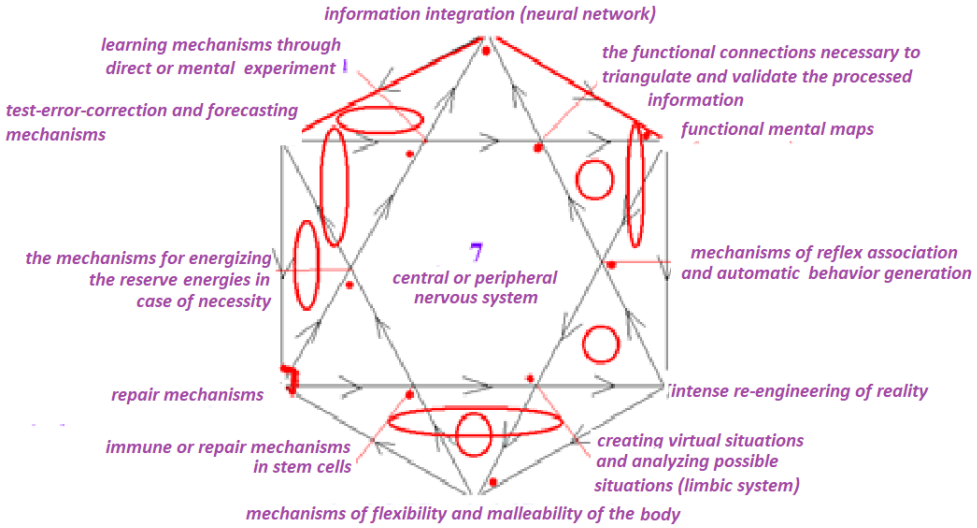

Fig. 1 central nervous system

The evolution between levels is done by refining the information on packages of four successive layers from the coherent space of the information, but the refining takes place on level 2, which can be fractalizing endlessly. The other layers in the refined package are associated with level 2.

The process can continue for 4 more levels, until the specialized cell system is reached, using only layer 2 of the technology of the coherent space of information. The use of the entire 4-layers package will reveal much more details and functional structures. a

Although the analysis of these connections is extremely complex, it is probably the only one that can make us aware of the problems posed by the humanity of the planet's existence. Such an analysis can allow to identify the problems and develop the solutions necessary to restore the planetary balance. For this purpose it is necessary first of all to enrich our thinking with other nonlinear logics. In this direction no effort, however great it may be, will not be too great. For this purpose it is necessary to develop the NETWORK OF PROFESSIONALS.

We all live the period of profound transformation and of systemic crises characteristic of the transition to another state. This other state affects all information balances and structures. It is an exam that if we want to promote it we must open our minds to the intelligence of matter and the universe, from which we must inspire and learn.

The great evolutionary leaps in the history of life on planet Earth were made by the complete reconfiguration of the architecture of the living, including their external and internal organs.