

The Hypothesis of Life from the cybernetic and teleonomic point of view.

Inside matter adaptive co-operations and aggregations of elements becoming parts sub-systems and the system as a whole found the first organic principle of life.

Let us postulate that organic matter components have been and are conditioned by their actions and feed-backs to perform operations by the gathering of several. "Perceptions of goals" by these aggregates are used as selection pressure on those operations and components.

All the mixed and crossed levels of interactions by actions and feed-backs determine their building parts to come together and become sub-systems of the entire system.

Also we have to know how the pressure of numerous feed-backs correlative to actions push elements and parts to aggregate and adapt each others by the means of interpreting information depending on the signification principle. The signification principle says that a receiving apparatus as minimal as it may be is needed for what - the unconscious sub-systems - or/and who - the consciousness - interpret(s) a share of these loops of actions and feed-backs.

The notion of cooperative operations and aggregations comes from a criticism of Church's thesis. Is it a function of a variable the best representative way of coding a functioning as a work or an operation like a skill ? In other words in order to go beyond distributed algorithms with the idea of distributed and adaptive operations at any level of architecture what does it mean inside matter to collaborate meaning to cooperate ? And this would necessarily be thought of within a finality or goal manner as to simplify processes when being guided by the real.

Cooperation plays the part of intermediary between the laws of physics and the system's skills. We have to find the threshold or lower limit from which it is possible for sparse sets of elements to aggregate themselves into functional parts and units.

Nine (9) steps are found in the organization of an objective mind : State of Perplexity facing an event ; Asking Oneself Questions ; Having Needs of Any Kinds ; Need of Logical Answers ; Stating Problems ; Sharing Projects ; Finding Solutions ; Teaching or Convincing the Others to gather means for ; Applying Solutions or a single one that resumes all.

Inter-determination by communication has four (4) Rs categories leading more or less directly to a fifth R: inter-determination acts Relatively to some other part(s); Respectively; Reciprocally and Reflexively up to give (or not) an acknowledge till being Responsible as a whole.

Warning : terms between quotation marks translate operative categories available for logic and micro- or nano and so on physical operations' scales. As they are a transposition of high level operations on matter they need a better objective and mathematical definition. I call this "trans-framing" or "trans-setting" of code. At a very elementary level the one of primitives and first actions biological elements on the way to coordinate themselves "study" or "experiment" reciprocally (4Rs) one toward each other in an adaptive manner ; because they are into an experimental situation of contacting their outputs via feed-backs as they "feel" at several levels and simultaneously the joint and composed "perception" of "needs". All this is transformed into "goals' logic" as to better guide the system for survival first and then for free development. The sub-systems of all integration levels to be distinguished are functioning and interact simultaneously which performs and represents as well "crossed pressures" from "requests" originated by specific functioning of each sub-system however more or less centralized (or not) it may be.

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