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Topic: Theory of Systems Design

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DIARIES FROM THE FUTURE

the role of the memory in the emergent processes

Abstract:

With this essay we are reconnecting with the theory we presented to our conference at the GA2008 in which we focused on the relationship between the notion of the future and that of becoming, we will now compare it to the subject of memory, as the centre of identity for objects, places and processes of becoming.

We know that inside a complex system, an event is called 'emerging' when it begins to demonstrate a principle of coherence, in other words, within a chaotic motion of bodies, some of these start to "resonate". As it happens in music or dance, they begin to play or dance together. Out of a chaotic noise a type of melody is born. For those who are familiar with theory of the Complexity and are involved in the design of habitat and environment, it will not be sufficient to observe only the birth of coherence as the scientists do.

The question is how Pattern, Structure and Process identify life, and therefore also the life of a shape: organization and behaviour.

The Theory of the Systems makes us more cautious in the role of the Process rather that on Pattern and Structure since it starts from the relational and inter-relational factors present in life. In this essay we use the word Pattern, Structure, Process in this way:

Pattern - the organizing scheme of the organisms, a drawing not reductible in parts.

Structure – the structure of a system is the physical embodiment of its pattern of organization.

Process – is the capacity of the structure to manage the large universe of input and output, managing the feedbacks.

This striking property of living systems suggests process as a third criterion for a comprehensive description of the nature of life [1]. The process of life is the activity involved in the continual embodiment of the system's pattern of organization. Thus the process criterion is the link between pattern and structure. Therefore we can say

FROM - what it is, how is it made

TO - how it establishes relations, and what does it become when combined with others.

It supposed that could be legitime after one century full of such modern experience in art, architecture and design. In this century we observed how the linear scenario of the Reinassance perspective moved towards a labirinth made by infinite layers of elements and nodes. There is no need to explain how important it is to identify the Pattern and Structure in order to designate a shape. But if you look at the life of a shape it is better to start our investigation from how the shape establishes relations with other formal lives. It is important to perceive the structures in their capacity of realizing a Pattern.

In our contemporary interconnected society we observe in a new manner the interactions between different Patterns and Structures. In complex systems, overwhelmed of informations and feedbacks, considering the high speed of our real-time dimension, we can read and use the instructions suggested by the Process.

Keywords:

Memory, Coherence, Emergent Behaviours, Metasemantic, Attractors, Complex Systems