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Two levels of control in living systems

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Abstract:

The aim of the presented work is to describe some general features of the control of a living system based on model works.

Dissatisfaction:

The meaning of the existence of every living object is to solve the dissatisfaction of its elements. These elements are, for example, people in society, water molecules in animals and plants.
To solve this dissatisfaction, they are organized into production units (PU). In society they are businesses, in animals and plants they are cells.

Production units:

Management in a living system distinguishes between the production of food on the one hand and the production of supporting needs and activities on the other. Elements exist in two states in every living system. On the one hand, they are involved in production in PU and on the other hand, in a non-connected state, when they are regenerated and the results of PU production are used. And in this disengaged state, their dissatisfaction is also evaluated. The principle of merit works when using the products. According to its involvement in production, the element receives a corresponding amount of a kind of universal evaluation unit (OU). When regenerating, he purchases the necessary products for these OUs. E.g. in society it is money.

In every living system, PUs and their entire organization are created for one purpose – the production and use of food in elements in the broadest sense of the word. In this way, PUs of a purely food nature is created, but also those that enable the production and use of food itself - the packaging of the food core in the system.

According to its capabilities and needs, each element acquires not only food from the system, but also other products created in the packaging. He then uses them analogously as a system for the smooth use of these foods. In society, these are e.g. products in the field of housing, clothing, sports, etc.

Nervous System (NS):

Similar to how the living control system resolves element dissatisfaction, it also resolves PU dissatisfaction as an intermediate step.

Model work on the company showed that management at these two levels – elements and PU – has a number of similar features and at the same time several differences.

Every NS activity (analogous notation from human physiology continues to

used) begins as a response to a displeasure event. As soon as this reaction occurs, it branches out depending on the state of the entire system. If there is an excess or deficiency of OU. In society, this branching can be described as the effect of inflation. Similar to society, reactions in food are called expansion and reactions in packaging are called restriction. Their impact on the OU level – inflation – is roughly the opposite.

The division of NS reactions into two groups – expansion and restriction – does not represent an exhaustive description of the behavior of the entire system. After the system flips into one of the two states, its corresponding activity follows precisely using these states. E.g. the organism of the animal switches over to the sympathetic state and thus mobilizes its resources to react to the external situation. The reaction itself is then no longer part of system control at this level.

Expansion:

Expansion - as well as restriction - in both cases results in the removal of the primary cause - the event of dissatisfaction. However, there will also be an increase in the number of OUs in the system.

The expansion differs depending on whether it is a reaction at the level of the CNS or VNS (central or vegetative NS).

In the case of the CNS, the expansion is a response to the dissatisfaction of the elements and represents the rearrangement of the PU chain of the food flow in such a way as to eliminate this dissatisfaction.

Both NSs act on the PU - they have the same resolution. However, CNS, unlike VNS, sees the entire chain of PU relations as it begins at the entrance to the production areas of the object, sees it throughout the production period and with all influences up to the exit to the elements. It thus has enough information to change its structure - if the capabilities of the CNS itself are sufficient. For the government, for example, it is an activity that directs government spending or measures to specific areas and relationships.

Expansion in the VNS means the activation of all those PUs that are not on the system boundary and further support the production of subsequent PUs with their activity. E.g. in humans it is the parasympathetic.

Restriction:

In the case of the CNS, the restriction is used by the system in the state of a certain excess of OU, in the case of the VNS, it seems that its use does not affect the OU.
Again, there is a difference between CNS and VNS. In the case of CNS, the activity is focused on rebuilding PU chains, but this time non-food ones. The whole range of options available to the CNS applies here, but it is based on the opposite situation, when there is an excess, or at least enough OUs, in the system. The result is a limitation of their condition.

In the case of VNS, it is an effect on the PU at the inputs to the system. For example, in humans it is a sympathetic reaction. In society, the VNS, in this case in the form of the monetary policy of the central bank, is equal to a restrictive monetary policy, which contains a lot of exchange rate operations - that is, activities close to sympathy.

Localization of systems:

In the case of the company, the localization of NS is obvious - that's why the model was also built on economic data. In the case of e.g. animals are a problem. PUs is easily visible, even when mistaken for elements. The importance and existence of the elements of water is undeniable, the problem arises with e.g. food for her.

In general, food, but also products for packaging water, are created in the system of brain glia, which are controlled, if necessary, in the entire necessary chain. The final outputs of production from glia are then primarily on the surface of the cerebral cortex and flow into the cerebrospinal fluid. This is the space where relatively quickly regenerating elements – water molecules – are replaced, and from the cortex or other walls of the cerebral ventricles, they acquire resources for regeneration according to their possibilities.
VNS in the company is an activity around the central bank, although in its current form it is still seemingly far removed from all the functions of VNS. However, in the model analysis, it was shown that monetary policy as a whole has quite obvious characteristics of VNS animals in its behavior. It is even possible to say that these qualities were identified on her. These are the following findings.

Monetary instruments are activated as a result of PU dissatisfaction. They are divided into two groups - expansive, parasympathetic and restrictive sympathetic. These groups differ not only in the state of OU, but also in food. Restrictive instruments include, for example, exchange rate operations.

Relationship of CNS and VNS:

So far, the model results show that there are several important links between the CNS and the VNS. The difference between the orientation in time to the side of expansion or restriction in the CNS is balanced by an analogous difference in the VNS. As if the activity of these two systems is ultimately linked. At the same time, it seems that the leadership is with the CNS, after all, also due to the primacy of dissatisfaction of the elements, and the VNS follows it.

The basic connection, but this time in the inputs, is that both respond to the defacto same definition fields. Expansion into the food sector and restrictions in the packaging sector. This is probably a manifestation, among other things, of the primacy of food for a living object.

Conclusion:

It is possible to state that all natural systems that surround man are alive. It would be so ideal if one approached them as if they were alive. With knowledge of their functioning, their motivation, their

means.

The presented work wants to be a contribution in this field. E.g. in society, it is possible to paraphrase its approach as: "Democracy is based on the parliamentary evaluation of the dissatisfaction of the elements, monetary policy on the evaluation of the dissatisfaction of the PU".

Such is the knowledge of American society today gained from American stocks. 😊