

Functioning of the Brain

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1 System

Every system is confronted with the problem how to solve the tension - unsatisfaction of its elements. It has to decide if react on a given tension, in what time and with what strategy.

The system identifies in this tension known situations and chooses strategies lowering it as whole, systematically. That is why, the formation of a holistic tension and the acceptance of a strategy depending on similarity with already solved tensions in the past, is crucial.

The system has to be sustainable so the adopted strategy has to non lower the sustainability in the time of lowering the tension. The sustainability of a system is given by the sustainability of its elements and by the sustainability of the system as whole – of the object. The sustainability of an object is given by the balance of its interactions with the environment.

The solution of a tension of a group of elements must not provoke any tension in other groups. The solution of a tension coming from the superstructure – see later – is named thinking.

The solution has to be as stable as possible, so the best one is to remove the cause. On the other side it has to be quick. The system solves this by reacting firstly by short-term solutions and only gradually applies solutions approaching the cause. The cause is usually in the environment and that is why the means of communications are very important, too. They provoke changes neutralizing the initial cause.

2 Brain

The brain is on the scheme named as motivator Y and superstructure B.

The motivator is a structure integrating the tension and later on this tension is solved. The motivator is the consciousness of the organism. In the brain it is the area of the cortex, where the integration happens and will be named as SL – surface layer. It is not clear if it is only the cerebral membrane or a part of the neuronal structure under it, too.

The physical base of the tension of SL is unknown, too. It may be a common

physical tension as a result of micro-movement of neurons or an electrical state.

We can divide neurons of the cortex, of the superstructure B on the scheme, into two groups. The first one, afferent, forms the tension on the SL, the second one, efferent, this tension solves. But they are interferences between groups.

The aim of afferents is to identify an event in tension covering all the motivator. They use the memory realized by neuronal terminations. Through the feed back from efferents, evaluating the successfulness of the identification on the criterion of sustainability, the given identification is strengthened.

The solution through efferents is a sequence of reactions distinguishing itself by stability and the reaction time.

All reactions are made through the scheme Di. D1 is a stabilization of the structure, strengthening successful interactions, D2 is a change of structure, weakening the less successful ones. This rebuilding is made in a group of cells evaluating by motivator as worth attention.

When the cause of tension is out of organism, the means of communication will act.

3 Movers

Two events are generated in the time of tension of a group of cells. It is the impulse, spreading the information into the motivator throughout the superstructure and been strictly bound to it. And it is the mover entering the common pool (cerebrospinal liquid, blood, ...) and been commonly to the disposal. It is the information, too, but bound with a material particle having no metabolic meaning. This particle, movers is used later on in the solution of a tension, together with the impulse coming from efferents.

The channel of communication G2 generates movers in the connection of the activity of digestive system without generating impulses into the superstructure. Similarly the channel F, been in contrast with G under control of superstructure, generates movers. It is perhaps the channel connected with the main moving activity of the organism as whole.

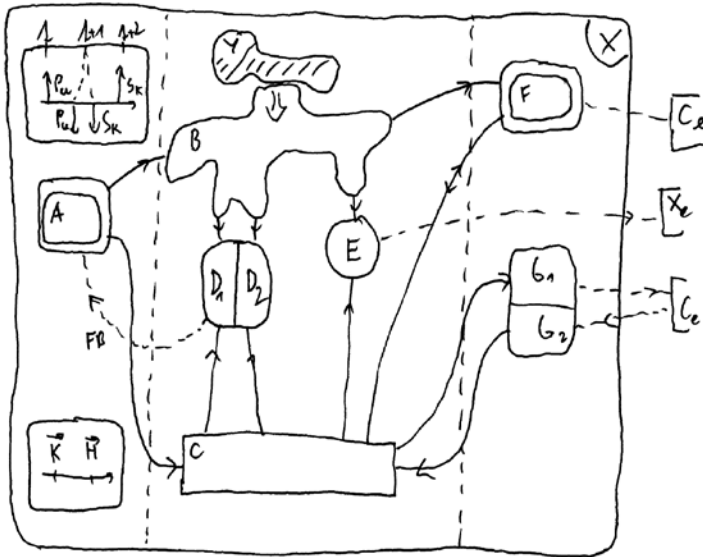
The function of the mover is as following: to bear information been demanded, been commonly systematic and relevant and provoking in other parts of system new, relevant events.

It is a return to initial materialistic values. The tension in motivator is to some extent losing its content and this one is returned just by movers.

Movers don't leave the organism in the time of communication. They are only participant on the side of input in forming the communication and are deactivated later on. In cells, an example is mRNA, in economy Valuables (gold). In both examples they aren't consumed in the production, they only hand over relevant information.

The motivator acts by this manner as solution seeker, synchronizer, agregater, etc., but at the end, all is realized on the materialistic level – in the space of movers. Here is important that, if they are not used, their life time is relatively unlimited in contrast with impulses in the superstructure.

Figure 1: **Functioning of the Brain**



- X - organism**
- A - cells**
- Pu - tension**
- Sk - sustainability**
- K+H - impulses and movers**
- Y - motivator**
- B - superstructure, carrier of impulses**
- Di - fixation + change**
- FB - feed back**
- C - pool, carrier of movers**
- E, F, Gi - communication**