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STATISTICAL MODEL OF COMMUNICATION IN INFORMATIONAL EXCHANGE

The *statistical model of communication*, which creates the digital world and *artificial information*, is based on the categorical necessity of choosing between two variants of abstract *binary opposition*. At the *bit* level this is known as “0” or “1” (“yes” or “no”). With all the limitations of this model, it allows the description of the communication processes in a discrete coordinate system in the context of unified, logically justified equivalents. This approach is the background of general theory of control and connexity based on the statistical measurement of communication, or *Cybernetics*.

Nobel laureate Dennis Gabor (or Dénes Gábor) described the *essence* of the *statistical model of communication* in 1952: “Once we have a vocabulary, communication becomes a process of selection. A selection can always be carried out by simple binary selections, by a series of yeses or noes. For instance, if we want a letter in the 32-letter alphabet, we first answer the question “is it or is it not in the upper half?” By five such questions and answers we have fixed a letter. Writing 1 for a “yes” and 0 for a “no”, the letter can be expressed by a symbol such as 01001, where the first digit is the answer to the first question, and so on. This symbol also expresses the order number of the letter (in this example, the number 9) in a binary system”. [2, p. 1]

It is this model that provides the functionality of *information* in computer-mediated communication. Such instrumentality has macro levels, for example, *programs*, as well as micro levels, presented by a specific sub-model called a *bit*.

Naturally, this instrumentality allows the formalization of only a superficial shell of communication, for example, graphics or acoustics, and needs to be elaborated for further adjustment. The *ontological* problem of improving the *statistical model of communication* is the impossibility of objective representation of speech practice by algorithmic procedures of computer mediation. It is too extensive and needs a special generalization

of material for effective mastering – *information* [1, p. 12]. Moreover, speech practices, including computer-mediated ones, are multidimensional and variable. The correctness needed at the level of abstract modeling of communication mechanisms is scarcely supported by the adequate representation of such involved semiotic systems as natural languages. Nevertheless, it is very “convenient” from a technical point of view: the issues of baseload meta-description, for example, *dictionary*, and its replenishing, its mastering with new participants of communication, for example, children, are taken out of brackets. In such a mode human senses are called “chaotic”; for no reason they are accused of *interfering* with the describing and understanding of information [2, p. 1].

It is *au contraire* in linguistic practice. Of course, the effectiveness of computer tools is high but the capabilities of computer-mediated communication only *complement* traditional methods of communication interpretation. The metalinguistic structuring of “thinking” in computer-mediated communication does not significantly differ from pre-computer speech practice. However, the computer presentation of semantics is based on the formal logic of special tables of commands, *programs*, which is not directly “compatible” with the intuitive mentality (“heuristics”) of a human being. *People's mental* activity is significantly different from computer information processing, and the differences are clearly visible through the prism of speech functionality.

In the process of human perception of *natural information*, for example, in reading, specific mental mechanisms are involved. *Reading* in the traditional sense of the word is a unique activity of the brain that is effective not due to the rapid recognition of a number of images but because it is characterized by the slow mastery (and preservation throughout life) of the essence of things and concepts, or *information*.

REFERENCES

1. Barkovich A. (2020). Informational Linguistics: The New Communicational Reality. Newcastle upon Tyne: Cambridge Scholars Publishing. 271 p.
2. Gabor D. (1952). Lectures in Communication Theory; Tech. Report No. 238, Research Laboratory of Electronics, MIT, 1952.