

Cognitive Modeling of Scientific Text

Our research is aimed at the problem of polymorphic textuality of scientific text which is relevant to the domain of knowledge representation. We tried to clarify the main question: how is knowledge adopted within the structure of scientific text. Our research is based on the following tenets: 1) the view of scientific text as unlimited semiosis; 2) intratextuality of scientific text; 3) cognitive theory. Semiotics provides a sufficient theoretical foundation for regarding text production as a multi-stage process; the other theories add support to a view of text production as a process of knowledge representation.

The cognitive approach to scientific text production implies the view of the text as the result of cognitive activity. The structure of the scientific text, stipulated by the regularities of the cognitive process, is a multi-leveled phenomenon which explicates the process of getting knowledge. Various ways of cognition (observation, experiment, logical development of thought, etc.) are represented within the scientific text in different forms. Taking it into consideration, we suggest that the cognitive model of scientific text includes three types of texts: *text-description* which is relevant to the pre-scientific stage of cognition, *text-narration* which is linked with the experimental stage of cognition and *text-argumentation* which is associated with the theoretical level of cognition. The first type of the cognitive model represents the relations "object-quality", the second type fixes the consequences of events, the third type reveals logical relations between the described objects. In this sense, scientific text is intended to serve all types of knowledge, including imaginary thinking, fantasy, abstraction, description of unseeing world. The peculiarity of the scientific text is that it fixes and interprets various types of cognition. For this reason it may be considered as a "depository" of types of narration.

By observing the cognitive approach to scientific text production, we have attempted to show that it has a number of consequences in the cognitive trend of knowledge representation.