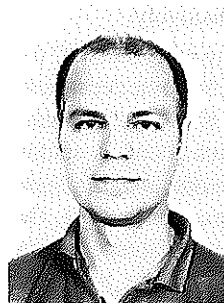

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The Picture of the World and Knowledge Organization



Dr. (Philosophy) Alexander A. Krushanov, b. 1949. Subject of interest: The system of the sciences, integration of knowledge, knowledge organization.

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Work in the field of knowledge organization is based on a very rough understanding of a general structure and dynamics of the world. For the development of such understanding it is worthwhile to separate "universal" and "specified" knowledge and then to construct a system of universal criteria for "normalizing" a massive of the specified knowledge as a whole. (Author)

It is well-known that research work in the field of knowledge organization is done in the framework of some picture of the world. Such a picture determines a definite understanding of general structural and dynamical properties of the Universe, and this understanding is reflected in the main divisions of today's classification systems and in the types and numbers of the headings inside the divisions.

Analysis shows that such a picture of the world is usually constructed purely on the basis of an expert's opinion without a well-developed theoretical investigation of their correctness. As a result very different general classification schemes exist today, and their structure is poorly coordinated with the real structure of changing sciences. Moreover, the work on the organization of knowledge in different divisions is done very autonomously (as if different fields of knowledge are principally different), and such work is very complex and ineffective.

In recent years it has become more and more evident that today's general picture of the world has to be changed very essentially and that it will influence the work in the field of knowledge organization very much. First of all it is clearer now that the differences between the inorganic world, animate nature and the social system are exaggerated in great measure. This is clearly shown by the recent discovery of rather many similar (cybernetical, system, symmetry, synergetical) features in the objects of different fields of the Universe. Such likenesses produce possibilities in principle for the systematization of knowledge from different divisions of today's classification systems on the general base.

To solve this problem it is necessary to perform some operations. First of all it is useful to separate two different kinds of knowledge: "universal", which does not fix the concrete nature of reflected objects ("number 235", "system", "quality"), and the "specified" type which reflects

the concrete nature of objects ("culture" - social phenomenon, "gene" - biological object, "atom" - physical objects, etc.). From this point of view physics, chemistry, geology, sociology etc. are fields of specified knowledge. Ontological categories, cybernetics, general systems theory, mathematics, etc. are fields of universal knowledge. Universal knowledge has such an interesting and very important property that in principle it could be applied to any field of specified knowledge. Accordingly, the main structures of universal knowledge can determine the general unified base - a system of standard criteria for systematizing all separate fields of specified knowledge. To make this possible it is necessary first of all to systematize universal knowledge itself; that is, in other words, to find out which structural and dynamic properties of the Universe are the most widespread and essential ones for it. For example, five properties of such kind were reflected as facets in Ranganathan's classification of knowledge, but it seems that the systematization of all universal knowledge will help us find a far greater number of such properties. And finally, the whole work discussed here will be completed when specified knowledge will be "normalized" on the basis of a received system of universal properties - general classificatory characteristics. This means that it will be necessary to reorganize knowledge into main divisions in accordance with and under the new headings. Without such an operation, separate fields of knowledge will be perceived as different only because there are historical differences in the approaches to their systematization.