

Ration of the concepts “scientific knowledge” and “scientific information” of system of social communication

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Abstract. Process of scientific knowledge and application of scientific knowledge in practical activities of people is directly connected with information support. Mastering by the made scientific knowledge is carried out through system of social communication. That fact attracts attention that in scientific literature the concepts “scientific knowledge” and “scientific information” not always differ. «Scientific information» is used sometimes as a synonym of “scientific knowledge”, at the best, they are used as one-serial.

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Introduction

The ratio of considered concepts remains uncertain. Some believe that scientific knowledge is part of scientific information as include not only scientific knowledge. From the point of view of "factual" interpretation, the scientific information provided as new data on the scientific facts, is part of scientific knowledge as the scientific facts make only part of scientific knowledge. As B. M. Kedrov wrote, "The knowledge of the separate fact - isn't still science" [1]. Though all science is factual, but they play a subsidiary role in science. The facts are related to lower levels and components of scientific information as treat the very first floors of the building of science. Laws of science are the its highest floors united in system, called by the theory. In spite of the fact that the majority of scientists collects empirical information (pilot studies make the most part of publications), the bases for an exception of theories from the sphere it doesn't give information. It is noted by G. A. Lakhtin, "And theories, and even hypotheses also can be considered as information" [2].

In a certain degree and the facts, both theories, and hypotheses are information [3]. It is well known and is used in the field of logic for studying by means of information methods. In the field of informatics this situation proceeds from much broader definitions of concept of scientific information. The concept developed by G. A. Lakhtin, is divided also by the American economist F. Makhlop [4]. Trying (contradicting the combinatory and probabilistic concept of measurement of information developed by him) to distinguish knowledge from information, L. Brillouin defined information so: "The crude material also consists of simple collection of data whereas knowledge assumes some reflection and the

reasoning organizing data by their comparison and classification" [5]. A. D. Ursule believed that scientific information represents some party of scientific knowledge: "Information represents only certain party of reflection, instead of its any part" [6].

Now definition of scientific information which is given in the known book "Fundamentals of Informatics", is the most widespread. Authors of this book Mikhaylov A. I. Black A. I., Gilyarevsky R. S., tell the following: "Scientific information is logical information received in the course of knowledge which adequately displays regularities of the objective world and is used in socio-historical practice" [7]. Rather this definition it should be noted that here the main attention concentrates on contents of data as scientific knowledge "and creation on their basis of uniform space of research is one of important problems of being formed areas of new knowledge" [8]. For concept of scientific information it is an important sign. But it insufficient. He, actually, doesn't lead to essential differentiation of scientific knowledge and scientific information. Though distinction between them exists. So, in understanding of information it was put in the forefront not property of the validity, and absolutely other property of knowledge. For transfer of data, and also as well as for information it wasn't so obligatory that data were true. The main thing consisted in possibility of their transfer. In this case the knowledge if it even is true, but not transferred from one person to another, disappears together with got it and made of it mystery. Information as knowledge is opposite not only to noise, hindrances, but also secret, concept which in science still precisely isn't defined and which designate usually something or yet not learned or hidden from other people. Only as a result of a solution in the course of scientific or other search the secret stops being secret. Same occurs in the course

of information transfer about it to the people interested in its disclosure. The unknown can be not only mysterious, but also not certain therefore removal of a cover from secret, destruction of uncertainty appears also process of obtaining information. The knowledge and information make initial idea of information [9]. Here, apparently, the knowledge and information are inseparable, but, nevertheless, idea of information includes their distinctions.

However for the purpose of thorough distinction of considered concepts we use that fact that development of science is connected not only with an increment of new knowledge though as a whole scientific activity is focused on it. Not less the importance has also that the gained knowledge should be ordered, systematized and transferred, broadcast in acceptable forms, from one scientists to another. It is possible to call this aspect scientific and communicative. Both aspects in total represent science as a certain social activity, a certain social institute [10]. These aspects allow to carry out distinction between the concepts "scientific knowledge" and "scientific information".

Scientific knowledge represents knowledge of essence, properties, communications and regularities of the phenomena. As "kernel" of scientific knowledge laws though the science includes also some other elements of knowledge, for example hypotheses, the facts and so on act.

Taking into account the second aspect, it is possible to tell that scientific information is such scientific knowledge which is included in scientific and communicative processes [11]. It follows from this that the scientific knowledge turns into scientific information when functions only in systems of social communication; out of this system it isn't scientific information.

During the modern period, in the course of streamlining, in systematization and transfer of scientific information of people meets great difficulties. Acceleration of a course of historical development, expansion and deepening of the scientific and technical revolution, being accompanied rough social changes led to that person actively acting now appears in the inconsistent situation which has received the name of information crisis. For various fields of activity of the person this crisis is characteristic to some extent where it is significantly connected with perception, storage, transfer, processing and use of diverse and powerful flows of information.

In the conditions of modern scientific and technical progress production management demands such powerful information streams that the person isn't able to cope with them without special means.

Therefore there was inevitable a transfer of information functions from the person to the car: information "superfluous" in relation to human opportunities, but necessary for production management, was "assumed" by the corresponding technical devices [12].

As a result powerful technical means of mass communications, information retrieval and datalogical cars perceive, store, transfer and overwork productive and economic, administrative, technical and many other types of social information. Transfer to equipment from the person of information functions created great opportunities in the field of production and transfer of social information [13].

If development of technology and productions put forward information problem as vanguard, similar, even even more difficult situation developed and in the science sphere. The science had accurately expressed information nature from the very beginning of the origin. Production acted earlier, first of all, as production of the products having generally the material and power nature, and scientific production is the new knowledge, the essential which party of the contents is scientific information. As the perception of information in the sphere of science occurs from object of knowledge, its transformation into scientific information, transfer, storage and the main thing - processing of this of the last for the purpose of receiving new knowledge, now science theorists represent science as difficult dynamic information system [14]. Characteristic as information system of science is the continuous accumulation of scientific information which has amplified sharply for the last 250-300 years, having taken thus the exponential form.

In development of science, the equipment, all society it has the reasons. We will consider the reasons and the conditions connected generally with rather independent development of sciences. First, the continuity of scientific information, that is science moves forward in proportion to the mass of the knowledge inherited by it from previous generation. Secondly, universal, international character of scientific information. In principle scientific information belongs to all mankind, and no important opening can be appropriated forever neither the personality, nor group of people. The opening hidden or lost for a while then opens again. Thirdly, differentiation (specialization) and closely related integration (interaction) of the sciences, conducting to emergence and synthesis of new knowledge. Fourthly, improvement of organizational forms and science institutes. Transition from individual process of receiving new knowledge during an era of "small" science to collective (system cooperatively) to an increment of scientific

information during an era of "big" science (that is sciences in the conditions of modern scientific and technical revolution). Fifthly, improvement and development of language and logical, mathematical and other general and special theoretical means and knowledge methods. Sixthly, closer connection of science with equipment, production and other fields of activity of the person and gradual formation of science by direct productive force. Science development here is already mutually connected with progress of other areas of human activity. The important role is played here by education [15; 16].

It is possible to allocate the following reasons relating to development of technology: escalating research in informative processes of technical means the researches allowing sharply to increase number of valuable scientific information; development of technical means of communication and communication (technical means of fixing, distribution of information, individual and mass communications - the press, radio, television, computer telecommunication networks).

From among the social factors favoring to development of science, it is possible to mention such, as growth of number of scientists and in general taken in science; growth of allocations for scientific researches (in the developed countries they reach several percent of the national income); progress of productive forces, the material and spiritual production, creating more and more favorable welfare "climate" to scientific creativity; improvement and development of the public relations stimulating development of science [17].

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