

**SOCIO-PHILOSOPHICAL ESSENCE OF
SCIENTIFIC COMMUNICATIONS IN
MODERN SOCIETY**

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**MÜASİR CƏMIYYƏTDƏ ELMI
KOMMUNİKASIYALARIN SOSIAL-
FƏLSƏFI MAHIYYƏTI**

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<p>UOT UDC: 001.6</p> <p>ORKID İD ORCID ID: 0000-0001-5318-5537</p> <p>Daxil oldu Received: 06.04.2022</p> <p>Qəbul olundu Accepted: 24.05.2022</p> <p>Redaktə etdi Edited by Dr. Bayram Quliyev</p>	<p>Keywords: <i>science, scientific knowledge, sociology, science, technology</i></p> <p>Summary</p> <p>The Paper deals with the socio-philosophical essence of scientific communications in modern society. We have to emphasize that scientific information obtained as a result of scientific knowledge plays an important role in the development of modern society. The issue of scientific communication, the communication of scientists in the course of their activities, has been one of the key problems in research conducted within the framework of science of science since the middle of the 20th century. The main goal of science, as you know, is to obtain new true scientific knowledge, and scientific communication is thus one of the conditions for creating such new knowledge. All these issues have been studied on the basis of the scientific literature of the time and relevant scientific results have been obtained.</p> <p>Açar sözlər: <i>elm, elmi biliklər, sosiologiya, elmşünaslıq, texnologiya</i></p> <p>Xülasə</p> <p>Məqalə müasir cəmiyyətdə elmi kommunikasiyaların sosial-fəlsəfi mahiyyətinin öyrənilməsinə həsr olunmuşdur. Vurğulamaq lazımdır ki, elmi biliklər nəticəsində əldə edilən elmi məlumatlar müasir cəmiyyətin inkişafında mühüm rol oynayır. Elmi ünsiyyət, alimlərin öz fəaliyyətləri zamanı ünsiyyəti məsələsi 20-ci əsrin ortalarından elmşünaslıq çərçivəsində aparılan tədqiqatların əsas problemlərindən biri olmuşdur. Elmin əsas məqsədi, bildiyiniz kimi, yeni həqiqi elmi biliklər əldə etməkdir və beləliklə, elmi ünsiyyət belə yeni biliklərin yaradılmasının şərtlərindən biridir. Bütün bu məsələlər dövrün elmi ədəbiyyatları əsasında araşdırılmış və müvafiq elmi nəticələr əldə olunmuşdur.</p> <p>Ключевые слова: <i>наука, научное знание, социология, наука, технология.</i></p> <p>Резюме</p> <p>Статья посвящена изучению социально-философской природы научных коммуникаций в современном обществе. Следует отметить, что научная информация, полученная в результате научных знаний, играет важную роль в развитии современного общества. Научная коммуникация, вопрос общения ученых в процессе их деятельности является одной из основных проблем исследований в области науки с середины 20 века. Главной целью науки, как известно, является приобретение нового истинного научного знания, и поэтому научная коммуникация является одним из условий создания такого нового знания. В статье данные вопросы изучены на основе научной литературы и получены соответствующие научные результаты.</p>
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Introduction

Scientific information obtained as a result of scientific knowledge plays an important role in the development of modern society. Naturally, its acquisition, dissemination and use are essential for the development of science. Scientific information is distributed in time and space by certain channels, means and methods. A special place in this system belongs to scientific communication.

As you know, science is an important tool for social transformation, which ensures the values and vitality of the whole society. Only by relying on science, education, technology and innovation can a country reach the world level of progress. Therefore, a scientist, researcher, specialist needs powerful information resources, fast and convenient access to world scientific information through scientific periodicals, scientific literature, databases, etc.

Today, both in society and in the structure of the reorganization of science and education, rapid transformation processes are taking place, which are formed against the background of the growing role of technological innovations in scientific activity, primarily globalization, informatization, and virtualization of the space of scientific communication. The role of effective communication between scientists is one of the key ones in the effective implementation of the processes of functioning of science in society. The plurality of opinions and approaches to the organization of scientific and practical activities, the identification of possible scenarios for overcoming crisis situations, global problems of mankind require solving the problem of rational foundations for successful communication.

Science by its nature is a communicative phenomenon, its vital activity is provided by the scientific university and academic communities, the exchange of scientific information in scientific publications, during conferences, symposiums and personal communication of scientists. Communication is seen as a powerful heuristic potential for comprehending new horizons of thinking and scientific activity, formalizing,

legitimizing and disseminating scientific knowledge, achieving understanding, broadcasting worldview, value, methodological instructions, etc.

Communication is proclaimed the universal property of mankind and the universal reality of social existence. Despite the fact that communication as one of the specific characteristics of human existence has been of interest to philosophers since antiquity, it came into focus in the 20th century. In particular, the anthropological aspect of this phenomenon was studied by M. Buber, H. G. Gadamer, M. Heidegger, culturological - by M. Bakhtin, linguistic - by J. Austin, J. Searle, sociological - by N. Luhmann, M. McLuhan and others.

The idea of absolute equivalence of “I and You” as subject and object is, in fact, the discovery of the Jewish philosopher Martin Buber. Of course, he is not the only thinker who holds this opinion, but it is with him that dialogism is gaining ontological coloring: both participants in the dialogue at the meeting point in a certain way replace each other. If in German classical philosophy, which revealed the rich world of human subjectivity, the subjective-objective relationship excludes the equality of the parties, because the mind is aimed at understanding the world dependent on the activity of the subject, then M. Buber notes the equality of both participants in the dialogue. Martin Buber explores the problem of dialogue in three dimensions: “life with nature”, “life with people” and “life with spiritual beings”. Therefore, the author rightly focuses on “dialogical multidimensionality”. “Dialogue is not limited to the communication of people with each other, it is the attitude of people towards each other, which is expressed

in their communication. From this it follows that even if it is possible to do without words, without notice, one thing must necessarily be present in the dialogue - the mutual direction of internal action. Two people participating in a dialogue should be turned to each other, they should be, no matter how much activity or awareness of activity, they should be turned to each other” (Buber M., 2003, 99).

The German philosopher, one of the most significant thinkers of the second half of the 20th century, is best known as the founder of “philosophical hermeneutics”. Hans-Georg Gadamer sees “truth that shows itself in non-scientific experience, attributes it to works of art, history, human communication and considers true logical expression as a derivative form of truth. Gadamer's understanding of truth is guided by the truth of unconcealment, disclosure, self-revealing of a thing”.

Exploring the features of thinking in the modern era, the German thinker, one of the greatest philosophers of the 20th century, Martin Heidegger, distinguishes two types of thinking: the first is “calculative thinking” (calculating thinking), which seeks out new, more and more promising and profitable opportunities; and the second – “understanding thinking” (thinking thinking), aimed at finding meaning in everything that is, it deals with deliberation, definition, construction. Calculating thinking is largely based on the development of a certain stereotype of thinking, an important characteristic of which is following a certain logic, automatism.

M. Bakhtin introduces two main ideas into his model of communication: dialogue and carnivalization. M. Bakhtin wrote: “The word is focused on the interlocutor, focused on who this interlocutor is: a person of the same social group or not, standing higher or lower (the hierarchical rank of the interlocutor), connected or not connected with the eloquent by any closer social ties (father, brother,

husband, etc.). An abstract interlocutor, so to speak, a man in himself, cannot exist; we really would not have a common language with him, either literally or figuratively” (Bakhtin M., 1996. T. 5. S. 93).

The linguistic aspect of communication was studied by scientists J. Austin and J. Searle. The whole concept of speech acts was proposed by the English philosopher and logician, a representative of neopositivism, Professor John Langshaw Austin in his work “How to do things with words” (“Word as Action”) (Austin J., 1962. 166). J. Austin formulated the idea that the construction of the constituent parts of communication is accompanied by the performance of several linguistic and cognitive operations, in particular, the creation of a grammatically correct sentence with a certain meaning and reference (illocution), giving the statement a certain communicative orientation (illocution), and influencing consciousness or behavior of the addressee (perlocutionary effect). Given the illocutionary power of the sender of information and his mental state, J. Austin singled out five main speech acts: 1) Representatives, the purpose of which is to judge a certain state of things; 2) Directives, the purpose of which is to create pressure on the addressee, induce him to certain actions; 3) Commissions, the purpose of which is to formulate obligations to the addressee; 4) Expressives, the purpose of which is to demonstrate the psychological state of the broadcaster; 5) Declaratives, the purpose of which is to influence the social relations of people.

According to the idea of the American philosopher, one of the leading experts in the philosophy of artificial intelligence, John Rogers Searle, the unit of communication should be considered not a sentence or statement, but a speech act, that is, the actual speech act, in which the intentions (intentions, motives) of the speaker are concentrated. In

this concept, the means of the language code in communication are considered not as a set of universal meanings, but as a field of action with the help of which people in everyday practice influence the behavior, thoughts and emotions of others.

According to the German sociologist, the creator of the original theory of society, Niklas Luhmann, “What always happens in society is communication” (Luhmann N., 2002. 90). Thus, Luhmann notes that communication constitutes society, and not the actions of an individual. It is communication that creates and maintains the boundaries of society. In systems theory, three components of communication are distinguished: 1) information informing a person about the state of affairs; 2) messages as a form of communication (speech, writing, facial expressions); and 3) understanding the meaning. In general, Luhmann distinguishes three types of systems: social, physical, and organic. The social system for Luhmann is a set of simplifying functions that determine the consequences of events, the expression of social actions and the course of social interactions. Social systems should for the function of “create, process and reduce complexity and make the world suitable for human needs at least in the minimum order so that a person can navigate it and act in a planned way” (Münch R., 2004. 182).

When it comes to communication, one should definitely consider the theory and views of the Canadian-American sociologist Herbert Marshall McLuhan. The concept of the scientist is based on a mechanistic point of view on technical progress as the main driving force of social development. McLuhan in his studies presents the history of the social progress of mankind as a change in the forms of communication. From the point of view of the philosophy of history, McLuhan takes, at first glance, a deterministic position, but the influence of the means of communication on

the transformation of consciousness and culture, in his opinion, is not absolute. McLuhan aims to identify and describe the most important factor of social change, which should contribute to the increase of “true human autonomy” (Маклюэн М., 2004. 432).

The process of scientific knowledge is not least determined by the methods and forms of scientific communication. Therefore, the emergence of new methods and forms of scientific communication qualitatively modifies the very process of scientific knowledge.

There are two stages of scientific communication. At the first, internal stage, the subjects of communication are scientists who communicate within the scientific community. When scientific knowledge has already been obtained, it is time for the second stage - external communication. This is where the translation of scientific knowledge into the mass consciousness takes place, popularization of science. The rapid development of information technologies, providing unique opportunities in the dissemination of scientific information, today play a huge role in the development of science as a social institution, which actualizes the issue of studying the model of scientific communications in the 21st century.

Speaking about the model of scientific communications in the 21st century, of course, one cannot but take into account the rapid development of the latest information technologies, which provide unique opportunities in the dissemination of scientific information, and sometimes change the very nature of scientific communication. Scientific communication is a type of interaction and communication between scientists, so it can be considered as one of the factors that determine the process of scientific knowledge. In the process of scientific communication between scientists, not only the movement of

information takes place, but also certain social relations are established.

The issue of scientific communication of scientists in science of science.

The issue of scientific communication, the communication of scientists in the course of their activities, has been one of the key problems in research conducted within the framework of science of science since the middle of the 20th century. The main goal of science, as you know, is to obtain new true scientific knowledge, and scientific communication is thus one of the conditions for creating such new knowledge. The prominent historian of science J. Bernal noted that: “science is not the subject of pure thinking, but the subject of thinking, constantly involved in practice and constantly reinforced by practice” (Бернал Дж., 1956. 26).

The concept of scientific communication as a kind of social interaction is presented in the works of M. Polanyi, P. Bourdieu, T. Kuhn, B. Latour. The norms of scientific cooperation and the ethos of the scientist were developed by R. Merton.

Exploring the nature of scientific knowledge, the famous English scientist in the field of philosophy of science Michael Polanyi revises the concept of “knowledge”, proposing “personal knowledge” as the ideal of knowledge and thus expanding the concept of objectivity. Personal knowledge, which presupposes “the personal participation of the cognizing person in the acts of understanding”, but is not reduced to subjective understanding, is presented by M. Polanyi with a claim to objectivity, since it “allows you to establish contact with the hidden reality; contact, defined as the condition for anticipating an indefinite realm of unknown (and perhaps hitherto unimaginable) true entities” (M. Polanyi. 1st edition, 1974. 428).

The research position of the French sociologist, ethnologist and philosopher Pierre

Bourdieu in considering social science as a field of symbolic production is subject to the identification of social conditions for development and the limits of scientific knowledge. In the concepts of “field of science”, “strategy”, “historicization”, “objectification” and “habitus” P. Bourdieu describes not only the laws of the functioning of science, but also tries to determine the possibility of identifying criteria for the scientific character of social knowledge (Bourdieu P. 2004, 8–11).

Thomas Samuel Kuhn, one of the most influential philosophers of science of the 20th century, drew attention to the idea of communication in the activity of a scientist when defining the problem of substantiating science, pointing out the expediency of considering a scientist, together with his value judgments, as the essence of humanity. T. Kuhn admits the commonality (separability) of values, but warns that their recognition is not yet a condition for their identical application: “the specific application of values sometimes depends heavily on personality traits and biographies that distinguish members of a scientific group from each other” (Кун Т., 2003. 605).

French anthropologist and sociologist of science Bruno Latour also associates scientific communication with scientific knowledge. An example of the theory of scientific discourse as a network of communications is the description of the creation of scientific knowledge in B. Latour's book “Science in Action”. The formation of a scientific fact depends on the past and future statements of scientists regarding this topic. Scientific knowledge is born from their disagreements, forcing the disputing subjects to delve deeper and deeper into details and refer to various accompanying texts, documents and technical details (Bruno Latour., 1987. 288).

For R. Merton, science, first of all, is a social institution. Any social institution can be understood from the point of view of a special system of norms of behavior and value orientations. A systematic approach to the study of science makes it possible to reveal its inner nature as a kind of integral system, which is an organic unity of interrelated aspects: scientific knowledge and scientific activity. Being such a system, science performs precisely the role of a social institution.

There are 6 components in P. Hills' model of scientific communication: a scientist as a producer and consumer of scientific information; science community; publisher; information product; library worker; new communication technologies. In this model, the process of scientific communication is an integral and complex interaction of all these components. The scientist both produces and uses scientific information; the scientific community provides structure, brings scientists together and helps to disseminate information and communicate effectively; the publisher is the distribution agent (Hills P.J., 1983. 99 – 125).

Currently, the world is going through a new stage in the development of mankind - global informatization is taking place, when information activity becomes the leading factor in the socio-cultural and social development of mankind, and ICT is a modern universal and multifunctional tool for the development of scientific communications.

It is difficult to imagine the modern world without highly developed communication technologies, from which we daily draw operational information, including scientific information. Scientific communications are a complex, multi-level dynamic system, where the totality of relationships is constantly changing and transforming. Scientific communication, the essence of which is the exchange of

information, is the core of the professional activity of scientists.

In general, any communication, including scientific, in the modern information and communication space acquires several new features. This is explained by the fact that the interaction of subjects of network communication reflects a new quality of information, subject-object relations, due to the specific functions of social networks.

Communication is adequate if it delivers the information people need in a form they can use. Achieving this goal requires cooperation between scientists who have the subject knowledge for communication and scientists who have experience in communication processes, as well as practitioners who are able to manage this process.

At the same time, it is very important for scientists and researchers to get acquainted with new scientific works and researches of other world scientists. All this leads to the creation of national scientific information systems in each country. Scientific information systems should be able to provide the following services to researchers who call on them:

- scientific and technical literature, data, computer programs, etc., search and acquisition;
- obtaining information about the latest scientific and technological achievements;
- information processing and calculations;
- use of information systems for teaching and learning;
- development of individual professionalism, establishment of scientific and business relations (Гасымов.В., 2005. 21).

The problem of scientific communication for researchers is extremely relevant, especially for our country. Among

the tasks are the efficiency of dissemination of the results of the activities of scientists, increasing their presence in the world academic space by eliminating barriers or even isolation, exchange of opinions and much more, which contributes to the development of modern science. From the point of view of philosophy, scientific communication is a social process that reflects the social structure and performs a unifying function in it. It constitutes a functional subsystem within the framework of the scientific information movement system for obtaining new knowledge, co-authorship, transferring the information received to other specialists, popularization, and practical use of knowledge.

The rapid development and global introduction of high-tech computer and information technologies also significantly influenced the course of civilizational and socio-cultural processes in the world. First of all, it concerns communication processes. In particular, with the development of Internet technologies, new ways of communication penetrate deeper and deeper into various spheres of public life and transform them. Scientific communication thus also acquires new forms and features. Modern forms of scientific communication open up great

prospects for scientific and research activities, for the development of a scientist as a professional in his field, and for maintaining his competitiveness in the scientific market.

Conclusion

The advent of information and computer technologies significantly changes the work of a scientist and research institutions. Given the pace of emergence of new communication tools, scientists learn to use new technologies in practice even before they manage to explain the features of the functioning and the essence of new information and communication processes.

So, the rapid development of information and communication technologies significantly accelerates the development of society, enhances the role and importance of information and knowledge, turns knowledge into a direct creative force; expands and enriches the channels of information exchange; carries out the transition from book communication to multimedia and forms modern models of scientific interaction.

Thus, successful scientific communication today largely depends on the level of information culture of scientists, researchers, teachers and students and on their ability to use the latest information and communication technologies.

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