



FUNCTIONAL TASKS OF THE DYNAMICS OF THE DEVELOPMENT OF SCIENCE IN THE EAST

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ANNOTATION

This article highlights the role and peculiarity of the development of science in the countries of the East throughout history, the key functional tasks that science performed in oriental civilizations are considered, and the dynamics of this development is analyzed. The role of science in the East, having gone through a complex historical path, today again gains increasing significance, expanding our understanding of the laws of world scientific progress. The article presents a comprehensive analysis of the functional role and dynamics of the development of science in the East, which allows you to better understand its place and significance in the history of world civilization.

Key words

progress, revival, science, East, evolution, dynamics.

АННОТАЦИЯ

В данной статье освещается роль и особенность развития науки в странах Востока на протяжении истории, рассматриваются ключевые функциональные задачи, которые наука выполняла в восточных цивилизациях, а также анализируется динамика этого развития. Роль науки на Востоке, пройдя сложный исторический путь, сегодня вновь обретает возрастающее значение, расширяя наше понимание закономерностей мирового научного прогресса. В статье представлен комплексный анализ функциональной роли и динамики развития науки на Востоке, что позволяет лучше понять ее место и значение в истории мировой цивилизации.

Ключевые слова

прогресс, возрождение, наука, Восток, эволюция, динамика.

Science, being a complex sociocultural phenomenon, performs a wide range of functions that are transformed throughout the historical development of mankind. From ancient civilizations to the present, the key tasks of science evolved, responding to the challenges of their time.

The development of science throughout the history of mankind has a complex, uneven dynamics. Several key aspects of this dynamics can be distinguished: 1. Slow accumulation of knowledge in the pre - industrial era. In ancient times and the Middle Ages, the process of accumulating scientific achievements was extremely inertial. New discoveries and inventions rarely appeared, and their distribution was limited. This was facilitated by weak communication between scientists, the dominance of traditional, often dogmatic approaches. 2. Acceleration of the pace of scientific and technological progress. The situation has changed dramatically in the last centuries. With the onset of the Art Nouveau, there is an exponential growth of scientific knowledge and innovation. If earlier the accumulation of new discoveries has occurred for centuries, now it has become an explosive character. This was facilitated by scientific revolutions,

industrialization, the development of communications and globalization. 3. Change of scientific paradigms. Science develops not only quantitatively, but also qualitatively - through the periodic change of leading concepts, theories and methods. Revolutionary shifts such as the transition from Newtonian mechanics to Einstein physics, radically transform the picture of the world. 4. Differentiation and integration of scientific disciplines. On the one hand, there is a process of increasing specialization and crushing scientific knowledge in narrow areas. On the other hand, the need for interdisciplinary integration is growing to solve the complex problems of our time, which leads to erosion of faces between individual disciplines. 5. Globalization of science. Science is becoming an increasingly international sphere, with an active exchange of ideas, methods and results of research between scientists from different countries. The formation of a single world scientific space occurs, which affects the acceleration of the pace of progress. 6. The development of science gives rise to new social, environmental and ethical problems that require thorough understanding. The understanding of the limits of scientific knowledge and the need for a responsible approach to scientific and technological progress is growing.

The dynamics of science is characterized by a contradictory combination of linear acceleration and nonlinear revolutionary shifts, differentiation and integration, globalization and growing uncertainty. This makes it one of the key factors that determine the modern development of mankind.

In ancient times and the Middle Ages, one of the main functional tasks of science was the preservation and increase of the accumulated knowledge. Both in the East and in the West, scientific traditions accumulated extensive knowledge in the field of mathematics, astronomy, medicine, philosophy and other areas. The maintenance and development of this unique intellectual heritage was the most important mission of scientists of the past.

Along with this, science was often closely integrated into state institutions, solving the practical tasks of management, organizing production, and the development of infrastructure. Thus, another key functional task of science was to ensure the political and economic stability of society. Scientific knowledge was used to strengthen the socio-political order.

This function was especially pronounced in the East, where scientific achievements were an integral part of cultural tradition. The development of sciences, philosophy, religious-mystical teachings was called upon to approve the identity of oriental civilizations, their worldviews. Science acted as a tool for preserving cultural identity. In addition, the specifics of the natural-climatic conditions in various regions of the world set the science of the task of adapting a person to the environment. In the east, unique scientific knowledge and technologies were formed aimed at overcoming the consequences of monsoons, drought, floods.

In the modern era, the functions of science expand significantly. It is increasingly focusing on the development of innovative solutions that meet new socio-economic challenges. Scientific and technological progress is designed to ensure sustainable development, food and energy security, and improve the quality of life of people.

The functional tasks of science evolved from preserving traditional knowledge and maintaining stability to active participation in solving modern global problems. This process reflects the increasing role of science as the most important factor in social progress. Despite the fact that in recent centuries, science in the West began to dominate the scientific traditions of the East, one cannot underestimate the contribution of oriental civilizations to the development of world scientific knowledge. From ancient achievements to rapid progress in the modern era - such is the trajectory of the formation of science in the East.

The origins of Eastern science go into ancient times. The ancient cultures of China, India, the Arab world have accumulated extensive knowledge in the field of mathematics, astronomy, and medicine, which largely anticipated the discoveries of European science of the New Age. Thus, Indian scientists in the I-II centuries of our era developed a decimal system of number and the foundations of algebraic symbols, laid the foundations of mathematical analysis. Chinese astronomy has reached a high level, which allowed to carry out accurate astrological calculations and observations of celestial bodies. Arab scientists of the Middle Ages preserved and increased the ancient scientific heritage, which has become the foundation of European science.

In modern times, scientific thought in the east has long lost its position. While Europe committed a scientific revolution, the eastern countries, with rare exceptions, experienced a period of decline and stagnation. Only in the XX-XXI centuries the situation began to change. Such states as Japan, China, South

Korea demonstrate the rapid increase in scientific and technical potential, reducing the lag from the leading Western powers.

Modern scientists of the East make an increasingly significant contribution to the development of key areas of science. Japanese researchers have achieved significant success in robotics, nanotechnologies, and the development of new materials. Chinese scientists make breakthroughs in the fields of quantum calculations, astrophysics. Korean experts lead in the areas of information and biotechnologies. Of course, the West retains a technological advantage in a number of areas. However, the East is gradually catching up, becoming an increasingly serious player in the world scientific arena. This is facilitated by large state investments in science, the creation of advanced research infrastructure, as well as the desire to integrate into international scientific collaborations.

The role of science in the East, having gone a complex historical path, today again acquires more and more importance. Ancient knowledge and modern discoveries make a significant contribution to the development of world science, expanding our understanding of the world.

In conclusion, we can say that science in the East, despite the periods of decline and stagnation, played a fundamental role in the development of world scientific knowledge. Having passed a complex historical path, it again acquires an increasing significance in the modern era. Today, the contribution of scientists of the East to the development of information technology, nanotechnology, biotechnologies and other advanced directions is becoming more and more significant. This allows us to talk about the return of the East to the forefront of world scientific progress.

The experience of developing science in the East once again emphasizes its key role as one of the most important factors that define the socio-economic and technological development of human civilization. Despite the complex ups and downs, science in the east made a fundamental contribution to the formation and evolution of world scientific knowledge.

Literature:

1. Krivtsov V.A. Science in the East: History and Modernity. - M.: Science, 2014.
2. McCraill Sh. Science in medieval Islam. - M.: Center Polygraph, 2007.
3. Rable V.A. The history of the medieval East. - Kyiv: Libid, 2007.
4. Khayutdinov A.G. Civilization of Islam. - M.: Logos, 2001.
5. Nugmanovna M. A. The role of social control in the legal socialization of the individual //Academicia: An International Multidisciplinary Research Journal. – 2020. – Т. 10. – №. 5. – С. 712-721.
6. Nugmanovna M. A., Kamariddinovna K. A. Modern biotechnical problems of medicine and their solutions //Archive of Conferences. – 2021. – Т. 13. – №. 1. – С. 169-173.
7. Nugmanovna M. A., Akbaralievna U. G. FAMILY IS THE BASIS OF SOCIETY AND STATE //Archive of Conferences. – 2021. – Т. 22. – №. 1. – С. 28-31.
8. Бекмирзаева Л. Р. ПРОЯВЛЕНИЕ НАЦИОНАЛЬНОЙ ОСНОВЫ В ПРОИЗВЕДЕНИЯХ ЧИНГИЗА АЙТМАТОВА //IMRAS. – 2024. – Т. 7. – №. 1. – С. 88-91.
9. Бекмирзаева Л. Р. Чтение речевая деятельность студентов при обучении русскому языку и литературе в узбекской и таджикской аудитории //Science and Education. – 2023. – Т. 4. – №. 10. – С. 403-407.