SOCIAL SCIENCES

IMPACT OF ARTIFICIAL INTELLIGENCE ON THE OBJECT OF SOCIAL COGNITION

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Abstract

The purpose of the study is to identify the social risks of the application of artificial intelligence technologies in various areas of modern society and ways to regulate them through public administration. In this article, the author describes the state policy of Azerbaijan on the development and application of artificial intelligence technologies based on existing strategies, concepts, standards and legislation. The results of qualitative and quantitative research are presented, demonstrating citizens' attitude to technology, the most risky areas of public life in terms of the application of artificial intelligence technologies, the positive and negative effects of the application of artificial intelligence technologies, possible risk reduction measures and the degree of government participation in the development of this area. In addition, based on the results obtained during the study, the author has developed recommendations for optimizing state policy in the field of artificial intelligence development. Based on the results of the study, recommendations were developed for optimizing state policy in the field of artificial intelligence development, including: public disclosure of the positive effects of artificial intelligence; creation of general education courses on artificial intelligence and retraining courses for specialists in need, improvement of educational programs for bachelor's and master's degrees in artificial intelligence; development of infrastructure for testing artificial intelligence technologies.

Keywords; artificial intelligence, social risks. modern society, Quality and quantity, intelligent technologies

INTRODUCTION

The development of human civilization has undergone a number of fundamental changes through scientific and technological revolutions that began with the advent of the steam engine in the second half of the 18th century. The development of water and steam-powered equipment significantly increased productivity and reduced the use of heavy physical labor. The advent of electricity in the second half of the 19th century made it possible to establish mass production and division of labor. The development of computing technology in the mid-20th century contributed to the automation of production, and the subsequent development of new technologies led to even more profound changes. [Durgheim, E., (1996), l The late 20th and early 21st centuries were characterized by the increasing application of new technologies in all areas of human activity. Profound qualitative changes were taking place in production, science, and the labor market. This period marked the beginning of another era of global change, when, starting in the second decade of the 21st century, scientists began to talk about the fourth scientific and technological revolution, for which the term "Industry 4.0" was used in 2011 at the Hannover Fair, the world's largest industrial exhibition. New technologies are constantly developing and transforming our world into a connected, intelligent environment. Artificial intelligence (AI) is increasingly integrated into all aspects of modern society. [Durgheim, E., (1996), lAccording to the consulting company Gartner, the global market for artificial intelligence software amounted to approximately $ 51.5 billion in 2021, which is an increase of 21.3% compared to 2020. [Luhmann, N.,(2007).] One of the most developed areas and segments in the market is intelligent virtual assistants, and the funds spent on them reached approximately $ 6.21 billion in 2021, which is an increase of 12% compared to the previous year. [Artificial Intelligence (Global Market). Tadviser. Government, Business, Technology.URL:https://www.tadviser.ru/index.php/Article:Artificial_intelligence_(world_market) (Access date: 10.03.2020)]

In 2022, a higher growth rate is expected in the development of software for driverless vehicles and the creation of digital jobs. New technologies indeed open up many opportunities, but at the same time they create potential risks and dangers. The main positive results are the easing of labor due to automation, the increase in the amount of material goods per capita, etc. [Thompson, V., Ellis, W., and Wildavsky, A. (1994)] However, it is too early to talk about alternatives for the moral development of society, equality, social justice, fair distribution of economic benefits, etc. The prospects largely depend on the people themselves, as well as on the political position and environment in which the next leap in the development of artificial intelligence technologies will occur. Azerbaijani society and its various spheres of activity have also undergone changes due to the emergence of new technologies. [.Burkardt F. (1996] Therefore, Azerbaijani scientists have begun to assess the social risks and consequences of innovation, as well as the government's support for technological innovation.

Materials and Methods

Minimizing the social risks of the application of artificial intelligence technologies is a state policy. The purpose of this study is to identify the social risks of the application of artificial intelligence technologies in various areas of modern society and ways to regulate them through state management. [Douglas, M., and Wildavsky, A. (1982)]

Research objectives:

1. To study the essence of the concept of "risk", to identify its main types and factors of occurrence;

2. To analyze existing approaches to the study of "risk" in the social sciences;

3. To describe the main scientific and technical conditions for the emergence of artificial intelligence technologies;

4. To analyze the specific features of the application of artificial intelligence technologies in modern Russian society;

5. To analyze the Russian state policy regarding the development and application of artificial intelligence technologies;

6. To identify the main risks of the application of artificial intelligence technologies and ways to regulate them based on sociological research;

7. To develop recommendations for optimizing state policy regarding the development and application of artificial intelligence technologies. Research methods: theoretical analysis method, secondary data analysis method, document analysis, expert survey, questionnaire survey, correlation analysis, comparative method. [Marcuse, G. (1994).]

Although the first attempts to study risks were made at the beginning of the 20th century, a more detailed study of the problem began only in the 1970s. The topic of risk was studied mainly in English, French and German sociology. In these countries, risk was analyzed at different levels, in different social groups and in different areas of activity Knight, F. (1994).. The main results of this work can be used in the preparation of federal and regional programs for the development and application of artificial intelligence technologies in modern Azerbaijani society. [Keynes, J. M. (1993] The list of social risks associated with the application of artificial intelligence technologies to various areas of public life is clarified, mechanisms for minimizing these risks are proposed, and recommendations are developed for optimizing state policy in the field of development of artificial intelligence technologies.

Proposals presented:

1. Based on the results of quantitative sociological research, a list of public spheres where artificial intelligence technologies are most actively and successfully used has been compiled: information technologies, marketing and advertising, medicine and healthcare, finance and banking, agriculture.

2. Based on the results of qualitative and quantitative sociological research, a list of the most risky spheres of public life where artificial intelligence technologies are applied has been identified. This list includes medicine, judicial affairs, public administration, transport and military spheres.

3. Based on the results of quantitative sociological research, key measures have been identified to minimize the risks of applying artificial intelligence technologies, including: improving and comprehensive testing of systems before their implementation, monitoring the implementation process, receiving user feedback, educational activities and training of citizens, as well as developing a modern regulatory framework for regulating technologies. [.Neumann, J. Von and Morgenstern, O. (1970)]

4. According to the results of an expert survey involving 10 specialists from leading domestic and foreign companies involved in the development and application of artificial intelligence technologies, it was found that the funding allocated by the state to support the development and application of artificial intelligence technologies is insufficient.

5. Based on the results of quantitative and qualitative sociological research, a list of positive and negative effects of the application of artificial intelligence technologies has been identified. Positive effects include: automation and optimization of production processes, increased labor productivity, minimizing human errors, improving product quality, and accelerating the development of social processes. Negative effects include: excessive formalism and complexity of interaction procedures between management entities; errors in the artificial intelligence system leading to financial losses; risks to human life caused by artificial intelligence errors, loss of jobs, misuse and manipulation of data; excessive control; decrease in literacy levels.

6. Based on the results obtained during the study, recommendations were developed for optimizing state policy in the field of artificial intelligence development, including: publicizing the positive effects of artificial intelligence; creating general education courses on artificial intelligence and retraining courses for specialists in need; improving educational programs for bachelor's and master's degrees in artificial intelligence; developing infrastructure for testing artificial intelligence technologies; attracting specialists from leading foreign companies to exchange experience; increasing financing for the development of artificial intelligence technologies; developing the venture market to accelerate the development of artificial intelligence technologies; attracting highly qualified specialists in the field of artificial intelligence to solve state-level management problems. [.Burkardt F. (1996].

CONCLUSIONS

The author describes the social risks of applying artificial intelligence technologies to various areas of society. First, the scientific and technical conditions for the emergence of artificial intelligence technologies are described, as well as definitions of this concept, including "a field of scientific research aimed at the 'intellectualization' of computers, modeling of cognitive and thought processes, etc.", "various devices, systems and programs designated 'intellectual' according to various criteria", etc. However, after conducting an analysis, the author determined that machine learning is more accurately understood today as artificial intelligence. In addition, the article examines various experiences of applying artificial intelligence technologies to various social areas: education, industry, transport, healthcare, information technologies and the public sector. In addition, the article describes the risks of applying artificial intelligence technologies based on various foreign and domestic studies. At the same time, it describes the state policy of the Russian Federation on the development and application of artificial intelligence technologies, based on existing strategies, concepts, standards and legislation. The results of qualitative and quantitative research are presented, demonstrating citizens' attitudes towards technology, the most risky areas of public life in terms of the application of artificial intelligence tech-

nologies, the positive and negative effects of the application of artificial intelligence technologies, possible risk reduction measures, and the degree of government involvement in the development of this area. In addition, based on the results obtained during the study, the author has developed recommendations for optimizing state policy in the field of artificial intelligence development.

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