

ARTIFICIAL INTELLIGENCE IN LEGAL SPHERE

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Abstract. *At the present stage of new technologies development much attention has recently been paid to the issues connected with artificial intelligence. This article is devoted to artificial intelligence and robotization: the history of artificial intelligence development is presented, it is concluded that nowadays there is no universal legislation in the field of artificial intelligence and the use of robots all over the world. The article emphasizes that the phenomenon of artificial intelligence has not yet been fully studied, therefore, the problem of developing legislation in this area remains relevant throughout the world.*

Keywords: *artificial intelligence; history; development; legal regulation; development projects.*

In the digital age, artificial intelligence (AI) occupies a special place. Throughout time, plans and programs have been developed more than once that use AI as the main working mechanism.

For example, in 2019, a new development was announced concerning application of artificial intelligence in combating fraud. These data were obtained during a joint study by SAS (Statistical Analysis System) and ACFE (Association of Certified Fraud Investigators).

Also, the use of AI as a workforce in various service areas has begun – the President of Russia suggested using AI more instead of people in places with harmful conditions, building such mechanisms to work, store data on a domestic cloud platform: «And we need to make sure that it was much safer and more secure than keeping information and paperwork in your own computer or on paper» [1].

But before discussing the useful functions of AI, it is necessary to consider what it really is.

In the technical sense artificial intelligence (AI) is “an automatic software control where algorithms are not set in advance by an operator, but are created independently within the system based on coded descriptions of various types of goals, ideas about actions and information base about the external environment” [2].

The history of artificial intelligence development can be divided into several stages.

1) The first mention (1943-52). The first stage is associated with writing scientific works on the "artificial neuron model" by Warren McCulloch and Walter Peets, Donald Hebb's improvement of these neurons, that were later called "Hebb's learning", and a test to check machine abilities for human-like intelligence [2].

2) Awakening period (1952-56). At this stage, the concept of "artificial intelligence" was introduced into the scientific environment and this phenomenon became part of science. At this time, the first mathematical AI was created. It proved not only half of the existing theorems, but also created new solutions.

3) Dawn of AI (1956-1974). This period of development is focused on the research and creation of many algorithms for solving problems, the use of artificial intelligence programs for communication, such as the ELIZA chatbot [3], as well as the creation of an intelligent robot WABOT-1 [4]. However, the interest in this area was gradually decreasing due to the limited finances, which later led to stagnation.

4) The first period of stagnation (1974-80). In 1973, the Lighthill Report was published, an assessment of the academic research on AI. Up to this point, he has been very critical of research in this area, stating that AI research has essentially fallen short of its grandiose goals. This report forced the end of AI

funding. Subsequently, due to limited finances, the interest in this area decreased, which led to stagnation [5].

5) Rise of AI (1980-87). The situation changed in 1980 when AI returned with the so called "expert systems". Expert systems have been programmed to mimic the ability of a human expert to make decisions. But project funding dwindled again after seven years of development, which led to a new period of stagnation.

6) The second period of stagnation (1987-93). This period is associated with the emergence of the qualification problem that many AI systems faced at the time. This was due to the fact that AI programs could not predict all the negative consequences that hinder development, but at the same time, in theory, they should have been able to self-repair.

7) Emergence of intelligent agents (1993-2011). In 1997, IBM Deep Blue beat world chess champion Gary Kasparov to become the first computer to beat a world chess champion. Facebook, Twitter and Netflix also started using AI. The production of Roomba vacuum cleaners equipped with artificial intelligence has begun.

8) Globalization of AI (2011 – present day). The globalization of AI has been going on since 2011, when IBM Watson won a quiz that involved both hard questions and riddles. A year later, Google launched a program that predicted the forecast at the request of users. Two years later, the Turing test was passed by one of the chatbots. In 2018, Google showed off an AI program called "Duplex" that was a virtual assistant and made an appointment with a hairdresser on call without the woman on the other side noticing she was talking to the machine [6].

With the spread of artificial intelligence in society, with the increase in the use of this technology, various violations of the law can occur. The higher the level of use of AI becomes, the more significant problems appear in the field of legislation. Therefore, the constantly evolving scope of artificial intelligence and its development requires changes in legal regulation.

In addition, there is a high probability that artificial intelligence will cause some kind of

damage. Cases where responsibility for certain actions passed to AI already take place.

That is why the issue of legal regulation of artificial intelligence technology requires a thorough review.

Researchers have not come to a consensus on what kind of legal regulation of artificial intelligence should be: 1) anticipatory universal-total, or 2) the one with the aim to regulate specific artificial intelligence systems being created and taking into account the fact that this area is steadily developing and it is impossible to know exactly what this development will lead to after some time.

M. Scherer suggests that the legal regulation of the use and development of artificial intelligence systems can be effective when the following mechanisms are applied:

- ensuring certification of artificial intelligence systems and a ban on the production and use of non-certified systems, which can be a serious incentive for developers to invest certain resources in ensuring the security of such systems;

- application of joint liability mechanisms for the use of non-certified artificial intelligence systems;

- the use of delicate liability mechanisms as a lever for external factors internalization associated with artificial intelligence systems;

- state funding of research in the field of artificial intelligence systems security with the simultaneous imposition of sanctions against developers who ignore the results of such research;

- establishing the need for approval of artificial intelligence systems by the relevant public authority, the process of which will include several stages of thorough testing for safety, by analogy with ensuring, for example, the safety of medicines [7].

The South Korean scientists were the first to speak about need for legal regulation of the relationship between humans and artificial intelligence. The South Korean legislators became pioneers in the normative consolidation of such doctrinal provisions ("Korean Law for the Development of Artificial Intelligence of Robots" (2005), "Ethical Charter of Robots" (2007) and "Legal regulation of autonomous systems in South Korea" (2012)). They stated the need for detailed regulation of

the activities of the creators of programs for the functioning of robots, as well as people involved in their development and production, use and destruction.

In the United States, the Roadmap for the Development of Robotics is being implemented (Roadmap for US Robotics, 2011, 2016) and the National Robotics Initiative (National Robotics Initiative, 2011, 2016).

Japan has developed and implemented the Guidelines aimed at ensuring the safety of the use of next-generation robots laid down in the Japanese Economic Revitalization Plan and the New Robot Strategy: Japan's Robot Strategy. Vision, Strategy, Action Plan (2015).

China has adopted Guidelines on Promoting the Production of Industrial Robots (2014) and the global state development program "Made in China – 2025" (2015).

The European Parliament adopted Resolution No. 2015/2103(INL) "Civil Law on Robotics", which was based on the 2014 report "Regulating Robotics: A Challenge to Europe", which in its turn has become a part of the large study "European Law Perspectives".

Russia did not stand aside either. Our country is successfully implementing the state program "Digital Economy of the Russian Federation", as well as the Strategy for the Development of the Information Society in the Russian Federation for 2017-2030.

In addition, in 2019, President V. Putin issued a decree on a national strategy for the development of artificial intelligence, which describes the need to create conditions for effective interaction between the state, organ-

izations, including scientific ones, and citizens in the field of artificial intelligence development. It will allow Russian artificial intelligence technologies to take a significant share of the global market, as well as introduce workable AI mechanisms into the economic and social spheres, where AI programs will improve existing processes and improve the quality of services provided.

In pursuance of the presidential decree, Federal Law No. 123-FZ of April 24, 2020 "On conducting an experiment to establish special regulation in order to create the necessary conditions for the development and implementation of artificial intelligence technologies in a constituent entity of the Russian Federation – the federal city of Moscow" was created. This law is aimed at studying the provisions related to the introduction of AI in the social sphere and its successful implementation for the benefit of the inhabitants of a particular subject, while the law does not specify in any way where exactly artificial intelligence will develop, generalizing everything with the term "good".

Summing up, it must be said that at present the world is experiencing an accelerated introduction of technological solutions developed on the basis of artificial intelligence in various sectors of the economy and spheres of public relations. This phenomenon is quite new to the world and has not been fully studied, and therefore the problems in the field of legislation and regulation of the work of artificial intelligence in the state still remain relevant.

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ИСКУССТВЕННЫЙ ИНТЕЛЛЕКТ В ПРАВОВОЙ СФЕРЕ

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***Аннотация.** В последнее время на современном этапе развития новых технологий большое внимание уделяется вопросам, связанным с искусственным интеллектом. Данная статья посвящена искусственному интеллекту и роботизации: представлена история развития искусственного интеллекта, делается вывод о том, что в настоящее время во всем мире не существует единого законодательства в области искусственного интеллекта и использования роботов. В статье подчеркивается, что феномен искусственного интеллекта еще не изучен до конца, следовательно, проблема разработки законодательства в данной области остается актуальной во всем мире.*

***Ключевые слова:** искусственный интеллект; история; разработка; правовое регулирование; проекты развития.*