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Legal aspects of the regulation of social relations with the participation of Artificial Intelligence

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ABSTRACT

The objective of the work is to study the legal aspects of the regulation of social relations with the participation of artificial intelligence, as well as to analyze the features of such regulation taking into account international experience and recommendations of competent institutions. Although traditional legal doctrine emphasizes that legal norms regulate relations between people, the social relations with the participation of artificial intelligence develop rapidly. Thus, it is essential to analyze the legal aspects of the regulation of social relations with the participation of artificial intelligence, highlight the features and pay attention to the further development of such relations. The methodology of the research includes: method of comparison, historical method, system method, method of analysis and synthesis. As a result of the research the legal aspects of regulation of social relations with the participation of artificial intelligence are studied. In particular, the regulation of artificial intelligence depends on the positioning of such a phenomenon in social relations (only as an object; as a separate entity; positioning of both individual entities and the possible object of such legal relations). It was also emphasized that the study of the legal personality of artificial intelligence requires further scientific substantiation using international standards.

KEY WORDS: Artificial intelligence, legal status, liability, Human Rights, intellectual property.

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Aspectos legales de la regulación de las relaciones sociales con la participación de la Inteligencia Artificial

RESUMEN

El objetivo del trabajo es estudiar los aspectos jurídicos de la regulación de las relaciones sociales con la participación de la inteligencia artificial, así como analizar las características de dicha regulación teniendo en cuenta la experiencia internacional y las recomendaciones de las instituciones competentes. Aunque la doctrina jurídica tradicional enfatiza que las normas jurídicas regulan las relaciones entre las personas, las relaciones sociales con la participación de la inteligencia artificial se desarrollan rápidamente. Por lo tanto, es esencial analizar los aspectos legales de la regulación de las relaciones sociales con la participación de la inteligencia artificial, resaltar las características y prestar atención al desarrollo ulterior de tales relaciones. La metodología de la investigación incluye: método de comparación, método histórico, método de sistema, método de análisis y síntesis. Como resultado de la investigación se estudian los aspectos legales de regulación de las relaciones sociales con la participación de la inteligencia artificial. En particular, la regulación de la inteligencia artificial depende del posicionamiento de tal fenómeno en las relaciones sociales (solo como objeto; como entidad separada; posicionamiento tanto de las entidades individuales como del posible objeto de tales relaciones jurídicas). También se enfatizó que el estudio de la personalidad jurídica de la inteligencia artificial requiere mayor fundamentación científica utilizando estándares internacionales.

PALABRAS CLAVE: Inteligencia artificial, estatus legal, responsabilidad, Derechos Humanos, propiedad intelectual.

Introduction

The rapid development of technology leads to the emergence of new methods of production, globalization of markets, and digitalization of all spheres of life. More and more industries are turning to artificial intelligence technologies. Given these changes, an important issue today is the place of artificial intelligence in the system of public relations, as well as the legal regulation of such relations.

Artificial intelligence helps to increase the speed of work, automate processes, reduce labor costs, minimize risks, and, in general, improve the activities of both business and people or the state. Innovative solutions promote service, help optimize the quality of the "product" and accelerate the pace of production.

Of course, there are areas where artificial intelligence is utilized more and where it is

not yet used, but undoubtedly, this phenomenon covers more and more areas of our lives. For example, in the public sphere, artificial intelligence algorithms are used in public services and GOVTech activities. In the business sphere, flexibility, quality management, and high speed of implementation can build machine learning, IoT, AR/VR, and robotics. In the field of public-private partnership, thanks to the artificial intelligence, it is possible to implement smart cities, transport, and explore new types of energy.

In other words, digitalization is becoming an integral part of modern social relations, in which new "actors" appear in the form of artificial intelligence, which also require humanity to give them rights, responsibilities and other features. Therefore, the task of legal professionals is to more effectively form the foundations of artificial intelligence rights, anticipating and localizing the risks of uncontrolled globalization of artificial intelligence. Moreover, there are more and more specific questions for certain branches of law, for example: who is the owner of works created by artificial intelligence, who is responsible for "digital" cartels created automatically by artificial intelligence algorithms without human intervention, and other issues regarding the division of responsibilities. To provide answers to these and other questions, there must be an appropriate regulatory framework that will regulate relations with the use of artificial intelligence. It is important to determine the terminology, concepts, principles of analysis and synthesis, based on systemic and synergistic approaches, innovative, informational, convergent technologies, taking into account the design of future and viable, safe, and sustainable development. At the same time, in today's world, the scientific direction of artificial intelligence must be based on fundamental and interdisciplinary scientific developments and methodologies, taking into account many new challenges. Attention should also be paid to the following issues: the status of artificial intelligence, compensation for damage caused by artificial intelligence, protection of personal data, intellectual property and artificial intelligence, discrimination in connection with the use of artificial intelligence.

Regarding the legal aspects of regulating relations with the participation of artificial intelligence, it is necessary to mention that they are as follows: on civil law (definition of legal personality, in particular, in which situations it can act as an intermediary of a natural or legal person; legal responsibility); criminal legislation (definition of criminal liability for the actions of artificial intelligence); fears legislation; anti-discrimination legislation (problems

of equality of persons and persons using artificial intelligence; issues with criteria and data provided by artificial intelligence); protection of personal data (the possibility of providing differentiated consent to the processing of personal data, as well as improving the mechanism of informed consent to the processing of personal data); legislation in the field of intellectual property; medical law (use of artificial intelligence in the medical field, aspects of the activities of a doctor who uses artificial intelligence).

The analysis of the mentioned legal aspects will allow us to understand the place of artificial intelligence in national and international legislation.

1. Theoretical Framework or Literature Review

Some scientific articles and monographs were analyzed for a comprehensive study of the regulation of relations with the participation of artificial intelligence.

The following scientists have devoted their work to study the legal status of artificial intelligence: Baranov (2019), Bezhevets (2019), Velikanova (2020), Zalevsky (2020), Efremova (2020), Karmaza, and Grabovska (2021), Katkova (2020), Kostenko (2021), Kryvytskyi (2021), Martsenko (2019), Onishchuk (2020), Radutny (2017), Ramazanov, Shevchenko, and Kuptsova (2020), Glenn Cohen (2020).

Legal aspects of national strategies for the development of artificial intelligence have been the subject of Baranov's (2019) research. The author emphasizes that work with artificial intelligence in the future will have a great impact on society and people's daily lives, inevitably becoming a necessary attribute of social relations or as their object or subject, which will lead to legal problems, part of which to date is almost unidentifiable. The researcher puts forward and substantiates the statement about the equivalence of criteria, characteristics, and indicators of cognitive functions of an individual and the corresponding cognitive functions of work with artificial intelligence, and the provision on the possibility of recognizing work with artificial intelligence as the legal equivalent of an individual. It is also substantiated that in contrast to the presumption of legal personality of an individual recognized in the traditional system of law, the legal capacity and capacity to work with artificial intelligence as the legal equivalent of an individual must be proven by conducting special studies. In addition, the author proved the validity of the hypothesis of the possibility of applying legal norms to regulate social relations between the traditional subject (individual) and the robot with artificial intelligence as the legal equivalent of an individual.

The matter of the legal status of robots was revealed by Bezhevets (2019) in his work. Velikanova (2020) revealed problematic issues and risks in the regulation of artificial intelligence. The author noted that gaps in the legal regulation of the use of digital technologies, ensuring the protection of the rights and legitimate interests of individuals and legal entities from violations of digital technology and prosecution for damage caused by digital technology, makes it impossible to compensate for damage. Accordingly, the solution of these problems lies in the modernization of current legislation in the following areas to determine the status of electronic persons and outline their legal personality, the moment of its emergence and termination, addressing the identification of robots and artificial intelligence; addressing the issue of liability for damage caused by artificial intelligence, based on how autonomous such artificial intelligence was; application of the rules of compensation for damage caused by a source of increased danger to the relationship with the use of digital technologies, based on whether the damage was caused by the action or inaction of artificial intelligence.

The legal personality of artificial intelligence in the field of intellectual property law has become the subject of research by Zalevsky (2020). The author believes that the robot is not the subject, but the object of law and the owner or the person who controls the robot bears full responsibility for its actions, however, the situation may change in future. In particular, the robot must have identifiers in order to be able to distinguish it from others. Efremova (2020) also considered the issue of legal regulation of artificial intelligence in the digital economy in her work.

In their work, Karmaza and Grabovska (2021) examined in detail the status of the electronic person as a subject of legal relations in the civil process. The authors propose to use the concept of "civil process" as a generalizing category that combines independent private legal processes (notarial, civil, executive), which are related to a common goal - to ensure protection, protection and restoration of citizens' rights. The authors prove that the concept of "artificial intelligence" covers different scientific fields, different research methodologies, tools and more. According to the authors, the term "electronic person (personality)" is conditional and applies to robots with highly developed intelligence, which have a physical incarnation, and, therefore, the robot with artificial intelligence in Ukraine is not a subject of procedural legal relations or other legal relations, but the "electronic person"

may acquire such legal status provided that the general principles of the use of artificial intelligence are respected, the principles of respect for fundamental human rights and freedoms, non-discrimination, quality and security, transparency, impartiality, justice, human control, etc.), and the boundaries, procedure and methods of its activities will be determined by law. Simultaneously, the rules of law in terms of the use of artificial intelligence must comply with the principle of legal certainty and the principle of the rule of law. Also, researchers consider it appropriate to expand the range of subjects of procedural legal relations and give the right to administer justice in civil cases of minor complexity (by mutual agreement of the parties) to an electronic judge, and in the notarial process – to perform notarial proceedings to an electronic person – for example regarding the certification of copies (photocopies) of documents and extracts from them, etc.). Also, the legal personality of the electronic person and theoretical and methodological approaches to the status of such a person was studied by Yastrebov (2018).

Legal aspects of the use of artificial intelligence in Ukraine were considered by Katkova (2020) in her study. The directions of development of law in the field of Internet of Things and artificial intelligence were analyzed by researcher Kostenko (2021). The legal regime of artificial intelligence in civil law has become the subject of Martsenko's research (2019).

The issues of reforming the legislation on the regulation of the status of artificial intelligence became the subject of Kryvytsky's (2021) research. According to the researcher, the use of artificial intelligence technologies in the legal field and legal practice is an important factor in the development of the legal system, ensuring human and civil rights and freedoms, because the potential of artificial intelligence technologies can help solve complex, priority legal tasks. The use of artificial intelligence during legal reform allows to significantly expand the horizons of legislative activity, improve the legislative process, and diversify legislative techniques.

Onishchuk (2020) drew attention to the peculiarities of the legal regulation of artificial intelligence technologies. The author emphasizes that at this stage the legal regulation in the field of technology and units of artificial intelligence is at the stage of formation and initial development. Therefore, new forms of regulation need to be encouraged now to promote transparency and adherence to ethical principles, legal paradigms and

educational practices, especially on new technologies that can potentially violate human rights.

The question of the possibility of recognizing artificial intelligence (electronic person) as a subject of criminal law and the subject of crime, potential information and other threats from artificial intelligence, the possibility of maintaining control over the latter is considered in Radutny's (2017) study.

Ramazanov, Shevchenko, and Kuptsova (2020) paid more attention to artificial intelligence and problems of intellectualization. Philosophical and legal problems of using artificial intelligence have become the subject of research of Sydorchuk (2017). Scholars Stefanchuk, Musuca-Stefanchuk, and Stefanchuk (2021) researched the prospects of legal regulation of relations in the field of artificial intelligence.

The peculiarities of the use of artificial intelligence in medicine and the problematic issues of such regulation were considered by Glenn Cohen (2020).

However, despite the significant amount of research on artificial intelligence, the legal aspects of the regulation of relations with the participation of artificial intelligence are insufficiently studied, and therefore there is a need to analyze this issue in more detail.

2. Methodology

In the study of the legal aspects of the regulation of relations with the participation of artificial intelligence, a number of methods were used: the method of comparison, historical method, system method, method of analysis and synthesis.

The historical method has become a way to reveal a retrospective of the development of artificial intelligence technologies in Ukraine and in the world. Given that the historical method is a research process used to gather evidence of past events and further develop ideas or theories about history, and includes methodological techniques for analyzing relevant data on a historical topic, which allows you to synthesize information to make consistent report on the events that took place in the episode under study, the use of this method in the study of the regulation of artificial intelligence, on the example of historical facts of endowment of "things" with rights and responsibilities, established certain cyclical links. Also, the historical method is used to study the historical periods when the main acts regulating relations in the field of digitalization and the granting (non-granting) of artificial intelligence legal status were established.

Using the method of comparison, it became possible to compare foreign experience in regulating relations with artificial intelligence and identify key points, positive aspects, and terminology that should be used in building a domestic system of legal regulation of research and protection of rights. Identifying the similarity of legal positions and levers of regulation makes it possible to identify patterns and trends in digital technology and artificial intelligence. The comparative method helped to specify a number of general and special methods in the study of their own subject, as it is due to its properties and patterns, and the basis for comparison is to compare anything to establish similar or different features, identify similarities or differences in the study of crime. At the same time, when using the comparative method, such techniques as collecting and studying facts, analysis, abstraction, comparison, evaluation and generalization were used. That is, the use of the comparative method was carried out comprehensively.

The method of analysis was useful for studying the legal status of artificial intelligence, gradually dividing the study of the theoretical part of the object and practical, which consists in the analysis of international and Ukrainian experience in the use of regulation of artificial intelligence. Analytical assessment of the processes of implementation of legislative regulation makes it possible to identify patterns, according to which it becomes possible to identify certain features of the legal status of artificial intelligence as an object of public relations.

Analysis and synthesis act as fruitful methods of cognition only when applied simultaneously. The method of synthesis allowed to gather the studied theoretical and practical aspects into a single whole in order to find the most effective mechanisms for regulating artificial intelligence.

Using the systematic method, the object of study is considered as a set of interconnected elements that have a common goal. It is important that the properties of the object as a whole system are determined not only and not so much by summing up the qualities of its individual elements, but by the properties of its structure, special system-forming, integrative connections of the object.

3. Results and Discussion

Before considering the features of the regulation of relations with the participation of artificial intelligence, we should consider the definition of the concept under study.

The Organization for Economic Co-operation and Development states in its principles that artificial intelligence is a machine system that can make predictions, recommendations or decisions, influencing the real or virtual environment on the basis of a set of human goals. Moreover, such systems can be designed to work with different levels of autonomy (Council on Artificial Intelligence, 2019).

In Ukraine, the concept of "artificial intelligence" is defined at the legislative level in the Concept of Artificial Intelligence Development in Ukraine (Order No. 1556-r, 2020). Thus, this document provides that artificial intelligence is an organized set of information technologies, using which it is possible to perform complex tasks by using a system of scientific research methods and algorithms for processing information obtained or independently created during work, as well as create and use their own knowledge bases, models of decision-making, algorithms for working with information and identify ways to achieve goals; this document does not contain legal recommendations for the development of the use of artificial intelligence, but only stipulates that developers must respect the right to privacy and human rights.

An important step in legislating standards for the development and use of artificial intelligence is the adoption of the EU Resolution of 16 February 2017 with the Commission's recommendations on the rules of civil law regulation of robotics (2015/2103 (INL) (European Parliament, 2017). The main part of the resolution consists of 64 items in the areas of: research and innovation, ethical principles, European Agency, intellectual property rights and data flow, standardization, security and safety, autonomous transport means, care work, medical work, restoration and improvement of the human body, education and work, environmental impact, international aspects, although this document is of a recommendatory nature, its importance should not be underestimated.

That is, at the legislative level, both nationally and internationally, the definition of artificial intelligence is formulated. Therefore, we will consider in more detail the legal aspects of the regulation of relations with the participation of artificial intelligence.

Analysis of the provisions of current legislation of Ukraine allows us to conclude about the legal regulation, which is based on the first hypothesis: a robot with artificial intelligence - the object of public relations – the property of a natural or legal person; is not and cannot be a separate independent subject of public relations. In case the special status of

artificial intelligence as an independent subject of legal relations is further enshrined in the national legislation of Ukraine, the issue of liability for artificial intelligence errors will be adjusted, as the introduction of "electronic person" status as a separate type of insurance, introduction of additional criteria. as well as the search for answers to all other possible challenges that will arise in the process of further use of artificial intelligence in various spheres of human activity, will lead to appropriate action.

Thus, if we consider the legal personality of an electronic person as an individual subject similar to a person, giving it such a legal status is an important step towards obtaining a full set of constitutional rights, which may result in a number of other problems.

The argument against giving artificial intelligence the legal status of an electronic person is its limited vulnerability to punishment. Although modern corporations are also endowed with legal personality, they cannot, for example, be deprived of their liberty, for example, they can be imprisoned.

Thus, Radutny (2017) believes that in the near future criminal law doctrine may undergo changes in the direction of recognizing artificial intelligence and digital man as subjects of legal relations and subjects of crime. More of that artificial intelligence is likely to be recognized at the legislative level as a subject of legal relations, including criminal law.

We should take into account that EU Resolution 2015/2103 (INL) defines artificial intelligence as an object (European Parliament, 2017). The current legislation of Ukraine allows to enter into the legal framework the relations arising in connection with the use of artificial intelligence, in particular in the case of determining the responsibility of the owner for the actions of artificial intelligence, and in the case of such actions as a result of shortcomings of the manufacturer and programmer – through the use of recourse requirements. However, the legislation is not sharpened for such situations, which can lead to difficulties in law enforcement practice.

In the future, in order to give legal intelligence to artificial intelligence, lawmakers must answer the main question: do developers and users of artificial intelligence want to abdicate responsibility for the actions of artificial intelligence, or do developers and users want to control the functioning of artificial intelligence?

Compensation for damage caused by artificial intelligence. EU Resolution 2015/2103 (INL) focuses on civil liability for the negative consequences of the use of robotics and

artificial intelligence (European Parliament, 2017). It should be emphasized that the document states that "according to the current legal framework, robots cannot be prosecuted per se for actions that have caused harm to third parties", "at this stage the responsibility should put on the human".

Given the provisions of the EU Resolution, it can be seen that a new concept of risk management is needed at the national level, given the growing losses caused by the use of artificial intelligence. One should not avoid the fact that one of the problems of artificial intelligence responsibility is the problem of bias of algorithms and discrimination and confidentiality.

In his scientific work, Baranov (2019), in particular, notes the following: we consider it appropriate to listen to the opinion expressed in the European Parliament: in a new era in human development, when increasingly complex works, bots, androids and other manifestations of artificial intelligence, will be the catalysts for a new industrial revolution, which is unlikely to leave any stratum of society untouched, and it is vital for the legislature to take into account the legal and ethical implications. In the last decade, this or that interpretation has been discussed at numerous world and national forums, congresses and conferences dedicated to the Internet of Things, robots or artificial intelligence. However, an unambiguous answer about the methods and means of implementation of the recommendations expressed in the European Parliament has not yet been formulated.

Based on the content of discussions on the prospects of legal regulation in the use of artificial intelligence, we can state the existence of three main hypotheses, which actually determine the main content of scientific approaches to improving or reforming legal systems due to the use of artificial intelligence:

● the object of public relations, and therefore may be the object of legal relations;

● the subject of public relations, and therefore may be the subject of legal relations;

● can be both an object and a subject of social relations, and, therefore, can be both an object and a subject of legal relations.

Conclusions

1. It is inevitable for human life to participate in a "relationship" with artificial intelligence.

2. Prospects for reforming the legal regulation on the use of artificial intelligence and its responsibility for an action can be grouped around three main provisions:

- positioning artificial intelligence only as objects of public relations (possible assistance in public relations, where the subjects are individuals and legal entities);

- positioning as separate subjects of legal relations (independent subjects of public relations with the ability to relatively independently and sufficiently realize and assess the importance of their actions and the actions of others);

- positioning of robots with artificial intelligence as separate subjects of legal relations, and possible objects of public relations.

3. Recognition of artificial intelligence (electronic person, personality) as a subject of crime is currently premature and will be appropriate and justified only if the entire criminal law system is reworked without imitating scientific or political fashion.

Concerning further research, it is worth paying attention to the specifics of the responsibility of artificial intelligence and investigating this issue in more detail.

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