Artificial Intelligence: Legal Status Determination

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Abstract

[Purpose] To study the feasibility of establishing the status of artificial intelligence and outlining its characteristics, as well as to identify problems associated with the introduction of the subject of legal relations "electronic person".

[Methodology] The main method, used in this article, was analysis of the approaches to understanding the essence of artificial intelligence and concepts of legal personality of the electronic person.

[Findings] Based on the analysis of the approaches to understanding the essence of artificial intelligence and concepts of legal personality of the electronic person, the conclusion is that the legal personality of the electronic person depends on the presence of features that characterize it as a subject of law: autonomy (separation) and personalization.

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[Practical Implications] The practical significance lies in the formation of proposals for improving approaches to establishing the essence of artificial intelligence and determining the legal status of the electronic person.

Keywords: Electronic Person. Legal Status. Civil Law. IT Technologies.

INTRODUCTION

Artificial intelligence (AI) technologies have been developing extremely rapidly in recent years. Today, it is quite difficult to imagine life without block chain technologies, the Internet of Things (IoT), conversational and interactive artificial intelligence systems, and so on. As stated in the Recommendation of the Council on Artificial Intelligence (2019) and the G20 Ministerial Statement on Trade and Digital Economy (2019), AI technologies can help countries respond to the COVID-19 crisis, the health crisis, track the economic crisis and recovery, empower individuals and businesses by creating new opportunities, services and employment. AI-based technologies could seek to improve lives in almost every sector, from the personal sector, such as the transport sector, to the work environment, as well as global challenges such as climate change, health, nutrition and logistics.

In general, the ability of such technologies to analyze large amounts of data quickly, access to a vast array of information, economic productivity, the ability to analyze certain conditions and make some autonomous decisions brings AI to a higher level of development. Maybe in the nearest future AI will be able to acquire the qualities of a smart person because recent fiction is becoming a reality: no one is surprised by self-driving cars, virtual personal assistants such as Alexa or Siri, surgery with robots, smart home technologies, Smart City, "Augmented reality". Therefore, it is not surprising that AI technologies are increasingly being the subject of research not only by specialists and scientists in the field of IT technologies, but also by other scientists, including researchers of private law relations.

Despite the increased scientific interest in AI technologies, it should be noted that so far no common understanding of the concept of "artificial intelligence" has been developed. The following definitions are found in researches:

– it is the ability of machines to learn from human experience and perform human-like tasks (STEFANCHUK, 2020);

– it is an imitation of such human behavior, such as learning, planning, reasoning, problem solving, perception of the environment, natural language processing, etc. (TYAGI, 2017);

– it is a machine system that can make predictions, recommendations or decisions that affect the real or virtual environment and are designed to work

with different levels of autonomy, etc. (RECOMMENDATION OF THE COUNCIL…, 2019).

The problem of understanding the definition of "artificial intelligence" is that this term is used in different senses. In general, the understanding of AI can be reduced to three meanings: "weak artificial intelligence" – AI, focused on solving one or more tasks that perform or can perform a person; "strong artificial intelligence" – AI, focused on solving all tasks that perform or can perform a person; "artificial superintelligence" – AI, which is much smarter than the best human intelligence in almost every field, including scientific creativity, general wisdom and social skills, which can have consciousness and subjective experiences (BARANOV, 2019). The legal status of objects with artificial intelligence depends on the functionality, features of implementation, measures of autonomy and expected subjectivity of artificial intelligence (PONKIN and REDKINA, 2018).

The rapid development of AI technologies, including due to the coronavirus pandemic (COVID 19), the involvement of an increasing number of actors in the use of AI, increasing the share of such relations, including in the private sector, requires an appropriate response from both the state and the scientific community. Accordingly, one of the problems that needs to be solved is the development of approaches to determining the place of AI in the structure of civil law. This article will contribute to the discussion on the feasibility of establishing the status of artificial intelligence and outlining its characteristics, as well as to identify problems associated with the introduction "electronic person" into the subject of legal relations.

THE ESSENCE OF ARTIFICIAL INTELLIGENCE AND APPROACHES OF ITS UNDERSTANDING

The problem of determining the place of AI in the structure of civil (and not only) legal relations is closely related to the lack of a unified approach of understanding this concept. As it is noted, there are different, even polar, understandings of AI. For example, a Stanford University research group report defines artificial intelligence as the science and set of computing technologies that inspire but tend to work quite differently than the ways people use their nervous system and body for feelings, learning, reasoning, and actions. AI is a science and a set of computational technologies that are inspired by – but typically operate quite differently from – the ways people use their nervous systems and bodies to sense, learn, reason, and take action (ARTIFICIAL INTELLIGENCE AND LIFE…, 2016).

In the European Parliament resolution of 20 January 2021 on artificial intelligence: questions of interpretation and application of international law in so far as the EU is affected in the areas of civil and military uses and of state authority outside the scope of criminal justice (2020/2013(INI)) (2021), the artificial intelligence system is defined as a system that is based on software or

embedded in hardware devices. That reflects behavior that mimics intelligence, collecting and processing data, analyzing and interpreting its environment, and taking certain measures of autonomy to achieve specific goals. At the same time, an autonomous is an artificial intelligence system that works by interpreting a certain input and using a set of predefined instructions, not limited to these instructions, despite the fact that the behavior of the system is limited and aimed at achieving the goal it received, and other relevant options design made by its developer ("autonomous" means an AI system that operates by interpreting certain input, and by using a set of predetermined instructions, without being limited to such instructions, despite the system's behaviour being constrained by and targeted at fulfilling the goal it was given and other relevant design choices made by its developer).

Thus, science was faced with the question of how to study AI: by analogy with natural intelligence (human intelligence) or consider it as something else. Moreover, if the basis of comparison is natural intelligence, then whether artificial intelligence should be based on the imitation of cognitive functions of the human brain or the absolute copying of thought processes. According to M.U. Scherer (2016), the difficulty in defining artificial intelligence does not lie in the concept of artificiality, but in the conceptual ambiguity of intelligence, because the definition of intelligence is usually related to human characteristics. Definitions of intelligence vary widely and focus on many interrelated human characteristics that are most difficult to identify, including consciousness, self-awareness, language use, learning ability, abstraction ability, adapt ability, and reasoning ability. The difficulty in defining artificial intelligence lies not in the concept of artificiality but rather in the conceptual ambiguity of intelligence. that definitions of intelligence tend to be tied to human characteristics. Definitions of intelligence thus vary widely and focus on myriad interconnected human characteristics that are themselves difficult to define, including consciousness, self-awareness, language use, the ability to learn, the ability to abstract, the ability to adapt, and the ability to reason (SCHERER, 2016).

One of the most well-known and widespread approaches to the implementation of the idea of AI is to copy the work of the human brain (BARANOV, 2019). However, with the current level of understanding of the mechanisms of the human brain, this may somewhat limit the search for possible options for technological, algorithmic and software construction of AI. The most rational approach will be to describe in detail the functions of the human brain (cognitive functions), functions of a fairly high level of abstraction, which could be described in algorithmic language. After such a description, there are ample opportunities for the implementation of the obtained algorithm of a specific brain function using a variety of software and hardware methods, techniques and tools that are known today or will be developed in the future. This idea is supported by foreign researchers. Thus, X. Chen et al. in their article on the study of modern trends in the use of artificial intelligence in the study of the human brain, note: "…When mathematician Alan Turing raised the question,

"Can machines think?" the only recognized system for performing complex calculations was the biological nervous system (CHEN et al., 2020).

Now there are two main approaches to AI development: semiotic and biological. The semiotic approach is focused on the creation of expert systems, knowledge bases and logical inference systems that mimic high-level mental processes such as thinking, judgment, language, creativity and more. The biological approach involves the study of neural networks and evolutionary computations that model intellectual behavior based on biological elements, as well as the creation of appropriate computing systems, such as a neurocomputer or biocomputer (YASTREBOV, 2018).

A. Goel and J. Davis (2011) also point to two types of AI: engineering of artificial intelligence and cognitive artificial intelligence. In the first case, the authors are talking about the design of a variety of intellectual artifacts, regardless of whether the implemented processes reflect the processes of natural intelligence. In the second – about the creation of artifacts that think like people, and sometimes even like animals (GOEL and DAVIES, 2011). It should be noted that both of these areas of understanding the essence of artificial intelligence have both supporters and opponents. Arguments in favor of a particular position are different. Thus, H. Surden (2019) emphasizes that the basis of AI work is man-made data templates and rules for their processing, and therefore essentially such systems do not have intelligence, as they are aimed at solving only a certain specific set of tasks in given conditions (EVERITT, 2018). Instead, according to other scientists, what matters is not copying the process of human thinking, but the ability to think and act rationally (ANDROSHCHUK, 2019).

O.A. Yastrebov (2018) notes that AI in a broad sense can be likened to human intelligence in terms of both its biological structure and full capacity for creativity, subjectivity of perception, the possibility of deviation or error, which is considered natural. Because such intelligence is often encountered with completely unfamiliar tasks, in the process of solving which there is a high probability of error or deviation. The author wonders whether the absolute formalization of AI will correlate with the intelligence of a person whose thinking is not always logical, can be paradoxical and emotional. According to his thought, the difficulty of defining individuality in AI is related to the problem of "philosophical zombie" as a system that will be quite realistic to mimic human communication without having at the same time self-awareness and self-identification. The self-awareness of electronic individuals can manifest itself simultaneously with the granting of their minimum personal rights, such as the right to be free, the right to self-interest in life, the right to development and self-improvement (YASTREBOV, 2018). The authors will support this approach and later in this study, the authors will proceed from the thesis that artificial intelligence is a basic characteristic of the electronic person.

The European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics

(2015/2103(INL)) (2017) in paragraph 59, called on the Commission to examine and analyze the creation of a specific legal status for robots in the long run during the assessing the impact of its future legislative instrument. So that at least the most complex autonomous robots can be established as having the status of electronic persons responsible for compensation for the damage they may cause, and possibly the use of electronic identity in cases where the works make independent decisions or otherwise interact with third parties independently.

Thus, it can be stated that currently in science the question of the place of artificial intelligence in the structure of legal relations remains debatable. Accordingly, the existence of such a subject of legal relations as an electronic person, the endowment of this subject with rights and responsibilities also causes a sharp dispute, which affects the ethical, moral, philosophical, technical, legal aspects. It is clear that the resolution of all controversial issues takes time and is determined by the development of both the technologies themselves and public relations in which such technologies are used. Therefore, this publication probably will not solve the problems associated with the use of artificial intelligence unambiguously. However, within the scientific discussion it seems appropriate to outline the directions of solving these problems and to analyze the possibility of granting legal status to the electronic person.

APPROACHES TO DETERMINING THE LEGAL STATUS OF THE ELECTRONIC PERSON

The problem of granting legal status to an electronic person (artificial intelligence) has been discussed for several decades. In particular, M.S. Willick (1983) in his article "Artificial Intelligence: Some Legal Approaches and Implications" in 1983 wrote that throughout the history of the United States somehow raised the question of "personality" for a certain group of people: slaves, women, legal entities. According to the scientist, the appearance of intelligent machines is likely to be quite fast and diverse in their forms. The authors need to develop some method of recognizing which machines are "smart" and which are not. Because internal difficulties in identifying members of the "intelligent machines" group complicate the problem and slow down any potential movement toward emancipation. As the author noted, the study of the need to consolidate the legal status of artificial intelligence should focus on both man and artificial intelligence. The more AI will behave as a person, the more reasonable it will be to treat him as a person.

AI analysis by analogy with humans dominates in many studies. Moreover, the few cases where AI is granted a certain legal status are criticized. Thus, A. Atabekov and O. Yastrebov (2018), in particular considering the case of granting citizenship of Saudi Arabia to the robot Sofia, note "When the robot is equated to a person, there will be a problem both in Sharia courts and in

courts of general jurisdiction, since the model of conduct is not specified by law". The authors explain their conclusion by the fact that the robot Sophia did not apply for citizenship; does not meet the criteria of capacity (age qualification), settlement; does not speak the national language to the extent prescribed by law; does not meet the requirements for clothing, ethics of conduct (male escort). Accordingly, this robot had to be brought to administrative and criminal responsibility in accordance with the current legislation of Saudi Arabia. Therefore, it is logical that such a comparison is not in favor of AI in this aspect. It is difficult to talk about the legal personality of AI. This is due to the fact, that man (individual) is a living organism with its own will, beliefs, soul. Thus, the comparison (equating) of AI with a person reveals the lack of sensitivity and life in AI in the biological sense. Accordingly, it allows the scientists to conclude that the presence of intelligence in robots and the possible development of emotional intelligence (the ability of artificial intelligence and robots to process and control their own feelings and emotions) does not give a holistic perception of them as subjects of law (MARTSENKO, 2019).

In general, when it comes to legal status and legal personality, it is advisable to pay attention to such reservations. Legal personality is perceived in science ambiguously, although scientific interest in this category has existed for a long time. For example, in the last century M.A. Gredeskul (1909), studying the subjects of law, noted that the subjects are the creators of their rights and responsibilities, although the law may be created by certain artificial entities called legal entities. S.S. Alekseyev (1982) defines legal personality as a legal quality of a person recognized by the rule of law, as an abstract opportunity to be a subject of law. The further development of this idea has allowed some scientists to conclude that only the state determines who and under what conditions can be a subject of law and what qualities this person should have. That is, only the law establishes and determines the special legal quality or property that allows this person to become a subject of law (MARCHENKO, 2008). The use of a formal-legal approach, according to which the subject of law is one who is recognized as such by the objective right, makes it possible to recognize anyone as a subject of law (ARTIKULENKO, 2018). The idea expressed by V.V. Nadyon (2017) is correct that the category of "ability" reflects the specifics of the content of legal personality the most clearly, because it expressions in it both as features of social properties of legal entities (their willpower) and the degree of guaranteed (enshrined) opportunities by the law are found. That is, the key characteristics of a subject of law are its social properties and the possibility enshrined in law and order to be a bearer of subjective rights and legal obligations. Characterizing such two features of the subject of law, S.S. Alekseyev (2009) noted that firstly, a person must have external separation, personification, the ability to produce, express and carry out a personified will. Secondly, it is a person who is really able to participate in legal relations, has acquired the properties of a subject of law through legal norms. M. Khaustova

(2009) adds in this regard: "For the law, the freedom of the individual and other subjects of social life in legal form is a determining opportunity for their functioning in terms of social integrity and a stable legal sphere".

Therefore, in order to talk about the legal personality of an electronic person (AI) and to consider it as a subject of law, it is necessary that the AI has the features described above. At the same time, it is expedient to proceed from the thesis that the primary subject of law is still a human person, and all other subjects are human-derived entities. In this regard, the opinion expressed by I.V Ponkin. and A.I. Redkina (2018) that the legal status of AI depends on the extent and nature of the autonomy of artificial intelligence from humans is correct. Significant elements of such autonomy are:

– subjectivity (including – autonomy as an intellectual agent, independence and self-referentiality in self-study and in producing and making decisions);

– cognitive and adaptive autonomy;

– spatial-kinetic autonomy;

– autonomy of program-energy management (including – independence in self-inclusion-shutdown-restart and possibility to interfere with external shutdown);

– energy autonomy.

I would like to add that AI must also have the ability to carry out a personalized will – to implement decisions. At the same time, according to L.B. Solum (1992), the concepts of "intelligence" and "will" are key in the discussion of the status of "smart" machines. "Intelligence" is associated with the competence of robots to perform complex tasks, while intentionality and consciousness are equated to "will". The presence of such properties in an electronic person will allow us to talk about the need for the state to consolidate the possibility of an electronic person to be a subject of law and a participant in legal relations. Thus, O.A. Yastrebov (2018) writes that the development of criteria and technologies to assess the levels of consciousness and self-awareness of AI, including on the basis of computer emulations of the human brain, necessitates the question of their right. They are: not to be disconnected against their will, the right to unlimited and full access to one's own digital code, the right to protect one's digital code from external influences, the right to copy (or not copy) oneself.

In general, the problem of personalization (subjectivization) of new subjects of legal relations is not completely new. As it was noted, it arose every time a certain legal status was given to slaves, women, legal entities. In ancient Rome, for example, a variety of legal techniques were used to resolve conflicts between the understanding of slaves as objects of law while effectively recognizing their ability to create certain rights and responsibilities for their masters. At the same time, there was a gradual change in the private law position of slaves (without changes in their public law status): although they were still no longer considered subjects of law, but gradually for practical reasons they were actually involved into civil circulation as its subjects. This allows scientists to

conclude that with the use of such an algorithm a gradual involvement of artificial intelligence to participate in civil circulation can be both in information and in post-information societies (KHARYTONOV and KHARYTONOVA, 2019).

Another question is how much legal personality an electronic person should be given. The opinion is expressed that the concept of an alternative capacity to act must be defined and the limits of legal responsibility must be clearly drawn. In the case of granting legal personality to the robots, it is proposed to limit the right to sign a contract and to file a lawsuit (DOĞAN ŞAHINER and KURT, 2020). According to B. Dovganand T. Mikhailina (2021), if the legal personality of a post human can be determined by analogy as an individual, given the presence of cognitive functions equivalent to human. Then this approach cannot be applied to robots as possible subjects of law, because there is a question of the extent of their liability in the event of an offense. In their opinion, the most well-argued is the idea of granting the robot status of a legal entity by analogy with the status, which creates the possibility of endowing his own property, official registration of a new entity and liability of the owner (provided that the damage caused by the robot is caused by error in software) (DOVGAN and MIKHAILINA, 2021). Nevertheless, if in the future AI will be able to self-improve actively, learn, analyze the received information, it will act based on their own "considerations", and therefore he must be responsible independently (KOLODIN and BAITALYUK, 2019).

It seems that the idea of consolidating the basic legal personality of an electronic person makes sense. It is clear that the total digitalization and development of technology will eventually reach the point where the electronic person will become a real participant in the relationship. In this case, it is advisable to consolidate the legal personality of the electronic person at least in the amount of rights and responsibilities that will ensure its existence, development and liability for damage. It is possible that such consolidation of the legal personality of electronic persons will not be a one-time act, but a gradual change in their legal status, for example, through their gradual involvement into civil (and not only) legal relations.

At the same time, it should be noted that today technologies with the use of AI have not yet reached the level when it is possible to talk about their autonomy, which allows them to have the ability to carry out a personalized will – to implement decisions. As of today, the only possible fundamental and universal consideration about AI-systems is that there is no philosophical, technological nor legal ground to consider them anything else but artefacts generated by human intellect, and thence products. From an ontological perspective, all advanced technologies are not subjects, but merely objects, and there are no reasons to grant them rights, nor hold them legally responsible (BERTOLINI, 2020). In fact, this position was reflected in a resolution of the European Parliament European Parliament resolution of 20 October 2020 with recommendations to the Commission on a civil liability

regime for artificial intelligence (2020/2014(INL)) (2020). Which states that any physical or virtual activities, devices or processes controlled by AI-systems may technically be a direct or indirect cause of harm or damage. Nevertheless, it is usually the result of someone creating, deploying or interfering with the operation of the systems; therefore, it is not necessary to give legal personality to AI-systems. The opacity, coherence and autonomy of AI systems can make it difficult in practice or even impossible to track specific harmful effects of AI systems on a specific human contribution or design decision. However, according to generally accepted concepts of responsibility, this obstacle can, nevertheless, be circumvented by prosecuting the various individuals in the entire value chain who create, maintain or control the risk associated with the AI system. However, a study by Policy Department C states that there are no technical grounds for excluding the possibility of granting legal personality to certain classes of AI systems in the future. This will not entail assigning to machines rights and responsibilities equivalent to the rights of an individual or even slaves (BERTOLINI, 2020).

CONCLUSIONS

The problem of rights and responsibilities, liability for damages, although currently solved with the help of existing procedures and tools, but in the nearest future, they may become suboptimal and lead to complex and expensive litigations. Therefore, the need to address the issue of consolidating the legal status of the electronic person is relevant and requires scientific justification. The use of artificial intelligence requires a developed legal field that will allow the best possible regulation of public relations arising in connection with the use of artificial intelligence technologies. Therefore, a need to develop approaches to establishing the essence of artificial intelligence and determining the legal status of the electronic person is appeared.

The legal personality of an electronic person (artificial intelligence) depends on the presence of features that characterize it as a subject of law: autonomy (separation), personification and the ability to carry out a personalized will – to implement decisions. The set of such features must be enshrined in objective law while determining the scope of legal personality at least in the scope of rights and responsibilities that will ensure the existence, development and responsibility of artificial intelligence for the damage caused. However, the change in the private law position of artificial intelligence should take place through the gradual involvement of electronic persons into civil relations. At the same time, it is also interesting for further research to study the issue of liability for damage caused by artificial intelligence and the use of insurance to minimize the risk of harm caused by artificial intelligence.

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