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Artificial intelligence as a subject of law: Development prospects

Abstract: The article notes that robots that have the ability to recognize objects, perceive and analyze information, make decisions and learn are likely to be able to become aware of their selves. All this causes new legal and ethical problems. Therefore, the question of the legal status of work with artificial intelligence is relevant in modern conditions. Within the framework of the article, the purpose is to study the issue: the need to regulate the status and use of "end" products of artificial intelligence and robotics technologies. The study subject is a set of theoretical and practical issues related to the recognition of artificial intelligence as a subject of law, the analysis of the legal consequences of such recognition and the prospects for the development of the corresponding legal regulation. The study object is artificial intelligence as a technology (nature, possibilities, limitations, like development rates) and its potential impact on society, moral and ethical aspects of social life. To achieve the purpose, the author uses a system of methods of scientific knowledge, including general scientific (analysis, synthesis), private (comparative, quantitative and qualitative analysis), like special legal (formal-legal, comparative-legal) methods. The main researchers studying the mentioned problems are M. Weiner, D. Gudyma, D. Hrytsai, L. Brodbeck, M. Rubenstein and others.

Key words: artificial intelligence, subject of law, robots, information technologies.

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Штучний інтелект як суб'єкт права: перспективи розвитку

Анотація: У статті наголошується на тому, що роботи, які матимуть здатність розпізнавати об'єкти, сприймати й аналізувати інформацію, ухвалювати рішення та навчатися, ймовірно, зможуть усвідомити власне «Я». Все це спричиняє нові юридичні й етичні проблеми. Тому питання щодо правового статусу роботу зі штучним інтелектом є актуальним в умовах сучасності. У рамках статті ставиться ціль вивчити питання: необхідності врегулювання статусу та використання «кінцевих» продуктів технологій штучного інтелекту та робототехніки. Предметом дослідження є комплекс теоретичних та практичних питань, пов'язаних з визнанням штучного інтелекту як суб'єкта права, аналіз правових наслідків такого визнання та перспективи розвитку відповідного правового регулювання. Об'єктом дослідження виступає штучний інтелект як технологія (природа, можливості, обмеження, а також темпи розвитку) та його потенційний вплив на суспільство,

моральні та етичні аспекти суспільного буття. Для досягнення поставленої мети у роботі використовується система методів наукового пізнання, зокрема загальнонаукові (аналізу, синтезу), приватні (порівняльний, кількісного й якісного аналізу), а також спеціально-юридичні (формально-юридичний, порівняльно-правовий). Основні дослідники, що досліджували зазначену проблематику: М. Вейнер, Д. Гудима, Д. Грицай, Л. Бродбек, М. Рубенштейн та інші.

Ключові слова: штучний інтелект, суб'єкт права, роботи, інформаційні технології.

Introduction

Developing robotics is closely linked to attempts to create artificial intelligence. Therefore, robots that can recognise objects, perceive and analyse information, make decisions, and learn will probably be able to understand their "I". All this leads to new legal and ethical problems. There is a question about the legal status of working with artificial intelligence. Therefore, this issue is relevant in modern conditions. The subject of the research is the legal regulation of artificial intelligence; the object is artificial intelligence as a technology and its legal regulation in modern legal systems. The study aims to provide a theoretical justification of legal mechanisms that will effectively regulate legal relations arising from the participation of artificial intelligence. The implementation of the goal determines the following tasks to conduct an analytical review of scientific literature studying the issues of artificial intelligence, analyse the international experience of legal regulation of artificial intelligence, identify general trends, determine the criteria that will distinguish artificial intelligence from other objects of legal relations and justify the possibility of granting it the status of a subject of law, develop proposals on the legal status of artificial intelligence, including the definition of its rights and obligations, like responsibility for its actions, and analyse the possible legal consequences of recognising artificial intelligence as a subject of law. To achieve this purpose, the work uses a system of methods of scientific knowledge, in particular general scientific (analysis, synthesis), private (comparative, quantitative and qualitative analysis), and notable legal (formal-legal, comparative-legal).

The results of the study

Today, many countries around the world are actively working on the problem of the need to regulate the status and use of "final" products of artificial intelligence and robotics technologies. Modern legislation is not ready to actively introduce artificial intelligence technologies and systems into legal practice. As for the legal personality of robotics with artificial intelligence, this discussion continues in the scientific literature. The leading researchers who studied this problem are M. Weiner (*2021*), D. Gudyma (*2009, p. 66*), D. Gritsay (*2019, p. 72*), L. Brodbeck (*2016*), M. Rubenstein (*2014, p. 796*), etc. So, L. Brodbeck and his colleagues emphasise that adaptation of physical forms is a fundamental mechanism that allows biological systems to survive in various environments. Due to evolutionary adaptation, some animals have changed their morphology to live on land rather than underwater (*Moczek et al., 2011, p. 2705*). Modern machines, by contrast, are severely limited by their initial morphological configurations,

and the question remains whether machines can achieve a similar level of adaptability by adjusting their morphologies (*Rubenstein et al., 2014, p. 796*).

One of the problems is that humanity still cannot accurately define the boundaries of what it means by the term "artificial intelligence". After all, who or what can or should be called "robots." Gradually, the line between people's abilities and carriers of so-called artificial intelligence is blurred. So, computers have long bypassed the human brain in indexing information and issuing data from memory based on simple queries. Researchers have already developed a machine that can learn and perform better than humans on intelligence quotient tests. Moreover, Microsoft specialists and scientists from the University of Science and Technology of China plan to give the machine the same thinking abilities humans have (*Wehner, 2021*). However, keep in mind that computers have long outstripped the human mind when it comes to indexing information and calling data based on simple queries. However, the soft processors inside our skulls have always had the upper hand regarding verbal reasoning and complex language problems. Scientists from the University of Hanover proposed to create a "nervous system" for robots that will allow them to feel pain. Regardless of whether a particular state invests resources in creation or supports the scientific search for artificial intelligence, it is obliged to predict the possible consequences of the development of robotics and use, in particular, legal means to determine the "rules of the game" in the relationship of people with such robots.

Therefore, the scientific community is interested in discussing the legal and moral aspects of the existence and activity of "artificial beings" in the world, like their rights and obligations concerning people and among themselves. Of interest are, in particular, the issues of the legal status of "smart machines", like responsibility for their failure and the negative consequences caused by them.

Discussion

The robotics industry and the development of information technologies are taking on unprecedented proportions today. If earlier robots and robotic equipment could only be found in factories and laboratories, now representatives of artificial intelligence appear everywhere in human life: in hospitals, on the roads, in offices and even at home. The man was at the centre of the robotics revolution. Robots surround us everywhere. Someone sees them as a carefree and comfortable future for humanity and someone – a threat to the existence of civilisation. Remember the 2020 Movie "Rise of the Robots" (artificial intelligence vs. humans).

Did you know that in 2021, robots "celebrate" their 100th anniversary? It was in 1921 that Karel Chapek, a Czech writer, coined the word "robot". Moreover, in 1942, the American writer Isaac Asimov, in the story "Round Dance", formulated 3 Laws of robotics. First, a robot cannot harm a person or, by its inaction, allow a person to be harmed. Secondly, the robot must obey all orders that a person gives, except in cases when these orders contradict 1 law, and thirdly, the robot must take care of its safety to the extent that it does not contradict 1 or 2 laws.

Well-known companies specialising in the development of artificial intelligence are now investing in creating so-called human assistants.

As we know from forecasts in robotics, in 2022, artificial intelligence will reach the level of human mental abilities by 10%, somewhere in 2040 – by 50%. After 2070, the robot's thinking

will not be distinguishable from that of a human. That is, robots endowed with artificial intelligence at the level of human intelligence will be able to understand the significance of their actions and will be able to control them. Therefore, if robots gradually become on the same level as humans in their development, they will be able to have rights and obligations. This raises the question: Do I need to grant robots rights? Let us think about it.

If the behaviour of so-called deterministic robots can be programmed and controlled, then cognitive robots are capable of perception, using language, interacting and solving problems, learning and creativity. Such robots' decisions are unpredictable, and actions depend on the experience gained and random conditions. Such actions can affect people's behaviour and lead to social and cultural changes, which can be both positive and negative. This is where the issues of security, privacy and protection of a person's dignity arise. Moreover, who will be responsible for such actions, the developer or user of a specific robotics object or artificial intelligence that is self-aware?

Cognitive robots with artificial intelligence of the human level and above can be self-aware. They will defend their rights, so to speak. Which ones? And at least for existence. Who would want people to take it apart for "spare parts", turn it off at any time, and throw it away? There is a threat of confrontation between people and their equal intelligence or even more intelligent creatures (robots). Moreover, the forecast of such a confrontation for humanity can be pretty tragic.

Of course, you can prevent the development of such a scenario. To do this, you need to program robots so that they do not have the appropriate intentions and set their artificial intelligence below the level of human intelligence. However, despite the pace of robotics development, companies' interest in creating a high-quality product, and competition, humanity is unlikely to implement this option.

Therefore, we may need another way to regulate such a confrontation. One of the options for ensuring the coexistence of humans and robots can be to grant robots the status of subjects of Civil Relations, which will be endowed with appropriate rights and obligations. When determining the scope of rights and obligations of robots, you need to consider the purpose for which the corresponding robots will be created. In other words, the legal capacity of robots at the initial stage will be special. Gradually, the set of rights and obligations of robots will be compared with those that previously belonged only to humans. Moreover, of course, the leading rights of robots should be the right to existence (life) and personal inviolability. However, among the responsibilities that robots should rely on, they are worth obligating to compensate for the damage they cause.

We are not talking about programmed hardware but about the mass use of self-aware robots. Perhaps now, we seem to be on the verge of understanding the script of some science fiction film. However, let us turn to world practice.

Discussion

Considering the legal status of robots in the future, as soon as the robot has an awareness of the subjective "I" when it can independently make decisions and give itself orders, from that moment on, this robot must bear some responsibility for the decisions it makes. On February 16, 2017, the European Parliament approved a resolution of the European Parliament with

recommendations of the Civil Law Commission on robotics (*European Parliament…, 2019*). The resolution notes that the current trend is to develop intelligent and autonomous machines to learn and make their own decisions in the long run. This creates not only economic benefits but also many problems regarding artificial intelligence's direct and indirect impact on society. The document emphasises that there is a possibility that, in the long run, artificial intelligence will surpass human intellectual capabilities. The European Parliament, in particular, proposed recognising robots as "electronic persons" and creating a European agency for robotics and artificial intelligence, which will conduct technical and ethical examinations of robots.

Determining the legal status of "smart robots" is still quite challenging. However, we can already predict that robots will still be able to become subjects of law when they have artificial intelligence on par with human intelligence: they will have the ability to recognise objects, perceive and analyse information, make decisions and learn. However, if attempts at any such definition are avoided, serious enforcement problems may arise over time. Recall the work of Sofia, who was granted citizenship in Saudi Arabia (*Alloway, 2017*); it is hardly possible to define what causes legal uncertainty clearly). Ravina Shamdasani, a spokeswoman for the Office of the United Nations High Commissioner for Human Rights, expressed that if the Universal Declaration of Human Rights says that all people are born free and equal, then a robot can be a citizen, but not a human.

The European Union proposes to create a European agency for artificial intelligence, introduce a legal definition of the concept of "smart autonomous robot", introduce new rules for reporting companies on the development of robots, and adopt insurance rules for companies in case their work causes harm.

After analysing the research of scientists devoted to the problem of legal status, namely, determining the legal personality of robots with artificial intelligence in our time, we can conclude that the norms of civil law can regulate their role, Place and status. The legal basis is Article 177 of the Civil Code of Ukraine (*2003*), which defines the types of objects of civil rights. The list of objects is not exhaustive and is subject to an expanded interpretation. Accordingly, we conclude that today, the legal status of robots is regulated by the provisions on objects of civil rights. The Civil Code of Ukraine and other acts of civil legislation of Ukraine do not contain the concept of "robot" or "artificial intelligence", and therefore, for further definition and specification of the legal status of a robot as an object of legal relations, it is necessary to apply by analogy the norms that relate to objects of civil rights, based on the definition's "work", "artificial intelligence", which are formulated in the scientific literature. In particular, today, the status of work most corresponds to the provision of Article 1187 of the Civil Code of Ukraine, which defines that the source of increased danger is activities related to the use, storage or maintenance of vehicles, mechanisms and equipment, creating an increased danger for the person who carries out this activity, and other persons.

Of course, giving robots the status of subjects of civil legal relations will satisfy the interests of robots with self-awareness. There is no practical need to grant this status to robots that are not self-aware. Thus, whether robots whose artificial intelligence is at the level of human intelligence or higher should have rights remains a rhetorical question of the future.

Conclusion

If natural beings are capable of evolution, we can assume by analogy a similar evolutionary adaptation to life and artificial intelligence (*Bongard, 2013, p. 74*). Joint optimisation of the body and mind has already been demonstrated by scientists using simulations of the evolution of virtual animal-like creatures (*Bongard, 2011, p. 1234*). At the same time, we live in a time when robotics has become an integral part of the life of each of us. it is worth agreeing that science is progressing in the 21st century. At this stage of development, robots gradually leave the places of their creation, various factories and laboratories, and become part of our everyday life. Moreover, of course, the day will come when robots will become not just created devices but also members of society.

It is significant to understand that technical sciences divide robots into several categories: robots that perform only the same type of primitive actions aimed at meeting human household needs (for example, robot vacuum cleaners), the second category includes robots that have the ability to analyse and evaluate the environment and partially adjust their actions to the nature of such an environment (combat robots), and the last category consist of robots endowed with artificial intelligence, which is understood as the technology of creating computer programmes that work and systematically learn, accumulate experience, they collect information, have the ability to analyse and evaluate environmental conditions and apply the accumulated knowledge in everyday life. Artificial intelligence, according to many experts, is a set of complex mechanisms that are designed to solve problems to bring benefits and help to humans; at the same time, the concept of artificial intelligence and a robot are not identical: a robot is a kind of shell of artificial intelligence, which sometimes has the shape of a human body, but artificial intelligence is a computer inside a robot.

Summing up, it is worth noting that there are lively discussions around the legal regulation of the creation and operation of artificial intelligence; interested states, individual scientists and developers of artificial intelligence, however, express different positions on the further regulation of artificial intelligence activities. So, some scientists and lawyers believe that artificial intelligence should get rights for many signs, such as the ability to think independently and analyse information, the ability to self-develop, the ability to make independent decisions, etc. Despite this, it can be argued that such positions today remain a minority. The dominant opinion is still about the responsibility of owners or developers of artificial intelligence for the damage caused by the latter (it can be assumed that the prevalence of this opinion is caused by the lack of awareness of legal experts in the technical aspects of artificial intelligence activities, which causes distrust of the latter). Also, in the scientific literature at the moment, there is not even a clear understanding of the terminological apparatus – the most repeated are the concepts of "electronic person" and "digital person", and the category of "persons" itself gives grounds to discuss the subjectivity of artificial intelligence, because traditionally individuals are called subjects – which indicates that science has not developed the question of the legal personality of mechanisms that have artificial intelligence.

Conflict of interest

The authors declare that there is no conflict of interest.

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