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Improving Mechanisms for Criminal Law Protection of Public Relations Arising in the Process of Digital Society Evolution

PETR N. KOBETS
All-Russian Research Institute of the Ministry of Interior of Russia, Moscow, Russia, pkobets37@rambler.ru, https://orcid.org/0000-0001-6527-3788

Abstract.

Introduction: legal relations arising in modern digital society in the field of application of artificial intelligence technologies, first of all, require proportional development of the criminal legal framework, since newly emerging innovative products can be potentially dangerous to humans. *Purpose:* to show that due to insufficient knowledge and the complexity of accurate forecast of the genesis of legal relations that are associated with the use of new technologies, common criminal law norms can no longer sufficiently provide full protection of the well-being of individuals and the state. *Methods:* historical, logical, comparative analysis, specific sociological techniques. *Results:* it is proved that despite a number of scientific and theoretical developments in the field of artificial intelligence liability, the issue of its legal regulation remains extremely relevant, has different points of view and needs to be resolved quickly. Meanwhile, solution of the problem associated with criminal liability of artificial intelligence using new technologies should pursue the goal of protecting interests of the society that will soon have to daily face legal problems arising in the process of improving new technologies. Therefore, today modern developments of the latest criminal law protective mechanisms that could very quickly ensure control of public dangers in the area under consideration are so relevant. *Conclusions:* in the near future, standard practice will not be able to ensure full protection of the welfare of society, since criminal law mechanisms will not be able to adequately respond to emerging technical innovations and, accordingly, will not be able to format new digital criminally punishable actions in their own way. Thus, it is reasonable to look for new solutions for the criminal law protection of public relations of the digital society. At the same time, it is important that designs of new protective mechanisms timely assess the possible risks associated with technical innovations and technological breakthroughs.

Keywords: digital society; artificial intelligence; legal regulation; criminal liability measures; legislative framework; compensation for harm; law enforcement; crime prevention; compliance with the law.

5.1.4. Criminal law sciences.

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Introduction

One of the key directions for boosting scientific and technological progress in the XXI century is the one that is inextricably linked with robotic systems based on artificial intelligence. Development and subsequent active promotion of robotic systems in most spheres of life necessarily leads to the formulation of new problematic issues, both for legal science in general and criminal law in particular.

At the moment, in most world countries, problematic issues related to various types of liability measures in case of harm caused by these technologies remain key in the field of legislative regulation of public relations related to artificial intelligence technologies [1, p. 85]. Domestic legal scholars heatedly discuss ways to solve a number of legal problems related to artificial intelligence liability. It is quite obvious that the issues related to the need to bring to various kinds of liability measures for illegal activities in the field of technologies in question in the near future will become one of the most difficult to resolve not only in foreign, but also in Russian legal practice [2, p. 125].

Today we can observe how artificial intelligence subordinates to its influence an increasing variety of spheres of human activity, including economics for the analysis of market mechanisms; the financial sphere in which algorithms of trade relations are studied; medicine for making various decisions and developing new patient treatment plans; household for the development of smart home technologies, etc.; transport; industry; defense, law and law enforcement [3, p. 43]. The list of uses of technologies based on artificial intelligence can be endless.

Discussion

In order to consistently analyze the issues related to criminal liability of robotics using artificial intelligence technologies, it is important to clarify this concept first of all. A fundamental document in our country in the field under consideration is the Decree of the President of the Russian Federation No. 490 of October 10, 2019 "On the Development of Artificial Intelligence in the Russian Federation", which sets priorities in this direction, as well as clarifies the terminology of artificial intelligence, which, as follows from this legislative act, "should be understood as a set of technological solutions that allow simulating human cognitive functions and obtaining results when performing specific tasks, comparable, at least, with the results of human intellectual activity" [4, p. 123].

The cited definition provides a basis for further discussion about the properties of technologies based on artificial intelligence. However, it should be emphasized that a very similar explanation of robotics with artificial intelligence can be found in recent publications of domestic researchers.

Key features of artificial intelligence are the following: presence of a technical device (cyberphysical system) capable of perceiving information and transmitting it; a certain degree of autonomous operation without human participation (subjectivity) in the absence of such a system; an ability to analyze, generalize information, develop intelligent solutions based on the studied data (thinking), self-awareness; an ability to learn, independently search for information and make decisions based on this information" [5, p. 37].

The majority of experts, analysts and specialists studying this issue agree upon general characteristics of these technologies [6, p. 31]. They note that a physical nature of this concept is expressed in a technical system created to imitate human mental processes and implement functionality subject to it [7, p. 25]. Domestic experts believe that artificial intelligence technologies are a complex, specially created software and hardware system that has capabilities to perceive and analyze information data, as well as self-learn [8, p. 43].

Meanwhile, it is worth noting that the problems associated with the legal definition of the technology in question are primarily actualized by the complete absence of any of its legal characteristics, including as a subject and object of legal relations. What is more, most definitions of this technology have significant drawbacks. According to a number of authors, artificial intelligence technology should be necessarily subject to the regime of a legal entity, because both of them are fictitious in a civil sense [9, p. 162].

However, the author of this work is absolutely not satisfied with this approach of some Russian researchers to new technologies, because robotics and other digital products operating using artificial intelligence do not have features of legal entities. Despite the fact that both of these legal phenomena still have the function of fiction, they are in no way united by a mecha-

nism for legal regulation, and this, by the way, is a very important issue.

So, it seems reasonable to develop mechanisms for protecting public relations that arise in the robotics evolution process using new technologies. In this regard, we would like to specifically note that today it is already well known that the technologies in question exist in electronic form as computer programs that ensure functioning of robotics and other digital devices. And as noted by domestic experts, analyzing issues of legal personality of robotics, it is fixed in special registries, while also having a significant material value. Therefore, as liability measures in case of violation of legal relations caused by activities of these technologies, a number of researchers propose to terminate functioning of the product using new technologies for work and then reprogram it, or destroy it altogether.

Meanwhile, the author finds domestic experts' approaches very controversial. They should be substantiated and the mechanism should be disclosed in more detail, but not just declared. So far, the author, like many other researchers of the problem under consideration, is not sure how, and most importantly by whom, computer programs can be recognized as subjects of legal relations, being subjects and objects of legal regulation.

According to V.A. Laptev, artificial intelligence technologies possess a number of separate elements of subjective law, and at the same time act as objects of this law [10, p. 87]. Therefore, in the coming years, liability measures for the activities of artificial intelligence technologies will be assigned to their creators – manufacturers, as well as owners – operators, similarly to liability measures in case of harm caused by sources representing increased danger. However, in the future, the technologies in question may be endowed with legal capacity, the possibility of independent legal liability, and after such steps, their legal personality will exist in the digital space, which may be a significant risk that will lead to an increase in criminal encroachments using artificial intelligence for criminal purposes.

In such situations, robotics will be an instrument or a means of committing criminal encroachments, and it is necessary to involve persons using it for criminal purposes in criminal liability measures. In this regard, there is a need to conduct separate studies specifically devoted to analyzing the question of whether the degree of public danger of criminal attacks that are committed using artificial intelligence technologies increases. Obviously, it seems grow, since such technologies may be used for committing highly skilled murders. Therefore, it is crucial to work out amendments to Part 2 of Article 105 of the Criminal Code of the Russian Federation (hereinafter – CC RF) fixing appropriate elements.

At the same time, the author of this study shares the point of view on the need to bring to justice people (developers, manufacturers, owners, tenants, operators, etc.) when any harm is caused by robotics in the course of its activities [11, p. 281]. At the same time, in the case of an illegal act in the area under consideration, it is obvious that it will be extremely difficult for law enforcement authorities to determine liability measures of specific persons related to products and technologies using artificial intelligence for their functioning: manufacturers, persons selling these products, owners, etc.

With the development of new digital technologies, the problems associated with their legal regulation will not decrease. In particular, it will not be easy to punish developers of this digital product, since the technologies analyzed in this study have the ability to self-learn. Therefore, they may reprogram themselves and receive necessary data from external sources in the process of an appropriate upgrade, thereby changing their settings; it may entail a series of unforeseen events leading to negative consequences. In such cases, it will be very difficult to bring to justice the persons who invented such a product or later reprogrammed it.

It is worth noting that few scientists support the need to impose liability for illegal activities carried out using artificial intelligence technologies in accordance with traditional criminal law norms, in particular, Paragraph "b" of Part 2 of Article 238 of the Criminal Code of the Russian Federation. At the same time, as noted by domestic experts, there are grounds to bring to justice persons responsible for artificial intelligence activities, namely in those cases when "in the process of creating system data, mistakes were made that subsequently led to the commission of illegal acts; these systems were unlawfully accessed, which served as the

reason for their damage" [12, p. 570], or the improvement of their functionality resulting in the commission of a crime; the technologies in question, having the opportunity to self-learn, came to the conclusion about the necessity to commit an illegal act.

It is important to realize that the technologies in question are just digital processes inherent in a certain software. At the same time, they are not a conscious being with actions and deeds, therefore they cannot have the same status as individuals, and of course they do not belong to the subjects of legal liability indicated above. In the process of legal regulation, the technologies in question cannot be legal entities either, because they do not have many features inherent in these entities. In accordance with the Russian legal doctrine, in the case of illegal activity, liability measures may be imposed on any persons, organizations, or the state, while in accordance with Article 19 of the Criminal Code of the Russian Federation, subjects of liability are sane individuals who have reached the liability age.

It is also important to note that since artificial intelligence is primarily a computer system, then "on the basis of Article 274 of the Criminal Code of the Russian Federation, criminal liability measures are applied, including as a result of the violation of rules for storage, processing or transmission of computer information and information and telecommunication networks" [13, p. 35]. So, we back Russian experts' idea that the indicated legislative norm can also be applied in all respects in cases of application of the technologies in question. At the same time, Article 274 of the Criminal Code of the Russian Federation is blank, referring to various kinds of rules that establish mechanisms for working with means "for storing, processing, transferring protected computer information data, information and telecommunication networks and terminal equipment in an agency or organization, violation of which entailed destruction, blocking, modification, or copying computer information that caused major damage" [14, p. 124].

According to the author, criminal acts committed using new technologies should be punished in accordance with general norms providing for penalties for committing illegal acts against a person, against property, against state power, interests of public service, and service in local governments, etc. In the same way, it is necessary to resolve issues in situations in which robotics using the technologies in question were subjected to unauthorized access, as a result of which there was a failure or improvement of its functionality leading to a criminal encroachment. In cases where unauthorized access was carried out using new technologies to have a negative impact on various types of objects associated with critical information infrastructure, liability should occur under Article 274.1 of the Criminal Code of the Russian Federation.

Summarizing the study of the formation of mechanisms related to the protection of public relations arising in the process of development of new technologies, it is important to note that humanism has always been one of the fundamental principles of legal regulation, which forms an anthropocentric legal shell around the inviolability of human rights and freedoms. Today, it is also important to pay great attention to the development of principles for legal regulation of new technologies, since in addition to general legal principles of humanism, legality, and prohibition of discrimination, the principles under consideration should also include legal regulation, which will set the right direction when building interaction among two types of intelligences [15, p. 15].

Obviously, when developing new technologies, one should be guided by principles of the impossibility of causing damage or any harm to people, confidentiality, respect for human dignity, justice, autonomy of will, informed consent, etc. It is expected that certain principles underlying legal regulation of technologies using artificial intelligence, such as neural networks, as well as various objects of robotics, will be added [16, p. 41].

In short, emerging new legal relations, which are in the stage of active formation, require adequate development and a legislative framework, since newly emerging innovative products can undoubtedly be potentially dangerous for humanity, due to their insufficient knowledge and the difficulty to accurately forecast the genesis of relations associated with their use. In this regard, modern developments of the latest criminal law protective mechanisms are particularly relevant, since they would be able to quickly suppress possible public dangers, which these criminal law mechanisms represent as the only

reliable criterion for establishing criminal liability measures for the illegal acts in question.

Conclusion

Thus, the problem of criminal liability of robotics using artificial intelligence technologies should be solved first of all in order to protect the interests of society, which will face and also may depend on activities and results of the decisions taken by the technologies in question. In this regard, the legal status of these technologies should include a number of obligations, prohibitions and liability measures in cases of their violation. In general, current problems in the field of criminal liability of new technologies can be divided into groups. The first one is related to unlawful modification of programs; in order to effectively prevent these encroachments, it is necessary to amend current versions of some articles of the Criminal Code of the Russian Federation. The second group is directly related to liability measures for causing various kinds of harm and damage to machines and equipment using artificial intelligence technologies in their work.

The conducted research indicates the impossibility of usual methods to fully protect the well-being of individuals. Current criminal law mechanisms aimed at existing socially dangerous acts may become unable to respond effectively to the ongoing transformations and at the same time will not be able to format new digital criminally punishable actions in their own way. Therefore, active use of the latest digital technological processes for the transmission and dissemination of information data forces the state to look for new solutions related to the criminal law protection of public relations that arise in a modern digital society. At the same time, it is important that designs of new protective mechanisms assess potential public danger arising from the development of new technologies as realistically as possible.

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INFORMATION ABOUT THE AUTHOR

PETR N. KOBETS – Doctor of Sciences (Law), Professor, Chief Researcher at the Center for Organizational Support of Scientific Activities of the All-Russian Research Institute of the Ministry of Interior of Russia, Moscow, Russia, pkobets37@rambler.ru, https://orcid.org/0000-0001-6527-3788

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