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Issues of Liability in the Field of Business Relations Involving Artificial Intelligence

Cholpon N. Sulaimanova*

*Kyrgyz-Russian Slavic University
named after B. N. Yeltsin
Bishkek, Kyrgyz Republic*

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Abstract. This scientific work examines certain issues of liability in the field of business relations involving artificial intelligence as the subject of research. The purpose of the study is to identify criteria for legal regulation of the process of active implementation of artificial intelligence systems in human life, as well as to determine the degree and range of subjects of responsibility for harm caused by robots and other programs endowed with artificial intelligence. In the modern world, the development of artificial intelligence systems affects to a greater extent entrepreneurial relations, which are permeated with innovative technologies, which leads to various violations of the interests of the parties due to the lack of a legal framework and an integrated approach to legal regulation. The work explores various approaches to solving problems related to determining the legal nature of artificial intelligence using methods of scientific knowledge, such as analysis, synthesis, simultaneous comparative analysis, general scientific and private scientific research methods. The scientific value of the study lies in the fact that to date, no country in the world has comprehensive legal regulation that takes into account modern technological processes. The conclusions drawn in the study are an attempt to satisfy the request for the creation of legal norms that take into account the growing use of artificial intelligence technologies in business. This work has both theoretical and practical significance in the formation of legal regulation of relations using digital technologies in business activities and in commercial relations in the future.

Keywords: artificial intelligence, entrepreneurial relations, quasi-subject, will, electronic face, digital technologies, robot.

Research area: Social Structure, Social Institutions and Processes.

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Вопросы ответственности в сфере предпринимательских отношений с участием искусственного интеллекта

Ч.Н. Сулайманова

Кыргызско-Российский славянский университет

им. Б.Н. Ельцина

Кыргызская Республика, Бишкек

Аннотация. В данной научной работе в качестве предмета исследования рассматриваются отдельные вопросы ответственности в сфере предпринимательских отношений с участием искусственного интеллекта. Целью исследования служит выявление критериев правового регулирования процесса активного внедрения в жизнь человека систем искусственного интеллекта, а также определение степени и круга субъектов ответственности за вред, причиненный роботами и иными программами, наделенными искусственным интеллектом. В современном мире развитие систем искусственного интеллекта затрагивает в большей степени предпринимательские отношения, которые пронизаны инновационными технологиями, что приводит к различным нарушениям интересов сторон в связи с отсутствием правовой базы и комплексного подхода к правовому регулированию. В работе исследуются различные подходы к решению проблем, связанных с определением правовой природы искусственного интеллекта с помощью методов научного познания, таких как анализ, синтез, синхронный сравнительный анализ, общенаучных и частнонаучных методов исследования. Научная ценность изучения заключается в том, что к настоящему времени пока ни одна страна мира не имеет комплексного правового регулирования, учитывающего современные технологические процессы. Выводы, сделанные в исследовании, являются попыткой удовлетворения запроса на создание правовых норм, учитывающих нарастающее использование технологий искусственного интеллекта в бизнесе. Данная работа имеет как теоретическую, так и практическую значимость в формировании правового регулирования отношений с использованием цифровых технологий в предпринимательской деятельности, в коммерческих отношениях в дальнейшем.

Ключевые слова: искусственный интеллект, предпринимательские отношения, квазисубъект, воля, электронное лицо, цифровые технологии, робот.

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Introduction

Changes associated with the development of robots will affect all areas of life in the near future. Many legal scholars believe that this

is contributing to the creation of a new legal branch, the so-called “robot law”, aimed at unifying the rules regarding the participation of robots in public life. In this case, the law on

robots will include rules governing relations with robots with artificial intelligence (hereinafter referred to as AI), that is, determining the legal status of robots, their liability for damage caused and protecting the rights to the results of intellectual activity created by robots. These norms will provide certain rights such as inviolability of code, body, hull and so on.

Discussions of the possibilities and prospects for the application of artificial intelligence are always accompanied by assessment: reflection on the positive and negative consequences of the introduction of AI in various fields (Leshchinskaya et al., 2023).

In today's world, the development of artificial intelligence systems influences entrepreneurial relationships more than ever. Since business law is a complex branch of law, it is a set of rules governing relations in the organization, implementation and management of business activities based on the interaction of private and public interests. And entrepreneurial activity is a business that is interested in the active implementation of AI in production and services to increase efficiency and gain competitive advantages.

Entrepreneurs are trying to harness the power of technology in business management to accelerate their growth. AI is changing the way work is organized and work itself. Complex programs and robots are increasingly performing tasks previously performed by humans, replacing them.

The social and economic systems have entered a stage of accelerated transformation, and the market model, business model, education standard, governance pattern and employment pattern have been seriously affected. The last big step forward came a few years ago when businesses moved to mobile platforms. Today, almost every business entity can conduct business through a smartphone or other mobile device. The next such "breakthrough" will radically expand the scope of AI, and it is clear that if an entity does not integrate AI into its operations within the next few years, it will become uncompetitive.

Research methods

The work explores various approaches to solving problems related to determining the le-

gal nature of artificial intelligence using methods of scientific knowledge, such as analysis, synthesis, simultaneous comparative analysis, general scientific and special scientific research methods.

Research

Let us pay attention to the pace of development of robotics presented in the report of the International Federation of Robotics for 2020 (World Robotics 2020...). It only talks about industrial robots, but there are also service robots, and their production is also growing. In addition, the use of programs with AI elements is increasing. The spread of AI technologies is not limited to the manufacturing sector; it is changing the way production and management processes are organized. AI technologies have begun to be introduced into corporate governance systems, especially into the work of corporate boards of directors.

Artificial intelligence helps companies formulate strategies and long-term development plans, which can potentially help boards of directors prevent and resolve conflicts between shareholders and company management, and much more. The advantages of introducing AI into company management systems include increasing the transparency of business processes for company management and shareholders and reducing control costs.

Most industrial robots are used in the segment in Asian countries. It can be seen that the total number of robots in China increased by 21 % in 2020, reaching approximately 783,000 units. In Europe, Germany becomes the leader in the use of industrial robots (221,500). During the year, 20,500 robots were installed, which is equivalent to the number of robots installed in 2014–2016 and 23 % less than the previous year. In the US, robot sales fell 17 %, but the total number of robots increased by 7 %. There are currently 293,200 industrial robots in the country (World Robotics 2020...).

Considering that artificial intelligence technologies are the fastest growing "end-to-end" digital technologies, they are already used in almost all types of business activities and contribute to maximum automation of business processes. AI is changing the entrepreneurial

landscape and therefore requires regulation, including business law. The widespread use of AI in business activities and entrepreneurial relationships has necessitated the development of legal regulations that take into account the growing use of AI technologies in business.

Currently, some fundamental issues have arisen that require legal regulation. The main problems brought up for discussion are reflected in two main issues of legal regulation. Firstly, in cases of using AI to infringe on the rights of other people, the question arises about responsibility for the consequences of the actions of robots or programs; secondly, when humans and other living beings are replaced by robots for certain purposes such as maintenance, manufacturing, transportation, entertainment, teaching, construction, healing and so on, which will cause the problem of “replacement”.

These two problems are recognized by experts and will certainly affect various legal areas, especially the sphere of business relations, and will create difficulties in settlement.

Of course, it is not possible to ignore the serious dilemmas provoked by the general introduction of AI into human life. As a result, engineers are concerned that regulations and restrictions on research may stifle innovation, and ethical philosophers have predicted the consequences of a blanket ban on this type of research in the future.

Thus, D.V. Smolin believes that AI is a system that has the ability to consciously change its operating parameters and methods of behavior, making it dependent on the current state of captured information and the previous state of the system (the specialist gives the following interesting analogy: an example of a targeted system is an artillery shell; an example purposeful system is a homing missile) (Smolin, 2004: 16).

When “weighing” the threats and opportunities that the introduction of legal regulation of AI brings, one can highlight the pros and cons. Therefore, among the positive changes associated with the development of AI and its integration into public life, there will be timely information about natural and humanitarian disasters, as well as the possibility of automatic monitoring of compliance by all subjects with

legal norms (already today, cameras, drones and specialized programs are used by law enforcement agencies, that monitor offenders) identify systematic violations of public order and other deviant behavior.

Negative consequences include decreased privacy, including as a result of such surveillance, and new risks to people, such as glitches in industrial robot programs, causing them to restart and injure workers.

However, we must understand that, despite the serious risks, it is still impossible to refuse the development of technology, which means this area requires legal regulation.

Among the general theoretical issues that require legal regulation, the following mainly stand out: firstly, the issue of determining the status of AI; secondly, the question of AI's responsibility for decision-making; thirdly, the issue of rights to the results of creative activity of AI; fourthly, the issue of maintaining the confidentiality of data, especially personal data.

The most pressing issue is determining the place of AI. Should AI be an object of law or, at a certain level of development, should it be considered a subject of law, perhaps a quasi-subject, since it has actually become a participant in social relations.

AI is currently viewed by law as an object – something that can be created, purchased, or destroyed. As technology develops, the issue of recognizing “intelligent” robots as subjects of law, for example, as a special category – cyborgs, agents capable of representing the interests of individuals and legal entities, becomes increasingly relevant. Opponents of considering AI as a subject of law insist that it is enough to consider it as a special type of property.

Discussion

While we agree with comments about the potential for self-learning, we believe it is necessary to challenge the assessment of AI as an object or tool, since such an approach can significantly change the way the social relations generated by its use are regulated.

From this position, one can rather consider AI as a subject of legal relations, which

is not supported even in the field of civil law research. As V.P. Kamyshansky notes, when introducing AI into legal relations, the circle of subjects (AI units, cyborgs) should be expanded (Kamyshansky, Koretsky, 2019: 44). It is difficult to disagree with this point of view; when determining the place of artificial intelligence in the structure of legal relations, we believe that when treating AI as a conscious, autonomous cybernetic form, it is unacceptable to consider it as its subject.

We also agree with those researchers who note that with the widespread introduction of artificial intelligence into social practice, it is necessary to develop a new concept of the subject (Simmler, Markwalder, 2019: 29).

A.A. Shchitova understands artificial intelligence as a program that has a certain degree of intelligence, capable of recognizing itself and making independent decisions (Shchitova, 2019: 98).

L.S. Bolotova explains it as “a certain artificial (computer) system capable of imitating human intelligence, manifested in recreating the ability to receive, process and store information and knowledge and perform various actions on them, collectively called thinking.” (Bolotova, 2012: 31). Although this definition is close to the corresponding definitions assessed in our study, it does not directly refer to the ability to learn independently, although this is implicit in the description of the ability to accumulate and store information.

Whether AI has a component of voluntary, volitional activity is a very controversial issue today. In the literature, there are often quite clear statements about the absence of volitional elements in AI, and, based on the lack of sufficiently convincing confirmation of this position, the authors, apparently, argue based on experience (Vasiliev, 2018: 40).

In fact, this problem lies at the intersection of biology and philosophy, and to solve it it is necessary to determine what is the source of will as an element of mental attitude.

G.A. Esakov defines the volitional determinant associated with direct forms of guilt as the desire for the occurrence of certain socially dangerous consequences (Esakov, 2017: 37).

The author defines will through the manifestation of a certain desire, indicating that the will expresses a person’s attitude to a specific situation. However, he did not name the reasons for such a relationship. In the case of humans, it has been established that desire can be determined by the activity of the body’s glands and the production of certain hormones.

In addition, other factors are shaped by the activity of assessing the acceptability and relevance of an event. In other words, based on the processing and evaluation of information, a person himself makes a conclusion about whether he should form an attitude towards a certain event. Moreover, the formation of such a relationship is entirely determined by the activity of neural connections in the brain, which, as we noted earlier, are also inherent in AI.

Based on the above, we believe that the position that volitional processes exist only in biological formations is contradictory and unfounded. Simultaneously with biological processes, a person also undergoes intellectual processes, which are also capable of forming his beliefs about appropriate ways of expressing his desires. Simply put, willpower is the process or activity of decision making based on biology and intelligence. Of course, this AI-related process cannot be caused by hormones. However, AI, having neural networks, can, like a person, express its own motives, but based only on intellectual activity, which means it is not devoid of will.

The source of desire is a need that is recognized by a person, but for some reason does not satisfy him. Aspiring and motivating desires outside of consciousness do not have criminal legal significance (Bikeev, Latypova, 2009: 150).

Summarizing the previous thoughts, we can conclude that the will is formed as a result of awareness of the existing need, which is ultimately an intellectual process. Consciousness arises as a result of analysis of the surrounding reality and a reliable reflection of its main characteristics, taking into account the area of analysis. From a criminal point of view, awareness is an understanding of the actual circumstances of the crime committed, which form the signs

that have legal significance for a specific crime (Latypova, 2008: 9).

Thus, let's assume that there are a number of ways to describe AI: by specifying the mechanism of action, the basic principles of operation, the range of tasks to be solved, and so on. However, in our opinion, the most convincing and consistent position for describing AI are the judgments of researchers who prefer to describe the phenomenon of AI, clarifying its properties and characteristics. We believe that the correct understanding is to recognize the conscious volitional nature of the functioning of AI, independence of actions and decisions, and the ability to self-learn.

At the same time, all these signs to some extent significantly complicate predicting the behavior of AI, which seems especially important from the point of view of legal science, this allows us to define AI as a full-fledged subject of legal relations (Begishev, Bikeev, 2020: 148).

The above issues are inextricably linked with the problem of responsibility for the consequences of AI decisions. Who and how will be held responsible: the person in whose interests the AI acts, or the AI system itself; for this, the AI must again be recognized as a subject of law. If damage is caused by the robot's actions, who will compensate for it? As we know, according to current legislation, the direct cause of harm is not always held accountable. Thus, the employer may be liable for the employee, the parent may be liable for the child, and instead of the owner of the thing, the manufacturer may be liable for damage (if a defect is discovered), and so on.

The current legal framework provides two potential ways for victims of robots to be compensated: filing a lawsuit against the owner or manufacturer. If the risk is borne by the manufacturer, then investment in the development of AI systems becomes unattractive.

When considering the rights to the results of AI creative activity, who will own them? If it is AI itself, then this means that it again needs to be recognized as a subject of law. Or, for example, to its owner, but if these are copyrights, maybe it would be more logical to transfer them not to the owner, but to the developers of the AI system?

Advances in technology have also increased the challenge of maintaining data privacy. After all, AI systems receive information about the outside world through numerous sensors, detectors and recording devices. Considering the popularity of such technological solutions as "smart homes" and "smart cities", that is, with the development of the Internet of Things, such information exchange between AI systems creates an artificial "smart" environment.

To date, no country in the world has adopted comprehensive and universal laws and regulations that take into account technological changes. Legal regulation is fragmented and has only recently begun to take shape, so we can observe the process of its formation.

For legal regulation to be effective, it must be systemic, therefore, first a national AI development strategy is formulated (planning), then a general concept of legal regulation in the field of AI is formulated (a regulatory framework is formulated), then the legislation changes (by formulating new legislative acts and introducing amendments for their implementation).

It is becoming increasingly clear that the smarter AI becomes, the greater its impact on the law. This means that AI cannot remain in the position of a legal entity forever. This won't work because AI is part of an end-to-end technology. One such group of technologies is neurotechnology, which improves brain function by affecting the nervous system. For example, neurotechnology connects the human brain and computers to enable successful medical rehabilitation of people who have lost limbs or sensory organs. The neuroprosthesis becomes part of their body. Sophisticated neuroprosthetics are artificial intelligence systems linked to humans.

Therefore, people with artificially intelligent neuroprostheses are already subjects of law, these people are integrated with the machine as a whole, they acquire a number of differences that require special regulation of the complexities of AI. It seems that in this case the question of whether AI is an object or a subject disappears.

We consider it necessary to pay attention to the proposals of some researchers in the field of

economics and law. There is an initiative to create a new tax – an AI tax. This is justified, since such a tax would provide a corresponding economic effect for the state budget and would reduce social tensions caused by the replacement of people in production with AI systems (and the funds received would go to the rehabilitation of people, retraining and social support), for example, in the form of an unconditional basic income, to which everyone has the right). All this highlights the need for response from various legal sectors and consistency in the formation and development of legal regulation of AI.

Conclusions

We consider it appropriate to draw the following conclusions that it is necessary to clearly define criteria and limits, as well as clearly outline the circle of responsible persons. So let's look at some options for solving the above problems:

- the owner of the AI system must always bear responsibility;
- partial release from liability when the injured party receives compensation, for example, in the form of a payment from an insurance fund. In this case, liability may arise even if the robot owner is not at fault;

- completely relieve anyone of responsibility when recognizing the actions of autonomous robots as force majeure;

- if the damage is caused by a faulty design of the system, the responsibility should lie with the manufacturer, if this is a consequence of an error in the software of the AI system – with the developer, if it is a self-learning system, then the responsibility should lie with the one who made the greatest contribution to its improvement;

- responsibility of the AI system itself, which means endowing it with legal personality.

In addition to regulating business in the context of digitalization, the issues of regulating innovative business activities in a high-tech economy also require special attention. On the one hand, such regulation should not hinder innovation; on the other hand, it should encourage competition while minimizing risks in areas of innovation where risks tend to be higher. An example of such regulation is the regulation of business activities related to the production and use of “smart” robots through the introduction of licensing. It is necessary to understand that this issue should be resolved not only in the norms of business law.

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