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Influence of artificial intelligence on the legal system

Introduction

Every year our life is becoming more dynamic. The development of advanced technologies is changing the format of civil-law relations in their classical sense (used by lawyers or ordinary citizens). Today, the norm for us is the use of artificial intelligence technologies in assessing credit risks, implementing them in the courts, legal departments of large companies, public authorities and management, in manufacturing, in the conclusion of smart contracts and, ultimately, in our homes (in the use of smart home technology). We don't even think about over using artificial intelligence programs almost every day. For example, email spam filters, face recognition, search recommendations, smart personal assistants (Siri), shared apps (Uber), etc.

Such changes are positive, as modern artificial intelligence technologies are designed to simplify a person's life, assist him or her in work or in accessing public services. However, they are accompanied by several unknown legal doctrines that need detailed scrutiny.

In general, the legal profession is one of those that most felt the ambiguous effect of modern technology being on the verge of upheaval¹. This is due to the introduction of artificial intelligence technologies into the work of lawyers when such technologies replace them².

¹ R. Susskind, D. Susskind, *The Future of the Professions: How Technology Will Transform the Work of Human Experts*, 67, OUP 2015.

² For example, many contract documents are drawn up at the Coca-Cola Law Department using artificial intelligence technology. This minimizes the work time of lawyers by engaging them for more strategic tasks. At the same time, this leads to more consistent agreements. See: M. Heric, N. Goldman, *Corporate Legal Eagles Start to Embrace Artificial Intelligence*, Bain & Company Brief, 5 February 2019, <https://www.bain.com/insights/corporate-legal-eagles-start-to-embrace-artificial-intelligence/> (accessed: 15.04.2020). In addition, law firms use artificial intelligence

Indeed, the modern world seeks to meet the needs of the consumer as soon as possible, most effectively, with the least material costs. These processes are accelerated, but they are impersonal and are carried out by machines by algorithmic processes, which are not fully known to us. This obscurity is threatening to a person locally and globally.

The danger is also the creation and use of solutions that are not justified, legitimate or that simply do not allow detailed explanations of their behaviour³.

By interacting with artificial intelligence, people can lose their sense of autonomy in decision making because the machine will do everything for it. With the use of artificial intelligence technology, we not only dramatically change the format of elementary private relations man-to-thing, but we also change the understanding of the place of man in the system of things. For decades, man has struggled for basic tenets of democracy, such as freedom. But now we see a willingness to sacrifice this freedom for the sake of comfort life, the efficiency of economic and political processes.

In his book “Ending Democracy”, David Runciman emphasizes the problems of democracy in the modern world, which he sees in particular as the diminishing participation of man in controlling power. The role of the technical expertise of acts and actions of government outweighs the usual format of democratic control by the community, which, nevertheless, remains more accessible and understandable to most citizens⁴.

The risk of this is that innovators do not always consider human rights when designing their technologies. And the state is not ready to put innovations within certain legal limits so as not to hinder their development.

The role of law and the doctrine of law in the process of reconciling human interests and the development of modern technologies can hardly be overestimated. Law must be firm in its position on the direction of technological innovation for the benefit of man.

Law and artificial intelligence: the limits of interaction

Accepting the challenges of the information society, the legal doctrine seeks to adapt to processes governed without human participation by artificial intelligence. Legal scientists are eager to find out the specifics of autonomous machine solutions because, under such conditions, human life is subject to

technology to support or even replace lawyers in their core business. See: Ch. Veith et al., *How Legal Technology Will Change the Business of Law*, January 2016, https://issuu.com/jeroenzweers/docs/legal_tech_report_2016 (accessed: 15.04.2020).

³ D. Gunning, D.W. Aha, *DARPA's Explainable Artificial Intelligence (XAI) Program*, “AI Magazine” 2019, vol. 40(2), p. 44–58.

⁴ D. Runciman, *How Democracy Ends*, Profile Books Ltd., 2018.

decisions generated by artificial intelligence. This aspect of the digital world and its implications pose problems for legal analysis⁵.

However, human life is of the highest value, so there can be no compromise and risk here. The Law stands on guard of human life, the protection of democracy and personal freedom, even in the face of such a high level of scientific and technological progress. At the same time, the content and essence of legal regulation in today's world are changing the format – they are becoming much broader in scope, requiring interdisciplinary knowledge and dynamic response. The role of lawyers today is to take on the challenges of the modern world and in the context of the constant increase in economic efficiency when using artificial intelligence technologies, to preserve and protect people from the possible harmful effects of technology.

Questions related to law and artificial intelligence in one way or another are complex and very voluminous. Today, there are not many studies in legal science that would analyze the impact of artificial intelligence on the will of a person in civil relationships, the legal regime of artificial intelligence, and its place in law. It's complicated. It is difficult because the right is logical as well as the computer program algorithm. And only following a clear algorithm of action will solve the problem. The coding algorithm, like the law, is a predetermined rule⁶.

The legal algorithm needs to be expanded not in content but volume⁷. Aristotle once said that “the legislator cannot foresee all the future circumstances in which the law will apply and therefore cannot ensure that the law always conforms to the basis of its justification and justification at the point of its application. Its purpose is to create a form of justice that is flexible in the application of the law»⁸.

The law should not be so specific as to take into account all possible variants of the subject's behaviour. But it must be so large as to be appropriate for use in such situations. The scope of the law is expanded through legal justification and study of the content of law rules.

⁵ H. Brooke, *Algorithms, Artificial Intelligence and the Law. Lecture for BAILII Freshfields Bruckhaus Deringer*. London Lord Sales, Justice of the UK Supreme Court, 12 November 2019, <https://www.supremecourt.uk/docs/speech-191112.pdf> (accessed: 15.04.2020).

⁶ Ibidem.

⁷ As know, by its logical structure, any concept consists of content and scope. The meaning of the concept is a set of features on the basis of which are generalized and distinguished in the concept of objects of a certain class. The scope of a concept is a set of objects, each of which is the carrier of the features that make up the meaning of the concept. The content and scope of the concepts are organically interconnected. These relations are expressed by the law of the inverse relation between the content and the volume of concepts. According to this law, an increase in the scope of the term leads to a decrease in the content, and a decrease in the volume – to an increase in the content. See: *Pidruchnyk dlia studentiv yurydychnykh fakultetiv* [Textbook for law students], 5-te vyd. pererob. ta dop. K.: Tsentr uchbovoi literatury, 2015. 320 s.

⁸ Aristotle, *Nichomachean Ethics*, V. 10. 1137b, 12–29.

The problem of legal regulation of the use of artificial intelligence in various spheres of human activity is characterized by uncertainty and has to do with the unpersuasive promotion of artificial intelligence development. In such circumstances, the law must adapt to the modern conditions of social life, the state and the coexistence of states in the conditions of these technologies globalization.

The law does not aim to study in detail the mechanisms of artificial intelligence, but the law aims to regulate the relations related to it qualitatively. Detailed regulation of the technology creation process may result in a slowdown of their development. Therefore, the right is interested in the issue, not so much of its creation as of safe use.

For this purpose, it is important to clarify several key questions: what is artificial intelligence (there is a need to define this issue from the law point of view), what are its characteristics, place in the structure of civil legal relations (whether it is an object or electronic person⁹), peculiarities of civil liability.

In addition, the actual absence of borders for the development and spread of artificial intelligence technologies necessitates the adoption of common international legal standards and close international cooperation in this field.

Problems of the artificial intelligence legal definition formation

The definition of artificial intelligence in law is extremely complex and debatable, given the lack of a philosophical fundamental concept of “intelligence”¹⁰. However, the rapid development of artificial intelligence capabilities and its fields of application poses the urgent need for legal science to seek consensus on the notion of artificial intelligence in law.

In 1956, at the Dartmouth Conference, John McCarthy proposed to understand artificial intelligence as the science and technique of creating intelligent machines, especially intelligent computer programs¹¹.

A more accurate definition is provided in the Oxford Dictionary, where artificial intelligence is understood as the theory and development of computer

⁹ European Parliament resolution of 12 February 2019 on a comprehensive European industrial policy on artificial intelligence and robotics (2018/2088(INI)), http://www.europarl.europa.eu/doceo/document/TA-8-2019-0081_EN.html (accessed: 15.04.2020).

¹⁰ G. Lea, *The Struggle To Define What Artificial Intelligence Actually Means*, 3 September 2015, <https://www.popsoci.com/why-we-need-legaldefinition-artificial-intelligence> (accessed: 15.04.2020); O. Burkeman, *Why can't the world's greatest minds solve the mystery of consciousness?*, 21 January 2015, <https://www.theguardian.com/science/2015/jan/21/sp-why-cant-worlds-greatest-minds-solve-mystery-consciousness> (accessed: 15.04.2020).

¹¹ *Artificial Intelligence: A Rising Star of Mobile Technology*, 5 October 2016, <https://blog.intuz.com/artificial-intelligence-a-rising-star-of-mobile-technology/> (accessed: 15.04.2020).

systems capable to perform tasks that typically require human intelligence, such as visual perception, language recognition, decision making, and translation between languages¹².

Artificial Intelligence is the development of a flexible agent capable of adapting to a variety of situations that were previously unknown and not learned through experience, and to achieve a goal that is unavailable to traditional computer systems¹³.

Artificial intelligence performs tasks in such a way that the result is no different from the result of a person working on the same task¹⁴.

For the most part, definitions of artificial intelligence are about explaining the essence of the latter through the mechanism of its action. The definition of artificial intelligence comes down to its ability to perform tasks without the help of human intelligence. Thus, there is a comparison of human intelligence and artificial intelligence.

However, the ability of artificial intelligence to “machine learning” involves the development of an algorithm that is optimized automatically through experience and with or without limited human intervention¹⁵. The ability of artificial intelligence for continuous development has the consequence of exceeding human intelligence capabilities.

In addition, the practice of defining the artificial intelligence concepts such as weak (narrow, applied, or restricted artificial intelligence, focused on solving one or more tasks that a person can perform¹⁶), strong (or general artificial intelligence) focused on solving all the tasks that a person can perform¹⁷) and superintelligence (which has social skills and is much smarter than human intelligence in various fields of activity¹⁸) is common.

Baranov O.A. proposed to understand artificial intelligence as a set of software and hardware methods, methods and tools (computer programs) that implement one or more cognitive functions equivalent to the corresponding

¹² *Artificial intelligence*, *English Oxford Dictionaries*, https://en.oxforddictionaries.com/definition/artificial_intelligence (accessed: 15.04.2020).

¹³ J.P.A. Lenardon, *The regulation of artificial intelligence*, Tilburg 2017, <http://arno.uvt.nl/show.cgi?fid=142832> (accessed: 15.04.2020).

¹⁴ L. Floridi, M. Taddeo, M. Turilli, *Turing's imitation game: still an impossible challenge for all machines and some judges – an evaluation of the 2008 Loebner contest*, “Minds and Machines” 2009, vol. 19(1), p. 145–150.

¹⁵ Financial Stability Board, *Artificial Intelligence and machine learning in financial services*, 1 November 2017, <https://www.fsb.org/wp-content/uploads/P011117.pdf> (accessed: 15.04.2020).

¹⁶ A. Smith, *Artificial intelligence*, 2015, <http://nationalmagazine.ca/Articles/Fall-Issue-2015/Artificial-intelligence.aspx> (accessed: 15.04.2020); T. Urban, *The AI Revolution: The Road to Superintelligence*, 22 January 2015, <https://waitbutwhy.com/2015/01/artificial-intelligence-revolution1.html> (accessed: 15.04.2020).

¹⁷ B.J. Copeland, *Artificial intelligence (AI)*, 12 January 2017, <https://www.britannica.com/technology/artificial-intelligence>.

¹⁸ N. Bostrom, *How long before superintelligence?*, “International Journal of Future Studies” 1998, vol. 2, <https://nickbostrom.com/superintelligence.html> (accessed: 15.04.2020).

human cognitive functions¹⁹. He argues that legal science is sufficient to represent artificial intelligence in the form of a “black box”, which is described by the function “input-output” (that is, a functional relationship between input and output signals (information), which is equivalent to certain cognitive functions of the human brain, but for which the technical and technological details of the internal structure and functioning are not known). This means that artificial intelligence processes the processing (transformation) of input information following algorithms that implement human brain functions and knowledge previously embedded in artificial intelligence or acquired in the process of self-development, into new information that can serve a role or direct information impact to manage some processes or to act as source information for a new (next) stage of information processing²⁰.

Among legal definitions, in particular in EU law, artificial intelligence is described as highly sophisticated systems that analyze established conditions and, to a certain extent, make autonomous decisions to achieve certain goals. The Organization for Economic Co-operation and Development, in its principles approved in May 2019, indicates that “artificial intelligence is a machine system that can make predictions, recommendations, or decisions by influencing the real or virtual environment based on a set of goals. Such systems can be designed to work with different levels of autonomy”²¹.

However, for the law, it would be worth considering the definition of artificial intelligence from the point of view of its interaction with man, the principles of its application and the level of responsibility.

In this sense, the Organization for Economic Co-operation and Development’s recommendations on artificial intelligence should be addressed and adopted in June 2019 by the General Human-Centered Principles of the G20²², as well as the Coordination Plan and the Ethical Guidelines for Reliability of Artificial Intelligence²³.

The Economic Co-operation and Development Organization’s recommendations on artificial intelligence set out five interrelated principles: growth, sustainable development and prosperity; human-centric values and justice; transparency and clarity; reliability, protection and security; responsibility.

¹⁹ O.A. Baranov, *Internet rechei i shtuchnyi intelekt: vytoky problemy pravovoho rehuliuwannia* [The Internet of Things and artificial intelligence: the origins of the problem of legal regulation], IT-pravo: problemy ta perspektyvy rozvytku v Ukraini: zbirnyk materialiv II-yi Mizhnarodnoi naukovo-praktychnoi konferentsii (Lviv, 17 lystopada 2017 r.), NU «Lvivska politekhnika», Lviv 2017, p. 18–42, <http://aphd.ua/publication-377/> (accessed: 15.04.2020).

²⁰ Ibidem.

²¹ Recommendation of the Council on Artificial Intelligence, <https://www.fsmb.org/siteassets/artificial-intelligence/pdfs/oecd-recommendation-on-ai-en.pdf> (accessed: 15.04.2020).

²² G20 Ministerial Statement on Trade and Digital Economy, https://trade.ec.europa.eu/doclib/docs/2019/june/tradoc_157920.pdf (accessed: 15.04.2020).

²³ ETHICS GUIDELINES FOR TRUSTWORTHY AI, <https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai> (accessed: 15.04.2020).

In addition to enhancing technological and industrial capacity, the European Commission's Coordination Plan provides for a legal and ethical foundation that is consistent with the values of the European Union and the European Charter on Human Rights²⁴.

It is important that these documents, which reflect the current trend in the processing of personal data, emphasize ethics and human rights protection. At the same time, the main issues are freedom, dignity, autonomy, privacy, non-discrimination, equality, social justice and labour rights.

Therefore, summarizing the above, it should be noted the following features of artificial intelligence, which are conceived for the legal regulation of these technologies:

- artificial intelligence is created by man and is the product of his mental (creative, technical) activity;
- artificial intelligence can perform the tasks set by man before him;
- it can think and act rationally;
- the purpose of artificial intelligence is to reduce human effort and assist in making intelligent decisions;
- capable of machine learning and autonomy from human actions;
- is a complex concept because it combines the knowledge of various fields of science (philosophy, mathematics, economics, neuroscience, psychology, computer engineering, management theory, linguistics).

The debate over the definition of the artificial intelligence legal regime

Artificial intelligence technologies are progressing dynamically and human contribution to their activities will be minimized over time; it seems – they act independently²⁵. In this case, when they reach such a level of autonomy, how should their place in the legal field be determined? Does the degree of artificial intelligence autonomy (from a person) affect their legal regime?

The legal regime regulates social relations by limiting or increasing the amount of legal personality, the number of law objects and by establishing a special mechanism of legal regulation²⁶. In addition to the elements of the legal regulation mechanism (norms of law, legal facts, legal relations, acts of

²⁴ Coordinated Plan on Artificial Intelligence (COM(2018) 795 final), <https://ec.europa.eu/transparency/regdoc/rep/1/2018/EN/COM-2018-795-F1-EN-MAIN-PART-1.PDF> (accessed: 15.04.2020).

²⁵ S. Chopra, F. Laurence, *White A Legal Theory for Autonomous Artificial Agents*, University of Michigan Press, 2011, p. 249.

²⁶ D.D. Kosse, *Pravovyi rezhym ta mekhanizm pravovoho rehuliuwannia: oznaky ta spivvidnoshennia* [Legal regime and mechanism of legal regulation: signs and correlations], "Derzhava i pravo" 2009, vyp. 44, p. 25–31.

realization of rights and obligations, enforcement) within the framework of which the legal regime is exercised, the structure of the latter includes such components as the subject and its legal status, object, methods of interaction of specific types of subjects with objects and guarantees system (first of all legal liability for violation of the regime)²⁷.

The existing doctrine of law offers possible analogies on which the legal regime of artificial intelligence can be agreed.

Defining the place of artificial intelligence in law, it is understood as²⁸:

- subject, person (compare its status with a legal entity, person (child or employee), equate to the legal regime of the animal);
- object (equating artificial intelligence to commodity).

This distribution is to some extent conditional since it is first and foremost related to the identification of responsibility for actions (activities) related to the use of artificial intelligence.

The ability of the subject of the right to have rights and exercise them, as well as to take responsibility for their actions is perhaps the most important condition for legal personality. Therefore, the resolution of the question of artificial intelligence legal personality in the context of the theory of responsibility is quite acceptable.

First of all, the concept of the subject of law (person) should be extended to artificial intelligence. In this context, the legal position of artificial intelligence is compared with that of a legal entity, animals, children or employees.

The equation in the legal status of a legal entity and artificial intelligence is actively substantiated in the scientific literature. Such parallels are drawn not only in terms of legal status but also in the context of legal liability. However, the content of any legal entity is people and they directly form the position of the legal entity on its behalf. The ability of artificial intelligence to self-reproduction and machine learning completely distances artificial intelligence from humans. Moreover, artificial intelligence, which is devoid of sensitivity, is guided solely by algorithmic processes and is not capable of expressing emotions that can affect its behaviour (both positive and negative). Therefore,

²⁷ Ibidem.

²⁸ J. Chen, P. Burgess, *The boundaries of legal personhood: how spontaneous intelligence can problematise differences between humans, artificial intelligence, companies and animals*, 2019, <https://link.springer.com/article/10.1007%2Fs10506-018-9229-x> (accessed: 15.04.2020); Sh. Bayern, T. Burri, T.D. Grant, D.M. Häusermann, F.Möslein, R. Williams, *Company Law and Autonomous Systems: A Blueprint for Lawyers, Entrepreneurs, and Regulators*, "Hastings Sci. & Tech. L.J." 2017, vol. 9(135), https://repository.uchastings.edu/hastings_science_technology_law_journal/vol9/iss2/1 (accessed: 15.04.2020); S. Chopra, F. Laurence, *White A Legal Theory for Autonomous Artificial Agents*, University of Michigan Press, 2011, p. 249; P. Opitz, *Civil Liability and Autonomous Robotic Machines: Approaches in the EU and US*, "Stanford-Vienna TTLF Working Paper", no. 43, <http://tllf.stanford.edu>; https://law.stanford.edu/wp-content/uploads/2019/02/opitz_wp43.pdf (accessed: 15.04.2020).

comparing the legal regime of artificial intelligence with a legal entity raises more questions than answers and requires more thorough research.

An analogy is drawn with animals, which at first glance seems plausible since animals and robots are entities, they can think and act independently of their human owners²⁹. The purpose of comparing robots to animals is not to fully identify them, but to justify the unpredictability of robots and animals in terms of the user. However, there is one fundamental argument against the application of animal liability theory. It is that animals act according to instincts, whereas autonomous systems are controlled by algorithmic processes “similar to rational human thinking”³⁰. This is their essence – the robots are mechanical, and the animals are biological. However, in the US and the EU, some lawyers propose liability rules governing responsibility for the actions of wild and domestic animals to apply to robots and their owners.

The possibility of dealing with autonomous work as children is also considered. They suggest that the owners of autonomous systems can be held responsible for the actions of their robots³¹. *Considering Robots as Children, Negligence and Inadequate Care May Be Responsible under US Law*³². In most European countries, parents have a similar responsibility for their children³³.

At first glance, such an analogy to legal personality is valid, since autonomous robots can be seen as adapted and unpredictable as young children³⁴. Robots could be compared to children because of their “relatively high intelligence and low moral responsibilities”³⁵. In addition, minors are managed by parents and can often change their behaviour according to parental influence³⁶.

²⁹ Y. Wilks, *Responsible Computers?*, IJCAI'85: Proceedings of the 9th International Joint Conference on Artificial Intelligence, August 1985, vol. 2, p. 1279–1280, <https://www.ijcai.org/Proceedings/85-2/Papers/117.pdf> (accessed: 15.04.2020); see also: Chopra/White, *A Legal Theory for Autonomous Artificial Agents*, 2011, p. 120.

³⁰ P. Čerka, J. Grigienė, G. Sirbikytė, *Liability for damages caused by artificial intelligence*, “Computer Law & Security Review” 2015, vol. 31(3), p. 376–389.

³¹ P. Opitz, op. cit.

³² F.P. Hubbard, *Sophisticated Robots: Balancing Liability, Regulation, and Innovation*, “Florida Law Review” 2014, vol. 66(1803), https://scholarcommons.sc.edu/cgi/viewcontent.cgi?article=2027&context=law_facpub (accessed: 15.04.2020).

³³ P. Giliker, *Vicarious Liability in Tort: A Comparative Perspective*, “Cambridge Studies in International and Comparative Law” 2010, p. I–X.

³⁴ R. Janal, *Die deliktische Haftung beim Einsatz von Robotern – Lehren aus der Haftung für Sachen und Gehilfen*, “Gless/Seelmann, Intelligente Agenten und das Recht” 2016, vol. 141, p. 143.

³⁵ S.N. Lehmann-Wilzig, *Frankenstein Unbound – Towards a legal definition of Artificial Intelligence*, “Futures” 1981, vol. 442, p. 450.

³⁶ Ch. Leroux, R. Labruto, Ch. Boscarato, F. Caroleo, J-P. Günther et al., *Suggestion For A Green Paper on Legal Issues in Robotics*, Grant Agreement, no. 248552, public report, December 2012, p. 55, https://www.unipv-lawtech.eu/files/euRobotics-legal-issues-in-robotics-DRAFT_6j6ry-jyp.pdf (accessed: 15.04.2020).

But comparing robots and children is questionable for fundamental reasons. The presence of certain similarities in the legal personality of robots and children does not change the fact that the basic public goals for robots and children are different³⁷. As children grow up, they become fully-fledged and independent entities in society. And artificial intelligence, in general, remains under human control. Even the capabilities of machine learning and the unpredictability of artificial intelligence technologies do not change their goal of being under human control³⁸.

The possibility of comparing robot and employee is acceptable under the well-known doctrine of the responsible chief in the US and the EU³⁹. Unambiguously, such a theory contributes to the spread of artificial intelligence technologies in production, offices and others. Thus, an employer in the United States bears the responsibility to third parties for the cruel acts of their employees⁴⁰. Although this type of responsibility is not directly related to the actions of the chief, it is strict enough.

Many problematic issues are first and foremost related to the continuous improvement of artificial intelligence and its ability to make autonomous decisions. However, even autonomy in the decision-making process and blaming artificial intelligence, in the end, will not make it possible to compensate for the harm done. That is why the owner should be responsible for the actions of artificial intelligence, even if they go beyond employment and were not managed and produced by artificial intelligence on their own⁴¹.

The employer should understand the risks of using sophisticated and autonomous artificial intelligence technologies, which are primarily related to the possible loss of control over their activities (in particular, the ways and means of artificial intelligence).

On the subject of understanding artificial intelligence technology as an object of law, it is equally interesting and debatable. Artificial Intelligence is seen as an object of high risk. At the same time, the use of the object of high risk involves the use of rigid liability⁴².

A continuous constructive complication of the activity of artificial intelligence and robots, despite technical harassment, carries with it several threats to

³⁷ R. Janal, *Die deliktische Haftung beim Einsatz von Robotern – Lehren aus der Haftung für Sachen und Gehilfen*, "Gless/Seelmann, Intelligente Agenten und das Recht" 2016, vol. 141, p. 143.

³⁸ Ibidem.

³⁹ P. Čerka, J. Grigienė, G. Sirbikytė, op. cit., p. 376–389.

⁴⁰ F.P. Hubbard, op. cit.

⁴¹ R. Janal, *Die deliktische Haftung beim Einsatz von Robotern – Lehren aus der Haftung für Sachen und Gehilfen*, "Gless/Seelmann, Intelligente Agenten und das Recht" 2016, vol. 141, p. 143.

⁴² D.B. Dobbs, *The Law of Torts*, Hornbook series Practitioner treatise series, West Group, 2001, p. 1737; P. Čerka, J. Grigienė, G. Sirbikytė, op. cit., p. 376–389.

humans. At the same time, unlike the objects of high-risk sources, the analysis of which we are accustomed to seeing in the rule of law, artificial intelligence can behave in a completely different way, completely unforeseen rule of law.

In this context, Cerka defined the source of danger as “a specific object of the physical world that has specific properties” and as an example cites artificial intelligence that is dangerous given its ability to gather information from the environment and respond autonomously⁴³.

However, the more autonomous systems penetrate our lives, the less likely they are to be considered dangerous⁴⁴. It might be correct to classify artificial intelligence technologies by certain factors, such as, for example, the level of independence, the ability to learn, and the level of risk. This would allow these technologies to be graded as objects of law and more stringent legal requirements applied.

Analyzing the possible options for determining the legal status of artificial intelligence, it is most appropriate to understand it as an object of law, which has a special legal regime. The definition of artificial intelligence as a source of increased danger will promote a cautious approach to its use in the most important areas of human life.

According to Paul Opitz, “the theory of dangerous activity may not be a long-term solution”⁴⁵. However, at this stage, it is the right decision that will not hinder the development of scientific and technological progress and at the same time protect the person from the possible risks.

Legal risks and artificial intelligence: an overview of the obvious issues

Artificial intelligence has come into our lives not so unexpectedly, but it has dynamically changed the order of things we are used to. Man has always sought to make his life easier, reduce his efforts to succeed, modernize production, make efficient use of available resources. However, it would seem that such great achievements did not come by themselves, but created several risks for the person – the creator or consumer of modern technologies.

Lawyers are well aware of the phrase “Jus est ars boni et aequi” (“law is the art of good and justice”). Entire systems of law are built on centuries-old ideas of justice. Justice is the foundation of law. This is beyond doubt.

Reflecting on contemporary politics in the book “On Mercy”⁴⁶, Malcolm Bull argues that mercy, not justice, is the basis for politics. He understands

⁴³ Ibidem.

⁴⁴ F.P. Hubbard, *op. cit.*

⁴⁵ P. Opitz, *op. cit.*

⁴⁶ M. Bull, *On Mercy*, Princeton University Press, 2019, p. 208.

mercy as an act of the more strong to vulnerable. He argues that in a world dominated by artificial intelligence, we are all becoming vulnerable to power beyond our knowledge and control; so, according to him, we have to program the power of mercy on machines⁴⁷.

However, mercy and other emotions are inherent in man, but not artificial intelligence, which is guided solely by algorithmic processes. For a person to be protected in the world of modern technology, there must be a clear system of legal obligations for developers and users of artificial intelligence.

We need to find effective legal mechanisms that will not destroy the effectiveness of artificial intelligence technologies but will be designed with particular care for human values and fundamental human interests⁴⁸. Technologies must be compatible with human rights. This is not a requirement of time, but a requirement of common sense.

Apart from the need for a legal balance with human rights, there is the problem of a relatively low level of technical knowledge in society. For example, in the case of transition to electronic services in public administration or medicine, the question arises of their accessibility, first of all, for the elderly, children.

The next problem is the need for law and legal doctrine to adapt to the world of modern technology. It is necessary to clearly define with the questions of the legal regime of artificial intelligence, the peculiarities of its use in various spheres of human life, responsibility for the possible harmful activity. These questions are fundamental. Our future depends on them.

It is also worrying that the issue of technology is changing the format of democracy that we have known for decades. Technology should not prevail over democracy. The law, as a product of democracy, must protect the freedom of the individual, while at the same time functioning in society as the product of a common consensus, an expression of the will. This begs the question: will not modern technologies in public administration limit the effectiveness of public control over the actions of the authorities, which we have seen through direct communication between society and the authorities? Will there not be a loss of human-state connection in general?

Technologies also influence political processes. Today, technology is a means to a political end. Will we lose the freedom of our thought in this case? Will technology not dictate the limits of our freedom in its full sense? These issues need detailed study.

Moreover, artificial intelligence seeks to attract our attention, and this can affect the formation of our will. James Williams, in his book, *Stand Out*

⁴⁷ Ibidem. J. Williams, *Stand out of our Light*, Cambridge University Press, 2018, p. 106, https://static1.squarespace.com/static/58727b5a9de4bbf0b38db631/t/5b827bd0b8a045cacc86f99b/1535278036430/Stand_out_of_our_Light.pdf%20 (accessed: 15.04.2020).

⁴⁸ Ibidem.

of Our Light, states that will is the source of democracy. He notes that the digital economy is damaging to the will of the people and that it is “hitting the very foundations of democracy”. This can “directly threaten” not only individual freedom and autonomy but also collective freedom⁴⁹. Subordinating a person’s life to code-driven processes means that the code can gain control of our thinking, reducing human choices and choices.

And lastly, it is a question of responsibility. There are no compromises here. Civil liability should be specific if the damage was caused by the use of artificial intelligence.

The problem is that our liability laws envisage a person as the subject of responsibility⁵⁰, and in this case, artificial intelligence is understood as a tool.

The tool should be fully managed by the person using it. However, the possibilities for machine learning and the unpredictability of artificial intelligence extends the meaning of the tool. In this regard, a number of scientists and institutions have made suggestions for future adjustments to the liability system, including the introduction of a strict liability statute for owners or users of intelligent robotic machines⁵¹.

Prospects for the development of artificial intelligence within the framework of civil law

With the use of artificial intelligence in various spheres of human activity, civil law regulation of several civil law institutions such as contract law, property law, institute of civil liability changes. Such changes are justifiably slow since hasty rules will not contribute to the sustainability of the law and may threaten the entire legal system. However, active use of artificial intelligence already requires some decisions of the legislator or at least adaptation of these relations to the current norms of civil law.

For example, the regulation requires widely used “reasonable contracts” that can be fully or partially concluded and executed without human

⁴⁹ J.F. Weaver, *Robots Are People Too: How Siri, Google Car, and Artificial Intelligence Will Force Us to Change Our Laws*, 26 November 2013, p. 234, [https://books.google.com.ua/books?id=UY6OAwAAQBAJ&pg=PR4&lpg=PR4&dq=Weaver,+Robots+Are+People+Too,+18+\(2014&source=bl&ots=Sqk9HBmPCX&sig=ACfU3U1DGiFI1hjR7vy9RxXk2godP1ZKA&hl=uk&sa=X&ved=2ahUKewiC9_eA68HnAhVqkIsKHV12DDMQ6AEwAnoECAYQAQ#v=onepage&q=Weaver%2C%20Robots%20Are%20People%20Too%2C%2018%20\(2014&f=false](https://books.google.com.ua/books?id=UY6OAwAAQBAJ&pg=PR4&lpg=PR4&dq=Weaver,+Robots+Are+People+Too,+18+(2014&source=bl&ots=Sqk9HBmPCX&sig=ACfU3U1DGiFI1hjR7vy9RxXk2godP1ZKA&hl=uk&sa=X&ved=2ahUKewiC9_eA68HnAhVqkIsKHV12DDMQ6AEwAnoECAYQAQ#v=onepage&q=Weaver%2C%20Robots%20Are%20People%20Too%2C%2018%20(2014&f=false) (accessed: 15.04.2020).

⁵⁰ P. Opitz, op. cit.

⁵¹ R. de Caria, *The Legal Meaning of Smart Contracts*, “European Review of Private Law” 2019, no. 6, https://iris.unito.it/retrieve/handle/2318/1651566/464500/R.%20de%20Caria%2c%20The%20Legal%20Meaning%20of%20Smart%20Contracts%2c%20ERPL_26_0602.pdf (accessed: 15.04.2020).

intervention⁵². The law should ensure the security of such agreements and guarantee the expression of the true will of the parties to avoid error, fraud or deception. As the agreement between the buyer and seller is implemented by the code that exists in the blockchain when the code conditions are fulfilled, the goods are released and the contract is executed. With such mobility, the right called for by legal means is to guarantee the parties “reasonable contracts” their stability and security. The coding algorithm must meet human rights standards. It is important.

Or if the artificial intelligence used by the parties to the contract to optimize the contracting process decides on its own, can we consider it the will of the parties to the contract? These issues should be reflected in the rule of civil law.

Property law will also need to be adapted. If computers using artificial intelligence generate intellectual property, who owns that property? There are many risks and prospects too. Today, artificial intelligence technologies are writing articles for the New York Times, and tomorrow they will write “wise laws” for us. Changes in lawmaking and the legal profession are already present and smart technologies are helping to increase the technical level of the lawmaking process. However, these technologies are unlikely to help us solve the problems of the philosophical approach to understanding law.

In addition, lawyers need to understand the peculiarities of artificial intelligence decision-making. To do this, the right must strike a balance between the confidentiality of the creation and activities of artificial intelligence and human rights.

A strict civil liability regime is required to reduce the risks of artificial intelligence. It should be noted that the prospect of introducing unified artificial intelligence standards and mandatory insurance requirements are positive. However, this may not be enough soon to fully guarantee the protection of human rights and digital equality.

Therefore, a further draft law should be to develop an appropriate structure of individual rights that will enable a person to control his or her digital life⁵³.

Nevertheless, there is an urgent need for international cooperation to establish coherent rules for the use of artificial intelligence. At the same time, ethical considerations, consumer interests, and the need for confidentiality should be common to all. This will be the most difficult task with important consequences for the well-being of our societies in the coming years⁵⁴.

⁵² L. Hodge, *Law and technological change*, British Irish Commercial Bar Association Signet Library, Edinburgh, Justice of The Supreme Court of the United Kingdom 4 April 2019, <https://www.supremecourt.uk/docs/speech-190404.pdf> (accessed: 15.04.2020).

⁵³ H. Brooke, *op. cit.*

⁵⁴ *Ibidem.*

And the last. Having introduced artificial intelligence into our lives, we must understand that these are great resources. The state must understand not only the benefits of artificial intelligence but also be prepared to finance the development of these technologies. There must be reasonable control by the state. Support and control.

Conclusion

Artificial Intelligence provides tremendous opportunities to improve human life. However, these opportunities go hand in hand with great risks for man and all mankind. As practice shows, artificial intelligence technologies have no boundaries – they are rapidly expanding and gaining popularity in our daily lives.

Of course, we prefer quick decisions, forgetting that they are not made by us, but artificial intelligence makes for us. We give tacit consent when we do not protect our rights to private information and the right to freedom in general. Freedom of thought, reason, development. Will we endure this duel when we forget how to think? I doubt it.

Law must find appropriate concepts and practical ways of building the digital world. And not necessarily specific rules of conduct, they can be abstract enough, but as effective as possible.

The law is a vehicle for the protection of human values⁵⁵. The law should provide structures for artificial intelligence to be used to enhance human capacity, dignity, and not eliminate them.

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⁵⁵ Ibidem.

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Summary

Influence of artificial intelligence on the legal system

Keywords: artificial intelligence, legal system, civil law, legal personality, the object of law, subject of law (person).

Due to the extremely rapid development of technologies and artificial intelligence, there are changes in civil law relations and their legal regulation. Lawyers and legislators are trying to solve the new problems facing the legal system by using classical approaches in legal regulation. However, such decisions are not always effective. On the one hand, lawyers seek to regulate in detail the mechanism of creation and use of artificial intelligence. On the other hand, the state contributes to their development intending to win the world race for the most advanced technologies. The problem is also what place the artificial intelligence in law should occupy. Is it an object or subject of law (person, an entity)? These issues are philosophical and need deep research. The author offers his thoughts on the solution to this issue. This article explores the features of the interaction between law and artificial intelligence, the legal regime of artificial intelligence, and the risks that arise when addressing the place of artificial intelligence in law.

According to the authors, the law should find appropriate practical ways to build the digital world. It does not have to be specific rules of conduct. Artificial intelligence laws can be abstract enough, but as effective as possible. Artificial intelligence must be used to enhance human dignity, and not to eliminate it.

Streszczenie

Wpływ sztucznej inteligencji na system prawny

Słowa kluczowe: sztuczna inteligencja, system prawny, prawo cywilne, osobowość prawna, przedmiot prawa, podmiot prawa.

W związku z niezwykle szybkim rozwojem technologii i sztucznej inteligencji zachodzą zmiany w stosunkach cywilnoprawnych i ich regulacji prawnej. Prawnicy i ustawodawcy próbują rozwiązywać nowe problemy stojące przed systemem prawnym, stosując klasyczne podejścia w regulacji prawnej. Jednak takie decyzje nie zawsze są skuteczne. Z jednej strony prawnicy dążą do szczegółowego uregulowania mechanizmu tworzenia i wykorzystania sztucznej inteligencji. Z drugiej strony państwo przyczynia się do ich rozwoju, aby wygrać światowy wyścig o najbardziej zaawansowane technologie. Problemem jest też

to, jakie miejsce powinna zajmować w prawie sztuczna inteligencja. Czy jest to przedmiot lub podmiot prawa (osoba, podmiot)? Zagadnienia te mają charakter filozoficzny i wymagają szczegółowych badań. Autorka przedstawia swoje przemyślenia na temat rozwiązania tego problemu. W artykule omówiono cechy interakcji między prawem a sztuczną inteligencją, reżim prawny sztucznej inteligencji oraz zagrożenia, które pojawiają się w przypadku zajmowania się miejscem sztucznej inteligencji w prawie.

Zdaniem autorki prawo powinno znaleźć odpowiednie praktyczne sposoby budowania cyfrowego świata. Nie muszą to być konkretne zasady postępowania. Prawa sztucznej inteligencji mogą być tak abstrakcyjne, jak i skuteczne jak to tylko możliwe. Ważne, aby sztuczna inteligencja służyła wzmocnieniu ludzkiej godności, a nie jej eliminowaniu.

