

**Olha ZOZULIAK, Alla V. ZELISKO, Nataliia Ya.
BASHURYN, Andrii A. ALBU**

A inteligência artificial como objeto de regulamentação do direito civil

DOI: [https://doi.org/10.34625/issn.2183-2705\(34\)2023.ic-14](https://doi.org/10.34625/issn.2183-2705(34)2023.ic-14)

Secção I

Investigação Científica*

* Os artigos presentes nesta secção foram sujeitos a processo de revisão segundo o método *blind peer review*.

Artificial intelligence as an object of civil law regulation

A inteligência artificial como objecto de regulamentação do direito civil

Olha I. ZOZULIAK¹

Alla V. ZELISKO²

Nataliia Ya. BASHURYN³

Andrii A. ALBU⁴

ABSTRACT: The phrase "artificial intelligence" was first used in 1956, and since then it has raised a lot of questions that still have no answer. In general, artificial intelligence is a system that simulates human behaviour at an elementary level. This is necessary so that the machine performs various tasks and learns something new in the process of performing. The purpose of the study is to examine and discuss two concepts of legal regulation concerning artificial intelligence (AI) – the subject theory and the object theory. The study aims to analyze these concepts and present arguments for perceiving AI as an object of civil legal relations in the development of civil legislation in Ukraine. The article used such scientific methods as literature review, conceptual analysis, argumentation, comparative analysis, legal interpretation and synthesis. The rules for regulating relations on the use of artificial intelligence should be concentrated within the framework of intellectual property law, IT laws and consumer legislation.

KEYWORDS: artificial intelligence regulation; subjects of civil law; objects of civil law; source of increased danger.

RESUMO: A frase "inteligência artificial" foi usada pela primeira vez em 1956 e, desde então, levantou muitas questões que ainda não têm resposta. Em geral, a inteligência artificial é um sistema que simula o comportamento humano em um nível elementar. Isso é necessário para que a máquina execute várias tarefas e aprenda algo novo no processo de execução. O objetivo do estudo é examinar e discutir dois conceitos de regulamentação legal sobre inteligência artificial (IA) – a teoria do sujeito e a teoria do objeto. O estudo visa analisar esses conceitos e apresentar argumentos para perceber a IA como um objeto de relações jurídicas civis no desenvolvimento da legislação civil na Ucrânia. O artigo utilizou métodos científicos como revisão de literatura, análise conceitual, argumentação, análise comparativa, interpretação jurídica e síntese. As regras para regular as relações sobre o uso de inteligência artificial devem ser concentradas no âmbito da lei de propriedade intelectual, leis de TI e legislação do consumidor.

PALAVRAS-CHAVE: regulamentação de inteligência artificial; sujeitos de direito civil; objectos de direito civil; fonte de perigo acrescido.

¹ Department of Civil Law, Vasyl Stefanyk Precarpathian National University, 76018, 57 Shevchenko Str., Ivano-Frankivsk, Ukraine.

² Department of Civil Law, Vasyl Stefanyk Precarpathian National University, 76018, 57 Shevchenko Str., Ivano-Frankivsk, Ukraine.

³ Department of Legal Proceedings, Vasyl Stefanyk Precarpathian National University, 76018, 57 Shevchenko Str., Ivano-Frankivsk, Ukraine.

⁴ Department of Constitutional, International and Administrative Law, Vasyl Stefanyk Precarpathian National University, 76018, 57 Shevchenko Str., Ivano-Frankivsk, Ukraine.

Introduction

Artificial intelligence (AI) has emerged as a significant technological advancement, raising numerous questions and challenges in various fields, including law and regulation. As AI continues to evolve and integrate into society, it becomes crucial to establish appropriate legal frameworks to govern its use and address associated implications. Here it is worth quoting the words of Elon Musk, who notes that if humanity acts retroactively in matters of regulating artificial intelligence, it may be too late because the sphere of using artificial intelligence is the area where it is worth being proactive in matters of regulation⁵. Of course, this opinion is valid and requires serious legal analysis in the search for the concept of regulating artificial intelligence. Indeed, the study of legal aspects of artificial intelligence in terms of its consolidation within the framework of national legislation is not a new problem for scientists. This issue has been quite actively revealed by scientists-representatives of various branches of law-for several years now. But if earlier questions were raised about the need for legal consolidation of such a phenomenon as artificial intelligence in general, today certain concepts are being formed on this issue, revealing a corresponding vision regarding the vector of development of legislation in this area, and specific approaches have been developed⁶.

As a branch of computer science, AI seeks to perform tasks that normally require human intelligence, such as speech recognition, natural language processing, decision making, planning, problem solving and learning^{7, 8}. To this end, AI resorts to the use of machine learning algorithms and techniques, artificial neural networks, data processing and other technologies to create

⁵ Elon Musk argues unregulated AI may be the “biggest risk we face as a civilization”. 2017. Available from <http://www.businessinsider.com/elon-musk-unregulated-ai-may-be-the-biggest-risk-we-face-as-a-civilization-2017-7>

⁶ MARTSENKO, N. Determining the place of artificial intelligence in civil law. *Studia Prawnoustrojowe*, 2020, vol. 47, pp. 157-173.

⁷ SANDRA, L., HERYADI, Y., LUKAS, SUPARTA, W., WIBOWO, A. Deep Learning Based Facial Emotion Recognition using Multiple Layers Model. In: *2021 International Conference on Advanced Mechatronics, Intelligent Manufacture and Industrial Automation, ICAMIMIA 2021 – Proceeding*, 2021, pp. 137-142. Surabaya: Institute of Electrical and Electronics Engineers.

⁸ BARLYBAYEV, A., SHARIPBAY, A. An intelligent system for learning, controlling and assessment knowledge. *Information (Japan)*, 2015, vol. 18, no. 5, pp. 1817-1827.

systems that can learn to adapt to new situations and contexts^{9, 10}. AI allows the analysis of large amounts of data, extracting patterns and insights that can be used to improve processes, optimize systems and even create new technologies and solutions. Therefore, it can be used in different areas, from the well-known virtual assistants on smartphones, in autonomous cars, but also in medical diagnosis and in solving legal problems. Having arrived here, the authors understand the need to proceed with its regulation, either as a subject of law or as an object.

It is also worth noting that scientists agree that the issues of artificial intelligence need to be regulated within the framework of civil legislation. N. Martsenko¹¹ reveals the inexpediency of understanding a robot and artificial intelligence as a subject of civil legal relations. According to the author, this may create a situation of legal uncertainty. Also, the article by N. Martsenko discusses the EU legislation and the use of the term "electronic person"¹².

Also, the problem of artificial intelligence as a subject of civil law was considered by B.S. Shcherbina and V.V. Tkachenko¹³. In their opinion, the use of artificial intelligence technologies in such areas as medicine or public administration indicates that it is not just an object, but an object of the legal regime of a source of increased danger. This is done to better protect the rights of users of artificial intelligence technologies.

At the same time, it is extremely important to be able to develop the existing mechanisms of the civil law system with the improvement of its institutions based on conceptually correct approaches based on the subject-object and subject-methodological characteristics of the industry. This thesis is the basis of the work of N. Martsenko¹⁴, which proves that the regulation of civil

⁹ ZIEMIANIN, K. Civil legal personality of artificial intelligence. Future or utopia? *Internet Policy Review*, 2021, vol. 10, no. 2, pp. 1-22.

¹⁰ GETMAN, A. P., KARASIUK, V. V. A crowdsourcing approach to building a legal ontology from text. *Artificial Intelligence and Law*, 2014, vol. 22, no. 3, pp. 313-335.

¹¹ MARTSENKO, N. Determining the place of artificial intelligence in civil law. *Studia Prawnoustrojowe*, 2020, vol. 47, pp. 157-173.

¹² MARTSENKO, N. Determining the place of artificial intelligence in civil law. *Studia Prawnoustrojowe*, 2020, vol. 47, pp. 157-173.

¹³ SHCHERBINA, B. S., TKACHENKO, V. V. Artificial intelligence as a subject of civil law. *Scientific Works of National Aviation University. Series: Law Journal "Air and Space Law"*, 2021, vol. 1, no. 58, pp. 142-148.

¹⁴ MARTSENKO, N. The legal regime of artificial intelligence in civil law. *Actual Problems of Jurisprudence*, 2019, vol. 4, no. 20, pp. 91-98.

liability at the level of consumer relations provides grounds for understanding artificial intelligence as a product (commodity).

The use and development of artificial intelligence can raise controversial issues in legal regulation. That is why the idea of creating one holistic legal mechanism for these systems has been discussed for several years. This mechanism will monitor the activity of machines and, in case of deviation from a given trajectory, will intervene and resolve disputes. However, the development of this legal mechanism may take years, and technologies are developing every day, and the question arises – how to regulate the legal activity of artificial intelligence now? Because there is always the possibility of an emergency that artificial intelligence can create, but the question of responsibility for this remains open. In history, there have even been cases when a person transferred negative results of their activities to a machine, so legal regulation is required¹⁵. In any case, the most important thing is always the protection of people and their lives, so it is necessary to put the interests of a person first, to adjust all the activities of machines to the needs of a person.

According to A.A. Hrynychuk¹⁶, the main criterion that would allow for the specific identification of an object and attribute it to artificial intelligence is the possession of cognitive functions of human intelligence – logical thinking, learning and self-improvement. Just a set of functional properties of intelligence allow scientists to distinguish it into two types: weak (performs cognitive tasks through a pre-written algorithm of actions, without deviating from it) and strong (capable of independent learning and thinking through constant self-programming based on the updated base of the obtained material).

The purpose of this study is to examine and discuss the concept of legal regulation concerning artificial intelligence as an object of civil law regulation.

¹⁵ YAROSHENKO, O. M., VAPNYARCHUK, N. M., BURNYAGINA, Y. M., KOZACHOK-TRUSH, N. V., MOHILEVSKYI, L. V. Professional development of employees as the way to innovative country integration. *Journal of Advanced Research in Law and Economics*, 2020, vol. 11, no. 2, pp. 683-695.

¹⁶ HRYNCHUK, A. A. Artificial intelligence as an object of legal regulation: concepts, types and features. *Journal of Eastern European Law*. 2019. Available from http://easternlaw.com.ua/wp-content/uploads/2019/12/hrynychuk_70.pdf.

Materials and Methods

At certain stages of the study, certain scientific methods were used, including literature review, conceptual analysis, argumentation, comparative analysis, legal interpretation and synthesis. The literature review involved an extensive examination of existing research and legal frameworks pertaining to artificial intelligence.

Conceptual analysis was conducted to explore and analyze the subject theory and the object theory in relation to the legal regulation of artificial intelligence. This analysis aimed to provide a comprehensive understanding of these theories and their implications.

A comparative analysis was carried out to investigate diverse approaches to regulation in different jurisdictions. This analysis allowed for the identification of similarities, differences, and best practices, contributing to a broader perspective on the topic.

Legal interpretation was employed to interpret and analyze existing laws and principles within the context of artificial intelligence. The Civil Code of Ukraine served as the primary legal regulator for this study.

The article utilized argumentation to present well-supported arguments based on logical reasoning, evidence, and the findings from the literature review, conceptual analysis, comparative analysis, and legal interpretation. The synthesis method was employed to integrate and combine the conclusions, arguments, and findings from the various scientific methods used. This facilitated the proposal of an approach to the development of civil law in Ukraine, with a specific focus on intellectual property law, information technology law, and consumer protection law.

It is important to note that this study relied on secondary data sources, such as literature and legal documents. The interpretation of these materials is subject to the availability and reliability of the sources accessed during the research process.

1. Defining the Essence of Artificial Intelligence within the Framework of Private Law

Recently, concepts for defining the essence of artificial intelligence within the framework of private law include:

- a. theory of the subject of legal relations;
- b. theory of the object of legal relations;
- c. a compromise theory, which is essentially a combination of the subject-object theory.

At the same time, the authors immediately note that the subject-object concept is not considered by us at all, because the authors believe that compromise, in this case, is meaningless. After all, the law should not form the concept of interpretation of one phenomenon from the positions of both subjects and objects, it is necessary to choose a specific approach with appropriate argumentation and implement it in the norms of law.

The subject theory of artificial intelligence is related to the use of the term "digital persona". Scientists who express this vision of artificial intelligence, emphasise the presence of separate subjective rights and obligations of such a person and civil legal personality in general. Thus, the doctrine of civil law states that a civil legal personality is characteristic of a digital persona, so, there are reasons to believe that artificial intelligence is a subject of civil law. As an argument in favour of this position, the following theses are given related to civil legal personality legal entities that do not have a natural will. Based on Article 2 of the Civil Code of Ukraine¹⁷, civil studies offer an understanding of the essence of robots with artificial intelligence, as a "quasi-legal entity", or "equivalent of a legal entity". A "legal entity" itself is fiction, which allows determining its features, requirements for legal status, applying a "double" fiction in the necessary facts, and so on¹⁸. Note that in general, a legal entity owes its recognition as a subject of civil rights and obligations, in particular, to such a technique as fiction.

Therefore, there are no sufficiently strong objections to recognising another fiction – a quasi-legal entity – robots with "artificial intelligence"¹⁹. It is also proposed to include "cyber capability" – the ability to be an active participant in relations in the IT-sphere, in the list of types of legal personality of

¹⁷ The Civil Code of Ukraine. 2003. Available from <https://zakon.rada.gov.ua/laws/show/435-15#Text>.

¹⁸ TATSYI, V., GETMAN, A., IVANOV, S., KARASIUK, V., LUGOVIY, O., SOKOLOV, O. Semantic network of knowledge in science of law. In: *Proceedings of the IASTED International Conference on Automation, Control, and Information Technology - Information and Communication Technology, ACIT-ICT 2010*, 2010, pp. 218-222.

¹⁹ STEFANCHUK, M. O. Theoretical principles of civil legal personality of individuals and features of its implementation. Kyiv: Yurinkom Inter, 2020.

a legal entity. At the same time, "cyber capability" can be realised through not only transactions but also legal actions within the framework of the special legal personality of robots with artificial intelligence²⁰. However, do not forget that the dangers in the use of artificial intelligence are huge, due to the misuse of personal data to train algorithms that lack large amounts of data to learn and improve response capabilities, which may contain sensitive personal information, such as name, address, medical history, political preferences, among others that may be used for discrimination, harassment or other forms of abuse.

The development of the doctrine of civil legal personality of artificial intelligence is not unfounded. As the researchers note, in October 2017, "a humanoid robot Sofia received the status of a subject, and, consequently, a citizen of Saudi Arabia and became the first robot to receive legal personality in a particular country. This event was the starting point for raising the issue of recognising artificial intelligence as a subject of international law"²¹. In this example, the authors talking about constitutional legal personality and legal personality in the field of international law, but, as follows from the above, there are also developments in terms of the civil legal personality of robotics.

On this occasion, the authors of this study would like to express the following. For the entire period of evolution, the doctrine of civil legal personality of a legal entity is based on certain initial provisions regarding the fact that the latter is an element of the legal status of a person, a prerequisite for the emergence of subjective rights and obligations. The theory of civil legal personality of a legal entity has gone through a difficult path in the formation of various concepts (fiction, separate property, collective, etc.) to reach a logical conclusion that the will of a legal entity is somehow connected with the human substrate, the will of individuals who, being in organisational unity, form the will of a legal entity²². It is on this basis that the doctrine of the civil legal capacity of a legal entity, its management bodies, the limits of the powers of management

²⁰ BARRIO ANDRÉS, M. Towards legal regulation of artificial intelligence. *Revista IUS*, 2021, vol. 15, no. 48, pp. 35-53.

²¹ KHARITONOV, E. A., and KHARITONOVA, O. I. To the problem of civil legal personality of robots of the Internet of Things: problems of legal regulation and implementation. In: *Materials of the second scientific practice*. Kyiv: KPI named after Igor Sikorsky, Polytechnic Publishing House, 2018.

²² YESIMOV, S., BOROVIKOVA, V. Methodological foundations of information security research. *Social and Legal Studios*, 2023, vol. 6, no. 1, pp. 49-55.

bodies and their excess, the institution of property liability of the manager are built.

Regardless of whether it is a legal entity – an association of people, or a legal entity – an association of property, the civil legal capacity of a legal entity is realised by the Natural will of individuals in the legal forms of a contract, charter, etc. Moreover, today a legal entity bears independent civil liability. The above statement about the civil legal personality of a legal entity emasculates the arguments in favour of the fact that artificial intelligence can be equated with a legal entity.

In terms of supporting the theory of the subject, as noted above, opinions are also given about the presence of separate subjective rights in the "digital persona". For example, M. O. Stefanchuk²³, defining the concept of "digital persona", notes that it can be applied exclusively to robots with certain characteristics due to giving them Artificial Superintelligence, and comes to the conclusion that in connection with these characteristics, robots can act as carriers of specific rights and obligations. This definition implies the author's tendency to consider a "digital persona" as a subject of civil legal relations. It is worth noting here that the so-called concept of "robot rights" is now quite controversial in the doctrine of civil law. E. O. Michurin rightly notes that even if the authors of this study assume that a digital persona is granted certain rights, then:

- first, to give artificial intelligence rights, it is not necessary to give it the rights of a subject (here the author gives an example of a civil approach to regulating animals as objects of Civil Rights, which, although they have certain rights, are not a subject of law);
- second, according to the Civilist, it should be borne in mind that certain rights belong to biological organisms, which robots are not, because artificial intelligence is not a living being²⁴. The latest conclusion of the author, in the authors opinion, completely emasculates the concept of "robot rights".

²³ STEFANCHUK, M. O. *Theoretical principles of civil legal personality of individuals and features of its implementation*. Kyiv: Yurinkom Inter, 2020.

²⁴ MICHURIN, E O. Legal nature of artificial intelligence. *Law Forum*, 2020, vol. 64, n. 5, pp. 67-75.

2. Changes in the Concept of the Structure of Civil Legal Relations

Agreeing with the above, the authors believe that the theory of the subject is controversial and will require serious changes in the concept of the structure of civil legal relations in general, the doctrine of subjects and objects of civil legal relations, the correlation of approaches to the subject composition will require the doctrine of obligations, and especially the institution of civil liability in terms of the field under study. The above changes in terms of subjects of civil legal relations will determine the need for serious reform of traditional legislation with its approach to the structure of civil legal relations.

In this regard, it is also appropriate to cite the opinion of N. Martsenko²⁵, who notes that "the use of the term "digital persona" in the regulations of the European Union seems premature since the spread of this concept in the field of law does not give a holistic legal understanding of issues of their legal status, civil liability, user rights protection, data protection. Moreover, according to the researcher, recognition of them as subjects means extending to them the provisions on the protection of their rights (since all subjects for participation in civil legal relations must have their own will and a free choice of ways to implement their behaviour from the point of view of the dispositive principle and have rights and obligations equal to other participants in legal relations – from the point of view of the principle of equality). Such reservations should be definitely taken into account.

As was mentioned by O. V. Kokhanovska²⁶, the perception of the concept of artificial intelligence as a subject of law by the legal community and society can carry uncontrolled unpredictable results, pointing out the need for adequate regulation of relations in this area, also emphasizing that the search for legal theorists and practitioners, discussions on this topic should take place constantly, taking into account the speed of technical and information progress. The professor points out that some excellent experts in the field of Information Technology warn about the danger posed by artificial intelligence. The researcher's reasoning is based, among other things, on the conclusions of

²⁵ MARTSENKO, N. Legal regime of artificial intelligence in civil law. *Actual Problems of Jurisprudence*, 2019, vol. 4, n. 20, pp. 91-98.

²⁶ KOKHANOVSKA, O. V. Civil liability of the subjects of information relations in terms of further development of autonomous robots and artificial intelligence. Modernization of civil liability. Matthew's civilist readings. In: *Materials of scientific-practical conference*. Kyiv: Taras Shevchenko National University of Kyiv, 2019.

Elon Musk, who believes that no one knows what conclusions machines will eventually come to, and the results of uncontrolled artificial intelligence can be more terrible than nuclear weapons because human feelings are not subject to robots – and this is the problem^{27, 28}.

If the authors characterize the object theory, it is obvious that the main argument is in its favour. As scientists rightly point out, the arguments in favour of the fact, that artificial intelligence by its nature tends to objects of legal relations or tools for their implementation are as follows:

1. this results from human activity, which results in personal rights and obligations;
2. the subject of bringing to responsibility for damage caused by artificial intelligence, it is proposed to establish a non-digital identity²⁹;
3. this is a thing that the owner has the right to own, use and dispose of, just like any other property.

Of course, it makes sense to agree with such arguments. Indeed, the issues of civil liability concerning the use of artificial intelligence and the regulation of mandatory insurance in this area are at the epicentre of attention in the above-mentioned resolution.

At the same time, the authors talking about determining the grounds of responsibility of both manufacturers and operators, as well as owners or users of artificial intelligence. For example, as the researchers point out, certain changes have already been made to the Estonian legislation that regulates public relations due to the need to interact with robots. Therefore, in this country, concerning the operation of a self-propelled robot Courier, they are entitled to relevant duties and prohibitions on the owner and the person who controls this robot³⁰.

²⁷ HÁRS, A. AI and international law – Legal personality and avenues for regulation. *Hungarian Journal of Legal Studies*, 2022, vol. 62, no. 4, pp. 320-344.

²⁸ GINTERS, E., BARKANE, Z., VINCENT, H. System dynamics use for technologies assessment. In: *22th European Modeling and Simulation Symposium, EMSS 2010*, 2010, pp. 357-361.

²⁹ RAMLI, T. S., RAMLI, A. M., MAYANA, R. F., RAMADAYANTI, E., FAUZI, R. Artificial intelligence as object of intellectual property in Indonesian law. *The Journal of World Intellectual Property*, 2023. Available from <https://doi.org/10.1111/jwip.12264>.

³⁰ ZALEVSKY, S. V. Legal personality of artificial intelligence in the field of intellectual property law: civil law problems. 2020. Available from <https://www.ukrlogos.in.ua/10.11232-2663-4139.16.51.html>.

Another important aspect of the resolution in this area is the issue of protecting personal data when using artificial intelligence, which, by the way, will also appear in the process of legal regulation of robotics in the National Legal Plane³¹. One of the primary concerns is the potential misuse or unauthorized access to personal data. AI systems often process and analyze sensitive information, such as health records, financial data, or personal preferences³². If not adequately protected, this data can be vulnerable to breaches, hacking, or unauthorized use, leading to privacy violations, identity theft, or other forms of harm to individuals. Ensuring transparency and accountability in AI systems is also a challenge³³. The complexity and opacity of some AI algorithms make it difficult for people to understand how their data is being used and for what purposes. This lack of transparency can undermine trust and raise questions about ethical practices, as people may not know how their personal data is being collected, processed or shared by AI systems.

Of course, as the researchers note, the resolution is recommendatory for Ukrainian legislation, but its provisions make it possible to form an idea of what will underlie the norms that will regulate relevant activities shortly, given the course towards European integration of the authors state, it is obvious that it is the EU standards in this area that will form the basis of the relevant norms of Ukrainian legislation in the future³⁴.

Since artificial intelligence is the result of the intellectual technological activity of a person, because it is a device or computer program designed by a person, there is every reason to consider its legal nature from the standpoint of intellectual property law. It is the disclosure of specific features of artificial intelligence within the framework of the Institute of intellectual property law that

³¹ European Parliament resolution with recommendations to the Commission on Civil Law Rules on Robotics. 2017. Available from <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P8-TA-2017-0051+0+DOC+XML+V0//EN3>.

³² SADVAKASOVA, A. T., KHANOV, T. A. On the new system of recording and registration of complaints, statements and other information on criminal offenses. *Russian Journal of Criminology*, 2019, vol. 13, no. 2, pp. 340-353.

³³ CHESTERMAN, S. Artificial intelligence and the limits of legal personality. *International & Comparative Law Quarterly*, 2020, vol. 69, no. 4, pp. 819-844.

³⁴ GORODYSKY, I. M. *Trends in the legal regulation of artificial intelligence in the European Union IT law: problems and prospects for development in Ukraine*. 2020. Available from <http://aphd.ua/publication-388/>.

will contribute to its separation from related categories and legal protection through the tools of intellectual property law^{35, 36}.

There is every reason to consider this issue within the framework of a civil law institution that regulates relations using a source of increased danger. Indeed, it is within the framework of this institution that the authors of this study are talking about the increased responsibility of the owner of a source of increased danger, the principle of responsibility without guilt in this area, and so on.

Leading experts in the field of Information Law quite reasonably emphasize the need to supplement Ukrainian Information legislation with provisions on compensation for information damage. Such legislative changes should begin with the addition of the Civil Code of Ukraine and other special laws with the article "compensation for information damage"^{37, 38}.

In addition, as noted in the doctrine of law, the issue of liability for damage caused by sources of increased danger should also be discussed in detail. The authors talking, in particular, about the harm that is caused to an individual or legal entity by the dissemination of information that is vital and poses a threat to the survival of humanity³⁹; developments that are related to the gene, energy, molecular, information structure of the human body; issues of the origin of life and death, the combination of the human brain with information objects, as well as for the harm caused by uncontrolled use of objects that belong to the concept of "autonomous robot" or "artificial intelligence"⁴⁰. Moreover, it is necessary to agree with the positions of researchers regarding

³⁵ LUSPENYK, D. D. Institute of Defamation and Ukrainian legislation on the protection of honor, dignity and business reputation. *Law of Ukraine*, 2006, vol. 2, pp. 62-66.

³⁶ GETMAN, A., KARASIUK, V., HETMAN, Y., SHYNKAROV, O. Ontological representation of legal information and an idea of crowdsourcing for its filling. *Advances in Intelligent Systems and Computing*, 2019, vol. 836, pp. 179-188.

³⁷ FARRANDS, D. Artificial intelligence and litigation – Future possibilities. *Journal of Civil Litigation and Practice*, 2020, vol. 9, no. 1, pp. 7-33.

³⁸ KOT, O. O. *Exercise and protection of subjective civil rights: problems of theory and judicial practice*. Kyiv: Alerta, 2017.

³⁹ Judgment of the European Court of Human Rights. 2011. Available from https://zakon.rada.gov.ua/laws/show/974_807#Text.

⁴⁰ FARRANDS, D. Artificial intelligence and litigation – Future possibilities. *Journal of Civil Litigation and Practice*, 2020, vol. 9, no. 1, pp. 7-33.

the possibility of applying the norms of consumer legislation regarding relations related to the protection of consumer rights of artificial intelligence^{41, 42, 43}.

Although there are opposing opinions in terms of responsibility. So, for example, the literature indicates that "the progress of robotics has led to the fact that the artificial intelligence system has begun to significantly affect the public life of different countries, for example, China, Japan and the United States use the services of genoids to conduct logistics and statistical research at the level of individual corporations. The possibility of creating artificial intelligence that exceeds human intelligence is quite real and can be achieved in the future. Given this, it is advisable to recognize artificial intelligence as a subject of legal relations, giving it the legal status of a "digital persona". This is important first of all to prevent artificial intelligence from committing crimes against humanity by providing them with tort capacity"^{44, 45}.

The authors of this article cannot agree with this approach, given the understanding of liability in civil law (both contractual and non-contractual) and the status of the entities to which it applies. The authors believe that by consolidating tort about artificial intelligence, it will not be possible to prevent it from committing crimes against humanity.

Conclusions

Summing up all the above, it should be summarised that the development of civil legislation on the vector of perception of artificial intelligence as a subject of civil legal relations is an unjustified step, and the arguments given above indicate the futility and fallacy of approaches to determining the features of the subject of civil law by artificial intelligence. Artificial intelligence is the result of human activity, it would not exist if a person did not create it with its own hands and mind. Artificial intelligence is endowed

⁴¹ KULINICH, O. O. *The right of an individual to his own image: the current state and prospects of development*. Odesa: Yuridicheskaya Literatura, 2016.

⁴² SPASIBO-FATEEVA, I. V. *Civil Code of Ukraine: scientific and practical commentary*. Kharkiv: Ekus, 2021.

⁴³ KHARITONOV, E. A., and KHARITONOVA, O. I. *Civil relations*. Odesa: Phoenix, 2011.

⁴⁴ RODRIGES, R. Legal and human rights issues of AI: Gaps, challenges and vulnerabilities. *Journal of Responsible Technology*, 2020, vol. 4, art. 100005.

⁴⁵ CHERNIAVSKYI, S., BABANINA, V., VARTYLETSKA, I., MYKYTCHYK, O. Peculiarities of the economic crimes committed with the use of information technologies. *European Journal of Sustainable Development*, 2021, vol. 10, no. 1, pp. 420-431.

only with the features that humans have given it. There are still discussions about whether the person who created artificial intelligence is responsible for its further activities. Artificial intelligence needs control because its activities can be unpredictable, which reinforces the idea that the perception of artificial intelligence as a subject of civil legal relations is ill considered. A machine cannot be fully responsible for its actions as humans do, because it is programmed for certain actions.

Issues of the rights and freedoms of artificial intelligence remain unresolved to this day. Most researchers agree that artificial intelligence cannot function as a person, while others believe that a machine should have the same rights as a person. The norms for regulating relations on the use of artificial intelligence as an object of civil law relations should be concentrated within the framework of legislation on the protection of human rights as an individual and a person as a consumer, intellectual property, IT law, and norms governing relations on the use of a source of increased danger. Of course, just in this part, significant doctrinal developments are still needed so that the norms of these institutions in their content act as a qualitative basis for regulating the legal relations under study. It is also necessary to conduct additional research that will be useful in further solving issues related to artificial intelligence as a subject of civil legal relations.

References

Barlybayev, A., Sharipbay, A. (2015). An intelligent system for learning, controlling and assessment knowledge. *Information (Japan)*, 18(5), 1817-1827.

Barrio Andrés, M. (2021). Towards legal regulation of artificial intelligence. *Revista IUS*, 15(48), 35-53.

Cherniavskiy, S., Babanina, V., Vartyletska, I., Mykytchyk, O. (2021). Peculiarities of the economic crimes committed with the use of information technologies. *European Journal of Sustainable Development*, 10(1), 420-431. <https://doi.org/10.14207/ejsd.2021.v10n1p420>

Chesterman, S. (2020). Artificial intelligence and the limits of legal personality. *International & Comparative Law Quarterly*, 69(4), 819-844.

Elon Musk argues unregulated AI may be the “biggest risk we face as a civilization”. (2017). Available from <http://www.businessinsider.com/elon-musk-unregulated-ai-may-be-the-biggest-risk-we-face-as-a-civilization-2017-7>.

European Parliament resolution with recommendations to the Commission on Civil Law Rules on Robotics. 2017. Available from https://www.europarl.europa.eu/doceo/document/TA-8-2017-0051_EN.html?redirect.

Farrands, D. (2020). Artificial intelligence and litigation – Future possibilities. *Journal of Civil Litigation and Practice*, 9(1), 7-33.

Getman, A. P., Karasiuk, V. V. (2014). A crowdsourcing approach to building a legal ontology from text. *Artificial Intelligence and Law*, 22(3), 313-335.

Getman, A., Karasiuk, V., Hetman, Y., Shynkarov, O. (2019). Ontological representation of legal information and an idea of crowdsourcing for its filling. *Advances in Intelligent Systems and Computing*, 836, 179-188.

Ginters, E., Barkane, Z., Vincent, H. (2010). System dynamics use for technologies assessment. In: *22th European Modeling and Simulation Symposium, EMSS 2010*, 357-361.

Gorodysky, I. M. (2020). *Trends in the legal regulation of artificial intelligence in the European Union IT law: problems and prospects for development in Ukraine*. Available from <http://aphd.ua/publication-388/>.

Hárs, A. (2022). AI and international law – Legal personality and avenues for regulation. *Hungarian Journal of Legal Studies*, 62(4), 320-344.

Hrynychuk, A. A. (2019). Artificial intelligence as an object of legal regulation: concepts, types and features. *Journal of Eastern European Law*. Available from http://easternlaw.com.ua/wp-content/uploads/2019/12/hrynychuk_70.pdf.

Judgment of the European Court of Human Rights. (2011). Available from https://zakon.rada.gov.ua/laws/show/974_807#Text.

Kharitonov, E. A., and Kharitonova, O. I. (2018). To the problem of civil legal personality of robots of the Internet of Things: problems of legal regulation and implementation. In: *Materials of the second scientific practice*. Kyiv: KPI named after Igor Sikorsky, Polytechnic Publishing House.

Kharitonov, E.A., and Kharitonova, O.I. (2011). *Civil relations*. Odesa: Phoenix.

Kokhanovska, O. V. (2019). Civil liability of the subjects of information relations in terms of further development of autonomous robots and artificial intelligence. Modernization of civil liability. Matthew's civilist readings. In: *Materials of scientific-practical conference*. Kyiv: Taras Shevchenko National University of Kyiv.

Kot, O. O. (2017). *Exercise and protection of subjective civil rights: problems of theory and judicial practice*. Kyiv: Alerta.

Kulinich, O. O. (2016). *The right of an individual to his own image: the current state and prospects of development*. Odesa: Yuridicheskaya Literatura.

Luspenyk, D. D. (2006). Institute of Defamation and Ukrainian legislation on the protection of honor, dignity and business reputation. *Law of Ukraine*, 2, 62-66.

Martsenko, N. (2019). Legal regime of artificial intelligence in civil law. *Actual Problems of Jurisprudence*, 4(20), 91-98.

Martsenko, N. (2020). Determining the place of artificial intelligence in civil law. *Studia Prawnoustrojowe*, 47, 157-173.

Michurin, E. O. (2020). Legal nature of artificial intelligence. *Law Forum*, 64(5), 67-75.

Milonenko, Yu. V. (2018). The prospect of recognizing artificial intelligence as a subject of international law. *A Young Scientist*, 11(63), 125-127.

Ramli, T. S., Ramli, A. M., Mayana, R. F., Ramadayanti, E., Fauzi, R. (2023). Artificial intelligence as object of intellectual property in Indonesian law. *The Journal of World Intellectual Property*. Available from <https://doi.org/10.1111/jwip.12264>.

Rodrigues, R. (2020). Legal and human rights issues of AI: Gaps, challenges and vulnerabilities. *Journal of Responsible Technology*, 4, art. 100005.

Sadvakasova, A. T., Khanov, T. A. (2019). On the new system of recording and registration of complaints, statements and other information on criminal offenses. *Russian Journal of Criminology*, 13(2), 340-353. [https://doi.org/10.17150/2500-4255.2019.13\(2\).340-353](https://doi.org/10.17150/2500-4255.2019.13(2).340-353)

Sandra, L., Heryadi, Y., Lukas, Suparta, W., Wibowo, A. (2021). Deep Learning Based Facial Emotion Recognition using Multiple Layers Model. In: *2021 International Conference on Advanced Mechatronics, Intelligent Manufacture and Industrial Automation, ICAMIMIA 2021 – Proceeding*, 137-142. Surabaya: Institute of Electrical and Electronics Engineers. <https://doi.org/10.1109/ICAMIMIA54022.2021.9809908>

Shcherbina, B. S., Tkachenko, V. V. (2021). Artificial intelligence as a subject of civil law. *Scientific Works of National Aviation University. Series: Law Journal "Air and Space Law"*, 1(58), 142-148.

Spasibo-Fateeva, I. V. (2021). *Civil Code of Ukraine: scientific and practical commentary*. Kharkiv: Ekus.

Stefanchuk, M. O. (2020). *Theoretical principles of civil legal personality of individuals and features of its implementation*. Kyiv: Yurinkom Inter.

Tatsyi, V., Getman, A., Ivanov, S., Karasiuk, V., Lugoviy, O., Sokolov, O. (2010). Semantic network of knowledge in science of law. In: *Proceedings of the IASTED International Conference on Automation, Control, and Information Technology - Information and Communication Technology, ACIT-ICT 2010*, 218-222. <https://doi.org/10.2316/p.2010.691-076>

The Civil Code of Ukraine. (2003). <https://zakon.rada.gov.ua/laws/show/435-15#Text>

Yaroshenko, O. M., Vapnyarchuk, N. M., Burnyagina, Y. M., Kozachok-Trush, N. V., Mohilevskiy, L. V. (2020). Professional development of employees as the way to innovative country integration. *Journal of Advanced Research in Law and Economics*, 11(2), 683-695.

Yesimov, S., Borovikova, V. (2023). Methodological foundations of information security research. *Social and Legal Studios*, 6(1), 49-55. <https://doi.org/10.32518/sals1.2023.49>

Zalevsky, S. V. (2020). *Legal personality of artificial intelligence in the field of intellectual property law: civil law problems*. <https://www.ukrlogos.in.ua/10.11232-2663-4139.16.51.html>.

Ziemianin, K. (2021). Civil legal personality of artificial intelligence. Future or utopia? *Internet Policy Review*, 10(2), 1-22.

Data de submissão do artigo: 20/01/2023

Data de aprovação do artigo: 20/07/2023

Edição e propriedade:

Universidade Portucalense Cooperativa de Ensino Superior, CRL

Rua Dr. António Bernardino de Almeida, 541 - 4200-072 Porto

Email: upt@upt.pt