DOI: 10.31648/sp.5279

Nataliia Martsenko
Ternopil National Economic University, Ukraine
ORCID: 0000-0003-0947-5179

Determining the place of artificial intelligence in civil law

Introduction

The active development of information technology, the Internet of Things, and artificial intelligence, in particular, pose increasing challenges to scholars and practitioners in the various fields of modern science. The use of artificial intelligence has resulted in an increase in the efficiency of the Internet of Things[1], in particular in the areas of autonomously-managed transport, various medical, industrial and household robots and military and special-purpose robots, etc. However, along with the great prospects of using artificial intelligence, many researchers and practitioners are paying attention to the risks associated with the development of artificial intelligence. An indicative signal is an open letter signed by more than 8,000 well-known scientists, developers and industrialists (including astrophysicist Stephen Hawking and Tesla and SpaceX founder Elon Musk) whose activities are related to the development or use of artificial intelligence, in which they are encouraged to devote more close attention to the issues of security and public utility of work in the field of artificial intelligence[2].

Meanwhile, legal research on artificial intelligence is not something new to legal science. In the early 1980s, the first attempts at legal analysis of the problems of the development and use of artificial intelligence were made. In particular, it is worth mentioning the dissertation of American researcher Anne Gardner, „An artificial intelligence approach to legal reasoning", which was defended in 1984 at Stanford University and became one of the first comprehensive studies of artificial intelligence. However, the development of

[1] See Ethically Aligned Design. The IEEE Standards Association. 13 Dec. 2016, https://standards.ieee.org/develop/indconn/ec/ead_v1.pdf.

[2] See An Open Letter: Research priorities for robust and beneficial artificial intelligence, https://futureoflife.org/ai-open-letter/.

science and technology is so dynamic that it is often a matter of legal regulation of the development and use of artificial intelligence that is resolved with some temporal delay. This may be due to the fact that it is difficult for legislators to control what is incomprehensible and lawyers may be too deeply involved on the technical side of resolving this issue. However, in any case, the creation and use of artificial intelligence must clearly be socially-oriented and meet the interests of human security, the preservation of personal space, freedom and self-awareness.

Today, artificial intelligence technologies permeate every aspect of our lives – from resolving everyday issues to fulfilling a civic duty to lead by example in an election or referendum[3]. Despite its wide potential for human beings, the use of artificial intelligence poses a serious threat to life, expression of will and choice. Being created to meet human needs, artificial intelligence can often be used as a tool against people. In this perspective, many issues related to responsibility for the negative consequences of using artificial intelligence when making responsible decisions[4] or creating critical situations[5] remain relevant and unresolved. In addition, there is no single approach among scientists in understanding artificial intelligence in the legal, social, moral and ethical fields or even in the technical field. The problem is exacerbated by the promotion of the latest technologies without paying sufficient attention to the impact of these technologies on humans.

Obviously, stopping the development of artificial intelligence is difficult or almost impossible. However, the penetration of these technologies into the modern life of virtually every person at the domestic, professional, civic level raises many questions related to the social, technical, ethical and legal content of understanding the essence of the latest developments. Without going into a detailed study of social, moral and ethical research into the implications of the use of artificial intelligence, it is advisable to study the legal side of this issue in order to ensure the proper legal regime for the use of artificial intelligence.

---

[3] The use of artificial intelligence technology in elections is a rule rather than an exception in modern countries. One's influence on a person when using artificial intelligence in an election or referendum is an extremely important indicator that influences the final decision. The 2019 presidential election in Ukraine is illustrative in this regard. Therefore, the use of artificial intelligence technologies entails threats not only to the free choice of citizens, but also to the dangers of such a democratic institution as elections in general.

[4] It is known that artificial intelligence today has active uses in the field of medicine, ecology, in making managerial decisions in the field of state and regional government and in the organization of everyday life, etc.

[5] For example, in the event of a car accident with an autopilot system, when such control resulted in damage to the car owner or other persons.

Problems in defining the field of law as the basis for the legal regulation of artificial intelligence

Today, there is a fair amount of research on the distinction between private and public law. Therefore, without going into the details of this issue, it should be noted that the sphere of private law concerns the legal regulation of relations between individuals and legal entities among themselves[6], and the sphere of public law regulates issues related to management[7]. The most obvious criterion for differentiation is also the method of legal regulation[8]: if in private law it is dispositive (based on the choice of behaviour variation at the discretion of the individual), then in public law is dominated by the imperative method of legal regulation (the method of power influence, which mediates relations of power-subordination)[9].

Looking ahead, the article raised the point that relationships related to the use of artificial intelligence obviously tend to fall within the sphere of private law. It seems that private law itself should dominate the regulation of relationships related to the use of artificial intelligence. This has been confirmed by the decisions of the European Parliament and the European Commission.

The Resolution on a comprehensive European industrial policy on artificial intelligence and robotics, adopted on 12 February 2019 by the European Parliament[10], is indicative of this. The provisions of this Resolution concern precisely the private-law regulation of artificial intelligence on the basis of the civil law principles. However, the lack of specific legal provisions on liability and the general nature of artificial intelligence regulation, creates the basis for legal uncertainty. Of course, at this stage of legal artificial intelligence regulation, civil law itself applies, but there is a risk that the rules of civil law will not be sufficient, given the specific nature of artificial intelligence.

Therefore, there is an active debate in science about the law that should apply to relationships using artificial intelligence. Against the background of the main branches of law[11], many researchers argue for the feasibility of

---

[6] See G. Tavits, *Lecturer of Labour and Social Security Law The Position of Labour Law in the Private Law System*, „Juridica International" 2000, No. 5, p. 125.

[7] Ibidem.

[8] See A. Cebera, *The Paradigms for Distinguishing between Private Law and Public Law*, „Zeszyty Naukowe Towarzystwa Doktorantów UJ Nauki Społeczne" 2014, No. 8(1), p. 56.

[9] See A.J Bělohlávek, N. Rozehnalová, *Czech Yearbook of International Law*, Vol. 3, *Public policy and ordre public*, New York 2012, p. 154.

[10] See 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.

[11] The main branches of law include civil law, criminal law, constitutional law and administrative law. See В.П. Хряпченко, *Від критеріїв поділу системи права на галузі до комплексних галузей права*, „Актуальні проблеми політики" 2015, No. 55, p. 313.

developing new branches of law that will more effectively regulate completely new spheres of relations. The question is: it is not a matter of completely new relationships, but of a logical process of the transformation of legal relations (legal relations objects) from one form into another – more complex and at the same time perfect because of the development of technology.

The criticism of such opinion, however, leads to a deeper reflection on the question of the branch of artificial intelligence legal regulation.

In particular, the article deals about the creation of a new branch of law – the rights of robotics[12]. The prerequisite for such scientific decisions could be the adoption by the European Parliament on 16 February 2017 of Resolution 2015/2103 (INL) on the civil regulation of robotics with recommendations for the European Commission[13]. The name of this resolution shows that it is more about „robotics" rather than artificial intelligence. However, in paragraph 1 of the Resolution, the phrase „robotics and artificial intelligence" is constantly used, indicating that the authors of this document are not ready to separate these issues.

The resolution does not give a holistic view of the artificial intelligence legal side, although it is a specific legal act. With all of the above, c) emphasizes the need to further „develop a commonly accepted definition of (…) artificial intelligence that will be flexible and will not hinder innovation"[14]. Basically, the document addresses the major social, economic, ethical and legal issues and challenges that need to be addressed in relation to the development of robotics and artificial intelligence. Particularly noteworthy are the provisions on the legal regulation of developments in robotics and artificial intelligence and the requirements for standardization in the development of appropriate technologies. And most importantly, ensuring the protection of personal data when using these technologies, the issue of control over decision making when using technologies of robotics and artificial intelligence, and civil liability in connection with the development and use of robotics and artificial intelligence[15]. The content of the Resolution raises issues pertaining to the legal regulation of civil law. The volume of the latter is absolutely sufficient to regulate this issue based on the specific legal acts of special action and general principles of private regulation. Therefore, it is too early to talk about the creation of a new branch of law – robotics law.

---

[12] See P.P. Baranov, A.Yu. Mamychev, A.A. Plotnikov, D.Yu. Voronov, E.M. Voronova *Problems of legal regulation of robotics and artificial intelligence in Russia: some approaches to the solution*, „Herald NAMSCA" 2018, No. 3, p. 17.

[13] See European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)), http://www.europarl.europa.eu/doceo/document/TA-8-2017-0051_EN.html.

[14] See European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)).

[15] Ibidem.

When analysing the legislation of the countries which are most active in the production of robotics and artificial intelligence technologies, the most responsible for this issue are the lawmakers in Japan, and the least interest in legal regulation is in China and the United States[16]. This may be due to the world race for new technologies, but it is unknown how this may end. The European Union is vigilant on this issue, as evidenced by Resolution 2015/2103 (INL) and Resolution 2018/2088 (INI).

There is also a position in the literature regarding cyber law as an industry that regulates, in particular, cybersecurity issues in the field of robotics[17]. The arguments given by Ryan Calo are sufficiently sound. It seems more appropriate to explore new technologies through traditional legal industries that have sufficiently effective regulatory mechanisms in place[18]. However, the right to confidentiality is by its very nature completely private and governed by a number of civil codes in different countries. Moreover, the law is not intended to study the mechanisms of these technologies, and in particular artificial intelligence, but the purpose of the law is to regulate relations with it qualitatively.

The development of technology is forcing lawyers to revise the law and refine it, to carry out the so-called revolution in the already existing branches of law. As Lyria Bennett Moses notes, it is important for technology regulation to delineate the subject and to understand that it is something unique and not applicable to general (customary) regulation[19]. Therefore, in order to distinguish it in a separate sphere of regulation, it should be clearly understood that the subject of regulation is completely new. Moreover, detailed regulation of the technology process creation may have the effect of slowing down its development.

Therefore, it seems fair to seek solutions to the legal regulation of artificial intelligence in pre-existing traditional areas of law, such as civil law. At the same time, it should be explored how technological advances affect the transformation of civil relationships. Legal regulation of artificial intelli-

---

[16] See Robot Law: A Global Perspective, https://www.roboticsbusinessreview.com/legal/robot_law_a _global_perspective/.

[17] See R. Calo *Robotics and the Lessons of Cyberlaw*, „California Law Review" 2015, No. 63, p. 513.

[18] The mechanism of legal regulation is understood as a range of legal tools, methods and forms with help of which contracting relations in Ukraine are adjusted, their ideal pattern set in the regulatory rules is embodied, and the contract itself fulfills the function of legal fact related with establishing of contracting relations for certain parties, their rights and obligations. See A. Hryniak, O.M. Pleniuk, *Mechanism of Private Legal Contracting Relations in Civil Law,* „Journal of Legal, Ethical and Regulatory" 2018, Vol. 21(1), https://www.abacademies.org/articles/regulation-mechanism-of-private-legal-contracting-relations-in-civil-law-7854.html.

[19] See L. Bennett Moses, *How to Think About Law, Regulation and Technology. Problems with 'Technology' as a Regulatory Target*, "Law, Innovation and Technology" 2013, Vol. 5(1), p. 1–20.

gence will assist law enforcement, and if additional technical knowledge is needed, a judge may, for example, use the expert's assistance[20].

New technologies have been, and will be, the source of legal regulation, but the purpose of the right is not to enter into the mechanism of their creation, but to regulate qualitatively at the level of law their interaction with humans. Therefore, the European Parliament is developing a common approach based on a strategic regulatory environment for artificial intelligence and encourages strong user protection by the rules of specific European legal acts. The European Parliament also devotes a whole section to the Cybersecurity Resolution, which is an important aspect of artificial intelligence, as „artificial intelligence can be both a cybersecurity threat and a cyberattack tool"[21].

The provisions of Resolution (2018/2088 (INI)) on humanity and ethics are of paramount importance, as technology must be human-cantered and must not undermine fundamental rights. Therefore, artificial intelligence developments must be robust, in accordance with the laws in force and ethical values.

The finding that legislators are increasingly confronted with the impact of artificial intelligence and robotics technology on society and the unique ethical and legal problems that result from human and artificial intelligence interaction within a single environment, necessitates re-evaluating existing legislation to match its purpose artificial intelligence.

In today's global legal order, private law must be open to new challenges[22], to respond promptly to changes in all areas of human life.

Artificial Intelligence: a subject or an object of civil legal relations (rights)?

The creation of a legal basis for a person privileges people to some extent, puts them in a special place in the modern world. Man was the first subject of law, but with the development of social relations he objectively became one of a few subjects of law among other individual independent

---

[20] Experts are individuals who have high qualification, specialized knowledge and directly carry out scientific or scientific and technical expertise and are personally responsible for the accuracy and completeness of the analysis, validity of recommendations in accordance with the requirements of the task for the examination. See Закон України Про наукову і науково-технічну експертизу Відомості Верховної Ради України, 1995, № 9. URL.

[21] See 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.

[22] See S. Allen, D. Costelloe, M. Fitzmaurice, P. Gragl, E. Guntrip *Private Interests and Private Law Regulation in Public International Law Jurisdiction*, Oxford Handbook on Jurisdiction in International Law, Oxford University Press, Oxford 2018, Forthcoming, p. 22.

subjects of civil rights, such as legal persons, the state and territorial communities[23].

This issue becomes particularly interesting and debatable from the point of view of the analysis of European Parliament resolution 2015/2103 (INL), the provisions of which provide for a specific legal status for smart robots. In accordance with the provisions of the Resolution, an „electronic person" may be accorded special legal status. In fact, it is about assigning legal status to intelligent robots who can independently interact with the environment and can change their actions according to changes. It is argued that dignity should be at the heart of the new digital ethics[24]. However, the question arises: do robots or artificial intelligence have dignity, willpower, morals and ethics in general? And does the presence or absence of these qualities and traits, influence the perception of artificial intelligence as a subject or object of law? To answer these questions, one should turn to the classical understanding of the subjects and objects of law existing at this stage of law and legal science development.

A person as a subject of civil rights is understood as an individual who is endowed with legal capacity, capacity and the ability to be responsible for own actions (legal personality) to participate in civil relations. Man is a living organism with its own will, views and soul.

The legal personality that an individual is endowed with is special. So legal capacity is an abstract opportunity to have civil rights and is characterized by such belonging to a person of birth and inalienability[25]. At the same time, capacity is the ability of an individual to acquire civil rights and obligations through his actions[26]. It is differentiated according to intellectual and mental factors related to age.

One of the features of an individual's legal personality is his ability to be responsible for his actions[27]. In addition, the individual is responsible for the actions of the persons for whom he or she is obliged to take care under a law, contract or court decision[28]. Such liability for the actions of others does not exclude liability for damage to others by the exploitation or belonging to

---

[23] See Цивільний кодекс України Відомості Верховної Ради України, 2003, № 40–44, https://zakon.rada.gov.ua/laws/show/435-15.

[24] See L. Floridi *On Human Dignity as a Foundation for the Right to Privacy*, „Philosophy & Technology" 2016, p. 308.

[25] See В.В. Надьон, *Деякі аспекти визначення правоздатності в цивільному праві*, „Теорія і практика правознавства" 2014, No. 1(5).

[26] See Н.В. Волкова, *Щодо визначення підстав обмеження цивільної дієздатності фізичної особи при розгляді справ у цивільному судочинстві*, „Часопис цивілістики" 2015, No. 18, p. 92.

[27] See С.Д. Гринько, *Деліктоздатність неповнолітніх фізичних осіб за цивільним законодавством України та зарубіжних країн: порівняльно-правовий аналіз*, „Часопис цивілістики" 2015, No. 19, p. 159.

[28] See Цивільний кодекс України Відомості Верховної Ради України, 2003, No. 40–44.

a person of live animals or certain objects[29] (such as damage done by a vehicle, dog or other property).

Instead, a legal entity is an organization established and registered in the manner prescribed by law, endowed with legal capacity and a legal entity can be a plaintiff or a defendant in court. According to the concept of a legal entity, it has its own will, expressed in the decisions of its governing bodies[30]. Such a will of a legal person is completely autonomous from the will of its participants and, in fact, embodies their compromise decisions. The presence of the will of a legal person is an important prerequisite for understanding it as a subject of civil relations. According to the legislation of Ukraine, a legal entity may own all rights and obligations as well as an individual, except those belonging to a person because of his/her peculiarities[31] as a subject of civil rights (legal relations).

There are a number of differences between the legal status of an individual and a legal entity. Man as an individual can feel pain, show feelings of care and love, can show pity and empathy, can be a participant in residential, family, hereditary relationships and can move freely in space. An individual has a number of rights associated with belonging to a particular country (such as voting rights and other civic responsibilities). In contrast, a legal entity cannot do this.

At the same time, a legal entity may have a different organizational and legal form which, of course, cannot be said about an individual. Legal entities may be public, private, commercial or non-commercial. Moreover, a legal entity can be both the subject as well as the object of a number of contracts – sale, exchange, rent, etc. They can also be reorganized by division, separation, merger and accession. With the individual, such actions are impossible because they lay beyond the limits of the permitted and the possible[32]. The capacity of an individual may be limited by intellectual, age and mental characteristics, but such limitations have legal and moral grounds. Any other restrictions on the rights of individuals that contain discrimination or are expressly prohibited by law are totally unlawful[33].

---

[29] Ibidem.

[30] See Р.Б. Прилуцький, *Основні теорії юридичної особи та їх вплив на розвиток організаційних форм суб'єктів господарювання*, „Юридична наука" 2013, No. 3, p. 42.

[31] See Цивільний кодекс України Відомості Верховної Ради України, 2003, No. 40–44.

[32] Of course, there may be arguments related to the understanding of slavery in the Roman Empire, where the slave was rather valuable property, but not an individual capable of civil rights and obligations. However, I do not consider it appropriate to consider this issue more broadly, since the impossibility of understanding humans as an object of law has long been justly proven and scientifically substantiated. A person is always the subject of a law, whether private or public.

[33] For example, it is forbidden to discriminate on different grounds (gender, race, skin color, religious, civic, political or other beliefs). Of course, there are countries in the world where, to this day, women are restricted in civil and civil rights, and are not allowed to own, possess, or inherit certain types of property. However, such actions in the context of contemporary international law are prohibited and contain discrimination.

It is important that a legal entity, along with an individual, can be legally responsible for its actions. In the cases provided for by law, the legal persons (legal entities) shall bear legal responsibility if their actions are unlawful. This is due to the fact that the content of the legal entity are people and it is the decisions that will make them that will depend on the successes and failures of the legal entity itself.

Therefore, the individual acts as a universal subject of civil rights. The legal status of an individual gives it ample opportunity and thus confirms the provision on the privileged status of an individual in law, alongside the legal entity.

Equally interesting are the issues of the civil rights objects. In civil law, legal objects are things, property, property rights, the enterprise as a property complex, goods, services, works that may give rise to civil rights and obligations. They may be the object of property rights and be the subject of contracts. According to the modern concept of civil rights objects, living beings such as animals can also be civil rights objects because of the possibility of their alienation[34]. In fact, animals are the only living organism that can be an object of civil rights, although science has been actively discussing the possibility of them being a subject of civil rights[35][36]. This position seems to be controversial and has no legal basis.

At the same time, civil rights objects can never be holders of rights and obligations. As a result, they have no legal personality and are subject to the concept of „legal regime", which provides for the possibility of their overturning in civil affairs. Civil rights objects do not have their own will – their physical and legal fate can be decided by natural or legal persons who own them or have certain property rights in relation to them.

Therefore, in order to be a subject of civil rights requires sufficient legal personality, which is a natural and legal person and which is not an object of civil rights. Legal personality is a prerequisite for entering into a civil legal relationship. By their actions, individuals and legal entities may acquire civil rights and obligations and may be liable for the legal consequences of such actions. That is, in civil relationships, individuals and legal entities are completely independent, separate from other such entities. The question is whether artificial intelligence can be considered a subject? And does it enjoy the necessary degree of autonomy?

The above analysis raises the question of the subject or object being artificial intelligence. The question is whether autonomous technical or elec-

---

[34] See О.М. Спектор, *Тварина як особливий об'єкт речових прав*, „Прикарпатський юридичний вісник Випуск" 2015, No. 3(9), p. 75.

[35] See K. Lagerfeld's cat Choupette could inherit part of his fortune, https://www.marketwatch.com/story/karl-lagerfelds-cat-choupette-could-inherit-part-of-his-fortune-2019-02-20.

[36] See R.A. Epstein, *Animals as Objects, or Subjects, of Rights*, „U Chicago Law & Economics", Olin Working Paper 2002, No. 171(35), p. 7.

tronic tools, equipment and software can be considered a bearer of rights and can act as an example to a legal entity (since the legal status of artificial intelligence is equivalent to an individual and is completely excluded from motives of reason) and to perform legal actions. How justified in this case is the comparison of the actions of artificial intelligence to capacity. Is it still possible that the individual creator of the artificial intelligence will be the ultimate bearer of rights and legal responsibility? How fair is this?

Understanding of the perception of artificial intelligence as a subject of law is motivated by Resolution 2015/2103 (INL), whose provisions provide for a specific legal status for smart robots – an „electronic person"[37]. Granting the status of a person (legal or electronic) to artificial intelligence is an extremely difficult issue since there are both legal and moral obstacles, which, for example, are not present in determining the legal status of a legal person in its classical sense.

Work should also not be equated with living things, such as humans or animals (and even more so with civil or constitutional rights) since, biologically speaking, robots are not alive and are devoid of sensitivity. Even the presence of intelligence and the possible development of emotional intelligence[38] (the ability of robots to process and control their own feelings and emotions) does not give a holistic perception of them as subjects of law.

Bearing in mind that robots can perform both useful and harmful tasks in unexpected ways – and this is a great danger – robotics blurs the very line between humans and tools[39].

Indeed, the dynamic development of artificial intelligence and the latest developments aimed at creating artificial intelligence capable of self-reproduction, encourage discussion about their legal personality. However, artificial intelligence as a product of human intelligence and invention is today a major threat to the security of people's lives. Any conclusions on this matter should be limited by the principles of morality and reasonableness and focus on socially-oriented technologies that will simplify a person's life rather than create serious competition or threats.

It can be predicted that the development of artificial intelligence can become uncontrollable and unpredictable. Therefore, in view of the growing risks associated with the advancement of the Internet of Things and Artificial Intelligence, the rule of law as a prerequisite for technical development should be given due consideration in the area of legal regulation. It is on the

[37] See European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)), http://www.europarl.europa.eu/doceo/document/TA-8-2017-0051_EN.html.

[38] See J.A. Perez, F. Deligianni, D. Ravi, Y. Guang-Zhong *Artificial Intelligence and Robotics,* https://www.ukras.org/wp-content/uploads/2018/09/UK_RAS_wp_AI_web.pdf.

[39] See R. Calo *Robotics and the Lessons of Cyberlaw*, „California Law Review" Legal Studies Research Paper 2014.

basis of the rule of law that the legal understanding of artificial intelligence and its place in modern civil law should be based. At the same time, the law should shape the model of behaviour, not modern technologies, and on the basis of human values, the boundaries of smart technologies should be ensured. The law should promote the development of artificial intelligence with clear ethical guidelines and be focused on ensuring the safety, well-being and preservation of the person as such.

Of course, modern notions of civil law change their format somewhat, saturating the rules of civil codes or individual special laws with completely new provisions, which are often inconsistent with established practice. However, the right should be dynamic and flexible enough, while maintaining the basic purpose of the right – to serve the interests of the individual. Technologies must be sensitive to human values and comply with the principles of fairness, reliability, security and confidentiality and the law must be effective and uphold all of the above principles at a time of significant technological innovation.

Artificial Intelligence: Peculiarities of Legal Liability

In 1965, Herbert Simon wrote in one of his books that „he believed computers will one day be able to do just about everything people can"[40]. But will robots and artificial intelligence be able to bear legal liability? In light of liability studies in civil law, this is difficult to imagine. Therefore, the last question that is raised in this research is the issue of legal liability. His decision is unprecedented in determining the place of artificial intelligence in the field of legal regulation.

Undoubtedly, it is an interesting way of resolving this issue in the European Resolution. Thus, the proposal to form a new civil rights entity – an electronic entity – is supplemented by the latter's liability provisions. The Electronic Liability Regulations provide for a special protection system with compulsory insurance and the creation of a compensation fund when using artificial intelligence. That is, in the case of damage from artificial intelligence, the injured party may either withdraw insurance or be compensated through a compensation fund.

However, there is a problem in establishing a causal link between actions with artificial intelligence and harmful effects. To find a direct causal link in such cases, it is difficult and likely that the question of proving the existence of harm will lie with the person to whom such harm was caused.

[40] See H.A. Simon, *The Shape of Automation for Men and Management* vii (1965) Ryan Calo *Robotics and the Lessons of Cyberlaw*, „California Law Review" Legal Studies Research Paper 2014.

Therefore, the issue of responsibility sharing and its proportionality are actively discussed in the literature.

The question is: how much artificial intelligence can be autonomous from humans? Since autonomy is a relative concept, two indicators can define it: the freedom of action of the machine relative to man and the ability of the machine to replace human actions[41]. It is the limit of the machine that will determine the division of responsibility[42]. In the context of responsibility research, Karni A. Chagal-Feferkorn tends to characterize artificial intelligence as similar to traditional goods or things and is covered by consumer law[43]. In this case, the state-of-the-art artificial intelligence (super intelligence) that will be used for the work of robots can be classified differently than traditional consumer goods, and therefore requires a differentiated attitude and responsibility in the future[44].

In order to evaluate the degree of responsibility on the basis of autonomy, one must consider the size of the parameters that the algorithm estimates before a final decision is made and how decisive the decision was for a disastrous result. It is necessary to take into account that the more stages of the system's operation, the greater the unpredictability of the decisions made by artificial intelligence[45].

Since artificial intelligence performs actions that will have certain consequences, the degree of liability for the negative consequences will obviously depend on the person who controls the use of artificial intelligence. Therefore, in order for manufacturers not to place too heavy a burden on the user and the consumer, the responsibility of artificial intelligence must have clear legal boundaries defined by the principles of fairness, reliability, security, privacy and data protection. In general, civil liability for the creation and use of artificial intelligence is aimed at protecting the rights of consumers and can take the following types: product liability, responsibility for service, unfair use and negligence[46].

---

[41] See K.A. Chagal-Feferkorn, *Am I an Algorithm or a Product? When Products Liability Should Apply to Algorithmic Decision-Makers*, „Stanford Law & Policy Review" 2019, No. 30, p. 61–114.

[42] See E. Magrani *New perspectives on ethics and the laws of artificial intelligence,* https://policyreview.info/articles/analysis/new-perspectives-ethics-and-laws-artificial-intelligence.

[43] See K.A. Chagal-Feferkorn, op. cit.

[44] Ibidem.

[45] See E. Magrani, P. Silva, R. Viola, *Novas perspectivas sobre ética e responsabilidade de inteligência artificial* [New perspectives on ethics and responsibility of artificial intelligence], in: C. Mulholland, A. Frazao (Eds.), *Inteligência Artificial e Direito: Ética, Regulação e Responsabilidade* [Artificial Intelligence and Law: Ethics, Regulation and Responsibility]. São Paulo: RT. Eduardo Magrani New perspectives on ethics and the laws of artificial intelligence, https://policyreview.info/articles/analysis/new-perspectives-ethics-and-laws-artificial-intelligence.

[46] See G.S. Cole, *Tort Liability for Artificial Intelligence And Expert Systems*, „Computer/Law Journal" 1990, No. 10(2), p. 127–231.

Much emphasis in Resolution 2015/2103 (INL) on the civil regulation of robotics is specifically about the issue of civil liability for the negative effects of robotics and artificial intelligence. The document states that the works and technologies of artificial intelligence cannot be held liable for actions that have caused harm to third parties. At this stage, the responsibility must rest with the individual (paragraph 56)[47]. In this case, the manufacturer, operator, owner or user may be responsible. One of the key criteria for establishing liability is to prove that the entities listed above could have foreseen and prevented harmful consequences. Paragraph 59 of Resolution 2015/2103 (INL) provides for the introduction of a mandatory insurance system for this type of technology (such as that existing for road transport), under which manufacturers and owners of such technologies will be required to insure against potential harm from their use[48].

Throughout the resolution, the European Parliament insists on the superiority of the individual over computer systems based on the principle of responsibility – people should always be responsible for decision-making.

Therefore, it is obvious that if a decision is made with the help of artificial intelligence wholly controlled by man, then such a decision should be the responsibility of the person, and the higher the degree of complexity and autonomy of the work, the greater the degree of responsibility for its manufacturer or operator (since in such cases the risk of harm is increased). Another question is if the decision is fully made by a programmed device that makes the decision independently, regardless of the will of the person.

According to Ukrainian law, in order for a person to bear civil liability, the fact of breaking (and the presence of) a willed element (intent or negligence to cause harm to another person or his property) must be proven. A special place is liability without blame, which applies to damage caused by a source of increased danger or due to defects in goods, works or services.

Since artificial intelligence does not have a willpower element (such features are limited to man only), it is the individual who should be responsible for the actions generated by artificial intelligence. Where the inventor or the user could have foreseen the possibility of damages, the highest degree of civil liability should be applied. By imposing strict liability, the legislator appears to create a significant incentive for the manufacturer or user to act in good faith to reduce the risk of harm. In turn, a high level of caution within the limits of strict liability will reduce the possibility of harm.

---

[47] See European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)), http://www.europarl.europa.eu/doceo/document/TA-8-2017-0051_EN.html.

[48] See European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)), http://www.europarl.europa.eu/doceo/document/TA-8-2017-0051_EN.html.

It is also difficult to establish a causal link between the fact of harm and the actions of the manufacturer, because often at the stage of designing artificial intelligence the consequences of its use and interaction with other factors and people may be unpredictable. Moreover, even the manufacturer may have difficulty explaining it. Therefore, in order to compensate the harm to consumers or the user, it is advisable to prove its presence and own honest behaviour.

At the current stage of technological development, people can influence the development of artificial intelligence capabilities and its possible shared responsibility. Different opinions can be expressed on the degree of control over artificial intelligence and its impact on the degree of responsibility, and this only applies to the responsibility of the legal or natural person who created or uses artificial intelligence. Objectively, the more demanded is the result of human activity in the field of artificial intelligence, the higher should be the legal and social responsibility of the inventor. Therefore, responsibility cannot be placed on the artificial intelligence itself or the system that uses it, since it is contrary to the very essence of legal responsibility.

Conclusions

The conducted research urge to certain conclusions. Without claiming a definitive solution to the issues explored in this publication, the following can be concluded.

Of course, it is important for society that a person working on the creation and improvement of artificial intelligence understands the consequences that the results of such innovations can bring. For artificial intelligence developers, transparency should be the first priority, not productivity. In turn, civil law should establish control over the use of artificial intelligence (i.e. control, not restriction). Therefore, when investigating human and artificial intelligence interaction, the legislator should strike the right balance between protecting innovation and protecting end-users, human rights, democracy and the rule of law in general.

In addition, understanding the robots and artificial intelligence as a subject of civil legal relationships is inappropriate and may create a situations of legal uncertainty. The use of the term „electronic person" in EU normative acts seems unreasonable and premature since the dissemination of this term in law does not give a holistic legal representation in matters of their legal status, civil liability, protection of user rights or data protection. Moreover, recognition of their 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 free choice of ways to exercise their

behaviour from the standpoint of the dispositiveness principle and to enjoy the rights and obligations of equals to other participants in the legal relationship – from the standpoint of the equality principle). It is more expedient to understand robots and artificial intelligence as civil rights objects. Moreover, the regulation of civil liability at the level of consumer relations gives reason to understand artificial intelligence as a product. The application of artificial intelligence technologies in areas such as medicine or public administration has prompted an extension of the legal regime of high-risk over these objects of civil rights. This would seem to help better protect the rights of artificial intelligence users.

In the case of civil liability, the principle of proportionality should be respected: the higher the risk of harm, the higher the measure of liability. In order to better protect the rights of users (consumers), it is advisable to prove the presence of consumers and their honest behaviour.

Therefore, when it comes to the future, defined by technological development and digitization, special attention should be paid to the place of the person in the relations concerning the technologies. As the noted in the words of the Council of Europe's Secretary General, Thorbjørn Jagland, who gave a speech at the conference „Governing the Game Changer – Impact of Artificial Intelligence Development on Human Rights, Democracy and the Rule of Law" in Helsinki (Finland) February 2019, recalled the story of how people in his hometown once watched the first telephone conversation in astonishment. At the time, it seemed to many that it was just an experiment with no further consequences. But they were wrong. „Everybody who thinks this way about artificial intelligence, better think again!"[49].

References

Allen S., Costelloe D., Fitzmaurice M., Gragl P., Guntrip E., *Private Interests and Private Law Regulation in Public International Law Jurisdiction*, Oxford Handbook on Jurisdiction in International Law, Oxford University Press, Oxford 2018.

Baranov P.P., Mamychev A.Y,. Plotnikov A.A, Voronov D.Y. Voronova E.M., *Problems of Legal Regulation of Robotics and Artificial Intelligence in Russia: Some Approaches to the Solution*, „Herald NAMSCA" 2018, No. 3.

Bennett Moses L., *How to Think About Law, Regulation and Technology: Problems with 'Technology' as a Regulatory Target*, „Law, Innovation and Technology" 2013, No. 5(1).

Bělohlávek A.J., Rozehnalová N., *Czech Yearbook of International Law*. Vol. III, *Public policy and order public Huntington*, New York Juris 2012.

Calo R., *Robotics and the Lessons of Cyberlaw*, „California Law Review" 2015, No. 513(63).

[49] See Conference in Helsinki on the effects of artificial intelligence on human rights, democracy and the rule of law, http://assembly.coe.int/nw/xml/News/News-View-EN.asp?newsid=7375&lang=2.

Cebera A., *The Paradigms for Distinguishing between Private Law and Public Law*, „Zeszyty Naukowe Towarzystwa Doktorantów UJ Nauki Społeczne" 2014, No. 8(1).
Chagal-Feferkorn K.A., *Am I an Algorithm or a Product? When Products Liability Should Apply to Algorithmic Decision-Makers*, „Stanford Law & Policy Review" 2019, No. 30.
Cole G.S., *Tort Liability for Artificial Intelligence And Expert Systems,* „Computer/Law Journal" 1990, No. 10(2).
Epstein R.A., *Animals as Objects, or Subjects, of Rights*, „U Chicago Law & Economics", Olin Working Paper 2002, No. 171(35).
Floridi L., *On Human Dignity as a Foundation for the Right to Privacy*, „Philosophy & Technology" 2016.
Grin'ko S.D., *Delìktozdatnìst' nepovnolìtnìh fìzicnih osìb za civìl'nim zakonodavstvom Ukraïni ta zarubìžnih kraïn: porìvnal'no-pravovij analìz* [Juvenile delinquency under the Ukranian civil law and the law of other countries: a comparative study], „Casopis civìlìstiki" 2015, No. 19.
Hrapcenko V.P., *Vìd kriterìïv podìlu sistemi prava na galuzì do kompleksnih galuzej prava* [The criteria of the division within the legal system regarding complex branches of the law], „Aktual'nì Problemi Polìtiki" 2015, No. 55.
Hryniak A., Pleniuk M., *Mechanism of Private Legal Contracting Relations in Civil Law,* „Journal of Legal, Ethical and Regulatory Issues Research" 2018, No. 21(1).
Nad'on V.V., Deakì aspekti viznacennâ pravozdatnostì v civìl'nomu pravì [Justice in civil law], „Teorìa ì Praktika Pravoznavstva" 2014, No. 1(5).
Priluc'kij R.B., *Osnovnì teorìï uridicnoi osobi ta ïh vpliv na rozvitok organìzacìjnih form sub'ektìv gospodaruvanna* [The Concepts of legal entity and the development of different forms of legal entities in business], „Uridicna Nauka" 2013, No. 3.
Simon H.A., *The Shape of Automation for Men and Aanagement* vii (1965) Ryan Calo *Robotics and the Lessons of Cyberlaw*, „California Law Review" Legal Studies Research Paper 2014.
Spektor O.M., *Tvarina ak osoblivij ob'ekt recovih prav* [Animals as an object of property rights], „Prikarpats'kij Uridicnij Vìsnik" 2015, No. 3(9).
Tavits G., *The Position of Labour Law in the Private Law System*, „Juridica International" 2000.
Volkova N. V., *Sodo viznacenna pìdstav obmezenna civìl'noï dìezdatnostì fìzicnoï osobi pri rozgladì sprav u civìl'nomu sudocinstvì* [On the determination of the grounds for restricting the civil capacity in civil procedure], „Casopis Civìlìstiki" 2015, No. 18.

Summary

Determining the place of artificial intelligence in civil law

Key words: legal regulations, robot, subjects of civilian rights, objects of civilian rights, responsibility.

This article analyses the civil-law aspects of the legal regime of artificial intelligence. According to the author, understanding robot and artificial intelligence as a subject of civil legal relations is inappropriate and can create a situation of legal uncertainty. The use of the term „electronic person" in

EU normative acts seems unreasonable and premature, since the extension of the term in law does not give a holistic legal representation in matters of their legal status, civil liability, protection of user rights or data protection. It is argued that it is advisable to understand robotics and artificial intelligence as civil rights objects. It is proposed to apply the legal regime of a high-risk source for artificial intelligence, which is used in such fields as medicine or public administration to better protect the rights of artificial intelligence technology users. In the case of civil liability, the principle of proportionality should be respected: the higher the risk of harm, the higher the measure of liability.

Streszczenie

Określenie miejsca sztucznej inteligencji w prawie cywilnym

Słowa kluczowe: regulacje prawne, robot, podmioty praw obywatelskich, przedmioty praw obywatelskich, odpowiedzialność.

W artykule przeanalizowano cywilno-prawne aspekty systemu prawnego dotyczącego sztucznej inteligencji. Autor uważa, że postrzeganie robota i sztucznej inteligencji jako podmiotów stosunków cywilnoprawnych jest niewłaściwe i może prowadzić do sytuacji niepewności prawnej. Stosowanie pojęcia „osoba elektroniczna" w aktach normatywnych UE wydaje się nierozsądne i przedwczesne, gdyż rozszerzenie tego pojęcia na całe prawo nie zapewnia całościowego zastępstwa prawnego w sprawach dotyczących ich statusu prawnego, odpowiedzialności cywilnej, ochrony praw użytkowników czy ochrony danych. Uważa się, że wskazane jest postrzeganie robotyki i sztucznej inteligencji jako przedmiotów praw obywatelskich. Proponuje się zastosowanie w odniesieniu do sztucznej inteligencji systemu prawnego dotyczącego źródeł wysokiego ryzyka, który stosuje się w dziedzinach takich jak medycyna czy administracja publiczna w celu skuteczniejszej ochrony praw użytkowników technologii sztucznej inteligencji. W przypadku odpowiedzialności cywilnej należy przestrzegać zasady proporcjonalności: im wyższe ryzyko szkody, tym wyższy wymiar odpowiedzialności.