ARTIFICIAL INTELLIGENCE AS A LEGAL CATEGORY

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Abstract. The study is devoted to the definition of artificial intelligence as a legal category. At the same time, the peculiarity of the term and its general social significance determine the fact that in order to find an answer to the question of the legal nature of artificial intelligence, it is relevant to analyze not only purely legal scientific ideas, but also philosophical, psychological, social, religious and other aspects of understanding artificial intelligence and the impact of this phenomenon on various spheres of public life.

In order to define the concept of artificial intelligence, the author examined the attempts to define it that have already been used in legislation. In particular, the author analyzed the Artificial Intelligence Act (AI Act), which entered into force in the EU on August 1, 2024, and concluded that this law does not answer the question of the subjectivity or lack thereof of artificial intelligence. Considerable attention is paid to the legal framework of Ukraine, in particular, the Resolution of the Cabinet of Ministers of Ukraine No. 1556-p of December 2, 2020, which approved the Concept of Artificial Intelligence Development in Ukraine. This policy document uses the basic principles of the Guidelines of the Organization for Economic Cooperation and Development (OECD) on Artificial Intelligence (Recommendation of the Council on Artificial Intelligence), which Ukraine joined in 2019.

The definition of artificial intelligence as a legal category in legal doctrine encounters a number of fundamental problems, but they all have a common denominator in identifying the legal nature of the bearers of such intelligence. The analysis of modern legal doctrine has revealed general approaches to understanding the relationship between the use of artificial intelligence and its liability for actions, namely: 1) positioning of robots with artificial intelligence as an object of social relations (under this approach, robots with artificial intelligence are perceived only as possible assistance in social relations where the subjects are individuals and legal entities) 2)

positioning of artificial intelligence robots as separate subjects of legal relations (under this approach, artificial intelligence robots are perceived as separate independent subjects of social relations with the ability to realize and assess the significance of their actions and actions of other persons relatively independently and to a sufficient extent).

Based on the study, the author offers her own solution to the problem of determining the legal status of artificial intelligence (robot, intellectual agent). First of all, the author proves the need to gradually prepare the legal system for the emergence of a new subject - an electronic person. It is timely to discuss the practical possibility of granting in the future the status of a quasilegal entity to the most advanced artificial intelligence systems with a high degree of autonomy, since it does not fall under the category of a legal entity (which is also a fiction).

It is substantiated that electronic persons should be understood as powerful artificial intelligence systems endowed with the status of a "quasi-legal" person having an appropriate scope of special legal capacity depending on their functional purpose and capabilities. The study draws historical and legal parallels with the experience of Ancient Rome in terms of using (involving) phenomena which were not originally subjects of law and then acquired such a possibility (municipalities, institutions, slaves, etc.) to participate in civil circulation.

Recognition of artificial intelligence robots ("electronic persons", "intellectual agents") as a quasi-legal entity will entail a number of additional legal consequences. In particular, there is a need to include "cyber capacity" in the list of types of legal personality of a legal entity, i.e. the ability to be an active participant in relations in the IT sphere (to enter into contracts as a user, to be a member of social networks, to participate in interactive campaigns, etc.) Cyber capacity can be realized through both transactions and legal acts.

As with legal entities, electronic entities should be subject to mandatory state registration in the relevant electronic registers. At the same time, a system of licensing the types of activities of such entities and establishing standards and norms to which such entities must comply, depending on the type of activity, is also possible. In addition to the development of the necessary regulations and standards, it is very important to use soft law. In this case, ethical standards of artificial intelligence are its value basis - they must be observed by all participants in legal relations: both private companies and executive authorities.

The author argues that an electronic person can be defined as a set of technologies which are recognized by law as a participant in property and non-property relations. Such a person has the legal status of a quasi-legal entity, is registered in accordance with the procedure established by law, and has a special legal personality depending on the functional purpose (field of activity).

Keywords: artificial intelligence, electronic person, quasi-legal entity, cyber capacity, legal personality, IT law

Methods. The research was conducted using a number of philosophical and special scientific methods of cognition. The two general scientific methods that formed the basis of the topic were the dialectical and formal logical methods. Applying the dialectical method, it was possible to trace the patterns of development of the concept of artificial intelligence and to identify scientific perspectives on the future needs for normalizing such a concept. The multidimensionality and complexity of the phenomenon of artificial intelligence has necessitated the active use of dialectical logic, which studies forms of thinking, abstracting from its content and the historical development of cognition in its contradictions. The formal logical method was used in building

the structure of the research topic, in presenting its main provisions, formulating definitions and categories, and substantiating conclusions and recommendations.

Legal research also requires the application of a set of relevant special methods of cognition, among which the most actively used are historical and legal, comparative legal, systemic and structural, and the method of dogmatic (logical) analysis and interpretation of legal provisions. The use of the historical and legal method of studying social phenomena made it possible to draw parallels with the development of Roman law, which was also forced to find forms for regulating new social phenomena as it evolved. The systemic-structural method was used to study the sectoral concepts of artificial intelligence, their analytical processing and systematization, and to identify classification constructions in the scientific legal doctrine of our time. The comparative legal method was used to study scientific approaches to understanding artificial intelligence in the legislation of Ukraine and some foreign countries. The author formulates conclusions and proposals using the method of dogmatic (logical) analysis and interpretation of legal provisions.

Chapter 1. Multidimensional understanding of artificial intelligence

The definition of the concept and legal nature of artificial intelligence is currently both the most researched and the most unexplored issue, as there is still no common understanding of this new category for law.

In order to find an answer to the question of the legal nature of artificial intelligence, it is advisable to analyze the points of view on the definition of artificial intelligence that exist in the scientific literature and are to some extent reflected in a few regulations.

At the same time, one should take into account the complexity of the term "artificial intelligence" and its multidimensionality, as it ceases to be only a technological tool, causing an increasing impact on the humanities: philosophy, political science, sociology, cultural studies and, of course, law. Therefore, artificial intelligence should be viewed, as mentioned above, not only as a technological tool, but also as, perhaps, primarily a socio-cultural phenomenon that affects semantic features and architectonics, values, social interaction and relationships, and human identity, which is analyzed in the humanitarian field of knowledge. It is the application of the capabilities of this area of knowledge that will allow us to study AI as a phenomenon that affects and changes the very nature of human existence and the entire set of relationships. The humanitarian field of knowledge includes philosophy, cultural studies, history, anthropology, linguistics, law, etc.[1].

From a philosophical point of view, the most interesting issues are the consciousness and morality of artificial intelligence. These are the two key aspects that philosophers and scientists are facing in the context of the development of such machines. These aspects are characterized by complexity and are aimed at opening up new opportunities and challenges in the field of philosophy, technology, and society. The question of consciousness of artificial intelligence is of great interest. Can a machine have consciousness, or is it a property of exclusively biological beings? Can technological processes have their own essence, or are they just tools created to fulfill tasks formulated by people?

In addition, the philosophical aspect explores the problems of modern anthropocentrism (the principle that man is the end of evolution) and new challenges to its modern implementation. In other words, this aspect explores independent and interrelated issues, in particular, the nature of man in "relations": what distinguishes man from "machine"; can a machine have mind and consciousness, free will, creative abilities, including intelligence? In other words, we can ask the

question: is the so-called "reconstruction" of anthropocentrism taking place today, questioning the uniqueness and originality of the human mind "thanks" to the capabilities of AI [2]?

Many philosophers believe that artificial intelligence cannot have consciousness and self-awareness because these abilities are related to the biological nature of human mental activity. Other scientists emphasize that an intelligent machine can have them, because these abilities depend on certain physical processes, such as electrical signals in the brain, which are similar to those in the human brain. [3, p. 102] Accordingly, artificial intelligence is understood by philosophers as a broad term used to define technologies/engineering systems that mimic human intelligence, linking it to neurophysiology, robotics, psychology (pattern recognition, modeling of psychological processes), transhumanism, cybernetics (computing power to find patterns in big data). Artificial intelligence is defined as a system developed by software that is able to influence the environment with varying degrees of autonomy, producing results (forecasts, recommendations, decisions) for a specific set of goals for the digitalization of society [4].

Psychology studies artificial intelligence in its relation to human intelligence, focusing on similarities and differences.

For example, comparing the concepts of natural and artificial intelligence, Y. Trofimov generalizes that the concept of artificial intelligence is a modern version of the "computer metaphor" in which a person is seen as a channel for transmitting information, and at the same time notes that the problem of artificial intelligence is one of the most important in the field of cognitive psychology [5]. Noting some common characteristics, psychologists point out that there are related phenomena that are unattainable for artificial intelligence at the current stage of science development. In particular, this is motivation, since it is motivational aspirations that give quality to actions and "conscience," although researchers note that this is a significant difference between human intelligence and artificial intelligence, but intelligence itself can be neither moral nor immoral [6]. The study of artificial intelligence as a category of psychology is important, because the assessment of the safety and ethics of the use of artificial intelligence technologies and their impact on people is, in particular, the responsibility of psychologists [7].

Psychological research helps to determine how people perceive and process information, make decisions, and perceive visual and auditory stimuli. This knowledge can be applied to improve the usability and accessibility of AI applications, making them more attractive, efficient, and tailored to individual user needs. Using the principles of human perception and cognition, psychologists can help developers create AI interfaces that are intuitive, user-friendly, and aligned with human perception models [8].

In general, the involvement of psychologists in the development of artificial intelligence technologies can significantly improve the quality and ethics of such systems, but requires the solution of certain technical and organizational challenges. Experts believe that the advantages of involving research and practicing psychologists in the development of artificial intelligence technologies are: 1) a deep understanding of human psychology - cognitive processes, behavior, emotions, motivation, which allows creating more humane and ethical AI systems that can better interact with users; 2) improving user experience by creating interfaces and interaction protocols that are more understandable, intuitive, and enjoyable for users; 3) control over compliance with ethical standards and moral principles; 4) individualization of the work of the latest technologies through the creation of adaptive systems that take into account the individual characteristics of users, their needs and the context of use. At the same time, limitations to the involvement of psychologists in the development of artificial intelligence technologies include: 5) limited

technical understanding of the issue due to the lack of deep knowledge in computer science and machine learning among psychologists, which may limit their influence on the technical aspects of AI development; information technologies and learning tools, 6) the increase in the cost and time of developing products using AI technologies when coordinating and integrating various knowledge and skills of an interdisciplinary team of specialists [9]. The use of artificial intelligence technologies in psychology is also aimed at creating empathetic artificial intelligence that can not only recognize emotions but also interact with humans in an emotionally intelligent way. This opens up new possibilities for both treating mental illness and recognizing painful mental states. It is a branch of artificial intelligence designed to understand, interpret, and respond to human emotions in a way that reflects human compassion. In contrast to traditional artificial intelligence, which focuses on data processing and task completion, empathic artificial intelligence takes into account the nuances of human emotional expression, seeking to distinguish between feelings and emotional states that underlie human interaction [10].

Artificial intelligence is the subject of research in computer linguistics, a science that emerged in the 1960s as a separate discipline that studies language using knowledge from such related sciences as philosophy (methodology, hermeneutics), semiotics (study of sign systems), cybernetics (principles of controlling complex systems), and mathematics (mathematical methods). Accordingly, in linguistics, artificial intelligence is a branch of computer linguistics and informatics that deals with the formalization of problems and tasks that are similar to human actions, the ability of an engineering system to acquire, process, reproduce, and apply knowledge and skills at the theoretical and practical level [11].

Artificial intelligence is also having a major impact on culture, as it is transforming the way we create, analyze, and interpret cultural phenomena, changing traditional approaches to understanding works of art. One of the key areas of this transformation is music, where AI is used as a tool to create new musical works, which raises the issue of uniqueness and authorship [12]. The main scientific approaches to studying the impact of artificial intelligence in the field of art can be summarized in three areas: the study of artificial intelligence's ability to automate creative processes, big data analysis, and the creation of new art forms. One of the key challenges that scientists are paying attention to is the issue of emotionality and creative intuition in art, particularly in music. Although artificial intelligence is capable of generating musical compositions, "...the question of whether artificial intelligence can reproduce human emotion remains open" [13].

Religion as a sphere of human activity has also been influenced by artificial intelligence technologies. In particular, in 2020, the Vatican organized a conference attended by representatives of the most technological companies such as IMB, Microsoft, FAO, and together with representatives of the Vatican and the government, they created and signed a document called "Rome call for AI ethics" [14] (The Call for AI Ethics, 2020), which refers to an ethical approach to the use of AI and emphasizes the need for an exceptionally responsible attitude to such technologies [15].

In particular, the document emphasizes the importance of researching artificial intelligence and developing criteria to ensure that technologies serve the entire "human family," taking into account human dignity, the environment, and the most vulnerable groups in society.

The Vatican calls for the development of AI aimed at the social good. To ensure freedom and dignity in the era of artificial intelligence, the document's authors say it is necessary to protect the rights and freedoms of every person, preventing discrimination on any grounds.

The authors also pay special attention to the impact of AI on society and young people, calling for it to be used as a tool for positive change, social inclusion, and respect for human dignity.

To ensure responsible and ethical AI development, the authors outline the following principles: 1) transparency: AI systems should be understandable; 2) inclusiveness: human needs should be taken into account so that all people have the necessary conditions for self-expression and development; 3) responsibility: AI developers and designers should act responsibly and transparently; 4) impartiality: AI should not be created with bias; 5) reliability: AI systems should operate reliably; 6) security and privacy: AI systems should operate safely and respect users' privacy.

One of the Vatican's achievements in the context of AI is also the recent doctrinal note 2025, which offers a number of ethical recommendations on the use of artificial intelligence in various fields. The document reflects the Vatican's desire to consider the challenges of modern technological progress in the context of moral and ethical values that can serve as a guide for the responsible development of AI.

"Antiqua et Nova" [16] is a joint reflection of the Dicastery for the Doctrine of the Faith and the Dicastery for Education and Culture, calling for technology to be used as a tool to *complement, not replace,* human intelligence. The authors of the document consider it "misleading" to use the word "intelligence" in the context of AI technologies. Although AI is able to imitate human intelligence in certain tasks, it remains limited to "logical and mathematical frameworks." Machine learning is different from the development of human intelligence, which is shaped by experience, social interaction, and context. Therefore, the document calls for AI to be viewed not as a form but as a product of human intelligence.

As noted, the implicit assumption underlying views of artificial intelligence is that the term "intelligence" can be used equally to refer to both human intelligence and AI. However, this does not capture the full scope of the concept. In the case of humans, intelligence is a capability that refers to the whole person, while in the context of artificial intelligence, "intelligence" is understood functionally, often with the assumption that activities characteristic of the human mind can be broken down into digitized steps that machines can reproduce.

The Vatican emphasizes the importance of moral responsibility of people, as they are the ones who develop AI systems and determine the goals of their use. In this regard, the Vatican calls for an assessment of the ends, means, and overall vision of AI systems to ensure that technologies "respect human dignity and promote the common good" [17].

"The regulatory framework should ensure that all legal entities remain responsible for the use of artificial intelligence and all its consequences, with appropriate guarantees of transparency, confidentiality and accountability," the document says.

The document examines the areas that may be affected by the development of artificial intelligence and the challenges associated with it:

- 1) Society. The document states that due to differences in wealth and political influence, artificial intelligence can be used to increase marginalization, discrimination, the digital divide, and social inequality. The Vatican also warns against the promotion of what Pope Francis calls a "technological paradigm" that places efficiency above human dignity. In this regard, the Vatican calls for the development of AI that contributes to the "common good of the entire human family" instead of pursuing only economic or technological goals.
- 2) *Human relations*. The Vatican emphasizes that artificial intelligence can become a source of dissatisfaction with interpersonal relationships. The threat is identified as anthropomorphization of AI imitation of human behavior by an algorithm, which "blurs the line between man and machine." This

is especially harmful to children's development, as it can encourage them to engage in emotionless, "transactional" models of interaction. The Vatican calls for "engaging with reality in a committed and intentional way." "If AI is used to help people develop authentic human connections, it can positively contribute to the full realization of the human person," the document says.

- 3) *Economy*. Artificial intelligence has certain advantages for the labor market, in particular, it helps to increase productivity by performing routine tasks. However, the authors of the document warn that the rapid development of AI technologies may lead to workers becoming dependent on the requirements of technology rather than perceiving AI as an auxiliary tool. Therefore, the Vatican argues that AI should not replace human labor, but rather facilitate it in order to "secure jobs and fair wages."
- 4) *Healthcare*. The Vatican warns that AI can worsen the loneliness of those suffering from illness if it is used to replace the relationship between patients and healthcare professionals. Another threat is bias and discrimination in healthcare AI tools due to systemic errors that can exacerbate social inequality. To prevent these risks, the Vatican encourages the construction of a "just framework" to ensure equality and promote the common good when applying AI tools in healthcare.
- 5) Education. The Vatican has expressed concern that the excessive use of artificial intelligence in education could lead to students' dependence on technology and impair their ability to perform certain skills independently. In addition, AI technologies are prone to disseminate biased or inaccurate information that may mislead students and learners. The document says that the tasks of educational institutions should be to help understand the social and ethical aspects of AI use, as well as to build a clearer framework for the use of these technologies.
- 6) Disinformation. The document also emphasizes that artificial intelligence can generate false information and create manipulative content, both through system "hallucinations" and through the malicious use of technology. In order to prevent the spread of disinformation and deepfakes using AI, the authors call for verification of the veracity of content created by AI.
- 7) *Privacy*. The Vatican considers it "unjustified" to use artificial intelligence for surveillance to exploit or restrict people's freedom. This applies in particular to "social scoring," which assesses individuals or groups based on their behavior. The authors advocate for the abandonment of AI surveillance practices that limit respect for human dignity.
- 8) *Ecology*. AI has created new challenges for environmental protection. Current AI models and the infrastructure required for their development consume a significant amount of energy and resources, which has a negative impact on the environment. Since environmental problems cannot be solved by new technologies alone, the Vatican proposes to follow a "more holistic" approach that promotes "the inherent good of the human person while protecting our common home."
- 9) War. The authors also expressed concerns about the use of AI in remote-controlled weapons and the creation of automated weapons capable of hitting targets without human intervention. This leads to "an even colder and more detached approach to the enormous tragedy of war." "The development and deployment of artificial intelligence in weapons should be subject to the highest levels of ethical scrutiny," the document states.
- 10) Relationship with God. The Vatican warns against perceiving AI technologies as an idol, emphasizing that artificial intelligence is "only a pale reflection of humanity" that is created and maintained by human labor. It is important not to place too much value on AI technologies, the document says.

In conclusion, the authors emphasize that technological progress must be accompanied by increased responsibility, respect for human dignity, and the pursuit of the common good. This

requires a responsible approach on the part of all levels of society, including individual AI users, institutions, governments, and international organizations. The basis for the responsible use of AI is the "wisdom of the heart," which is to promote the common good, care for the environment, advance truth, support human development, and solidarity [18].

Even a brief overview of the impact of artificial intelligence on all spheres of public life shows the multidimensional nature of its understanding in different fields, depending on the purpose of its use and the role that such technologies play in different spheres of life. However, there is a unifying point in the attitude to such a rapid development of artificial intelligence: fears that artificial intelligence will become fully autonomous and out of human control. Therefore, it is necessary to establish the possibility of regulating the processes that take place with the participation of artificial intelligence and to establish the role and place of the latter in law and its relationship with humans.

Chapter 2: Defining the Legal Nature of Artificial Intelligence in Regulations

Thus, we come to the need to define the legal nature and essence of artificial intelligence, and, accordingly, the mechanism of legal regulation and its specifics in the field of virtual reality (digital environment).

Virtual reality is the result of the rapid development of information and communication technologies and, above all, artificial intelligence, as a result of which people have acquired the technical ability to immerse themselves in such a parallel reality. The concept of the Metaverse (from the Greek μετά and universe) is being formed, which is considered as: 1) a network of virtual worlds of new social interaction; 2) a virtual space in which legal persons (individuals, legal entities, states) and their avatars can interact with each other and other digital objects using Virtual Reality (VR), Augmented Reality (AR) and Mixed (MR) technologies; 3) further integration of the Internet, which provides opportunities for learning, entertainment, social life and work, combining offline and online activities [19].

The Metaverse-UA Association has been established and is actively developing in Ukraine, fruitfully cooperating with leading architects, developers and designers of metaverse and smart cities. The main goal of the Association is to introduce Metaverse technologies into scientific, technical and educational processes in Ukraine, to create an electronic decentralized non-governmental social space in Ukraine "METVERSE-UA" with a high level of trust in Metaverse methods and technologies for the revival and post-war reconstruction of Ukraine. The Association plans to develop such areas as: popularization of modern technologies and knowledge; educational and scientific activities aimed at developing and applying electronic identification of electronic objects and items, blockchain technologies, AI, AR/VR, ICO, ML, ID, avatars, as well as creating clusters of electronic continuing education, electronic healthcare and social services for territorial communities; development of business, trade, fashion, art, etc. The Association also aims to contribute to the modernization of analog legislation and the creation of modern laws regulating the ownership of electronic assets and objects, intellectual property, electronic rights, the formation of electronic jurisdiction and electronic justice in the Metaverse [20].

The literature mentions that the term "artificial intelligence" was coined in 1956 by Dartmouth College professor John McCarthy [21], when he led a small team of scientists to determine whether machines could learn like children through trial and error, eventually developing formal thinking. This project was actually based on the intention to find out how to

make machines use language, abstract forms, and solve problems that humans usually solve, while improving in the process. This was done to separate a new field of research from cybernetics.

There are many definitions of artificial intelligence and approaches to understanding its essence - from identification with robotics to perception of artificial intelligence as an innovative direction of science and technology development aimed at creating intelligent machines and intelligent software.

When defining the concept of artificial intelligence, we should use the attempts to define it that are already available in the law. And, above all, we should use the concept offered by the Artificial Intelligence Act (AI Act), which came into force in the EU on August 1 last year. This law will have a significant impact on all aspects of AI use, from development to end-user, covering 27 EU countries and potentially having a "Brussels effect" (implementation of EU practices) worldwide [22]. The AI Act introduces a broad definition of artificial intelligence systems, including all systems that can make decisions on their own (with a certain level of autonomy) and demonstrate adaptability after implementation. These systems, with explicit or implicit goals, are capable of analyzing the data they receive and generating results, such as forecasts, content, recommendations, or decisions that can affect the physical or virtual environment. That is, to perform tasks that previously required human intervention. This includes both highly specialized models and general purpose artificial intelligence (GPAI) systems (Article 3) [23]. Thus, artificial intelligence systems that are capable of making decisions independently (with a certain level of autonomy) and demonstrating adaptability after implementation, and, with explicit or implicit goals, are able to analyze the data received and generate results such as predictions, content, recommendations or decisions that can affect the physical or virtual environment.

The AI Act classifies artificial intelligence programs based on their risk of harm. The proposed classification includes four categories of risk ("unacceptable," "high," "limited," and "minimal"), as well as one additional category for general-purpose AI. The Law also establishes: 1) harmonized rules for placing on the market, commissioning and use of artificial intelligence systems in the European Union; 2) prohibitions on certain artificial intelligence practices; - special requirements for high-risk artificial intelligence systems and obligations for operators of such systems; 3) harmonized transparency rules for artificial intelligence systems designed to interact with individuals, including emotion recognition systems and biometric categorization systems; 4) rules for market monitoring and supervision [24].

Obviously, the law does not answer the question of the subjectivity or lack thereof of artificial intelligence.

Starting with the legal framework of Ukraine, it should be mentioned that the Cabinet of Ministers of Ukraine approved the Concept of Artificial Intelligence Development in Ukraine by its Order No. 1556-p dated December 2, 2020 [25]. The Concept uses the basic principles of the Guidelines of the Organization for Economic Cooperation and Development (OECD) on Artificial Intelligence (Recommendation of the Council on Artificial Intelligence), which Ukraine joined in 2019. The main principles of the development and use of artificial intelligence technologies include the following: artificial intelligence should benefit people and the planet, promoting inclusive growth, sustainable development and well-being; artificial intelligence systems should be developed and used only in compliance with the rule of law, and their use should be ensured by appropriate safeguards, in particular, the possibility of unimpeded human intervention in the system's operation, ensuring transparency and responsible disclosure of information about the system.

The Concept for the Development of Artificial Intelligence in Ukraine defines artificial intelligence as "an organized set of information technologies that can be used to perform complex tasks by using a system of scientific research methods and algorithms for processing information received or independently created during work, as well as to create and use own knowledge bases, decision-making models, algorithms for working with other entities and determine ways to achieve the tasks" [26].

Thus, the Concept proposes to consider artificial intelligence as a software product that receives a specific request, collects and processes data, and then provides a ready-made solution. Such a solution is often perceived as the result of a program that demonstrates intelligent behavior and works in a manner similar to human thinking.

In the "White Paper on Artificial Intelligence. A European approach to excellence and trust", published on February 19, 2020, the Commission proposed to create a legal framework for artificial intelligence based on "excellence and trust": 1) an ecosystem of excellence, understood as a policy framework for action at European, national and regional levels, which should be transformed into a partnership between the private and public sectors. The mobilization of activities should include the entire chain of actions, from research to creating incentives for decision-making, in particular for small and medium-sized enterprises (SMEs); 2) trust ecosystem, i.e. ensuring compliance with EU rules, including rules that protect fundamental rights and consumer rights, in particular in the case of AI systems operated in the EU that pose a high risk [27].

According to the ISO/IECTR 24028:2020 standard, artificial intelligence (AI) is the ability of designed systems to acquire, process, and apply knowledge and skills [28].

A high-level expert group of the European Commission on artificial intelligence proposed the following definition: artificial intelligence is a system developed by humans that, given a complex goal, acts in the physical or digital world, perceiving the environment, interpreting collected structured or unstructured data, and, based on the knowledge gained from this data, making the best decisions (according to predefined parameters) to achieve the goal [29].

Attempts to regulate artificial intelligence, in addition to those already mentioned, are increasingly aimed at establishing certain rules and standards, taking into account the specific nature of artificial intelligence and its growing impact on people's lives. In particular, on January 17, 2024, in Beijing, the Ministry of Industry of China published draft guidelines for the standardization of the artificial intelligence industry. The draft proposes to create more than 50 national and industry standards for AI by 2026 [30]. The Strategic Plan for the Development of Artificial Intelligence in Singapore consists of the Model AI Governance Framework, which includes a manual describing the practical aspects of AI governance at the organizational level. Canada's Artificial Intelligence and Data Act, which is part of Bill C-27, is also in the process of being finalized. The United States has developed a federal policy on artificial intelligence governance [31].

It should be noted that Singapore's Strategic Plan for Artificial Intelligence Development is based on the priority of using soft law acts as implementation tools, thanks to which Singapore has already formed a set of rules for AI, mostly of a recommendatory nature (C.1.1, C.1.4, C.2.1, C.2.2, C.2.5). Such tools have different names: model frameworks, sets of principles, recommendations, etc. [32].

Chapter 3. Views on the Understanding of Artificial Intelligence in the Research of Legal Scholars

The category of artificial intelligence is the object of close attention from scholars in various fields of scientific knowledge. Given the understanding of artificial intelligence offered by experts in the field of computer linguistics, psychology, philosophy, etc., we will focus on the scientific achievements of legal scholars in this area.

As A. Kiseleva rightly points out, this term is used to combine many concepts, such as neural networks, robots, machine learning, and deep learning. Although these concepts are similar and may overlap, they are not identical. Defining AI comprehensively is a difficult task. The European Parliament in its Recommendation on Civil Law Rules in the Field of Robotics stated: "There is a need for a commonly accepted definition of robot and AI that is flexible and does not hinder innovation" [33]. This statement illustrates the challenges for those brave souls trying to develop a definition of AI: universal acceptance for the many industries that use AI, flexibility for the industries that use AI, flexibility for the extremely rapid technological development and at the same time enabling that development [34].

According to O. Baranov, the concept of artificial intelligence consists of two elements in its name: "artificial" and "intelligence". Therefore, artificial is a substance, material, object, process or environment created as a copy, model, imitation or analogy of a natural one with at least equivalent characteristic properties, the presence of which determines a certain user value [35]. Intelligence, accordingly, is the ability of a person to act purposefully and effectively in any conditions and environments through decision-making as a result of the activity of the system of cognitive functions of the brain [33]. A detailed analysis of the existing definitions and characteristics of the phenomenon under study allowed the researcher to formulate his own definition of the category of artificial intelligence: artificial intelligence is a certain set of methods, techniques, tools and technologies, primarily computer-based, that imitates (simulates) cognitive functions that have criteria, characteristics and indicators equivalent to the criteria, characteristics and indicators of the corresponding human cognitive functions [36].

According to M.O. Stefanchuk, artificial intelligence is essentially the ability of machines to learn from human experience and perform tasks similar to humans. It is the modeling of abstract, creative thinking - and especially the ability to learn - with the help of digital computer logic [37]. B. Nedelko also suggests that artificial intelligence should be understood through the term "capability" as the ability of machines and computer systems to perform tasks that normally require human intelligence, such as learning, decision-making, and data analysis [38].

Given the challenges of today, O. Kostenko proposes to define the concept of "artificial intelligence" as "a complex machine learning information system based on artificial neural networks that process big data, generate statistics and scenarios of the processes under study in order to predict their development for the final human decision" [39].

O.Y. Ivasechko and O.A. Kalita [40] understand artificial intelligence as a branch of computer science that deals with the creation of programs and systems that demonstrate intellectual abilities similar to the human mind or simulate human intelligence processes by computer systems.

Thus, even a cursory review of the definitions offered by lawyers reveals the main issue in determining the legal nature of artificial intelligence: what is it from the point of view of law: an object or a subject? This is what almost all discussions boil down to when trying to define the concept of artificial intelligence.

The general prospects for reforming the legal regulation of the use of artificial intelligence and its liability for actions can be grouped around the following main provisions: 1) positioning artificial intelligence robots as an object of social relations. Under this approach, artificial intelligence robots are perceived only as possible assistance in social relations where the subjects are individuals and legal entities; 2) positioning artificial intelligence robots as separate subjects of legal relations. Under this approach, artificial intelligence robots are perceived as separate independent subjects of social relations with the ability to realize and assess the significance of their actions and the actions of others relatively independently and to a sufficient extent.

The first approach does not cause any particular problems, since at this stage of technological development, all electronic digital devices are objects of law. As noted by M.V. Karchevsky, the "classical" system of legal coordinates already has certain solutions: the rights and obligations of developers, owners and persons operating robots are defined [41]. In this way, the issues of using autonomous vehicles, so-called "social" robots, surgical robots, innovative prosthetic devices, etc. are resolved.

According to I.F. Korzh, legal regulation should be based on the first hypothesis: a robot with artificial intelligence is an object of social relations - the property of an individual or legal entity that is not and cannot be a separate independent subject of social relations. AI is not a member of society a priori, so it cannot have the same rights as a member of society. Artificial intelligence should be perceived as a source of increased danger and considered taking into account all the specific conditions of liability for damage caused by the source of increased danger, which is established by the current norms of the current legislation of Ukraine [42].

- O. I. Zozuliak unequivocally stands for the position of recognizing artificial intelligence as an object, noting that the arguments in favor of the fact that artificial intelligence by its nature tends to be an object of legal relations or tools for their implementation are as follows:
 - 1) it is the result of human activity in respect of which a person has certain rights and obligations;
- 2) in view of the provisions of European Parliament Resolution 2015/2103, it is proposed to establish a non-electronic person as the subject of liability for damage caused by artificial intelligence;
 - 3) is a thing that the owner has the right to own, use and dispose of, like any other property [43].

The scholar argues that since artificial intelligence is the result of intellectual technological activity of a person, as 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 institution of intellectual property law that will facilitate its separation from related categories and its legal protection through the tools of intellectual property law. There is every reason to consider this issue within the framework of the civil law institute that regulates relations with the use of a source of increased danger.

In this regard, it should be noted that from the point of view of intellectual property law, there are no problems at present, since the object is already a computer program, and the subjects of sui generis law may be persons who own property rights or have licensing authority to non-original objects generated by a computer program: authors of such a computer program, their heirs, persons to whom the authors or their heirs have transferred (alienated) property rights to the computer program; lawful users of the computer program (the contract may determine the conditions of ownership of sui generis rights to non-original objects generated by the respective computer programs). In this case, a non-original object generated by a computer program is an

object that differs from existing similar objects and is formed as a result of the operation of a computer program without the direct participation of an individual in the formation of this object.

However, in this case, we are talking about the so-called weak artificial intelligence, and the problem of determining the legal status concerns strong artificial intelligence, which, judging by the pace of technological development, may appear soon and we should be prepared for the emergence of such an actor.

E.O. Michurin also considers artificial intelligence as an object of law. In his opinion, artificial intelligence is an object of law in the form of a device or computer program configured to acquire, process and use information, capable of acquiring skills similar to those consciously exercised by a person [44]. At the same time, the scientist notes that artificial intelligence has certain features that do not allow it to be classified as an exclusively virtual good in terms of objects of private IT law. As a rule, virtual goods are intangible, do not have a tangible form, and can quickly change material carriers without losing their properties. Thus, websites, cryptocurrencies, and other virtual objects in the form of electronic (digital) code can be transferred from one server to another, rewritten from one electronic medium to another [45, p. 71]. In his opinion, the analogy of artificial intelligence with an animal is appropriate. The latter is known to be an object of law. An animal, like artificial intelligence, is able to act without direct human volitional influence. A domesticated animal can take into account a person's will through training (analogous to setting up artificial intelligence). However, an animal is an object of law, although it is endowed by nature with a kind of intelligence, capable of thinking, learning, and communicating. Therefore, it is more correct to compare (analogize) artificial intelligence with an animal - an object of law - than with a human (a subject of law). Therefore, artificial intelligence is an object of law, and the application of the theory of the subject or quasi-subject of law to it is neither appropriate nor justified. Additional arguments in favor of the position that artificial intelligence is an object of law have already been given earlier [46].

According to the second approach, on the contrary, we are talking about a certain "socialization" of artificial intelligence (robots with artificial intelligence). We are talking about robots with artificial intelligence, using the terminology proposed by the aforementioned Resolution of February 16, 2017.

In particular, the European Parliament resolution of February 16, 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103 (INL) [47] refers to an "electronic person". Paragraph 59(f) of the Resolution proposes to create a special legal status for robots in the long term in such a way that at least the most sophisticated autonomous robots are assigned the status of electronic persons responsible for compensation for any damage they may cause and possibly the use of an electronic person in cases where robots make independent decisions or otherwise interact independently with third parties [48]. In general, the Resolution aims to regulate the legal status of robots in human society, for which it is proposed to: create a special European Agency for Robotics and Artificial Intelligence; provide a regulatory definition of "smart autonomous robot"; develop a system for registering the most advanced robots along with a system for their classification; oblige robot developers to provide guarantees that there is no risk of injury or damage from robots; develop a new reporting structure for companies that need robots on the impact of robotics

As we can see, this refers to an "electronic person", which means a robot with highly developed intelligence, capable of making independent decisions and interacting with other

persons independently of the developer. It is noteworthy that the term "person" is used, which a priori refers to this phenomenon as a "subject".

Of course, this category also requires detailed research, as manifestations of artificial intelligence are becoming more and more diverse and increasingly involved in the sphere of social relations, albeit as objects. And such studies are already underway, in particular, in the field of civil procedure. Thus, O. Karmaza and O. Grabovska note that a robot with artificial intelligence in Ukraine is not a subject of procedural legal relations or a subject of other legal relations, but an "electronic person (personality)" may acquire such a legal status provided that the general principles of artificial intelligence use (principles of respect for fundamental human rights and freedoms, non-discrimination, quality and safety, transparency, impartiality, fairness, human control, etc.) are observed, and the limits, procedure and methods of its activity are determined by law. At the same time, the rules of law regarding the use of artificial intelligence must comply with the principle of legal certainty and the rule of law [49]. The authors propose to expand the range of subjects of procedural legal relations and to grant the right to administer justice in civil cases of minor complexity (by mutual agreement of the parties) to an electronic person-judge, and in the notarial process - to perform notarial procedural actions to an electronic person - notary (certification of copies (photocopies) of documents, extracts from them, etc.

Without dwelling here on the expediency of granting artificial intelligence the status of an electronic person-judge and an electronic person-notary, since we are obviously talking about technical actions with the help of artificial intelligence, we note that we cannot currently equate robots and artificial intelligence in legal status with humans.

Chapter 4. Legal nature of artificial intelligence: from the present to the future

In the Ukrainian legal system, as in most modern legal systems, there are three groups of legal entities: individual (natural persons); collective entities formed by uniting individual entities, most of which are capable of acquiring the status of a legal entity; and public entities.

The concept of a legal entity is contained in Article 80 of the Civil Code of Ukraine. A legal entity is an organization in the form of companies, institutions and other forms established by law, established and registered in accordance with the procedure established by law, which is endowed with civil legal capacity and legal capacity, and may be a plaintiff and defendant in court. The law does not define any other persons, except for individuals and legal entities.

Some scholars believe that even the most sophisticated artificial autonomous agents do not deserve legal personhood and conclude that it is impossible to consider them as subjects of law given the difficulties in holding "electronic persons" accountable [50]. Others have argued that moral and legal personhood should not be attributed to currently existing robots, given their technological limitations, but should be done once they reach a certain level at which they are comparable to humans [51] who have legal personality, with appropriate constitutional protections similar to those afforded to humans [52].

The concept of legal personality of a robot (as a potential subject of law) is not completely new; it has been discussed in the scientific community for some time. Accordingly, first of all, it should be clarified whether such a subject falls within the existing classification or will be a completely new type of subject. O. Baranov, in particular, substantiates the need to recognize robots with artificial intelligence as subjects of social relations - "equivalents of an individual" [51]. In this case, robots are viewed as human-like entities that perform human-like actions in the course of relations with traditional subjects. The legal status of an AI robot is equated to the legal

status of a natural person with its scope of legal capacity, legal capacity and tort capacity, provided that the composition, criteria, characteristics and indicators of their cognitive functions are equivalent [53].

From the point of view of E.A. Tymoshenko, artificial intelligence physically embodied in a robotics object should be considered as a subject of legal relations, perhaps somewhere in between legal entities and individuals, combining their individual features with due regard for the relevant specifics. It is possible that artificial intelligence will be simultaneously considered both an object and a subject of law [54].

We do not consider this object-subject theory, as it only complicates our task by not giving a specific answer to the question we are interested in, although the position of AI between legal entities and individuals seems to make sense.

T. Mulgan offers several approaches to determining the legal personality of artificial intelligence: 1) "the concept of exclusive legal personality, which provides for granting the status of a subject of law only to humans; 2) the concept of minimal inclusiveness - artificial intelligence can be considered as an autonomous agent; 3) the concept of moderate inclusiveness - artificial intelligence as an autonomous agent or a legally capable agent that does not have legal personality; 4) the concept of full inclusiveness - recognizes artificial intelligence as a person with legal personality similar to human" [55].

In case of granting AI systems a legal status similar to that of natural persons, supporters of this approach consider it appropriate to grant such systems not literal rights of citizens in their established constitutional and legal interpretation, but their analogues and certain civil rights with certain restrictions. This position is based on objective biological differences between humans and robots. In particular, it is noted that it makes no sense to recognize the right to life for the AI system, since it does not live in the biological sense. In addition, the rights, freedoms, and obligations of artificial intelligence systems should be secondary to the rights of citizens; this provision establishes the derivative nature of artificial intelligence as a human creation in the legal sense.

The potential constitutional rights and freedoms of artificial intelligence systems (and we are talking about establishing the constitutional and legal status of AI, on which all other statuses, including civil law, will be based) include the right to be free, the right to self-improvement (learning and self-learning), the right to privacy (protection of software from arbitrary interference by third parties), freedom of speech, freedom of creativity, recognition of copyright for the AI system and limited property rights. There are also mentions of specific concrete rights of artificial intelligence, such as the right to access a source of electricity [55].

The literature also refers to "artificial agents". At the same time, according to Chopra S. and White L. F., reflections on how the law can decide whether to extend legal personality to artificial agents are a valuable testbed for philosophical theories of mind. In addition, philosophical and legal theorizations about personhood for artificial agents can be continually informative. The researchers explore two thematic areas based on legal debates about the status of artificial agents. The first one examines the doctrinal difficulties associated with contracts entered into by artificial agents. It is concluded that there is no need or desire to postulate artificial agents as legal entities to account for such costs. The second considers the potential of sophisticated artificial agents with legal personality with appropriate constitutional protections similar to those provided to humans [56]. This becomes possible, in particular, due to the development of technology and the evolution of the concept of "robot" itself. As Sebastian Tran notes in his study "Towards a Framework for Human-Robot Interaction": robotics is a field that is undergoing change; the meaning of the term

"robot" today is significantly different from what it was just ten years ago [57]. The researcher identifies the main epochs of robotic technology and systems - from industrial to service robotics - and characterizes different styles of paradigmatic human-robot interaction for each era.

The autonomy of robots raises the question of their nature in the light of existing legal categories or whether a new category should be created with its own specific features and implications. Moreover, most authors focus on robots rather than artificial intelligent systems, presumably because robots are easier to identify through the images presented in fiction or cinema. Since the concepts of "robot" and "artificial intelligent systems" are in a relationship of overlap, it is appropriate to generalize smart robots, software agents [58], etc. that have features due to their endowment with artificial intelligence, according to some scholars, in the concept of "artificial autonomous agent" to avoid ambiguity of reasoning [59].

The concept of an "agent" has become important both in artificial intelligence (AI) and in mainstream computer science. In particular, Michael Wooldridge and Nicholas R. Jennings' study Intelligent Agents: Theory and Practice deals with intelligent agents. The authors have created a whole *agent theory* related to the question of what an agent is and the use of mathematical formalisms to represent and reason about the properties of agents. Agent architectures are proposed to be considered as software engineering models of agents [60].

Stan Franklin and Art Gresser also deal with the problems of defining the concept of "agent," noting that there are various definitions of this category that range from simple to extensive and complex. The term "agent" is used to refer to two orthogonal concepts. The first is the ability of an agent to perform autonomously. The second is the agent's ability to perform object-oriented reasoning." At the same time, autonomous execution is certainly central to agency [61].

It should be noted that the designation of artificial intelligence (robot) as an "agent" or "intellectual agent" and its introduction into the legal field in this form does not seem to be entirely successful. In our opinion, if a new term is to be introduced into the legal field to denote a new type of entity, it could be the category of "electronic person". And here we are definitely talking about the subjectivity of this category.

The question of determining its legal status remains, not just now, but in the near future.

Without sharing the concept of the "equivalent of a natural person," we agree with the thesis that the criterion for recognizing legal capacity based on the presence of consciousness and self-awareness is abstract; it allows for numerous offenses, abuse of the law, and provokes sociopolitical problems as an additional reason for the stratification of society.

This idea was elaborated in detail in the work of S. Chopra and L. White, who argued that consciousness and self-awareness are not necessary and/or sufficient conditions for recognizing AI systems as legal entities. In legal reality, fully conscious persons, such as children (or slaves in Roman law), are deprived or limited in legal capacity. At the same time, persons with severe mental disorders, including those recognized as incapacitated or in a coma, etc., with an objective inability to be conscious in the first case (albeit in a limited form), and in the second case, they have the same full legal capacity without significant changes in their legal status, remain subjects of law (albeit in a limited form). The potential consolidation of this criterion of consciousness and self-consciousness will allow arbitrary deprivation of citizens of legal capacity [62].

The autonomy of artificial intelligence systems in the sense of their ability to make decisions and implement them independently, without external anthropogenic control or targeted human influence, is not comprehensive. Currently, artificial intelligence is only able to make "quasi-autonomous decisions" that are somehow based on the ideas and moral attitudes of people. In this

regard, we can only consider the "action-operation" of the AI system, excluding the ability to make a real moral assessment of the behavior of artificial intelligence.

In our opinion, the best option in this case, the one that is most adapted to the nature of artificial intelligence, is to use the category of collective entity, similar to a legal entity.

This possibility is already being actively discussed in the literature, i.e., solving the problem of the legal status of artificial intelligence by means of a legal entity based on the Persona Ficta concept. In this case, it is possible to disregard the presence or absence of internal will, self-awareness and other similar qualities inherent in humans [63]. The approach is based on the application of legal fiction to artificial intelligence.

Proponents of the object theory deny this possibility, emphasizing that the will of a legal entity is always determined and fully controlled by the will of individuals. Thus, legal entities cannot act without the will of individuals.

A strong artificial intelligence capable of making decisions independently, without human will, will no longer depend on human will, and therefore should be endowed with an appropriate legal status, similar, in our opinion, to the status of a legal entity, but not repeating it, given the specifics of AI. This should be the legal status of a "quasi-legal" entity.

Electronic persons are thus powerful artificial intelligence systems endowed with the status of a "quasi-legal" person, which have an appropriate amount of special legal capacity depending on their functional purpose and capabilities.

And here we can turn to the experience of ancient Rome. Jurisprudence has the experience of Roman law in using (involving) phenomena that were not originally subjects of law, but later acquired such an opportunity to participate in civil circulation.

Thus, in Rome, along with individuals, legal entities could be subjects of private law, the first of which were mentioned in the Laws of the XII Tables and the most common type of which in the late Republic were municipalities. In relation to municipalities, the idea of legal personality was developed, which was later applied to private corporations. Although corporations were limited in some rights compared to municipalities (for example, they could not be heirs, unlike the latter), they were generally treated as persons capable of being parties to private law relations. The jurisprudence of the "classical period" distinguishes quite clearly and consistently between the organization itself and the individuals who are its members [64].

In addition, institutions eventually became legal entities, which was triggered by the recognition of Christianity as the state religion in 380. Church institutions were recognized as having the right to receive property under contracts and by will, to be creditors, to appear in court, etc. This legal capacity is then extended to various private (non-governmental) charitable institutions, such as hospitals, shelters, etc., as they are supervised by the church. In general, it can be noted that Roman private law did not have a detailed concept and theory of a legal person. At the same time, the idea of this institution was quite clearly defined: recognition of legal capacity of an organization, separate from the legal capacity of individuals who are its members. In addition, the means of implementing artificial legal capacity were developed and the types of legal entities were defined. The main provisions formulated by Roman jurisprudence regarding legal entities are as follows: 1) corporations in the field of private law may be treated as natural persons (D.50.16.16); 2) the legal existence of a corporation is not terminated or impaired by the withdrawal of several members (D.3.4.7.2); 3) the property of a corporation is separated from the property of its members and belongs to it as a special entity (D.3.4.1.1; D.3.4.9); 4) the corporation and its members have separate rights and obligations and are not liable for each other's obligations

(D.3.4.7.1); 5) the corporation (legal entity) enters into legal relations with the participation of individuals authorized to do so in a certain way (D.3.4.1.3; D.3.4.2.3) [65, p. 395].

In addition to the legal status of legal entities, the status of slaves was also interesting, as it underwent transformations depending on the development of economic and other relations. Thus, in particular, with the expansion of the Roman state and the complication of economic relations, slaves finally acquired the status of "speaking instruments". In fact, a slave is not a subject but an object of law. However, Gaius discusses the legal status of slaves in Book I of his Institutes, entitled "Of Persons." We will follow his example. And here we come across some very interesting things.

First, slavery is not considered by Roman lawyers as a specific Roman institution - both in its essence and in its legal regime. As Gaius notes, "the power over slaves is an institution of the common law (juris gentium), for in general among nations we find that masters have the right of life and death over slaves, and that whatever is acquired by the slave is acquired by the master" (Institutes. 1.52).

Secondly, an equally important point worth paying attention to is the gradual change in the private legal status of slaves (without changes in their public legal status and the ideology in this area).

The specificity of the legal status of slaves in private law was that although they were not considered subjects of law, they were gradually, for practical reasons, actually involved in civil circulation as such. For this purpose, such means were used as granting slaves peculiarities, as well as praetorian lawsuits under the contracts they executed.

The essence of the slave peculiarity was that the master provided the slave with property that was accounted for separately from other property owned by the master (D.15.1.5.4).

The slave peculiarity was an interesting and, one might say, multidimensional phenomenon. On the one side, it was a means of increasing the slave's interest in the results of his own labor, ultimately for the benefit of his master, who could take back his property at any time.

On the upside, peculiarity became an effective means of involving slaves in trade, as the presence of separate property naturally encouraged them to enter into contracts, acquire new property, etc. The need to create guarantees for third parties who entered into contracts with slaves who had peculiarities led to the fact that praetors began to file lawsuits against the master who provided the peculiarities. In these cases, the slave owner's liability was limited to the amount of the peculiarity (D.15.1.41).

Another means of involving slaves in private circulation, with the recognition of their quasilegal capacity, was praetorian lawsuits.

The content and nature of such claims often depended on the type of activity of the slave.

- 1) Actio institoria was granted by the praetor in cases where the master appointed a slave to manage his business, whether commercial or otherwise. Since the master entrusted the slave with the management of his business, he was fully responsible for the slave's actions (D.14.3.1).
- 2) The problem of fulfillment of obligations under contracts concluded by a slave the captain of a ship was solved in a similar way. Here, the action was granted action exercitoria (D.14.1.1).
- 3) Actio quod jussu could be granted when a slave entered into a contract on the basis of a prior agreement between his master and a third party. In this case, the master was fully liable (D.15.4.1.1).
- 4) The master was responsible for the action de in rem verso to the extent of the property received under the slave contracts, as a result of which this property passed to him (D. 12.6.13-14).
- 5) In addition, the master was responsible for the damage caused by his slave to another person.

Thus, the spectrum of slaves' participation in private circulation was quite wide, which allows us to speak of the existence of real, albeit limited, legal personality [64, p. 378-397].

Conclusions

Summarizing the study, we can offer our own solution to the problem of determining the legal status of artificial intelligence (robot, intellectual agent).

First of all, it is necessary to gradually prepare the legal system for the emergence of a new subject - an electronic person. It seems that it is now necessary to discuss the practical possibility of granting the most advanced artificial intelligence systems with a high degree of autonomy the status of a quasi-legal entity in the future, since it does not fall under the category of a legal entity (which is also a fiction).

Therefore, robots with artificial intelligence ("electronic persons", "intellectual agents") should be recognized as quasi-legal entities. At the same time, we propose to include "cyber capacity" in the list of types of legal personality of a legal entity, i.e. the ability to be an active participant in relations in the IT sphere (to enter into contracts as a user, to be a member of social networks, to participate in interactive campaigns, etc.) Cyber capacity can be realized through both transactions and legal acts [65].

As with legal entities, electronic entities should be subject to mandatory state registration in the relevant electronic registers. At the same time, a system of licensing the types of activities of such entities and establishing standards and norms to which such entities must comply, depending on the type of activity, is also possible. In addition to the development of the necessary regulations and standards, it is very important to use soft law. At the same time, ethical standards of AI are its value basis - they must be observed by all participants of legal relations: both private companies and executive authorities.

Thus, an electronic person can be defined as a set of technologies that are recognized by law as enabling the possibility of being a party to property and non-property relations.

Such a person has the legal status of a quasi-legal entity, is registered in accordance with the procedure established by law, and has a special legal personality depending on the functional purpose (field of activity).

REFERENCES

- 1. Streltsov E.L. Artificial Intelligence from the Perspective of the "Bat" Phenomenon: A Humanitarian Essay. Foreword by Herbert Küpper (Regensburg, Germany), YUU, No. 2-4, January February 2025.
- 2. Bostrom, N. Superintelligence. Strategies and dangers of the development of smart machines (A. Yashchuk, A. Yashchuk, trans. from English). K.: Our format. 2020. C. 102
- 3. Vitalina Nikitenko, Valentyna Voronkova, Olga Kyvliuk, Roman Oleksenko, Valeria Suhenko. Philosophical reflection on artificial intelligence and its impact on the development of society, human, and education. *Humanities Studies*. 2024. Issue 19 (96). C. 73-74 (67-74
- 4. Psychology: a textbook [Y.L. Trofimov, V.V. Rybalka, P.A. Goncharuk, et al. Kyiv: Lybid, 2008. 560 c.
- Derevyanko S.P., Prymak Y.V., Yushchenko I.M. Artificial Intelligence and Emotional Artificial Intelligence as Phenomena of Modern Cognitive Psychology. Scientific Notes of the National University of Ostroh Academy. Series "Psychology": scientific journal. Ostroh: NaUoA Publishing House, June 2020. № 11. C. 115-119. C. 117.
- 6. Z. Abrams, "AI is changing every aspect of psychology. Here's what to watch for," Monitor on Psychology, vol. 54, no. 5, Jul. 2023. [Electronic resource]. Available: https://www.apa.org/monitor/2023/07/psychology-embracing-ai.
- 7. N. Board, "The Significance of Psychology in Shaping AI Development," LinkedIn, 2023. [Electronic resource]. Available: https://www.linkedin.com/pulse/significance-psychology-shaping-ai-developmentnathaniel-board/.
- 8. Melnyk M., Malynoshevska A., Androsovych K. Generative artificial intelligence in psychology: implications and recommendations for science and practice. *Information Technologies and Learning Tools*, 2024, Vol. 103, No. 5. C. 199-200

- 9. Tehsin Zia. Empathic w t learning intelligence: transforming mental health care and beyond with emotional intelligence Unite.AI
- 10. Pushyk N.V. Computer linguistics and "artificial intelligence". "Young Scientist" No. 2 (90) February, 2021. C. 154 (151-155)
- 11. Antipina, I. (2024). Artificial intelligence as a tool for transforming cultural ideas. *Journal of the Tchaikovsky National Music Academy of Ukraine*, (3(64), 74-90. C.75 https://doi.org/10.31318/2414-052X.3(64).2024.314744
- 12. The rise of AI in music production: creative partner or composer competitor?, 2023. Mastering the Mix, [online]. Available at: https://www.masteringthemix.com/blogs/learn/the-rise-of-ai-in-music-production-creative-partner-or-composer-competitor
- 13. The Call for AI Ethics. Ren Ais sance foundation. URL: https://www.romecall.org/the-call/Vernon,M. (2023). AI and Spiritual Intelligence. Beshara Magazine. URL: https://www.markvernon.com/ai-and-spiritual-intelligence; https://www.vatican.va/roman_curia/pontifical_academies/acdlife/documents/rc_pont-acd_life_doc_20202228_rome-call-for-ai-ethics_en.pdf.
- 14. Anna-Valeria Lavinyukova. Possibilities of Artificial Intelligence in the Study of Religious Experience. *Culturological almanac*. Issue 4 (12), 2024. C. 65 (64-69)
- 15. ANTIQUA ET NOVA. *A note* on the relationship between artificial intelligence and human intelligence. URL: https://www.vatican.va/roman_curia/congregations/cfaith/documents/rc_ddf_doc_20250128_antiqua-et-nova en.html#Introduction.
- 16. Boyko D. Ethical view of artificial intelligence: "Antiqua et Nova" and the Vatican's position on AI. https://dc.org.ua/news/etychnyy-poglyad-na-maybutne-antiqua-et-nova-ta-pozyciya-vatykanu-schodo-shi
- 17. Radutnyi O. E. Metaverse and the general economy of good and evil (criminal law dimension). Scientific researches. Issue 44. 2022. C. 43 (40-68)
- 18. ASSOCIATION METAVERSE-UA | ASSOCIATION METAVERSE-UA
- 19. J. McCarthy *et al*, "Proposal for a Dartmouth Summer Research Project in Artificial Intelligence" (August 31, 1955), http://www-formal.stanford.edu/jmc/history/dartmouth/dartmouth.html.
- 20. AI Act: A new era of artificial intelligence regulation in Europe | Think brave
- 21. Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 establishing harmonized rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act) (EEA text) PE/24/2024/REV/1. https://eurlex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202401689
- 22. Artificial Intelligence Act. a9-0188/2023. Url: https://www.europarl.europa.eu/doceo/document/ta-9-2024-0138_en.html.
- 23. On approval of the Concept of development of the ... | No. 1556-r of 02.12.2020 (rada.gov.ua)
- 24. Concept of artificial intelligence development in Ukraine: Order of the Cabinet of Ministers of Ukraine dated 02.12.2020 No. 1556-p. Uriadovyi Courier. 18.12.2020. № 247. https://zakon.rada.gov.ua/laws/show/1556-2020-p#Text
- 25. White Paper on Artificial Intelligence A Europe an approach to excellence and trust. commission-white-paper-artificial-intelligence-feb2020 en.pdf
- 26. ISO/IEC TR 24028:2020: Information technology AI Over view of trust worthiness in AI. URL: https://www.iso.org/obp/ ui/#iso:std:iso-iec:tr:24028:ed-1:v1:en
- 27. European Commission. 2018. a definition of Artificial Intelligence: main capabilities and scientific disciplines. reporthigh-level expert group on artificial intelligence. Url: https://digital-strategy.ec.europa.eu/en/library/definition-artificial-intelligence-main-capabilities-and-scientific-disciplines.
- 28. Ye Josh. China issues draft guide lines for standard is in gai industry. 2024. Retrieved from https://www.reuters.com/technology/china-issues-draft-guidelines-standardising-ai-industry-2024-01-17
- 29. Geletska I.O., Shovdra M.M. Definition of the concept of "artificial intelligence" and its place in the system of civil legislation of Ukraine. Galician studies. Legal sciences. 6, 2024. C. 16 (13-19)
- 30. Hachkevych A. Organizational and Legal Support for the Introduction of Artificial Intelligence in Singapore. *Electronic scientific publication "Analytical and Comparative Jurisprudence"*. 2024. C. 420 (418-428)
- 31. European Parliament Report with Recommendations on Civil Law Rules on Robotics as of January 27, 2017 http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+REPORT+A8-2017-0005+0+DOC+XML+V0//EN >accessed July 12, 2018

- 32. What is artificial intelligence and why does it matter for Copyright by Anastasiya Kiseleva LL.M. student at Leibniz Universität Hannoverin Germany
- 33. Baranov. Definition of the term "artificial intelligence". Information and law. № 1(44)/2023. C. 35-36.
- 34. Baranov. Definition of the term "artificial intelligence". Information and law. № 1(44)/2023. C. 45.
- 35. Stefanchuk M.O. Civil legal personality of individual sand feature sofits implementation. Kyiv: Artek, 2020.
- 36. The concept and main characteristics of artificial intelligence: domestic and foreign approaches. *Modern scientific journal*, (5(3), 2024. 15-21. https://doi.org/10.36994/2786-9008-2024-5-2
- 37. Electronic jurisdiction, metaverse, artificial intelligence, digital personality, digital avatar, neural networks: theory, practice, prospects. *Journal of Scientific Innovations and Advanced Technologies.* № 2 (4) 2022.
- 38. Artificial intelligence as a new tool of diplomacy: challenges and prospects. *Regional Studies*, 2023. № 34. C. 131 (129-134)
- 39. Karchevskyi M.V. The main problems of legal regulation of the socialization of artificial intelligence. *IT Law: Problems and Prospects of Development in Ukraine*: Proceedings of the II International Scientific and Practical Conference (Lviv, November 17, 2017) Lviv: Lviv Polytechnic National University, 2017. P. 95 (318 p.)
- 40. Artificial intelligence and law. *Social and digital transformation: theoretical and practical problems of legal* regulation: materials of the All-Ukrainian scientific and practical conference, Kyiv, December 2, 2021 / scientific adviser of the conference O. Baranov; edited by V. Furashev, S. Dorohykh Kyiv-Odesa: Phoenix, 2021. 324 p. P. 26 (22-27)
- 41. Artificial intelligence as an object of civil law regulation. Materials of the International Scientific and Practical Conference dedicated to the memory of Prof. V. P. Maslov Kharkiv, February, 2022. C. 95-102. http://hdl.handle.net/123456789/15819
- 42. Artificial intelligence: legal aspects. *Social and digital transformation: theoretical and practical problems of legal regulation*: materials of the All-Ukrainian scientific and practical conference, Kyiv, December 2, 2021 / scientific adviser of the conference O. Baranov; edited by V. Furashev, S. Dorohykh Kyiv-Odesa: Phoenix, 2021. 324 pp. C. 30 (27-31).
- 43. Michurin E.O. Virtual goods: features and characteristics. Forum of Law. 2021. № 3. 2021. C. 67-73
- 44. Legal nature of artificial intelligence. Forum of Law, 64 (5), 2020. 67-75. http://doi.org/10.5281/zenodo.4300624
- 45. European Parliament resolution of February 16, 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103 (INL). URL: https://www.europarl.europa.eu/doceo/ document/TA-8-2017-0051 EN.html.
- 46. Koval M. Electronic personality: why the EU is discussing the rights of robots | European Truth (eurointegration.com.ua)
- 47. Karmaza O., Grabovska O. <u>Electronic person (personality) as a subject of legal relations in civil procedure</u>. Entrepreneurship, economy and law. 2021. № 2. C. 5-10
- 48. Bryson, Joanna and Diamantis, Michalis and Grant, Thomas D.Z., For and by Humans: The Legal Lack of Synthetic Persons (September 8, 2017). 25 Artificial Intelligence & L. 273 (2017), available at SSRN: https://ssrn.com/abstract=3068082.
- 49. Gordon J.-S. Artifcial moral and legal personhood. Artificial Intelligence and Society. 2020. September 09, 2020. https://www.researchgate.net/publication/344268290 Artificial moral and legal personhood.
- 50. Chopra S., White L.F. Artificial Agents Personhood in Law and Philosophy. Proceedings of the 16th Eureopean Conference on Artificial Intelligence, ECAI'2004, including Prestigious Applicants of Intelligent Systems, PAIS 2004, Valencia, Spain, August 22-27, 2004. URL: (in PDF format) Artificial agents personality in law and philosophy.
- 51. Baranov O.A. Internet of Things (IoT): a robot with artificial intelligence in legal relations. Yurydychna Ukraina. 2018. № 5-6. C. 75-95
- 52. Transformation: social & digital & legal: a monograph in 3 volumes. Vol. 1. Saving civilization: the economy of results. Helvetica Publishing House, 2022. P. 165 (272 p.)
- 53. Artificial intelligence as a subject of intellectual property rights. Journal of Kyiv University of Law. 2020. Issue 4. C. 328-332
- 54. Mulgan T. Corporate Agency and Possible Futures. Springer Link. 2018. May 3. URL: https://link.springer.com/article/10.1007/s10551-018-3887-1

- 55. Vokrug A. Artificial intelligence and legal identity. https://unite.ai/uk/%D1%88%D1%82%D1%83%D1%87%D0%BD%D0%B8%D0%B9%D1%96%D0%BD%D1%82%D0%B5%D0%BB%D0%B5%D0%BA%D1%82-%D1%96%D0%BF%D1%80%D0%B0%D0%B2%D0%BE%D0%B2%D0%B0%D1%96%D0%B4%D0%B5%D0%BD%D1%82%D0%B8%D1%87%D0%BD%D1%96%D1%81%D1%82%D1%8C/
- 56. Chopra S., White L.F. Artificial Agents Personhood in Law and Philosophy. Proceedings of the 16th Eureopean Conference on Artificial Intelligence, ECAI'2004, including Prestigious Applicants of Intelligent Systems, PAIS 2004, Valencia, Spain, August 22-27, 2004. URL: https://www.researchgate.net/publication/220837427_Artificial_Agents_-Personhood in Law and Philosophy
- 57. Thrun S. Toward a Frame work for Human-Robot Interaction. Human-Computer Interaction. 2004. Vol. 19, Iss. 1-2. P. 9-24. Towards a framework for human-robot interaction: Human-Computer Interaction: Vol. 19, No. 1-2
- 58. Nwana H. S. Software Agents: An Overview. Knowledge Engineering Review. 1996. Vol. 11, No. 3. P. 205-244. URL: http://www.upv.es/sma/teoria/agentes/software%20 agents-nwana.pdf
- 59. Zhanna Pavlenko, Susanna Vodorezova. The concept of an electronic person in digital reality. Bulletin of the Yaroslav the Wise National Law University. 2021. № 3 (50) C. 63 (59-70)
- 60. Wooldridge M., Jennings N. R. Intelligent agents: Theory and practice. The Knowledge Engineering Review. 1995. Vol. 10 (2). P. 115-152. https://doi.org/10.1017/S0269888900008122
- 61. Franklin S., Graesser, A. Isitan agent, or just a program? A taxonomy for autonomous agents. Intelligent Agents III: Agent Theories, Architectures, and Languages: ECAI'96 Workshop (ATAL), Budapest, Hungary, August 12-13, 1996 Proceedings. Berlin: SpringerVerlag. 1997. P. 21-35. DOI: https://doi.org/10.1007/BFb0013570
- 62. Vokrug A. Artificial intelligence and legal identity. https://unite.ai/uk/%D1%88%D1%82%D1%83%D1%87%D0%BD%D0%B8%D0%B9- %D1%96%D0%BD%D1%82%D0%B5%D0%BB%D0%B5%D0%BA%D1%82-%D1%96- %D0%BF%D1%80%D0%B0%D0%B2%D0%BE%D0%B2%D0%B0- %D1%96%D0%B4%D0%B5%D0%BD%D1%82%D0%B8%D1%87%D0%BD%D1%96%D1%81%D1%82 %D1%8C/
- 63. Katkova T. G. Laws on robots: current state and prospects for development. IT law: problems and prospects of development in Ukraine: materials of the scientific and practical conference (Lviv, November 17, 2017). Lviv: Lviv Polytechnic National University, 2017. C. 58-64. URL: http://aphd.ua/publication-345.
- 64. Kharytonov E.O., Kharytonova O.I. Private law as a concept. Volume 1: Origins. Odesa: Phoenix, 2018. P. 394 (556 p.)
- 65. Kharytonova O. I., Kharytonov E. O. Digital man, digital person and digital personality: to the problem of correlation // Journal of Civilization. 2023. № 49. C. 5-13