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The Concept of Electronic Personhood in Civil Law

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Annotation: This article analyzes the concept of the "electronic person," which is gaining increasing relevance in modern legal relations, within the framework of civil law. The legal status of digital technologies, artificial intelligence, and automated systems as legal subjects is examined based on international experiences. The author evaluates theoretical foundations, existing contradictions, and the role of this emerging legal subject in civil transactions. Drawing on the practices of Germany, the United States, Japan, and the European Union, the article explores the legal structure of the rights, obligations, and liabilities of electronic persons. Furthermore, it discusses the necessity and prospects of introducing this concept into the civil law of the Republic of Uzbekistan. The article offers the author's proposals and recommendations for recognizing electronic personhood and establishing its normative-legal foundations.

Keywords: electronic person, artificial intelligence, legal subject, civil law, legal liability, legal personality, digital law, international legal practice, civil transactions, automated systems.

In today's era of digital transformation, artificial intelligence (AI), algorithmic agents, and automated systems are becoming new participants in legal relationships. The concept of an **electronic person** — the potential recognition of artificial intelligence, algorithmic agents, or automated systems as legal persons — is one of the most pressing issues in contemporary legal scholarship. This concept is not only of theoretical interest but also of great practical significance, as digital technologies are becoming increasingly complex and capable of making autonomous decisions without human intervention. These entities operate not within the traditional understanding of a "subject of law" — a natural or legal person with will, intent, and responsibility — but rather act based on pre-programmed algorithms [1, pp. 45–72]. Therefore, there is a growing need to revisit the mechanisms of liability and responsibility allocation. For instance, the European Parliament's 2017 resolution proposed granting "electronic personhood" status to highly autonomous AI systems [2]. The main goal behind this proposal is to develop a mechanism through which such systems could be held directly responsible for any damage they may cause.

As a result of modern technologies, new actors such as algorithmic agents (AI agents), robots, and smart contracts are emerging in legal relations [3, pp. 18–25]. These entities possess a degree of autonomy — for example, the ability to make independent decisions or perform payments upon meeting certain conditions. This capability sets them apart from traditional legal persons and raises new legal questions requiring regulatory response.

The concept of electronic personhood refers to the idea of granting legal person status to autonomous systems such as artificial intelligence (AI) platforms, algorithms, robots, or blockchain-based smart contracts [4, pp. 48–56]. For example, the European Parliament's 2017 resolution recommended introducing a special legal status of "electronic person" for highly autonomous systems and developing mechanisms through which such systems would bear liability for the damages they cause.

An electronic person encompasses technical devices, AI agents, algorithmically controlled robots, and blockchain-based smart contracts. In our view, an electronic person is a digital system or agent based on artificial intelligence that operates with a certain degree of independence and autonomy and is

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capable of functioning within a legal environment. Such systems can perform various functions: for instance, independently concluding contracts, executing financial transactions, or analyzing data and making decisions. However, according to traditional legal theory, legal personhood requires will and consciousness. For example, according to Friedrich Carl von Savigny's theory, legal persons are fictitious entities created by human intellect, lacking actual will and purpose [5, pp. 101–118].

Similarly, under Rudolf von Jhering's **"theory of interests"**, a legal person is viewed as a set of interests protected by law [6]. In our opinion, this approach provides some grounds for recognizing electronic persons since AI systems may represent certain interests. However, **Raymond Saleilles' "theory of will"** considers independent will and purposive behavior as defining characteristics of legal personhood [7]. We believe that the "will criterion" in Saleilles' theory needs to be reinterpreted in a contemporary context. Today's AI systems not only follow pre-programmed algorithms but also make autonomous "decisions" using machine learning technologies [8, pp. 1–8]. For instance, large language models such as GPT-4 or Claude generate unique, non-predefined content with every response. Although this process differs from traditional human will, the functional outcome may closely resemble it.

Furthermore, **Hans Kelsen's normative theory** conceptualizes the legal person as a construct created by legal norms [9]. This view offers the most suitable theoretical basis for legally recognizing electronic persons. According to **Georg Jellinek's "realist theory of legal personhood,"** a legal person is a socially existing entity with its own goals and interests [10]. This theory presents a challenge for electronic persons, as their "real existence" remains a matter of debate. However, we argue that the criterion of "real existence" in Jellinek's theory should be reinterpreted in the modern context—today, digital and virtual presence may also be considered "real." For example, the core value of companies like Facebook or Google lies in their digital assets—data, algorithms, code, and networks. Similarly, AI systems possess a form of digital reality.

If AI systems produce real outcomes and influence society, they should be considered to possess **"functional reality."** Therefore, Jellinek's theory should not be seen as an obstacle for recognizing electronic persons, but rather, through modern interpretation, it may encompass them as well.

Based on the above analyses, we conclude that recognizing an electronic person as a legal subject requires acknowledging its **"artificial will"**—a will-like capability resembling human will, albeit artificial in nature. This will is not deterministic: AI can respond differently to the same situations. It is adaptive, improves itself through experience, and operates with a defined objective. However, it remains limited—confined to predefined algorithms and parameters. Hence, the concept of **"artificial will"** can serve as an essential tool for determining the rights, responsibilities, and legal capacity of electronic persons.

In current legal systems, the main criteria for legal subjectivity are **legal capacity** and **capacity to act**. For natural persons, these capacities are determined by citizenship, while for legal entities, they depend on the laws of the country in which they are established. Electronic agents, however, represent a new category that is not yet recognized under the law. These entities do not operate based on consciousness or free will, but instead function according to algorithmic rules encoded in software. This raises a fundamental question regarding the attribution of traditional legal personhood to such entities: if legal recognition is to be granted, what specific rights and obligations should they be assigned?

According to radical interpretations of classical approaches, only conscious subjects—namely, natural persons—can be granted the status of legal persons, and artificial entities can never be fully recognized as such. However, this position is difficult to uphold, as even legal persons that are recognized under current law are not natural entities; they are **fictitious legal constructs**. Furthermore, the notion of

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electronic personhood has been interpreted in various theoretical frameworks. Some scholars describe it as an **"electronic legal person"**, suggesting a model akin to corporate legal structures.

Ugo Pagallo, in his work *The Laws of Robots*, proposes a model based not on full legal personhood, but on **"limited liability and regulatory oversight"** [11, pp. 35–41]. According to him, AI systems should be viewed not as full legal persons, but as instruments that may be held liable under certain legal conditions. Other researchers propose a more minimalistic role for autonomous systems, treating them primarily as **"normative agents"** with limited regulatory interaction.

For example, Shomurodov has suggested that AI should be treated as a **temporary intermediary status**, initially being regarded as a legal object—that is, as a tool subject to responsibility [12, pp. 10–14]. However, the view proposed by Shomurodov, which limits AI to the status of a legal object subject to imposed liability, does not appear sufficiently substantiated. Modern AI systems possess the ability to make autonomous decisions, adapt to varying environments, and respond to unforeseen situations. Treating such systems merely as objects neglects their **autonomous functional behavior**, which warrants legal analysis.

Therefore, it is essential to consider granting AI systems not an interim status, but a **limited and autonomous legal subject status**. This approach becomes particularly important when we apply the concept of **artificial will**, allowing for the legal attachment of responsibility to their goal-oriented, adaptable, and at times unpredictable actions. Such a theoretical foundation could provide a coherent mechanism for evaluating legal accountability in the age of autonomous technology.

Can Legal Subjectivity Be Granted to an Electronic Person?

The issue of granting legal subjectivity to electronic persons represents one of the most complex legal challenges of contemporary jurisprudence. First and foremost, this matter is debated in the context of two fundamental criteria of legal subjectivity: legal capacity and capacity to act. According to the civil legislation of Uzbekistan, a natural person's legal capacity and capacity to act are defined by the laws of their citizenship, while for legal entities, these capacities are governed by the laws of the state under which they are incorporated. Electronic agents, by contrast, possess neither natural citizenship nor any registration within a national jurisdiction. Therefore, if such entities are to be recognized as legal subjects, a new and specific legal framework must be developed for them.

Secondly, arguments for granting subjectivity to electronic agents often rely on the functional roles they perform. For example, if an AI system (such as a robot) can autonomously conclude contracts and perform financial transactions (such as executing payments) under those agreements, this raises fundamental questions about the traditional bilateral model of legal relations. At present, the law views robots merely as tools for executing decisions, and any legal transaction executed by such a system is ultimately attributed to a human user or developer behind it. In cases of contractual breach, liability generally falls on the legal entity (usually a company) that owns the robot or the individual who developed or deployed it.

A third issue relates to liability and accountability. If the robot is declared directly liable for damages it causes, to whom does the responsibility legally transfer? Many scholars regard such a shift as legally precarious. For instance, Simon Chesterman, professor at the National University of Singapore, argues in his 2020 article that "artificial systems can never be fully conscious subjects, as their behavior is not grounded in human cognition but in pre-programmed code" [13, p. 820]. As Chesterman notes, assigning legal personhood to AI could displace liability from developers or users onto the virtual system itself, creating significant ambiguities in civil responsibility. Accordingly, Chesterman and other legal scholars advocate for a cautious approach before granting subjectivity to robots or AI systems.

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In addition, there are alternative recommendations based on legal theory. In international practice, some experts suggest introducing a limited liability structure for robots (e.g., mandatory insurance) to distribute responsibility. According to Y. Burylo (Ukraine), at the current stage, the concept of electronic personhood could be useful in implementing decisions and resolving legal issues related to intellectual property. However, he emphasizes that limitations must be introduced in relevant fields such as national security and agriculture [14, pp. 18–25]. Therefore, granting personhood status to an electronic agent is a theoretical concept that still requires cautious evaluation, and its practical scope of application must be clearly defined.

In my view, these theoretical approaches are reasonable and appropriate. The issue of granting legal personhood to robots is indeed a complex matter that requires caution. A limited liability structure—through mandatory insurance—currently seems to be the most logical approach. It neither halts technological progress nor leaves potential harms unaddressed.

The significance of Y. Burylo's opinion lies in the idea that the concept of electronic personhood does not have to be uniformly applied across all areas. What may be beneficial in decision-making or intellectual property could be dangerous in contexts like national security or agriculture. The main issue is to define clear boundaries: which tasks electronic agents can independently perform, and which require human oversight—this must be specified at the legal level.

Currently, many countries around the world are exploring the legal status of Artificial Intelligence (AI) and algorithmic systems. However, there are few examples of legislation that directly grant AI the status of a legal person. In 2017, discussions held in the European Parliament raised the issue of introducing the status of "electronic person" for highly autonomous systems. According to the resolution adopted on February 13, 2017, "assigning legal personality to AI systems with a high degree of autonomy may ensure independent liability for the damages they cause." Nevertheless, this proposal sparked significant international debate. In particular, Simon Chesterman opposed the idea, asserting that AI systems can never become full-fledged persons, and that liability should instead remain with their developers.

In contrast, practical legal norms concerning AI and robotics exist in countries such as the United States, Japan, South Korea, and China [15]. As of now, no country's legislation formally recognizes AI systems as separate legal persons. Instead, laws are being introduced that assign responsibility to developers or users, ensure data privacy, and mandate adherence to ethical standards. For instance, in the United States, rather than granting AI systems distinct legal status, platforms have emerged that compel AI to operate within the boundaries of human rights and freedoms (such artificial agents are initially integrated within specialized institutions). While AI legislation is being developed in South Korea and Japan, these efforts conceptualize AI not as self-governing legal entities, but rather as tools for regulating technologies and data flows.

According to the current Civil Code of the Republic of Uzbekistan, legal subjects are categorized into only two types: natural persons (individuals) and legal entities. As of now, the concept of an "electronic person" is not provided for in the legislation, nor are specific legal statuses granted to artificial intelligence (AI) systems or robots under Uzbek law.

Nevertheless, the country has established key mechanisms regulating electronic relations. Notably, the Law "On Electronic Digital Signature" adopted in 2021 provides a legal framework for documents signed using digital signature tools, including those potentially operated by AI. Electronic signatures enable legal entities to execute contracts and exchange information online in a secure and legally recognized manner. Moreover, state-provided online services (such as the *my.gov.uz* portal) operate effective identification systems based on ID numbers and digital certificates.

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Introducing the status of electronic personhood could, however, give rise to a range of legal issues. Most prominently, the question of liability remains uncertain — who should be held financially responsible for harm caused by a robot or AI system: the owner, the developer, or the user? If a robot is recognized as a full legal person, then liability may shift to the robot itself, potentially exempting its creators and operators from responsibility. As Simon Chesterman notes, if a robot is declared to have legal personhood, the responsibility of developers may be diminished, and since liability would then be transferred to a "virtual system," this could create significant confusion within the framework of civil liability.

The second issue, as mentioned above, lies in legal system ambiguity. Granting legal capacity and civil capability to electronic agents complicates the legal structure. For instance, can a robot own property in its own name? Can it enter into contracts and fulfill obligations, or should it merely act as an executor for its owner? All of these questions require adjustments alien to traditional legal doctrines.

The third aspect is the need to update legislation. The current Civil Code of Uzbekistan lacks provisions applicable to electronic persons. To fill this gap, a new task arises for legal scholars and lawmakers: the inclusion of norms pertaining to so-called “electronic agents” or “digital subjects.” Primarily, practical legal frameworks should be introduced into the Civil Code to govern the activity of electronic agents (such as smart contracts or AI-managed transactions). It is worth noting that the draft of the new Civil Code already includes some norms aimed at regulating these types of relationships—e.g., smart contracts, digital rights, etc.

In our view, these provisions should be expanded to address the legal subjectivity of electronic persons explicitly, along with corresponding obligations and liabilities.

For example, a progressive approach is the model of assigning an “intermediate status” to artificial agents. In this model, AI systems are not recognized as full legal persons but are accepted as autonomous entities bearing certain responsibilities. In Uzbekistan's context, such an approach could be implemented alongside insurance mechanisms and material guarantees ensuring the obligations of developers and users. For instance, if an automated system causes harm, the insurance company could compensate the damage, while primary liability would fall on the developer or the user company. As suggested by U. Pagallo and Y. Burylo, under this “limited liability” model, electronic agents should not be engaged in sectors requiring state protection.

At present, it is advisable for the government and legal scholars of Uzbekistan to not only strengthen mechanisms regulating electronic transactions but also gradually conceptualize the civil legal status of AI agents. First and foremost, it is necessary to improve legislation governing contracts concluded online, electronic identification, and smart contracts. In the subsequent stages, the question of granting limited legal subjectivity to AI-based systems may be seriously considered.

Although the attribution of a new legal subject status to artificial intelligence remains largely theoretical for now, the issue is considered highly relevant in global jurisprudence. Uzbekistan cannot remain isolated from this global trend – we must be prepared to legally examine challenges related to electronic agents and smart contracts and to introduce temporary integration models. Analytical studies on artificial intelligence indicate that at the current stage, it is appropriate to treat AI systems as legal objects; subsequently, concepts such as an “intermediary status” may be gradually introduced. In this context, it is recommended to regulate the legal status of electronic agents in a gradual and cautious manner.

In the future, it will be necessary to expand the legal framework governing AI agents in Uzbekistan. To achieve this, international experience must be studied and theoretical models advanced in legal science must be adapted to fit the Uzbek legal context. In other words, a prudent strategy would

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involve initially regulating artificial agents as technical subjects or tools, and then carefully introducing the category of "electronic personhood."

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