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DELEGATION OF STATE POWERS TO AI SYSTEMS: A COMPARATIVE ANALYSIS

Introduction. The modern world is experiencing the new industrial revolution, a central element of which is artificial intelligence (AI).

Governments worldwide are actively experimenting with the implementation of algorithmic systems to perform public functions: from risk analysis in the justice and tax spheres to managing urban infrastructure and providing social services. This technological modernization promises a significant increase in the efficiency of public administration. However, it simultaneously creates a fundamental challenge to the foundations of the constitutional order - the transfer of a portion of sovereign powers not merely to another government body, but to a self-learning, autonomous, and often opaque ("black box") technology.

This phenomenon raises questions about the limits and conditions of such delegation. How can we ensure that decisions made by AI on behalf of the state remain accountable, fair, and legally predictable? How can we preserve the rule of law in an era of the rule of code? These questions compel a new examination of existing legal doctrines that have historically served as safeguards against the excessive concentration and uncontrolled use of power.

The purpose of this study is to conduct a comparative legal analysis of two key approaches to controlling the delegation of powers: the "non-delegation" doctrine in the United States of America and the principle of legal certainty in the European Union and Ukraine. The objectives of the research are: 1) to analyze the substance, history, and current application of each legal doctrine; 2) to investigate the specific challenges that AI (particularly the problems of "black boxes" and algorithmic bias) poses to these doctrines; 3) to evaluate the effectiveness of each approach in practice based on case studies; 4) to formulate a scientific hypothesis regarding the optimal regulatory model for Ukraine, which seeks to harmonize its legislation with European standards while preserving the stability of its constitutional foundations.

Analysis of Recent Research and Publications. The issue of AI legal regulation has been a subject of dynamic scientific discussions, which have intensified significantly in 2023-2025 in connection with the finalization and initial implementation of the AI Act in the EU. Modern research can be broadly grouped into several areas.

The first area is dedicated to a critical analysis of the AI Act itself.

Researchers, analyzing its final version, point to potential gaps and challenges.

For example, studies examine whether the criteria for "high-risk" systems are defined with sufficient clarity and how effective the proposed oversight mechanisms by national authorities will be. Particular attention is paid to "regulatory sandboxes" as a tool for innovation, as well as the Act's ability to protect fundamental rights, rather than merely ensuring product safety (Hacker, 2023).

The second area focuses on adapting administrative law to the challenges of algorithmic decision-making. Researchers in the U.S. and Europe recognize that existing doctrines, designed for human bureaucracy, are proving inadequate. Recent works demonstrate that the algorithmization of public administration creates a fundamental tension between efficiency and democratic values such as transparency, accountability, and the right to appeal. There is active discussion on how traditional oversight mechanisms, particularly parliamentary and judicial review, must be transformed to maintain their effectiveness in the age of algorithms (Chau, 2021).

The third, no less important area, concerns the practical aspects of combating algorithmic bias. Recent reports and publications analyze how existing anti-discrimination laws are applied

by regulators, such as the U.S. Equal Employment Opportunity Commission (BEOC), to cases involving the use of AI in hiring. It is emphasized that proving the discriminatory "disparate impact" of an algorithm is a complex task that requires new approaches to auditing and information disclosure (Garon, 2025).

However, despite the depth of this research, a part of the general problem addressed in this article remains unresolved. There is a lack of a comprehensive comparative analysis of the U.S. "non-delegation" doctrine and the European principle of legal certainty specifically as competing constitutional-legal paradigms for legitimizing and controlling the delegation of sovereign state powers to AI systems. Most works either analyze these approaches separately or focus on administrative law aspects (Kaminski, 2025). This article aims to fill this gap by offering a perspective on the problem through the lens of fundamental principles of state power organization, with the goal of developing specific recommendations for the Ukrainian legal system.

Materials and Methods. The methodological basis of this study is a comprehensive approach that combines several scientific methods.

The primary method is the comparative-legal method, which was used to compare the legal doctrines and regulatory approaches of the U.S., the E.U., and Ukraine. This method allowed for the identification of common and distinct features in the mechanisms for controlling the delegation of powers, as well as an assessment of their potential effectiveness in the context of AI implementation.

Systemic analysis was applied to consider the studied legal doctrines not in isolation, but as elements of their respective legal systems (common law and continental law), interacting with other constitutional principles and institutions (separation of powers, protection of human rights).

Through the formal-logical method, the content of legal norms was analyzed, including the provisions of the U.S. Constitution, the Treaty on the Functioning of the European Union, the Constitution of Ukraine, and special legislation such as the General Data Protection Regulation (GDPR) and the draft Artificial Intelligence Act (AI Act).

The case-study method played a key role in the research. Landmark court cases and situations were analyzed in detail: Gundy v United States and FCC v. Consumers' Research in the U.S., which demonstrate the current state of the "non-delegation" doctrine; the case of the COMPAS algorithm, which illustrates the problem of algorithmic bias; and the SyRI case in the Netherlands, which is an example of the application of European principles to protect human rights from opaque algorithmic systems.

The combination of these methods allowed for a comprehensive analysis of the problem and the substantiation of the study's conclusions and proposals.

Results and Discussion. A comparative analysis of the legal frameworks of the U.S. and the E.U. reveals two fundamentally different approaches to solving the problem of delegation of powers.

The U.S. Non-Delegation Doctrine: A Rigid Safeguard with an Uncertain Future.

At the core of the American approach lies the non-delegation doctrine, which stems from the principle of separation of powers enshrined in the U.S. Constitution. According to this doctrine, Congress cannot delegate its legislative power to other branches of government. However, in the 20th century, with the growth of the administrative state, the Supreme Court softened this requirement by formulating the "intelligible principle" test. According to this test, a delegation is constitutional if Congress sets forth a clear principle to guide the entity exercising the delegated authority (U,S. Supreme Court, 1928). In practice, this test has been applied very liberally, and only in two cases in 1935 was a delegation deemed unconstitutional.

A new round of debate surrounding the doctrine began with Gundy v. United States (2019), where some justices argued for its revival in a stricter form, seeing it as a means to combat excessive bureaucracy. However, the recent case of FCC v. Consumers' Research (2025), where the court upheld the delegation of authority to the Federal Communications Commission, showed that the majority of justices are not yet ready for a radical revision of the doctrine.

When applied to AI, this doctrine reveals fundamental weaknesses. First, it focuses on the legitimacy of the initial act of delegation, not on the control of subsequent activities. Even if Congress establishes an "intelligible principle" for an AI, this does not solve the "black box" problem: it is impossible to verify whether each specific decision of a self-learning algorithm complies with this principle (Tretter, 2025; Arrieta at al., 2020). Second, the doctrine contains no requirements for

transparency, accountability, and fairness at the operational level. As the case of the COMPAS algorithm shows, which demonstrated racial bias despite formally neutral input data, compliance with a general principle does not guarantee fair outcomes (Angwin, Larson, Mattu, & Kirchner, 2016).

Thus, the American approach is too abstract and rigid to effectively respond to the dynamic and opaque processes occurring within AI systems.

The European Principle of Legal Certainty: A Flexible and Rights-Oriented Approach.

The legal system of the E.U., which Ukraine's system gravitates towards, is based on the principle of legal certainty. It requires that any interference with a person's rights be predictable, clear, and have a transparent legal basis (Court of Justice of the European Union, n.d.). Unlike the U.S., the E.U. does not limit itself to a general doctrine but creates detailed, proactive, and risk-based regulations for specific technologies.

The key instruments are the GDPR and the AI Act. Article 22 of the GDPR already grants individuals the right not to be subject to decisions based solely on automated processing and the right to human intervention and to receive "meaningful information about the logic involved." The AI Act goes even further, classifying AI systems by risk level. For "high-risk" systems, which are most often used in the public sector (in justice, migration, and social services), strict requirements are established: high-quality data, logging capabilities, detailed technical documentation, transparency for users, and, most importantly, effective human oversight (European Commission, 2024).

The effectiveness of this approach is vividly demonstrated by the SyRI case in the Netherlands. The court found that the use of an algorithm to detect social benefits fraud violated Article 8 of the ECHR (the right to private life) precisely because of its opacity and disproportionality. The court emphasized that the lack of transparency in the functioning of the "black box" created an unacceptable risk of discrimination and deprived citizens of the ability to effectively protect their rights (Dutch Court, 2020).

Thus, the European model, by combining a general constitutional principle with detailed sectoral regulation, creates a much more reliable system of guarantees that ensures not only the legitimacy of the delegation itself but also control over each specific decision made with the help of AI.

Prospects for Ukraine. The Ukrainian legal system is based on the principle of legal certainty, which is a component of the rule of law (Article 8 of the Constitution of Ukraine). The jurisprudence of the Constitutional Court of Ukraine interprets it as a requirement for the clarity and predictability of norms.

The Concept for the Development of Artificial Intelligence, approved in 2020, and the recent signing of the Council of Europe's Framework Convention on AI (2025) clearly indicate a European vector for regulatory development.

Based on the analysis conducted, a scientific hypothesis can be formulated: a hybrid model is optimal for Ukraine. It should combine the best features of both approaches. On the one hand, it is advisable to develop and adopt a framework law "On the Principles of Delegating State Powers to Artificial Intelligence Systems." Such a law, ideologically drawing on the cautionary aspects of the "non-delegation" doctrine regarding the protection of sovereignty, would establish fundamental limits: a ban on delegating powers that constitute the core of state sovereignty (e.g., passing judicial sentences, use of lethal force), and would define general principles of responsibility and accountability. On the other hand, this law must be supplemented by special technical regulation, fully harmonized with the European AI Act, which would establish a risk-based approach, and requirements for transparency, data quality, and human oversight for specific AI systems.

Conclusions. This research leads to the following conclusions:

1. The delegation of state powers to AI systems is one of the most complex challenges for modern constitutional law, as it calls into question traditional mechanisms of accountability and control.

2. The American "non-delegation" doctrine, focused on the legitimacy of the initial act of delegation through the "intelligible principle" test, is insufficiently effective for controlling the operational activities of opaque and self-learning AI systems. It fails to ensure adequate transparency, fairness, and the possibility of challenging individual algorithmic decisions.

3. The European approach, based on the principle of legal certainty and supplemented by detailed, risk-based regulation (the AI Act, GDPR), is significantly more adequate. It creates a

comprehensive system of guarantees that covers the entire life cycle of an AI system and is aimed at protecting fundamental human rights.

4. The scientific hypothesis derived from the research is that a hybrid regulatory model is optimal for Ukraine. It should synthesize the American concern for preserving the sovereign prerogatives of the state by setting clear legislative limits on delegation and the European focus on procedural guarantees and human rights at the operational level.

Prospects for further research in this area lie in the practical implementation of the proposed model. It is necessary to develop a draft framework law on the delegation of powers to AI, as well as to prepare amendments to national legislation for the full implementation of the provisions of the European AI Act. A separate area of research should be the development of mechanisms for judicial review of decisions made by AI and the creation of a national regulator in the field of artificial intelligence responsible for the certification and supervision of high-risk systems.

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Summary

Shamov O. A. **Delegation of state powers to AI systems: A comparative analysis. –** Article.

The rapid implementation of artificial intelligence (AI) systems in public administration poses unprecedented challenges to traditional legal doctrines governing the transfer of state authority. ***Purpose:*** The article aims to conduct a comparative analysis of the U.S. "non-delegation" doctrine and the E.U, and Ukrainian principles of legal certainty as tools for controlling the delegation of state functions to AI systems, and to develop a scientifically-grounded model for Ukraine. ***Methods:*** The research methods include comparative-legal analysis, systemic analysis, formal-logical analysis, and the case-study method. ***Results:*** The study revealed that the rigid U.S. doctrine, focused on the legitimacy of the initial act of delegation, is less suitable for controlling the operational activities of AI "black boxes" than the flexible, human-rights-oriented, and procedurally-guar-

anteed approach of the E.U., enshrined in the AI Act and GDPR. It was found that the Ukrainian legal system, based on the principle of legal certainty, gravitates towards the European model. A hypothesis was formulated that a hybrid model is optimal for Ukraine, combining the establishment of framework legislative limits on delegating powers to AI (ideologically close to "non-delegation") with the implementation of detailed, risk-based regulation modeled on the E.U. ***Conclusion:*** It is proposed that Ukraine adopts a hybrid framework. This involves passing a foundational law that sets the fundamental conditions for delegating public functions to AI, combined with a detailed, risk-based regulatory scheme harmonized with the E.U. AI Act to ensure operational transparency, accountability, and the protection of citizens' rights.

Key words: artificial intelligence, delegation of powers, legal certainty, non-delegation doctrine, AI Act.

Анотація

Шамов О. А. **Делегування державних повноважень системам ШІ: Порівняльний аналіз. –** Стаття.

Актуальність теми зумовлена стрімким впровадженням систем штучного інтелекту (ШІ) в діяльність органів державної влади, що створює безпрецедентні виклики для традиційних правових доктрин, які регулюють передачу владних повноважень. ***Метою*** статті є проведення порівняльного аналізу американської доктрини «non-delegation» та європейського й українського принципів правової визначеності як інструментів контролю за делегуванням державних функцій системам ШІ, а також розробка науково обґрунтованої моделі для України. ***Методи*** дослідження включають порівняльно-правовий, системний, формально-логічний аналіз та метод case-study. ***Результати*** дослідження показали, що ригідна американська доктрина, сфокусована на легітимності

первинного акту делегування, є менш придатною для контролю за операційною діяльністю «чорних скриньок» ШІ, ніж гнучкий, орієнтований на права людини та процедурні гарантії підхід ЄС, закріплений в AI Act та GDPR. Виявлено, що українська правова система, базуючись на принципі правової визначеності, тяжіє до європейської моделі. Сформульовано гіпотезу про те, що оптимальною для України є гібридна модель, яка поєднує встановлення рамкових законодавчих обмежень на делегування повноважень ШІ (ідеологічно близьких до «non-delegation») із впровадженням детального, ризик-орієнтованого регулювання за зразком ЄС. ***Перспективи подальших досліджень*** полягають у розробці конкретних законопроєктів, спрямованих на імплементацію запропонованої гібридної моделі.

Ключові слова: штучний інтелект, делегування повноважень, правова визначеність, доктрина «non-delegation», AI Act.

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