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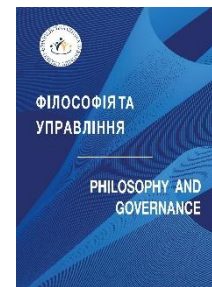
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The article analyzes the conceptual, regulatory, institutional and technological foundations of the digital transformation of the social protection system of Ukraine in the context of post-war reconstruction and European integration transformations. Digitalization is considered a systemic tool for ensuring the continuity of social services, increasing their targeting, accessibility and institutional stability in the context of large-scale socio-economic shocks caused by armed aggression. Based on the analysis of international approaches to the development of digital public infrastructure, in particular the concept of Digital Public Infrastructure, it was found that the effectiveness of the modern model of social protection is determined by the level of integration of digital identity, social registers, interoperable data exchange platforms, analytical tools and multi-channel service mechanisms for interaction with users. It is substantiated that the formation of a single digital architecture of social protection contributes to reducing the administrative burden, increasing the accuracy of verification of the right to assistance, optimizing management decisions and ensuring the adaptability of the system to crisis conditions. The institutional prerequisites for the digital modernization of the social sphere of Ukraine are determined, including the development of the Unified Information System of the Social Sphere, the functioning of the electronic services platform and the implementation of mechanisms for the interoperability of state registers. It is proven that the digitalization of social protection is not only a technological process, but a complex institutional transformation that combines legal regulation, data management, cybersecurity, organizational changes and the development of digital competencies of personnel. On this basis, a conceptual model and a roadmap for the phased implementation of digital transformation have been developed, which involves the formation of integrated digital services, the development of analytical and algorithmic tools, ensuring compliance with European standards of data protection and cyber resilience, as well as the implementation of the principles of human-centricity and inclusiveness. The study concluded that digitalization is a key factor in increasing the efficiency, transparency and sustainability of the social protection system, ensuring its adaptability to post-war challenges, contributing to improving the quality of social process management and creating the prerequisites for Ukraine's integration into the European digital space of social policy.

KEYWORDS

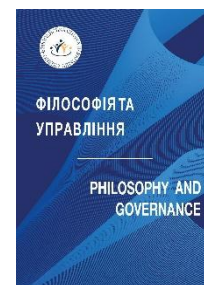
digitalization, social protection, post-war recovery, digital public infrastructure, Unified Information System of the Social Sphere, social registers, interoperability, digital identity, electronic public services, artificial intelligence, cybersecurity, inclusiveness, public administration, European integration.





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Поствоєнне відновлення через цифровізацію: рекомендації для сфери соціального захисту в Україні

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СТАТТЯ	АНОТАЦІЯ
Дослідницька DOI: 10.70651/3041-248X/2026.2.02 Отримана: 29.12.2025 р. Прийнята: 31.01.2025 р. Опублікована: 06.02.2026 р. Авторське право © 2026 автора Цей твір ліцензовано на умовах Ліцензії Creative Commons «Із Зазначенням Авторства – Некомерційна 4.0 Міжнародна» (CC BY-NC 4.0).	У статті проаналізовано концептуальні, нормативно-інституційні та технологічні засади цифрової трансформації системи соціального захисту України в умовах поствоєнного відновлення та євроінтеграційних перетворень. Розглянуто цифровізацію як системний інструмент забезпечення безперервності надання соціальних послуг, підвищення їх адресності, доступності та інституційної стійкості в умовах масштабних соціально-економічних потрясінь, спричинених збройною агресією. На основі аналізу міжнародних підходів до розвитку цифрової публічної інфраструктури, зокрема концепції Digital Public Infrastructure, з'ясовано, що ефективність сучасної моделі соціального захисту визначається рівнем інтегрованості цифрової ідентичності, соціальних реєстрів, інтероперабельних платформ обміну даними, аналітичних інструментів та багатоканальних сервісних механізмів взаємодії з користувачами. Обґрунтовано, що формування єдиної цифрової архітектури соціального захисту сприяє зниженню адміністративного навантаження, підвищенню точності верифікації права на допомогу, оптимізації управлінських рішень і забезпеченню адаптивності системи до кризових умов. Визначено інституційні передумови цифрової модернізації соціальної сфери України, включаючи розвиток Єдиної інформаційної системи соціальної сфери, функціонування платформи електронних послуг та впровадження механізмів інтероперабельності державних реєстрів. Доведено, що цифровізація соціального захисту є не лише технологічним процесом, а комплексною інституційною трансформацією, яка поєднує правове регулювання, управління даними, кібербезпеку, організаційні зміни та розвиток цифрових компетенцій персоналу. На цій основі розроблено концептуальну модель і дорожню карту поетапної реалізації цифрової трансформації, що передбачає формування інтегрованих цифрових сервісів, розвиток аналітичних і алгоритмічних інструментів, забезпечення відповідності європейським стандартам захисту даних і кіберстійкості, а також впровадження принципів людиноцентричності та інклюзивності. У результаті дослідження сформовані висновки, що цифровізація виступає ключовим чинником підвищення ефективності, прозорості та стійкості системи соціального захисту, забезпечує її адаптивність до поствоєнних викликів, сприяє підвищенню якості управління соціальними процесами та створює передумови для інтеграції України до європейського цифрового простору соціальної політики.



КЛЮЧОВІ СЛОВА

цифровізація, соціальний захист, поствоєнне відновлення, цифрова публічна інфраструктура, єдина інформаційна система соціальної сфери, соціальні реєстри, інтероперабельність, цифрова ідентичність, електронні публічні послуги, штучний інтелект, кібербезпека, інклюзивність, публічне управління, євроінтеграція.

1. Introduction

The post-war reconstruction of Ukraine actualizes the need for structural modernization of the social protection system as one of the basic institutions for ensuring social stability, poverty reduction and restoration of human capital. In the context of large-scale demographic changes, internal displacement of the population, loss of income, destruction of infrastructure and growth of budget constraints, the social protection system faces the need to simultaneously expand support coverage, increase targeting the allocation of resources and ensure institutional resilience to repeated shocks. According to the RDNA4 estimates, employment, means-tested programs, support for internally displaced persons, and restoration of social services are identified as priority areas for recovery, which indicates the systemic nature of transformational tasks in this area [8].

At the same time, state policy defines digitalization as a key tool for the modernization of the social sphere, which is enshrined in the Strategy for Digital Transformation of the Social Sphere, which provides for the regulatory and technological renewal of the components of the social protection system [2].

However, the presence of a regulatory framework does not guarantee the systematic integration of digital tools into the mechanisms of targeting, verification of eligibility for assistance, case management, payment and protection of personal data. Thus, there is a scientific and practical problem of determining the conceptual foundations and applied recommendations for the use of digitalization as a tool for post-war recovery in the field of social protection, taking into account the requirements of efficiency, transparency, security and social justice.

2. Literature Review

In modern academic discourse, the digital transformation of the public sector is conceptualized primarily through the category of Digital Public Infrastructure (DPI), which is considered as a set of interoperable and secure digital components (digital identity, data exchange, payment mechanisms) that ensure the scalability, efficiency and sustainability of public services. At the same time, the OECD documents focus on the structural risks of digital transformation, in particular, digital exclusion, threats of inappropriate use of data, and technological dependence on suppliers, which actualizes the need for institutional capacity and proper data management [16].

The development of this approach can be traced in the works on the phenomenon of digital resilience, where digital infrastructure is interpreted as a key factor in maintaining the functional capacity of the state in the face of military and crisis challenges. Brookings' analytical materials link the scaling of Ukrainian digital services with the processes of cloudization, cyber defense, and adaptation of management procedures to the military context, while emphasizing the need to bridge the digital divide and modernize the registry architecture [1].

Within the framework of research on the digitalization of social protection, the focus is shifting to the transformation of the delivery chain. Empirical results show that the introduction of digital self-service mechanisms can redistribute the administrative burden on users ("accidental caseworker"), which is especially noticeable for socially vulnerable groups. This justifies the need to evaluate digital reforms not only according to performance criteria, but also through the prism of accessibility and fairness [12].

At the same time, a scientific discourse on "digital welfare state" is being formed, within which the consequences of intensifying the use of data and algorithmic decisions in social policy are analyzed. The researchers draw attention to the risks of opacity, potential discrimination, and a decrease in the level of public participation in the adoption of data processing rules, which raises the question of the legitimacy of digital reforms [19].

In addition, the OECD analyzes the use of artificial intelligence in social security as a tool for optimizing eligibility checks and payment administration, emphasizing the need to implement risk management, human oversight and accountability systems. These approaches correlate with the regulatory requirements of the European Union for high-risk artificial intelligence systems [17].

The Ukrainian context of digitalization of the social sphere is characterized by the institutionalization of the UISSS as an integrated platform for social data management and the development of inter-register interaction through the Trembita system, which forms the technological basis of electronic services and extraterritorial access to them [5; 13].

Generalization of scientific and analytical sources allows us to state that, despite a significant array of studies, institutional mechanisms for assessing the impact of digital solutions on the accessibility of social protection, the issue of integrated cyber resilience and overcoming the fragmentation of the registry architecture, which necessitates further comprehensive analysis, remain insufficiently developed.

3. Problem Statement

The purpose of the article is to scientifically substantiate the conceptual foundations and develop practical recommendations for the use of digitalization as a systemic tool for the post-war recovery of the sphere of social protection of Ukraine.

4. Methods and Materials

The study employs a combination of theoretical and analytical methods, including systemic approach to conceptualize digital transformation of social protection as an integrated sociotechnical system, comparative analysis of international DPI models (OECD, World Bank, EU standards) and Ukrainian practices, content analysis of regulatory acts (Laws of Ukraine on electronic services, public registers, personal data protection, Cybersecurity Strategy), strategic documents (Digital Transformation Strategy of the Social Sphere, RDNA4, Recovery Plan), and international reports (OECD, Brookings, EU4DigitalUA). The research draws on monographs, scientific articles, official Ukrainian legislation (as of 2025–2026), analytical materials from international organizations (OECD, World Bank, NIST, W3C), and statistical data on Diia usage, UISSS development, and Trembita interoperability to substantiate the conceptual model and phased roadmap for digitalization of social protection in post-war Ukraine.

5. Results and Discussion

The conceptual framework of the post-war reconstruction of social protection requires a transition from the fragmentary logic of the introduction of individual electronic forms to the formation of an integral architecture of social protection as a sustainable digital service system. In the OECD approaches, Digital Public Infrastructure (DPI) is defined as a set of common interoperable “building blocks” that ensure the functioning of many sectors of public policy. Social protection. This means the formation of an integrated stack that encompasses digital identity and trust services, interoperable data exchange, payment mechanisms, industry registers and social register, business process orchestration (case management), as well as multi-channel models of user interaction (online, offline, assisted digital) [16].

The Ukrainian institutional trajectory creates preconditions for the implementation of such a model. The strategic vector of the digital transformation of the social sphere was fixed in 2020 at the level of a government decision, which determined the regulatory and organizational basis for the modernization of the industry [2]. At the operational level, the Unified Information System of the Social Sphere (UISSS) is being formed, which is positioned as a tool for integrating disparate information systems and ensuring extraterritorial access to support regardless of the place of registration or stay [13].

At the same time, the national digital interface of public services – Diia – is functioning, which, according to the results of the 2021 assessment, united more than 11 million unique users and a set of digital documents, including a certificate of an internally displaced person [4]. In 2023, the number of users increased to 20 million, which indicates the high potential of this platform as a channel for delivering social services in crisis conditions [10].

The functional evolution of digital services involves a shift to a “life-event services” model that integrates several administrative procedures within a single life scenario and reduces the transaction costs of households that have experienced displacement, loss of documents or changes in family status. The practice of comprehensive services demonstrates the possibility of integrating registration and social components within a single process. The war context has additionally actualized the need for scalable assistance platforms: a significant volume of applications submitted on the eDopomoga

platform confirms the need for a sustainable infrastructure for processing, validating, and coordinating social payments.

Digital identity is a key prerequisite for the functioning of social protection in electronic format, since identification errors have direct budgetary and legal consequences. The Ukrainian model of electronic passports has enshrined the legal equivalence of digital and physical documents [23]. Further development of this direction involves the introduction of a digital identity wallet in the Diia application, which is determined by a government decision of 2025 [3]. Given the European integration course, such decisions should be consistent with the reform of eIDAS and Regulation (EU) 2024/1183 on the European Digital Identity [6].

A fundamental condition for the effectiveness of social protection is the interoperability of registers and platforms, since verification of eligibility for assistance involves the processing of significant amounts of data on household composition, income, employment, disability and displacement status. In this context, the Trembita system ensures secure data exchange between state registers and creates an infrastructural basis for the development of electronic services [5]. At the same time, the UISSS in the state architecture functions as a sectoral superstructure aimed at integrating social registers and business processes and reducing the territorial linkage of the provision of services. However, in order to assess its strategic potential, it is advisable to consider such an architecture as a technical solution for data integration and as an element of a broader transformation of the social protection paradigm. It is in this dimension that the international analytical and scientific literature has formed an approach to considering social registers as an institutional basis for shock-responsive social protection. In this context, the register is interpreted not as a static database of aid recipients, but as a dynamic information and analytical tool capable of ensuring the prompt deployment of interventions in response to crisis events.

According to the World Bank, the effectiveness of such systems depends on their ability to regularly update data, include valid vulnerability indicators, and ensure interoperability with other government information resources, which creates prerequisites for more accurate targeting and rapid scaling of support [9]. Thus, the functional capacity of social protection is increasingly correlated with the quality of data architecture.

The Ukrainian context of recovery after full-scale aggression confirms this pattern. The RDNA4 materials emphasize that along with the physical reconstruction of social infrastructure facilities, the continuity of social benefits and services is of decisive importance in the context of a sharp change in the structure of household incomes, internal displacement of the population and high macroeconomic uncertainty [8]. This objectifies the need for analytical tools that provide scenario modeling and forecasting of needs, as well as support data-driven decision-making.

Further digitalization of social protection is associated with the introduction of automated decision-making (AI/ADM) systems. The OECD records examples of the use of algorithmic solutions for verification of the right to payments, document processing and optimization of administrative processes, while emphasizing the need to comply with the principles of data quality, transparency of algorithms, risk management and prevention of discriminatory consequences [14]. In this regard, the integration of AI requires a combination of technological efficiency with regulatory safeguards for the protection of human rights and procedural fairness.

Empirical studies of digital “self-service” in public administration demonstrate the ambivalent nature of digitalization. In particular, Madsen et al. [12] prove that the transfer of administrative procedures to the digital environment without proper support and a clear interface can increase the administrative burden of citizens, especially in difficult life situations, transforming them into “random case managers”. This justifies the need for a human-centered automation model that combines digital tools with the possibility of face-to-face or consultative support.

In the European integration dimension, the design of digital social protection systems should be carried out taking into account the EU regulatory environment, in particular the AI Act regime, which establishes special requirements for high-risk systems, including transparency, accountability, and assessment of the impact on fundamental rights. Therefore, algorithmic decisions in the social sphere must comply with the principles of legal certainty, proportionality and non-discrimination.

Cybersecurity is an integral structural component of the digital transformation of social protection. Since these systems operate with significant amounts of personal and sensitive data, cyber risk management should be carried out at the strategic and operational levels. In Ukraine, the strategic guidelines are determined by the Cybersecurity Strategy approved by the Decree of the President of

Ukraine No. 447/2021 [18]. At the international level, the methodological basis is NIST CSF 2.0 (2024), which systematizes the results of management cyber risks and singles out the “Govern” function as a separate dimension of strategic management [15]. At the same time, ISO/IEC 27001:2022 defines requirements for information security management systems (ISMS) [17], and Directive (EU) 2022/2555 (NIS2) strengthens risk management and incident reporting requirements for essential and important entities within the EU [7]. Harmonization with these standards is a prerequisite for the institutional sustainability of digital social services.

At the same time, the principle of inclusiveness of digital transformation provides for the implementation of a “digital-first, but not digital-only” approach. The materials of the Recovery Plan of Ukraine indicate that the limitations of digital systems are associated with the insufficient level of digital literacy of some beneficiaries and uneven access to the Internet [14], which is consistent with international approaches to the development of digital public infrastructure (DPI), which identify the risk of exclusion of persons with a low level of digital skills. In this regard, it is necessary to develop “assisted digital” mechanisms (ASCs, social workers, hotlines, mobile teams) and ensure that digital services comply with accessibility standards, in particular WCAG 2.2 as a W3C recommendation [24].

Thus, the modern architecture of social protection in the context of recovery should be considered as a comprehensive sociotechnical system integrating dynamic registers, algorithmic tools with legal guarantees, standardized cyber risk management and inclusive access mechanisms. Only the systemic interaction of these components ensures the adaptability, legal legitimacy and sustainability of the digital transformation of social policy.

The digital transformation of the social protection system provides for the introduction of information and communication technologies and the formation of a holistic and coordinated legal architecture that determines the principles of the functioning of electronic services, data circulation and guarantees of protection of the rights of subjects. The regulatory basis for the legal regime of electronic public services is the Law of Ukraine “On the Peculiarities of the Provision of Public (Electronic Public) Services” dated 06.10.2020 No. 1689-IX, which defines the concept of electronic public service, establishes the possibility of its provision in automatic mode and fixes the principles of digital interaction between the subjects of provision and recipients of services [21].

The institutional prerequisite for the implementation of automated procedures is the legal regime of public electronic registers, enshrined in the Law of Ukraine “On Public Electronic Registers” dated 22.10.2020 No. 1907-IX (as amended), which establishes the legal and organizational foundations for the creation, maintenance, interaction and operation of public electronic registers, defines the requirements for their interoperability, reliability and information protection [22]. Thus, digital social protection is based on a normatively defined system of data exchange and integration.

The basic requirements are established by the Law of Ukraine “On Personal Data Protection” dated 01.06.2010 No. 2297-VI, which defines the grounds, principles and guarantees for the processing of personal information, including sensitive data, which are widely used in the field of social security [20]. At the same time, in the context of European integration, the modernization of national legislation is underway in order to harmonize it with the provisions of the GDPR, which reflects the tendency to tighten standards for the protection of the rights of data subjects.

An integral part of the legal architecture of digital social protection is the regulation of cybersecurity and cryptographic protection of information. The strategic principles are determined by the Decree of the President of Ukraine “On the Decision of the National Security and Defense Council of Ukraine dated May 14, 2021 “On the Cybersecurity Strategy of Ukraine” dated 14.06.2021 No. 447/2021, which outlines long-term priorities for the formation of a national cybersecurity system, including the protection of state information resources [18]. The implementation of these provisions is specified in bylaws and standards in the field of cryptographic protection of information.

Financial support for digital transformation also has a regulatory basis. In particular, the Resolution of the Cabinet of Ministers of Ukraine “Some Issues of the Implementation of the Pilot Project on the Formation and Use of Electronic Identity Certificates and Electronic Attributes Certificates Using a Wallet with Digital Identification as a Functionality of the Mobile Application of the Unified State Web Portal of Electronic Services (Diia)” dated 24.10.2025 No. 1400 provides for the financing of the relevant project at the expense of the state budget, international technical assistance and other sources not prohibited by law [3]. In addition, international support for digital transformation is confirmed by the European Union’s 2026 decision to allocate funding for the development of Trembita 2.0 and bring data management closer to European standards.

Along with regulatory and financial support, personnel and organizational changes are crucial. Scientific studies of the digital transformation of social security show that its effectiveness depends on the level of digital competencies of staff, the ability of institutions to manage change, the optimal distribution of functions between a person and automated systems, as well as ensuring institutional accountability [12]. For Ukraine, this means the need for systematic training of social professionals in the areas of digital skills, data analytics, cyber hygiene and service design of public services.

Therefore, digital social protection should be considered as a comprehensive institutional transformation that combines the regulation of electronic services, the functioning of registers, personal data protection, cybersecurity, financial support and personnel modernization. The effectiveness of this transformation should be assessed by a system of measurable performance indicators, in particular in terms of accessibility, quality, reach, inclusion, safety and the level of public trust. After analyzing the regulatory, institutional, financial and personnel prerequisites for the digital transformation of social protection, it is advisable to move to the instrumental level of research. In particular, in order to systematize technological components and assess their functional role in the architecture of digital social protection, it is necessary to apply a comparative approach that allows correlating individual technologies with their functions, implementation risks and minimum safeguards that ensure the legal, organizational and technical stability of the system.

Based on the above, we will present a generalized comparative matrix of digital social protection technologies and tools, which is basic in nature and is subject to adaptation depending on a specific program, territorial community or departmental system, taking into account local parameters (data owners, source registers, interaction channels, cost of ownership, risk profile). Its application is aimed at supporting management decisions within the digital change portfolio.

Table 1. Generalized comparative matrix key components of digital social protection

Component	Functional purpose	Main risks	Key Fuses and Metrics
E-services and digital identity	Submission of applications, identification, signature, access to personal data	Digital Divide; exclusion of vulnerable groups; Compromise of credentials	The principle of “digital-first, not digital-only”; MFA; Success rate average processing time; NPS/CSAT
Interoperability and social registers	Automatic checks; the principle of “data once”; Targeting of assistance	Data errors; leaks; fragmentation; decreased trust	Data quality standards; access logging; audit; coverage of the register; Share of appeals
Analytics and AI	Decision support; detection of anomalies; Load forecasting	Discrimination; opacity of algorithms; false positives	AI impact assessment; human-in-the-loop; Bias/False Positives Metrics
Cybersecurity and resilience	Data protection; Continuity of services	Cyber attacks; service suspension; Compromise of information	Implementation of NIST CSF 2.0 / ISO 27001; DR/BCP; RTO/RPO
Accessibility and inclusion	Equal access for people with disabilities, the elderly, people with limited mobility	Exclusion of groups; Violation of rights	WCAG 2.2 AA; Part of the Assisted Digital; Inclusive Coverage Indicators

Source: [21].

The presented matrix demonstrates that digital social protection is a multi-component sociotechnical system in which technological solutions must correlate with risks, safeguards and measurable performance indicators. At the same time, a systematic understanding of the architecture of components requires their ordering in the time and management sequence of implementation. In this regard, it is advisable to supplement the analytical generalization of the tools with a phased implementation model, which reflects priorities, institutional capacities and resource constraints in the context of recovery.

Table 2 presents the roadmap in three phases. It is consistent with the logic of the stages traced in the materials of the Recovery Plan of Ukraine, as well as with the approach to short-, medium- and long-term horizons in digital recovery and institutional modernization policies.

The proposed model outlines a consistent transition from stabilizing basic digital processes to scaling an integrated data platform and further institutionalization of analytical tools with cyber resilience and European interoperability. At the same time, its implementation requires clearly defined management priorities and a systematic approach to minimizing risks.

First, the manageability and accountability of digital change. Digital transformation should be carried out within a continuous “policy-to-product” cycle, which provides for an interconnected sequence: regulation – service design – implementation – evaluation of results – correction of decisions.

It is advisable to supplement the quantitative indicators existing in the recovery planning documents (in particular, coverage of aid recipients) with metrics of the full-service provision process (execution time, the share of successful transactions, the level of errors and appeals, and indicators inclusion).

Table 2. Implementation Roadmap

Phase	Strategic focus	Key activities	Performance Indicators (KPIs)
0–12 months	Formation of a minimum viable digital chain of social support	Inventory of programs and registers; standardization of data and access; orchestration of priority services (IDPs, low-income, disability/care, subsidies); deployment of assisted digital; basic cyber resilience measures (logging, redundancy, DR plans)	Share of paperless applications; average term of appointment; share of automatic validation; Assisted digital coverage; reducing the number of critical incidents
1–3 years	Scaling of the UISSS, interoperability and data management	Expansion of registry integrations; introduction of a dynamic social register/household profile; standardization of data exchange with MFIs; data quality management systems; strengthening the personal data protection regime (approximation to the GDPR)	Targeting accuracy; share of data reuse ("data once"); reduction of errors and appeals; coverage of the social register; Access audit results
3–6 years	Industrialization of analytics and AI, European DPI interoperability	Integration of digital identity (digital wallet); implementation of AI tools with audits; development of Trembita 2.0 and data management standards; increasing cyber management maturity (NIS2 compatible practices)	Reduction of administrative burden (time/number of visits); indicators of trust and satisfaction; coverage of digital identity; compliance with standards; Results of AI fairness audits

Source: [21].

Secondly, the protection of personal data on the principle of "privacy by design". Social protection as a field of sensitive information processing requires legal certainty and harmonization with European standards. The current Law of Ukraine "On Personal Data Protection" dated 01.06.2010 No. 2297-VI establishes basic guarantees, while initiatives to modernize legislation indicate a focus on approximation to GDPR approaches. and implementing transparency policies on data collection, storage, and access.

Thirdly, inclusion as an architectural requirement. Recognition of the risks of digital illiteracy and uneven Internet coverage in materials restores necessitates a multi-channel access model, i.e. a combination of online services with assisted digital mechanisms, compliance with accessibility standards (WCAG 2.2), testing solutions with vulnerable groups, and ensuring offline loops of functioning in case of infrastructure failures.

Fourth, cyber resilience and continuity of operation. Given the threats of wartime, social services must remain operational in the face of cyberattacks and partial failures, which involves coordination with the national cybersecurity strategy, the application of risk management frameworks (NIST CSF 2.0), the implementation of information security management systems (ISO 27001) and the establishment of critical component recovery indicators (RTO/RPO).

Fifth, result-oriented financing. In the context of limited resources and significant sector needs (RDNA4), digital investments should be selected as efficiency tools that reduce administrative costs, minimize errors, and expand coverage. Mixed funding models (state budget + international technical assistance), which are already enshrined in regulations on digital components, in particular pilot digital identity projects, are appropriate.

Therefore, the implementation of the roadmap requires a combination of institutional manageability, legal guarantees of data protection, architectural inclusiveness, cyber resilience and results-oriented financing, which together ensures the resilience and legitimacy of the digital modernization of social protection.

6. Conclusions

Thus, based on the analysis of the regulatory, institutional, technological and organizational foundations of the digital transformation of social protection, it has been established that its effectiveness during the recovery period is determined not so much by the implementation of individual IT solutions as by the formation of an integral sociotechnical system. Such a system should ensure territorial independence of access to support, increased targeting based on integrated data, reduction

of administrative burden on recipients and personnel, a guaranteed level of cyber resilience and legal protection of personal data, as well as institutionally enshrined inclusivity.

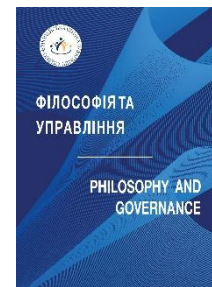
It has been proven that Ukraine has the basic institutional prerequisites for the formation of a full-fledged digital public infrastructure of social protection, in particular due to the development of the UISSS as an integration platform, the functioning of interoperability mechanisms through the Trembita system, and the availability of a scalable digital channel for interaction with citizens – the Diia portal and application. At the same time, the key challenge remains the transformation of these elements into a consistent DPI stack, within which data governance, cybersecurity, privacy-by-design principles, and inclusion standards are built-in components of the architecture.

It is substantiated that the optimal model of implementation is a step-by-step approach, which includes: at the first stage – the creation of minimally viable end-to-end digital chains for the provision of priority services; at the second stage, scaling integrations and forming a dynamic social register with proper data quality management; the third is the institutionalization of analytical and AI tools with audit procedures and ensuring European compatibility. Such a sequence allows you to ensure the manageability of changes, minimization of risks and long-term sustainability of the digital model of social protection.

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Formation and Improvement of Public Administration Methods for Smart City Governance in Ukraine's Agglomeration Centres: Challenges, Tools, and Methodological Approaches

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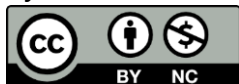
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ABSTRACT

The article substantiates theoretical and methodological approaches to the formation and improvement of public administration methods for Smart City governance in Ukraine's agglomeration centres under conditions of digital transformation and wartime challenges. It is determined that Smart City should be considered not as a set of technological solutions, but as an integrated public administration system based on strategic planning, project management, data governance, and stakeholder communication. The study identifies key conceptual, institutional, financial, technological, and security challenges in implementing Smart City in large urban agglomerations. Special attention is paid to the transformation of Smart City into a resilience tool under war conditions, ensuring continuity of critical services, infrastructure stability, and adaptive governance. An instrumental model for improving public administration methods through Smart City tools is proposed, integrating strategic, operational, analytical, and communication blocks into a unified governance framework. Based on international methodologies and Ukrainian realities, a scientific and methodological approach to ranking Smart City readiness in Ukraine is developed using an integrated Smart Governance Index. The Lviv Agglomeration Association is analysed as a practical case demonstrating effective intermunicipal cooperation and the transition from Smart City to Smart Agglomeration governance. The results confirm that Smart City effectiveness depends on the integration of digital tools into public administration methods and the formation of institutionalised governance models. The proposed model can serve as a basis for improving Smart City governance in Ukraine's agglomeration centres and enhancing their resilience and sustainable development.

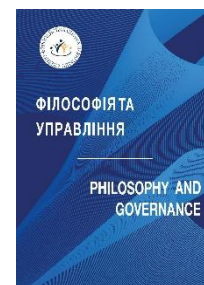
KEYWORDS

Smart City; public administration; agglomeration; digital governance; resilience; Smart Governance Index; Lviv agglomeration.



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Формування та удосконалення методів публічного адміністрування Smart City в агломераційних центрах України: проблеми, інструменти та методологічні підходи

Дмитро Г. Пфістер  ¹¹ Львівський національний університет імені Івана Франка (Україна). Аспірант.* Автор-кореспондент, e-mail: dimapfister23@gmail.com

СТАТТЯ	АНОТАЦІЯ
Дослідницька DOI: 10.70651/3041-248X/2026.2.03 Отримана: 30.12.2025 р. Прийнята: 31.01.2026 р. Опублікована: 07.02.2026 р. Авторське право © 2026  автора Цей твір ліцензовано на умовах Ліцензії Creative Commons «Із Зазначенням Авторства – Некомерційна 4.0 Міжнародна» (CC BY-NC 4.0).	У статті обґрунтовано необхідність переходу від технологічного розуміння Smart City до управлінсько-інституційного підходу, за якого цифрові інструменти розглядаються як засоби операціоналізації методів публічного адміністрування в агломераційних центрах України. Визначено, що ключові бар'єри смартизації в агломераціях мають багатовимірний характер і поєднують концептуальну невизначеність, інституційну фрагментацію, дефіцит координації та даних, ризики цифрової нерівності й алгоритмічної непрозорості, а також виклики кібербезпеки та стійкості критичної інфраструктури. Доведено, що воєнний контекст трансформує пріоритети Smart City у напрямі життєстійкості (resilience) та безперервності публічних послуг, посилюючи потребу в комплексній моделі адміністрування на рівні агломерації. Запропоновано інструментальну модель удосконалення методів публічного адміністрування в Smart City (поєднання стратегування, програмно-проектного управління, data governance та комунікаційних механізмів), а також модель комплексного адміністрування Smart City в агломераційному центрі зі стратегічним, операційним, аналітичним і комунікаційним блоками. Практичну релевантність агломераційного підходу проілюстровано на прикладі Асоціації органів місцевого самоврядування «Львівська агломерація» як платформи горизонтальної координації, реалізації міжмуніципальних проєктів і міжнародної інтеграції. Додатково сформовано методологічний підхід до оцінювання готовності та ранжування Smart City в Україні через інтегральний індекс із нормалізацією показників, вагуванням і включенням домену життєстійкості, що дозволяє адаптувати міжнародні вимірні підходи до умов війни та післявоєнного відновлення.



КЛЮЧОВІ СЛОВА

публічне адміністрування; Smart City; агломераційні центри; міжмуніципальне співробітництво; е-урядування; data governance; життєстійкість; оцінювання та ранжування.

1. Introduction

The digital transformation of public administration is one of the key features of the development of modern urbanized systems and an important factor in improving the efficiency of cities and agglomeration centers. In this context, the concept of Smart City is gaining importance not only as a technological direction for the modernization of the urban environment, but as a management paradigm focused on the integration of digital technologies, data and institutional mechanisms into the management decision-making process. This approach involves considering Smart City not as a set of separate digital solutions, but as a tool for updating public administration methods aimed at increasing efficiency, openness and adaptability of management.

In the international dimension, Smart City is considered as one of the means of achieving the Sustainable Development Goals and improving the quality of urban governance, in particular in the context of the implementation of the UN Sustainable Development Goals [20]. At the same time, digital solutions are evaluated not only in terms of technological innovation, but primarily by their contribution to social cohesion, environmental sustainability and the effectiveness of public administration [19].

This issue is of particular relevance for agglomeration centers, the development of which is accompanied by a high concentration of population, significant infrastructure loads, a complex multi-level management system and the need for coordination between territorial communities. Under such conditions, the effectiveness of Smart City depends not only on the availability of digital solutions, but also on the ability of public authorities to ensure strategic coordination of actions, intermunicipal interaction, openness of data and an appropriate level of institutional capacity [3].

An important component of Smart City development is ensuring transparency of public administration, expanding e-governance practices and using open data as a tool to improve the quality of management processes [9]. At the same time, modern challenges in the development of public administration actualize the need to modernize the mechanisms of interaction between public authorities, business and civil society, which is a necessary prerequisite for the effective functioning of Smart City, especially within agglomeration systems [18].

In this context, intersectoral partnership is of particular importance, which ensures the pooling of resources, competencies and institutional capabilities of different participants in the development of urban space. At the same time, SMART infrastructure should be considered as an integrated system of technical, organizational and information components that ensure the manageability of urban processes and sustainable development, and not as a set of isolated IT solutions [16]. No less important is the organizational component, in particular the effective management of human resources, which determines the ability of the public administration system to introduce innovative approaches and support sustainable development [14].

In the context of digitalization, military challenges and post-war recovery, the formation of new methods of public administration of Smart City, based on the integration of digital technologies, data management and intermunicipal coordination, is of particular importance. This necessitates a transition from the fragmented implementation of digital tools to the formation of a holistic management approach capable of ensuring the effective functioning of urban systems in the agglomeration centers of Ukraine [7].

2. Literature Review

In modern scientific discourse, the concept of Smart City is considered a comprehensive model of urban development management that combines digital technologies, institutional mechanisms and public administration tools. One of the fundamental studies in this area is the work H. Chourabi et al. [1], which proposes an integrative model of Smart City development factors, which includes technological, organizational, institutional and social components of the functioning of urban systems. This approach emphasizes that the effectiveness of a smart city is determined not only by technological solutions, but also by the ability of authorities to integrate digital tools into management decision-making processes.

In international studies, considerable attention is paid to the institutional dimension of the digital transformation of the public sector. In particular, analytical materials of the Organization for Economic Co-operation and Development emphasize the need to transition to a data-driven public sector, in which

management decisions are based on the systematic use of data, interagency interoperability of information systems, and the development of data governance mechanisms [12]. This approach contributes to increasing the efficiency of public administration, transparency of government activities and the quality of public services.

The problems of Smart City development are also closely related to the global Sustainable Development Goals. The United Nations policy document "Transforming our world: the 2030 Agenda for Sustainable Development" emphasizes the importance of using innovative technologies and digital solutions to ensure the sustainable development of cities, increase their environmental sustainability and social inclusion [20]. Further development of this idea is presented in UN-Habitat reports, where Smart City is considered as a tool for improving the efficiency of urban governance and ensuring climate and social sustainability of urbanized areas [19].

In the domestic scientific literature, the issues of Smart City development are studied in the context of modernization of the public administration system, digitalization of state institutions and the formation of new models of interaction between government, business and civil society. In particular, H. Komarnytska [9] considers Smart City as a component of the open data and e-governance system, emphasizing its role in ensuring the transparency of management processes and the development of electronic services for citizens.

A separate area of research concerns the modernization of mechanisms of interaction between public authorities, business and civil society in the process of digital transformation. Reshota's works emphasize that the effectiveness of public administration in the face of modern challenges largely depends on the development of cross-sectoral partnerships and institutional mechanisms of cooperation between various subjects of public relations [18].

An important contribution to the study of institutional and technological aspects of Smart City development is made in the works of N. Podolchak et al. In particular, the works on SMART reconstruction substantiate the role of digital technologies as a tool for modernizing the public administration system and accelerating the post-war restoration of territories [15]. The researchers also emphasize the importance of innovation infrastructure and public administration mechanisms in the formation of prerequisites for the development of Industry 4.0 and the digital economy [13].

In the context of the study of institutional mechanisms for the development of smart infrastructure of cities, the works of Protsiuk are of great importance, in which the conceptual foundations of the interpretation of SMART infrastructure as an integrated system of technical, organizational and information components of the urban environment are substantiated [16]. The researcher also emphasizes the importance of cross-sectoral partnerships in the development of smart infrastructure and the formation of effective models of urban systems management [17].

A separate area of scientific research concerns the managerial aspects of the formation of Smart City systems in the context of state-building and strategic processes of territorial development. In the works of B. Karpinsky et al. The conceptual foundations of smart-urbanism, which provide for the integration of strategic management, digital tools and institutional mechanisms for the development of urban agglomerations, are considered [8]. Further research by these authors is devoted to the formation of a system of smart infrastructure and strategic architectonics of urban agglomeration management [6; 7].

At the same time, in modern conditions, the study of the role of digital tools in ensuring the adaptability of the public administration system to crises and emergencies is of particular importance. In this context, O. Herasymenko et al. [4] substantiate the importance of digital technologies as a tool for adapting public administration to crisis challenges, in particular in wartime.

Thus, the analysis of scientific sources indicates the formation of a comprehensive interdisciplinary approach to the study of Smart City, which combines technological, managerial, institutional and social aspects of the development of urbanized areas. At the same time, the scientific literature does not pay enough attention to the problem of integrating digital tools into the system of public administration methods at the level of urban agglomerations, which necessitates further research in this direction.

3. Problem Statement

The analysis of scientific sources shows that most of the Smart City studies focus on the technological aspects of digitalization of urban systems or individual e-governance tools. At the same

time, the issue of integrating digital tools into the system of public administration methods remains insufficiently studied, especially at the level of urban agglomerations, where management is characterized by multi-level and requires coordination between territorial communities.

In the context of digital transformation and modern security challenges, there is a growing need to form new management approaches that can ensure a combination of strategic planning, data management, software and project mechanisms, and interaction with stakeholders in the Smart City development system.

The article is aimed at the theoretical and methodological substantiation of the directions of formation and improvement of methods of public administration of Smart City in agglomeration centers of Ukraine.

To achieve this goal, the following research tasks are defined:

- to analyze modern approaches to the interpretation of the Smart City concept in the public administration system;
- identify key institutional and managerial challenges for the implementation of Smart City in agglomeration centers;
- to substantiate an instrumental model for improving public administration methods based on digital tools;
- to investigate the role of intermunicipal cooperation in the formation of the SMART governance system at the level of agglomerations.

4. Methods and Materials

The methodological basis of the study is an interdisciplinary approach that combines the provisions of the theory of public administration, urban studies, digital governance and the concept of Smart City. This approach allows us to consider the development of Smart City as a component of the transformation of the public administration system in the context of digitalization and the growing role of data in management decision-making.

The information base of the study consists of scientific works of domestic and foreign scientists in the field of public administration and digital transformation, international analytical documents, as well as materials on the functioning of agglomeration centers of Ukraine, in particular, the Lviv agglomeration.

In the process of research, a complex of general scientific and special methods was used. The method of theoretical generalization is used to systematize scientific approaches to determining the essence and role of Smart City in the public administration system. The method of system analysis made it possible to consider Smart City as a complex management system that integrates strategic, organizational and information-analytical components of territorial development management. The comparative method is used to analyze the institutional and digital parameters of the development of agglomeration centers, in particular Lviv and Krakow agglomerations. The modeling method is used to develop a conceptual model for improving the methods of public administration of Smart City. The graphical method is used to visualize the results of the study.

The application of these methods ensured the comprehensive nature of the study and made it possible to substantiate the directions for improving the methods of public administration of Smart City in the agglomeration centers of Ukraine.

5. Results and Discussion

The modern discourse of Smart City in public administration is increasingly shifting from the technological interpretation of the “smart city” to the managerial and institutional paradigm, within which digital solutions perform the function of operationalization of public administration methods, ensuring the achievability of strategic goals, the evidence of managerial decisions and the accountability of the authorities [1; 11]. For agglomeration centers, this is of fundamental importance, since agglomeration as a form of spatial organization of development exacerbates the problem of fragmentation of powers, resources and data between the core and peripheral communities, and therefore requires supramunicipal coordination, common data management standards and coordinated project management tools.

In Ukrainian conditions, the agglomeration dimension of Smart City is strengthened by two circumstances. Firstly, the intensity of recovery processes and the competition of budget priorities (security, critical infrastructure, social protection) objectively shift the emphasis from “smart comfort services” to “smart life support services”. Secondly, the war actualizes the dimension of resilience as an integral characteristic of managerial capacity: the ability to ensure continuity of services, crisis communication, redundancy of critical systems, cyber defense, and manageability of resource flows. In view of this, it is advisable to expand the Smart City toolkit through digital solutions for crisis response and adaptation of management to emergencies, which is confirmed by the results of research on digital tools for anti-crisis adaptation of public administration [4]. Accordingly, “smart” in war conditions serves not so much to provide comfort as to ensure the controllability and continuity of critical functions of the urban system [19]. In this sense, Smart City is considered as a management infrastructure that supports the continuity of the management cycle – from planning and allocation of resources to monitoring results and feedback from citizens [9; 18].

To systematize the internal characteristics and external conditions of Smart City functioning in the agglomerations of Ukraine, it is advisable to use a SWOT analysis, which allows not only to describe the problems, but also to show their structural interconnectedness with the development potential and risks of the environment.

Table 1. SWOT analysis of the functioning of Smart City in the agglomerations of Ukraine

Category	Contents
Strengths	Developed IT and digital services sector in large cities; active involvement of international technical assistance; the presence of examples of leadership (Kyiv, Lviv, Dnipro); experience in e-governance and open data; adaptability of municipal management in crisis conditions
Weaknesses	Lack of a regulatory definition of Smart City; institutional dispersion; shortage of personnel; lack of strategic Smart City documents; incompatibility of information systems between communities
Opportunities	European integration vector; using reconstruction as a trigger for modernization; creation of agglomeration management structures; institutionalization of Smart City at the level of law; development of public-private partnership
Threats	Military risks; energy instability; cyberattacks; reduction of the development budget; Increasing digital inequality between communities

Source: Developed by the author.

The explanatory and analytical value of Table 1 is to identify the “core” of constraints of a managerial nature: the insufficiency of the institutional architecture of digital transformation (coordination structures, distribution of roles, data management centers), limited human capacity (analytics, data governance, project management), incompatibility of information systems and lack of tools for coordinated financing of digital and infrastructure components. At the same time, even with the presence of strengths (community activity, open data, partnerships, projectivity), the key threat is the increasing development asymmetry between the core and the periphery of agglomerations, which manifests itself in different digital capacities and uneven access to services and data. This approach is consistent with the logic of the formation of a data-driven public sector, where management decisions are based on standardized data, interagency interoperability, and mature data management procedures [12]. In this context, data governance is not a technical module, but an institutional mechanism for ensuring data quality, transparency and accountability of governance. The concept of SMART reconstruction emphasizes that innovations and digital technologies should be integrated into the public administration system as tools to accelerate recovery, increase transparency and efficiency of decisions [15]. At the same time, the development of innovation infrastructure and mechanisms of public administration in the logic of Industry 4.0 forms the prerequisites for technological and institutional strengthening of agglomeration centers [13].

The results of the theoretical and methodological analysis allow us to substantiate that the “weak link” of smartization in agglomeration centers is not the shortage of technologies as such, but the deficit of managerial mechanisms for their integration into the methods of public administration. Therefore, it is advisable to consider the improvement of methods as a process of institutionalization of digital tools in four interrelated dimensions: strategizing (goals, priorities, indicators), program and project management (project portfolio), data governance (data governance) and communication and participatory mechanisms (legitimacy, policy co-creation).

The visualization of these relationships is presented in Figure 1, which reflects an instrumental model for improving the methods of public administration of Smart City in agglomeration centers.

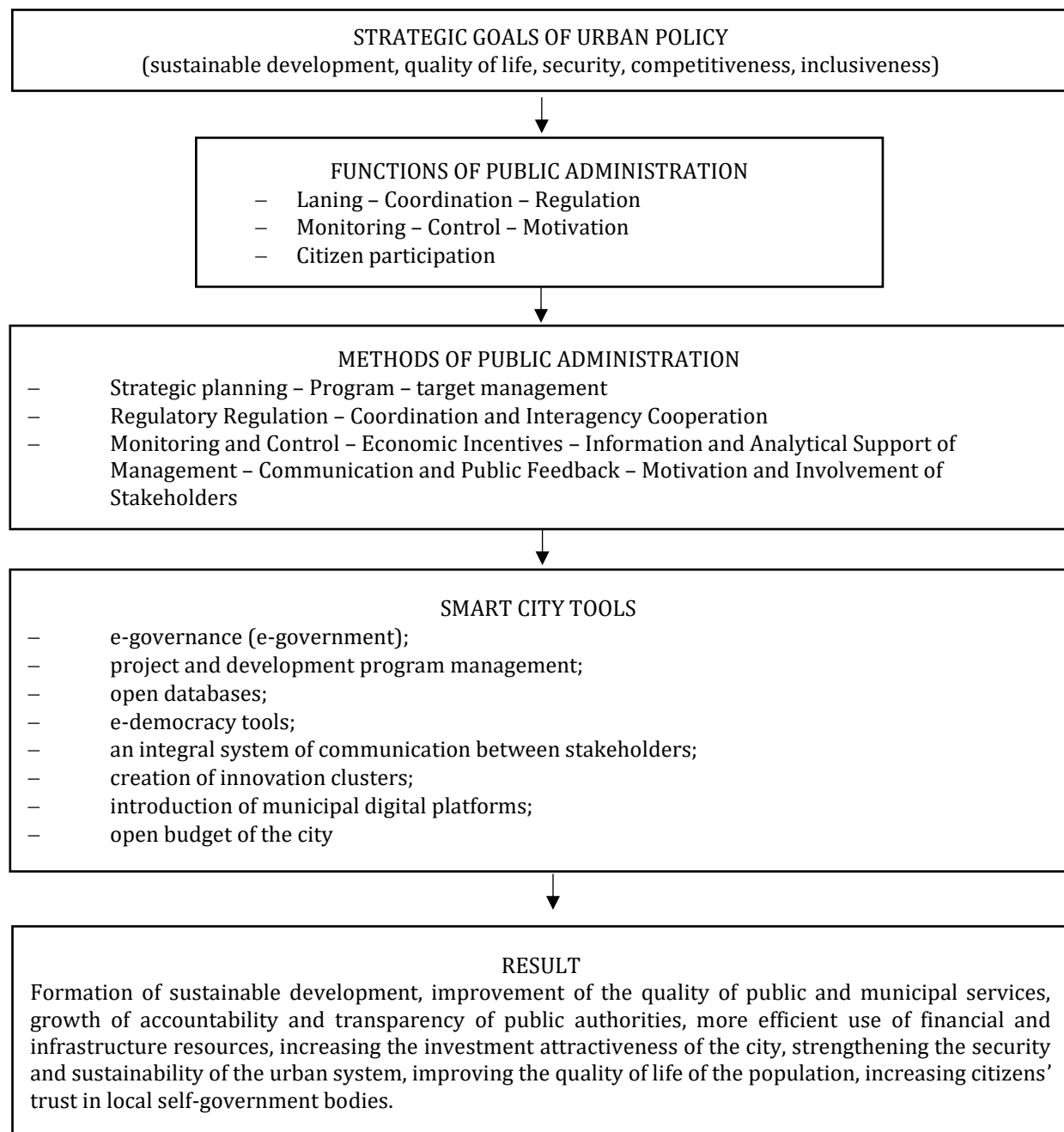


Figure 1. Instrumental model for improving public administration methods in Smart City

Source: Developed by the author.

The proposed model demonstrates the integration of strategic, project, analytical and communication dimensions of management into a single system that ensures the transformation of digital tools into effective management mechanisms. This makes it possible to conceptualize Smart City not as a set of technological solutions, but as an institutionally designed model of public administration focused on achieving measurable results in the development of agglomeration systems. The analytical interpretation of Figure 1 is that Smart City tools do not replace public administration methods, but enhance their functionality: administrative and legal methods become “digital by default”, economic methods become more accurate and transparent thanks to data and digital calculations, social and communicative methods are more targeted through digital channels of participation and feedback, and information and analytical methods are system-forming for data-driven governance [1; 11]. As a result, the Smart City effect is manifested not in the number of platforms, but in the ability of the authorities to link strategy, resources, data, and projects into a single system of accountable governance.

Further results of the study are to conceptualize a comprehensive model of Smart City administration in agglomeration centers, which takes into account multi-level management, heterogeneity of stakeholders and the supramunicipal nature of key policies (mobility, waste, ecology, energy, spatial development). Within this logic, a Smart City in an agglomeration should be considered as a management system consisting of strategic, operational, analytical, and communication blocks, the interaction of which provides a link between political priorities, project implementation, data, and the legitimacy of decisions.

In this context, an important empirical marker is government and partnership approaches to measuring the digital capacity of territories. In particular, the Ministry of Digital Transformation of Ukraine, together with partners, developed an approach to index assessment of the digital transformation of regions. The practice of indexing is used as a tool for comparability and management diagnostics, which can potentially be adapted to the agglomeration level (with decomposition into a core/periphery). It is the index approach in Smart City governance that allows you to move from declarative to measurable, which is critical for recovery management and trust in policy outcomes.

Figure 2 shows a structural model of integrated Smart City administration in an agglomeration center, which illustrates the logic of combining strategic management, software and project implementation, data management, and communication with stakeholders into a single integrated system. The proposed scheme reflects the cyclical nature of the management process and demonstrates that Smart City does not function as a set of separate digital solutions, but as a holistic management architecture.

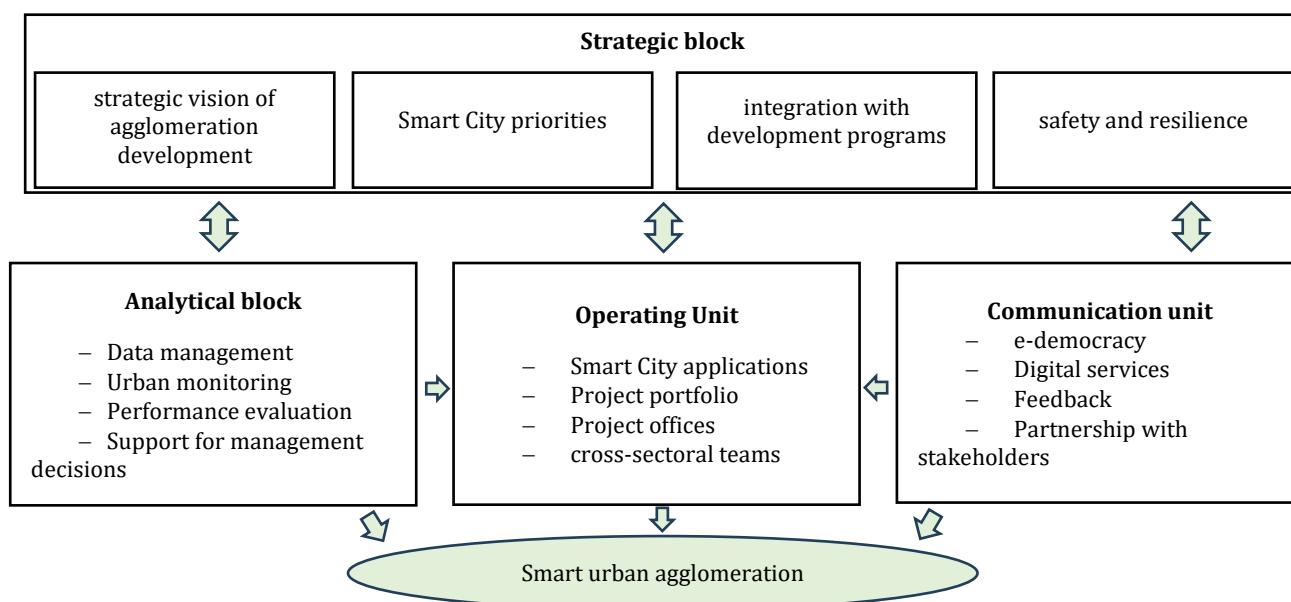


Figure 2. Model of integrated administration of the Smart City system in the agglomeration center

Source: Developed by the author.

First, the key resource of integrated administration is not only technology and funding, but institutional architecture: the presence of coordinating roles (responsible for digital transformation and data), interoperability rules, project portfolio management procedures, and accountability mechanisms. Secondly, for the agglomeration level, supramunicipal coordination becomes decisive, without which digital solutions reproduce the fragmentation of management: different communities accumulate incompatible data and services, which does not allow scaling solutions and obtaining a synergistic effect. That is why the institutions of intermunicipal interaction should be considered as an element of the “managerial framework” of the Smart City agglomeration.

The practical relevance of this thesis is demonstrated by the activities of the Association of Local Self-Government Bodies “Lviv Agglomeration”, which unites the Lviv City Territorial Community as the core and 12 neighboring communities, providing a framework of horizontal coordination for integrated socio-economic, spatial and environmental development. It is important that the institutional evolution of the Association (expansion of the composition in 2025 due to the accession of Pidberiztsi, Obroshyn and Murovanska communities) strengthens its representativeness and resource base, and the project portfolio (MSW management 2025–2035 with the preparation of an intermunicipal agreement; logistics

hub concept; environmental initiatives; mobility and accessibility) demonstrates the actual implementation of the operational block of the integrated Smart City model at the supramunicipal level. In addition, international integration results (membership in OASC, participation in Metrex and Metropolis, international recognition through the Seoul Smart City Prize 2025) create conditions for implementation of interoperability standards and ethical data management as a necessary component of smart governance.

Thus, the case of the Lviv agglomeration confirms that the Smart City in the agglomeration center requires institutionalization of coordination mechanisms, otherwise, digital transformation remains a set of local services without a supramunicipal effect. In the war and post-war context, this acquires additional importance, since it is the agglomeration level that creates the prerequisites for coordinated management of critical infrastructure, transport accessibility, and recovery based on data corresponds to approaches to modernizing the interaction between government, business and civil society [15] and the development of cross-sectoral partnerships in the field of smart infrastructure [17].

A separate result of the study is to substantiate the methodological framework for assessing the readiness of Smart City for agglomeration centers of Ukraine, which should combine two dimensions: (1) digital capacity (availability of services, data, digital transformation institutions, personnel and processes), (2) resilience (stability of critical services, redundancy, cyber protection, crisis management and communication). The practice of the index approach, which was used at the regional level as part of digital transformation, is useful as a basis for the development of an agglomeration index, but it requires adaptation to the “core-periphery” logic and taking into account war risks.

In this sense, it is advisable to move from “assessing the availability of digital solutions” to “assessing the managerial capacity to use digital solutions as methods of public administration”, i.e. evaluating not only the tools, but also the institutional procedures for their application. This allows us to consider the Smart City as a management system, and not as a technological set, consistent with the approaches to Smart City in open data and e-governance [9] and with an emphasis on the value principles of strategic adaptation of public administration in agglomeration centers [3].

Consideration of the Smart City as an integral management system objectively necessitates the transition from the local level of digitalization of an individual community to the agglomeration level of coordination, since the key functional subsystems of the smart city – mobility, waste management, environmental monitoring, engineering and social infrastructure – by their nature go beyond the boundaries of one administrative-territorial unit. In this context, the institutional dimension of Smart City is fundamentally important, which determines the ability of public authorities to ensure the consistency of management methods, data integration and synchronization of strategic priorities at the level of the entire agglomeration system.

A comparative analysis of European agglomeration centers confirms the decisive role of inter-municipal coordination as a basic factor in the effectiveness of Smart City. In particular, in the Krakowski Metropolitan Municipality (Krakowski Obszar Metropolitalny), the institutional formalization of cooperation between the core and adjacent communes made it possible to create an integrated system for managing mobility, digital services and spatial development, functioning on the basis of common data standards and joint strategic documents. provided the ability to scale digital solutions to the entire agglomeration, avoid duplication of functions and increase the efficiency of resource use, which, according to European Smart Governance approaches, is considered as a key criterion for the institutional maturity of Smart City [9; 11].

At the same time, in the case of agglomeration centers of Ukraine, including Lviv, the process of forming a similar institutional architecture is at the stage of formation, which necessitates the creation of organizational platforms capable of ensuring the systematic integration of public administration methods within the agglomeration. That is why the next logical stage of the analysis is to consider the practical implementation of this approach on the example of the Association of Local Self-Government Bodies “Lviv Agglomeration”, which acts as an institutional basis for the formation of the municipal level of smart governance.

An important empirical result of the study is the substantiation that in Smart City agglomeration centers, governance acquires applied capacity only if there is an institutional framework for intermunicipal coordination capable of converting strategic goals and digital tools into common policies, agreed data standards and implemented supramunicipal projects. In this context, the example of the Association of Local Self-Government Bodies “Lviv Agglomeration”, which functions as one of the most dynamic platforms of intermunicipal cooperation in Ukraine. The Association unites the Lviv City

Territorial Community as the core and 12 adjacent urban, township and rural communities (Zhovkva, Horodotska, Pustomyivska, Bibrska, Velykolyubinska, Davydivska, Zhovtanetska, Kulykivska, Novoyarychivska, Pidberiztsivska, Obroshynska, and Murovanska), forming a managerial space for integrated socio-economic, spatial and environmental development of territories.

In terms of content, the mission of the Association is to ensure the joint development of member communities by establishing horizontal ties, coordinating management decisions and initiating projects, the scale of which goes beyond the boundaries of one administrative unit. In terms of public administration, this means the formation of a supramunicipal level of policy coordination, which is critically important for areas with a naturally agglomeration logic: mobility, waste management, spatial planning, environmental systems, logistics, and critical infrastructure. The institutional development of the Association in 2025 testifies to the strengthening of its capacity: the expansion of the composition through the accession of Pidberiztsi, Obroshyn and Murovanska communities increased the representativeness and resource base, as well as increased the potential for scaling up joint management tools and services.

A separate analytical emphasis within the Smart City theme is the EBA project profile as a mechanism for “operationalization” of smart governance. This platform acts as a tool for attracting external funding and implementing grant initiatives, which corresponds to the logic of program and project management as a key component of the modern model of public administration. In particular, in 2024, the project “Strengthening Effective Democratic Governance in the Lviv Agglomeration” was implemented with the support of the Council of Europe, the results of which were the holding of the First International Forum of Agglomerations, the organization of intermunicipal children’s camps, as well as the development and printing of a local history atlas of the Lviv agglomeration. Together, these actions reflect not only the communication dimension but also the formation of a common identity of the agglomeration, which in smart governance correlates with the growth of social capital and the legitimacy of supra-municipal management decisions.

In the future, the Association’s activities will demonstrate a focus on structural problems relevant to Smart City as a management model. The project “Together for Better Services: Intermunicipal Cooperation in the Lviv Agglomeration” is aimed at supporting the implementation of intermunicipal cooperation in the field of solid waste management, in particular, the development of the Strategic Solid Waste Management Plan of the Lviv Agglomeration for 2025-2035 and the conclusion of an intermunicipal cooperation agreement. This example is methodologically significant, as it combines strategizing, standardization of procedures, coordination of roles and implementation mechanisms – that is, those components that ensure the transition from “local services” to “integrated agglomeration policies” in Smart City.

The project “Logistics Hub. Lviv agglomeration as an important logistics hub in the network of national and international connections” (donor: Ukraine–Moldova American Enterprise Fund) concerns the Lviv and Zymnovodivska communities and provides for the development of a logistics hub concept based on a comprehensive study of needs, opportunities and potential benefits for the region. The identified problems (lack of a centralized hub, low level of intermodal transportation, congestion of road infrastructure, insufficient digitalization of logistics processes, limited investment opportunities due to lack of strategy) are typical challenges of agglomeration development, in which Smart City tools have an applied role not as “IT solutions”, but as management mechanisms for coordinating flows, data and investment decisions.

In the ecological dimension, the SpongeWorks project is aimed at restoring peatland ecosystems on the territory of a landscape reserve with an area of 2500 hectares of local importance within the Lviv community, and also covers the Novoyarychiv, Kulykiv and Murovanska communities. The significance of this example lies in demonstrating the agglomeration logic of ecosystem management, where the boundaries of natural systems do not coincide with administrative boundaries, and therefore require supra-municipal planning and monitoring mechanisms, including data, indicators and communication. The Smooty and Embracer projects focused on overcoming transport isolation, creating a sustainable, green and accessible mobility system, and solving the problems of connectivity and transport accessibility are not enough wealthy areas, reinforce the thesis that mobility is an “agglomeration service”, and its digitalization makes sense only in the context of intermunicipal integration of routes, services, tariff/preferential mechanisms and data.

Additional proof of the platform’s institutional maturity is the international recognition and integration of the Lviv agglomeration: winning the Seoul Smart City Prize 2025 in the Human-CentriCity

category for a project focused on human recovery and inclusion; obtaining membership in the OASC as the first such case in Ukraine; organization of the International Forum of Agglomerations of Ukraine; membership in the Metrex and Metropolis networks. In the scientific interpretation, these elements are not only reputational, but managerial significant, as they demonstrate readiness to implement international standards of smart governance, cross-sectoral interaction and transition from “urban” Smart City to “agglomeration” smart governance.

Thus, the case of the Lviv Agglomeration Association allows us to empirically confirm the conclusion that the key condition for an effective Smart City in the agglomeration centers of Ukraine is the presence of an institutionally entrenched coordination platform capable of combining strategizing, project portfolio, data management, and communication with stakeholders. It is such a platform that creates prerequisites for the consistency of public administration methods within the agglomeration and provides a synergistic effect that is unattainable in the case of fragmented digitalization of individual communities.

A comparative analysis of Lviv and Krakow agglomerations, which have similar demographic characteristics but are at different stages of institutional and digital development, is presented in Table 2.

Table 2. Comparative characteristics of institutional and digital parameters of Smart City in Lviv and Krakow agglomerations

Indicators	Lviv agglomeration	Krakow agglomeration
Population of the agglomeration	about 1.1 million people	about 1.3 million people
Institutional form of coordination	Association of Local Self-Government Bodies “Lviv Agglomeration”	Krakowski Obszar Metropolitalny
Year of establishment of the institutional structure	2021	2014
Having a shared Smart City/digital strategy	partially formed	Fully integrated Smart City Kraków strategy
City Operations Center	in the process of formation	functioning
Integrated agglomeration transport system	partially integrated	fully integrated
A single digital platform for city services	limited functionality	complex platform
Open Data Layer	medium	high
Smart City Index (IESE Cities in Motion Index)	not in the ranking	included in the rating
Level of intermunicipal integration	medium	high

Source: Developed by the author based on [2; 5; 10; 11].

The analysis of the indicators given in the table allows us to state that the level of development of Smart City directly depends not only on the implementation of individual digital solutions, but primarily on the formation of an integral public administration system, which ensures their integration into the processes of strategic planning, infrastructure management and interaction with the community. At the same time, the key factor of efficiency is the availability of institutional coordination mechanisms at the level of the agglomeration, which allow synchronizing digital solutions, data standards and development policies between the central city and adjacent territories.

A comparative analysis of Lviv and Krakow confirms that even with the comparable scale of the urbanized territory and the functional role of the agglomeration center, the institutionalization of Smart City as a component of the public administration system is crucial. In particular, in Krakow, digital tools are integrated into a single system for managing urban services and strategic monitoring, which ensures a higher level of consistency of management decisions, efficiency of resource use and adaptability of the city system to new challenges. At the same time, in the Lviv agglomeration, despite the presence of some successful digital solutions and platforms, the further development of Smart City largely depends on the deepening of intermunicipal coordination, the formation of a joint data management system and the institutional consolidation of the agglomeration level of public administration.

The results also confirm that the concept of Smart City in modern conditions is being transformed from a technological model for the modernization of urban infrastructure into a comprehensive management mechanism for ensuring the viability, efficiency and sustainable development of agglomeration systems. This is especially relevant in the context of digital transformation and military

challenges, when the ability of public authorities to ensure the continuity of critical services, the efficiency of decision-making and coordination between different levels of government is becoming a key factor in the functional stability of urban systems.

Thus, the results of the study allow us to substantiate that the formation and improvement of methods of public administration of Smart City in agglomeration centers of Ukraine should be carried out based on the integration of strategic management, digital tools, data governance and mechanisms of intermunicipal cooperation, which ensures the transition from fragmented implementation of digital solutions to the formation of an integral Smart Governance system as an institutional basis for the development of modern agglomerations.

6. Conclusions

As a result of the study, it is substantiated that the formation and improvement of methods of public administration of Smart City in agglomeration centers of Ukraine should be carried out based on a managerial and institutional approach, in which digital technologies, data and platforms act as tools for improving the effectiveness of public administration, and not a self-sufficient set of technological solutions.

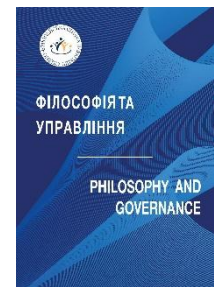
It has been established that the key barriers to the development of Smart City in Ukrainian agglomerations are mainly managerial in nature and are associated with institutional fragmentation, lack of intermunicipal coordination, non-standardization of data and limited integration of information systems. It has been proven that in wartime, the concept of Smart City is transformed in the direction of resilience, and its effectiveness is determined by the ability to ensure the continuity of critical services, the adaptability of management decisions, crisis communication and cyber resilience.

Within the framework of the study, an instrumental model for improving public administration methods in Smart City, as well as a model for integrated Smart City administration in an agglomeration center, covering strategic, operational, analytical and communication blocks, was developed. On the example of the Lviv agglomeration, it has been confirmed that effective Smart City governance is possible in the presence of an institutionally fixed platform for intermunicipal coordination. Comparison with the Krakow agglomeration showed that the decisive factor in the effectiveness of Smart City is the institutionalization of metropolitan governance and the integration of digital tools into a single Smart Governance system.

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Evolution of Reforming the Health Care System and the Market of Medical Services

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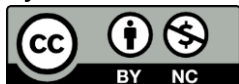
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ABSTRACT

The article studies the evolution of reforming the health care system of Ukraine and the transformation of the national market of medical services in the period of independence and further socio-economic changes. Particular attention is paid to the transition from the centralized Semashko model to a modern system based on the principles of state financial guarantees, contracting of medical services and strengthening the role of public procurement. The main stages of reforming the healthcare system, which include the initial post-Soviet period, the stage of fragmentary changes, pilot reform projects, the institutional design of the new model, and the current stage of systematic implementation of the medical guarantee program, are summarized. The paper analyzes the scientific approaches of domestic and foreign researchers on the regulation of health care systems, financial mechanisms, competition in the market of medical services and the impact of state policy on the quality and accessibility of medical care. It has been established that despite significant progress in the regulatory and legal support of the reform, the effectiveness of its practical implementation remains limited due to insufficient funding, uneven access to medical services, institutional weakness of the system and the complexity of tariff regulation. The influence of external factors, in particular the COVID-19 pandemic and armed aggression, which significantly transformed the conditions for the functioning of the health care system and actualized the need to increase its resilience, is considered separately. The need for further improvement of the mechanisms of public administration and development of the market of medical services on the basis of efficiency, accessibility and transparency has been substantiated.

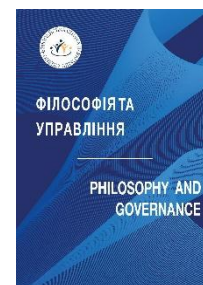
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Еволюція реформування системи охорони здоров'я та ринку медичних послуг

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СТАТТЯ	АНОТАЦІЯ
Дослідницька DOI: 10.70651/3041-248X/2026.2.10 Отримана: 08.01.2026 р. Прийнята: 10.02.2026 р. Опублікована: 14.02.2026 р. Авторське право © 2026  автора Цей твір ліцензовано на умовах Ліцензії Creative Commons «Із Зазначенням Авторства – Некомерційна 4.0 Міжнародна» (CC BY-NC 4.0).	У статті досліджено еволюцію реформування системи охорони здоров'я України та трансформацію національного ринку медичних послуг у період становлення незалежності та подальших соціально-економічних змін. Особливу увагу приділено переходу від централізованої моделі Семашка до сучасної системи, заснованої на принципах державних фінансових гарантій, контрахування медичних послуг та посилення ролі державного закупівельника. Узагальнено основні етапи реформування системи охорони здоров'я, які включають початковий пострадянський період, етап фрагментарних змін, пілотні проекти реформ, інституційне оформлення нової моделі та сучасний етап системного впровадження програми медичних гарантій. У роботі проаналізовано наукові підходи вітчизняних і зарубіжних дослідників щодо регулювання систем охорони здоров'я, фінансових механізмів, конкуренції на ринку медичних послуг та впливу державної політики на якість і доступність медичної допомоги. Встановлено, що попри значний прогрес у нормативно-правовому забезпеченні реформи, ефективність її практичної реалізації залишається обмеженою через недостатнє фінансування, нерівномірність доступу до медичних послуг, інституційну слабкість системи та складність тарифного регулювання. Окремо розглянуто вплив зовнішніх чинників, зокрема пандемії COVID-19 та збройної агресії, які суттєво трансформували умови функціонування системи охорони здоров'я та актуалізували потребу підвищення її стійкості. Обґрунтовано необхідність подальшого удосконалення механізмів державного управління та розвитку ринку медичних послуг на засадах ефективності, доступності та прозорості.



КЛЮЧОВІ СЛОВА

публічне управління, державна політика, механізми державного управління, охорона здоров'я, медичні послуги, система охорони здоров'я, медична реформа, управління системою охорони здоров'я, медична інфраструктура

1. Introduction

Ensuring high standards of health care throughout the entire period of Ukraine's independence is one of the priority areas for the implementation of socio-economic policy in the field of health care. Achieving the desired benchmarks implies the formation of an effective long-term national strategy of health care policy and strict adherence to its main provisions, since the model of the health care system of the USSR (Semashko model) was characterized by a high degree of centralization and the introduction of social medical security and, at the same time, was unable to provide the principles of flexibility and did not meet the requirements of the market economy.

Under such conditions, the need to reform the entire health care system, which provides for the reorganization of managerial functions, changes in approaches to financing and updating the principles of the provision of medical services and medical care, turned out to be quite justified, because the changes that took place before were of a thesis nature and did not affect the effectiveness of the national health care system, and also did not take into account the impact of such factors on the existing situation as the effectiveness of the bodies state power, the effectiveness of decentralized governance, the rationality of the financing system, the development of the medical services market, patient satisfaction and the influence of political factors. At the same time, the process of transferring the authority to manage the health care system to the regional level turned out to be quite dangerous, as a result of which the crisis phenomena deepened even more due to the insufficiency of funding for the health care sector and the chronic shortage of necessary resources.

It is obvious that the path of transformational restructuring of Ukraine is still unfinished, and the existing problems are constantly deepened by the emergence of new modern destabilizing factors. Of great importance in the national health care system is ensuring the efficiency of the development and functioning of the medical services market, which is characterized as a complex system of medical services provision that combines state, regional and private components. Throughout the entire period of its existence, the market of medical services in Ukraine has been subjected to destructive changes and the negative impact of external and internal environmental factors, as a result of which critical and crises in the field of health care have repeatedly necessitated and actualized the need for their reform. However, despite all the measures implemented, the desired results were not achieved, and the crisis of the domestic health care system continues to deepen due to the long-term aggravation of economic, political and social problems.

The problem of the need to reform the health care system is the object of active discussions by scientists and practitioners at various levels of management, and proposals for improving the system of its management and improving the medical, socio-economic and scientific-educational components are expressed in countless program documents and plans for the implementation of measures. However, it should be stated that the indicators of the effectiveness of such activities do not indicate positive changes, and the existing problems regarding the inconsistency of the current model of the functioning of the medical services market do not meet the modern needs of improving the level and quality of life of the population and guaranteeing them proper medical protection. Moreover, the existing deformations of the structure of medical services have deepened even more, as a result of which the problem of inefficiency in the use of available resources is exacerbated. Another equally important factor is the low quality of medical services and insufficient funding of the health care sector.

2. Literature Review

The issue of state regulation of the health care system and the implementation of the program of medical guarantees is widely studied in domestic and foreign scientific literature. Ukrainian researchers focus on the transformation of financial mechanisms of the health care system, in particular, the transition from the maintenance of institutions to payment for medical services [6; 15]. A significant part of the work is devoted to the role of the National Health Service of Ukraine as a key purchaser of medical services [7], as well as to the problems of tariff formation and financing efficiency [8].

Foreign studies emphasize the importance of regulatory mechanisms and competition in the field of health care [4; 12], as well as the impact of public policy on the availability and quality of medical services in countries with different income levels [2]. Special attention is paid to the efficiency of financing systems and the share of public expenditures in GDP [10; 14]. Studies also confirm that the quality of medical services directly affects patient satisfaction [1; 11].

A generalization of the literature shows that despite a significant number of studies, the issues of effectiveness of the practical implementation of medical reform in Ukraine remain insufficiently disclosed, especially at the level of interaction between the state, service providers and patients.

3. Problem Statement

Despite the implementation of the program of medical guarantees and the creation of a new model of financing the health care system in Ukraine, several systemic problems remain that reduce its effectiveness, in particular, uneven access to medical services, limited financial resources, insufficient institutional capacity of health care institutions and the complexity of tariff regulation. In addition, there is a gap between the declared principles of the reform and their practical implementation on the ground, which requires further analysis of public administration mechanisms and assessment of the effectiveness of the new financing model. The purpose of the study is to analyze the features of the implementation of the program of medical guarantees in Ukraine, to assess the effectiveness of mechanisms of state financing of the health care system and to identify the main problems of its practical implementation.

4. Methods and Materials

The study uses a set of general scientific and special methods: analysis and synthesis – to generalize the regulatory framework and scientific sources; a systematic approach – to consider the health care system as an integral structure; comparative method – to compare Ukrainian and foreign experience in financing medicine; as well as content analysis of regulations and statistics on the functioning of the medical guarantee program. The information base of the study was legislative acts of Ukraine, data of the Ministry of Health of Ukraine, the National Health Service of Ukraine, the World Bank and the Organization for Economic Cooperation and Development, as well as scientific publications of domestic and foreign authors.

5. Results and Discussion

In general, assessing the entire period of development of the national health care system and changes in the market of medical services, it is possible to single out certain stages of such transformations, which should be systematized in Figure 1.

At the same time, during the period of Ukraine's development, five main stages of changes and reform of the health care system and the national market of medical services can be distinguished, each of which has certain features.

The first stage of development of the medical services market of Ukraine corresponds to the period of preservation of the existing health care system and ensuring the minimum parameters of medical care and social guarantees of health care.

At the second stage, the main vectors of reforming the health care sector in general and the medical services market in particular were formed, as a result of which the formation and testing of the main mechanisms of the envisaged reform were observed. It is worth noting the active participation in this process of such international organizations as the World Bank and the European Commission, with the help of which activities on the types and selection of instruments for the provision of medical services were coordinated. However, it should be noted that the reforms carried out at that time were fragmentary and were mainly local, and the emphasis was placed on:

- 1) search for additional sources of funding;
- 2) introduction of new methods of financing health care institutions at the level of primary medicine;
- 3) automation of medical service providers through experimental research;
- 4) carrying out structural and functional transformations of the medical care system;
- 5) reforming primary health care in the direction of intensifying the development of family medicine;
- 6) increased attention to the development of inpatient substitution forms of medical services, their regionalization;

7) implementation of a set of measures to improve the quality of medical care through the introduction of special standards for the provision of medical services, licensing and accreditation of medical institutions.

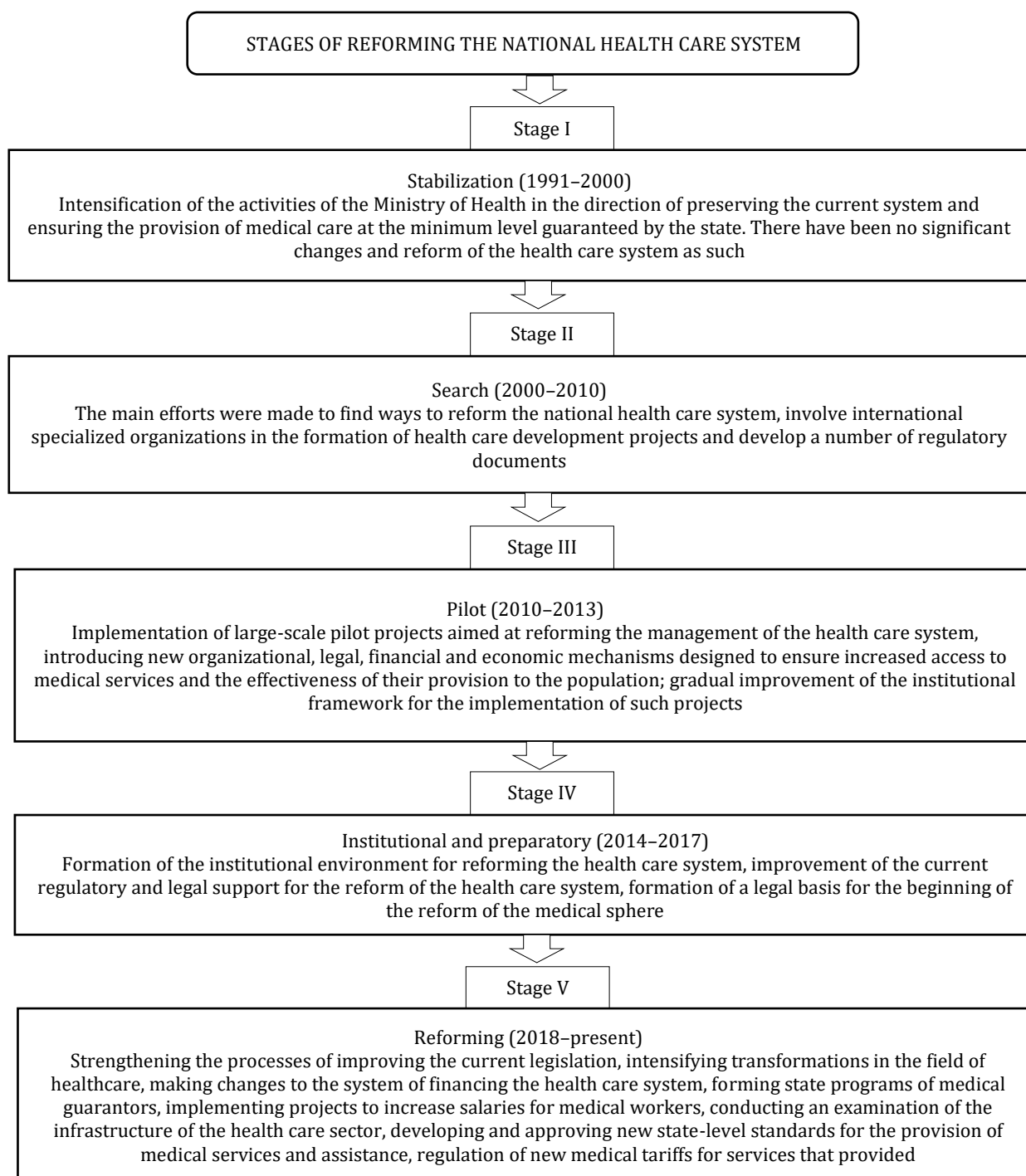


Figure 1. Stages of Reforming the National Health Care System

Source: [13, pp. 213–217].

The third stage envisaged large-scale implementation of the reform in certain pilot regions (Kyiv, Vinnytsia, Dnipropetrovsk and Donetsk regions), which were identified as experimental platforms for reforming the health care system. The effectiveness of such a pilot reform is evidenced by the proven expediency:

- 1) differentiation of primary and secondary medical care based on the functioning of the general practice of family medicine;
- 2) creation of primary health care centers, which provide for an extensive network of outpatient clinics;

- 3) combining different sources of funding for emergency and secondary medical care at the regional level;
- 4) formation of a system for routing patients to medical institutions specializing in the treatment of serious and complex diseases;
- 5) creation of medical institutions of intensive care in the form of leading institutions of hospital districts;
- 6) introduction of a remuneration system built based on compliance with the amount of payment for the quality of work performed;
- 7) formation of a system of state regulation of prices for medicines.

The fourth stage fell on the period of the Revolution of Dignity and the beginning of Ukraine's military confrontation with the military aggression of the Russian Federation and continued until 2017. Considerable importance is paid to the regulation of the basic organizational and legal foundations of financing changes and reforms in the field of health care.

The fifth stage, a systematic and gradual reform of the healthcare sector, began in 2018 and continues to this day. Its peculiarity is the introduction of targeted financing of the needs of the healthcare sector and the use of medical subvention. At the same time, great importance is attached to the formation of mechanisms for the creation of hospital districts and the development of criteria for their determination. In turn, the creation of a special state executive body – the National Health Service of Ukraine provides for the high-quality implementation of the state policy of financing guarantees for the provision of medical services to the population.

The main changes that are expected to be achieved in the process of reforming the health care system [13, p. 217] are proposed to be systematized according to their main directions and highlight the following features:

- 1) financing of specialized and highly specialized health care institutions is carried out through the National Health Service of Ukraine, which will prevent the closure of such institutions with the subsequent dismissal of medical personnel;
- 2) additional funding of such packages of State programs of medical guarantees as: primary and emergency medical care, acute myocardial infarction, acute cerebral stroke in inpatient conditions, as well as four packages for the treatment of coronavirus infection COVID-19;
- 3) increasing the level of remuneration of medical workers;
- 4) carrying out expert studies of the entire infrastructure of the health care sector, including determining the level of capacity and efficiency of the functioning of the hospital network;
- 5) formation and regulation of new standards for the provision of medical services;
- 6) approval and introduction of new tariffs for medical services with reference to market wages and the quality of medical services.

Undoubtedly, different periods of development of the medical services market in the health care system of Ukraine are characterized by a set of problematic aspects that are associated with transformational restructuring and transition to market principles of the functioning of the economy. At the same time, the existing legislation did not meet the requirements of modernity, as a result of which the process of rapid reform was not implemented. Moreover, in today's conditions, the system of functioning of the medical services market remains ineffective, despite the achievement of certain effective indicators of its reform and improvement.

Established traditions and stereotypes about the free system of medical care in the context of chronic underfunding of the industry create significant obstacles to ensuring the effective functioning of the medical services market. Moreover, the proposed measures of mechanical increase in the volume of financing of the health care sector in Ukraine cause and deepen the irrationality of the use of available resources and do not contribute to improving the quality of medical services. At the same time, the implementation of a radical restructuring of the entire health care system at this stage is impossible, due to the insufficient level of its institutional support and the emergence of new challenges and dangers for the healthcare sector, in particular, the spread of the COVID-19 pandemic and military confrontation with the armed aggression of the Russian Federation against Ukraine.

It becomes obvious that changes and reforms of the medical services market of Ukraine throughout the entire period of the state's existence are due to a number of different kinds of problems and challenges, and the period up to 2017 can be characterized more as preparation for the health care reform than the reform itself. At the same time, the main reasons for the intensification of the need for reform in the future can be called:

- 1) decrease in the efficiency of the country's medical services market and the quality of medical services within the framework of growing trends in household spending on health care;
- 2) strengthening the processes of European integration, which set obligations for Ukraine to sign and implement the Association Agreement between Ukraine and the European Union;
- 3) formation and implementation of the state program "Health – 2020: Ukrainian Choice" in accordance with the European strategy "Health – 2020";
- 4) decrease in the level of prestige of labor in the field of healthcare, low level of remuneration of medical specialists, and weakening of trends in the professional and qualification potential of the healthcare sector.

Obviously, there is an urgent need to revise approaches to the functioning of the medical services market, and the financing of the health care sector should be carried out taking into account the need to update the material and technical condition of health care institutions and maximize the population's access to health care services without significant damage to their financial situation.

The difficulty of reforming the market of medical services and the unpredictability of the impact of destructive changes are due to certain difficulties and obstacles to the implementation of the basic principles of the reform, which are associated with problems of a material, technical, financial and organizational nature, the most significant of which we systematize in Figure 2. At the same time, it is worth emphasizing the existence of risks of not obtaining the desired results of the reform, among which the following occupy a prominent place:

- 1) refusal of a significant proportion of the population to use medical services that are not guaranteed by the state, as a result of which there is a risk of the spread of chronic diseases and deterioration of the health of the majority of the population;
- 2) increasing the share of administrative costs aimed at ensuring the effectiveness of the system of benefits and discounts for socially vulnerable categories of the population;
- 3) reducing the opportunities and financial capacity of maintaining communal medical institutions owned by non-profit communities;
- 4) intensification of the development of the shadow market of medical services;
- 5) reducing the level of efficiency of informal expenditures made by households to receive medical services in case of failure by the state to establish high standards of medical services;
- 6) lack of a mechanism for controlling funds that will officially enter the health care system;
- 7) strengthening segregation in the market of medical services in Ukraine, under which private and non-profit medical institutions will not be allowed to provide services, including due to further state reimbursement of their cost on the terms of equality and parity with state and regional health care institutions;
- 8) reducing the state's obligations to protect and guarantee the provision of socially significant medical services, which include the protection of motherhood and persons with special needs.

Taking into account the outlined trends, it should be stated that the national market of medical services in Ukraine has extremely low opportunities to achieve absolute perfection, since consumers of medical services are not able to fully receive truthful information about the quality of medical services and the competitive advantages of certain medical products. In addition, the strengthening of the territoriality factor does not contribute to the desired choice of medical institutions, which neutralizes the concept of the functioning of medical institutions on the basis of competition.

At the same time, significant efforts to strengthen the processes of decentralized governance in the medical services market have not brought the desired socio-economic effect, and significant abuses in overstating tariffs for the provision of medical services in the private sector reduce the level of trust in the healthcare system as a whole and exacerbate the problem of the industry's competitiveness.

The domestic health care system has undergone significant destructive changes as a result of the full-scale military invasion of the Russian Federation on the territory of Ukraine and the annexation of large territories, which are manifested in the restriction of access of a significant share of the population to the medical services market due to their stay in the territory not controlled by the Ukrainian side. No less important is the problem of large-scale destruction of medical infrastructure as a result of active hostilities on the contact line.

Large-scale transformations of the domestic healthcare system and the reformatting of the national market of medical services to meet the requirements of martial law in the state necessitate the emergence of a new category of the population – internally displaced persons who need emergency medical care of various nature outside their territorial affiliation – when reforming the medical sector.

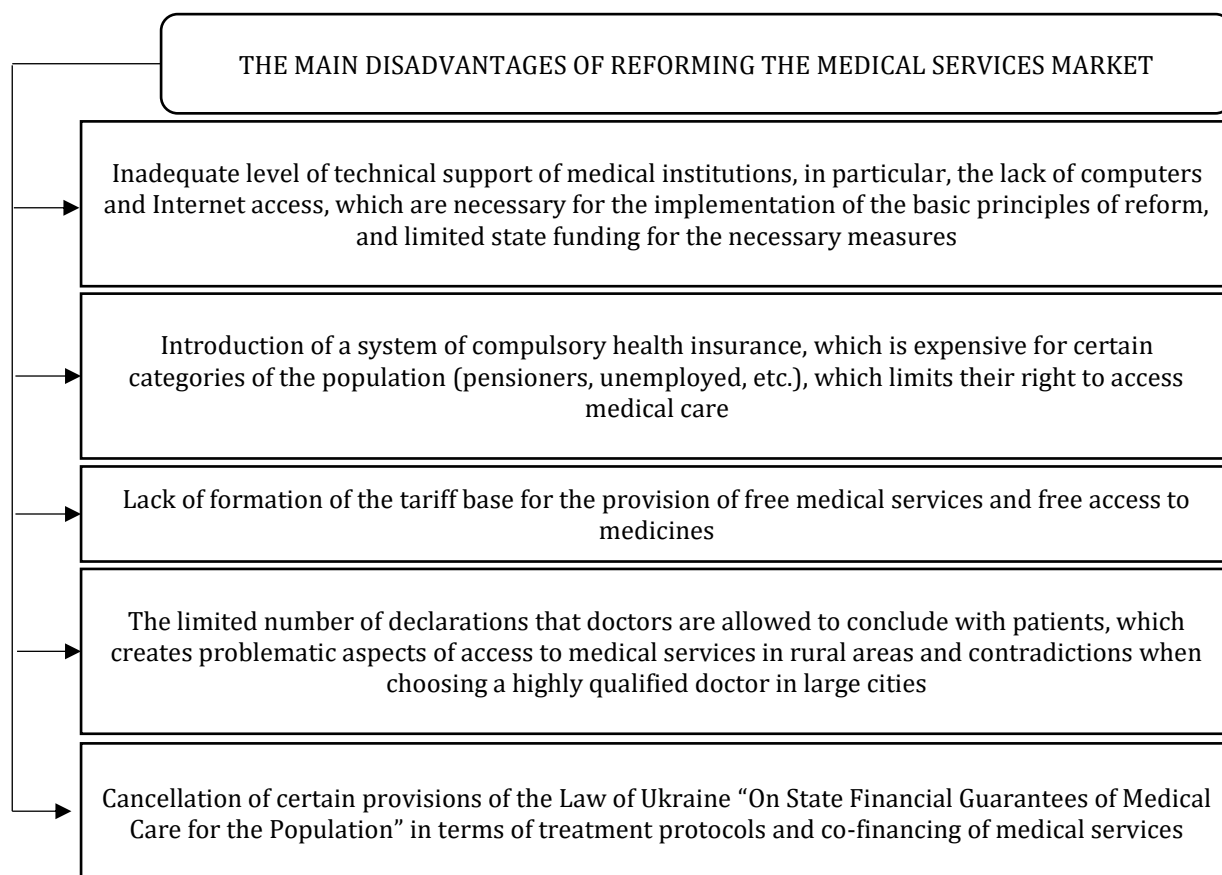


Figure 2. The Main Disadvantages of Reforming the Medical Services Market in Ukraine

Source: [9, p. 89].

Reforming the market of medical services in Ukraine is subject to a radical change in the organizational and economic principles of management, which are implemented with market conditions and European standards, which requires the implementation of several urgent measures, the main list of which is reflected in Figure 3.

It should be noted that changes and reforms of the medical services market of Ukraine are taking place in the system of reforming the health care sector; therefore, the main trends in its improvement certainly extend to the market of medical services. An indisputable fact of the current state of the medical industry is the problems with financing the needs of medicine, because the current state of the state budget is not able to cover the existing costs of updating the material and technical base, providing full medicines and paying for high-quality medical services. Therefore, within the framework of the reform of the health care sector, the expediency of introducing insurance medicine as one of the priority areas of reforming the medical services market, which will eliminate the shadow component and corruption risks in the medical services market, improve the quality of medical services and the efficiency of using available resources, is quite justified. However, as Bora and Yu. [5], to ensure the development of insurance medicine in the unstable conditions of our time in Ukraine, the urgent need remains:

- 1) formation and application of market mechanisms for the maximum possible self-regulation of the health care sector;
- 2) creation of appropriate conditions for the development of healthy competition in the market of medical services;
- 3) legislative regulation of the issues of compulsory social health insurance;
- 4) specification of the levels of medical care and a clear definition of the types of medical services provided at each of them;
- 5) structuring the population into certain groups, the provision of medical services to which will be carried out from health insurance funds;
- 6) introduction of uniform state standards for the provision of medical services by health care institutions, regardless of the form of ownership and strengthening of state control over such a process;

7) formation of a unified system of classification of medical services and pricing for them.

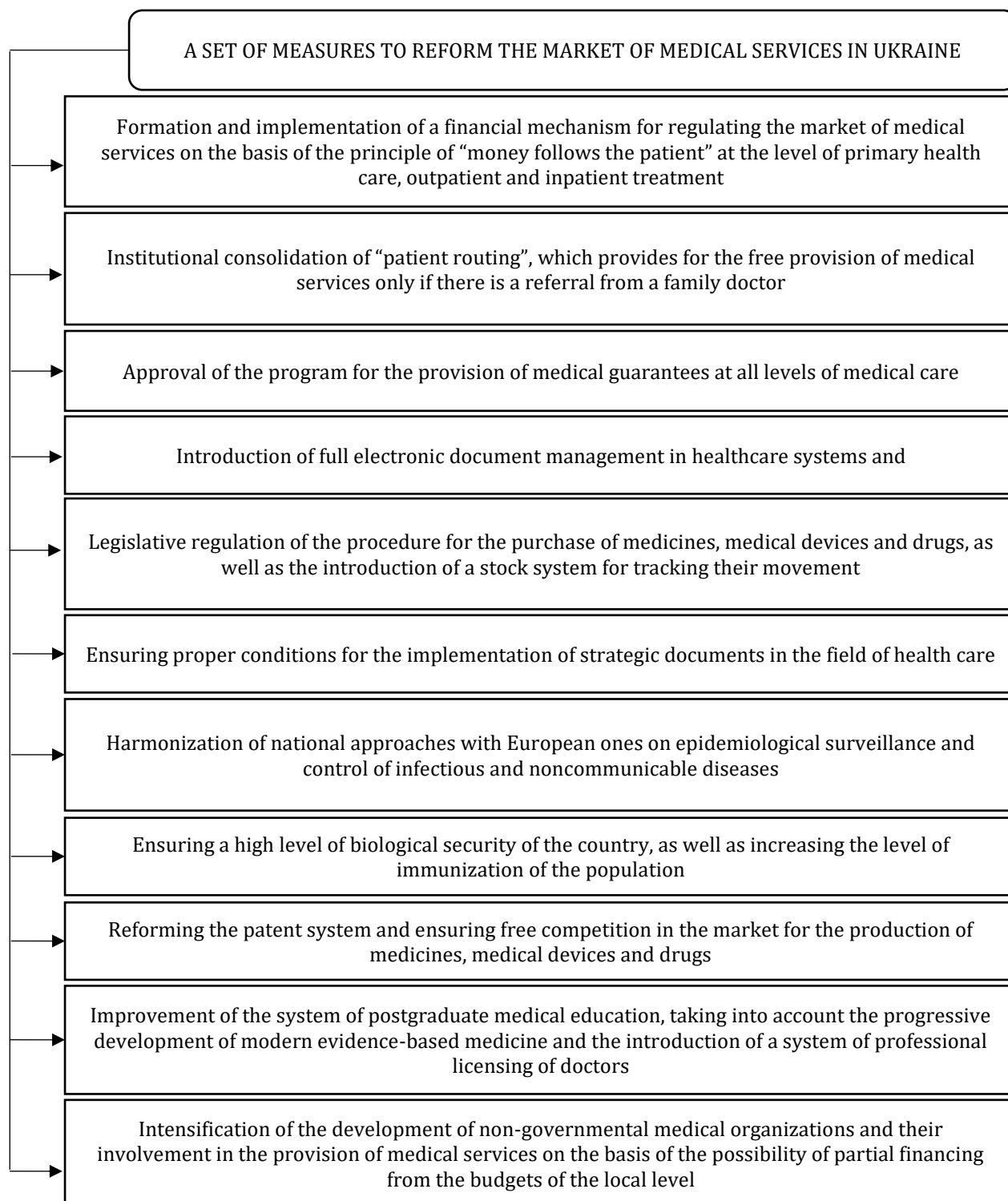


Figure 3. A Set of Measures to Reform the Market of Medical Services in Ukraine

Source: [3]

The positive side of these measures is a significant reduction in the burden on state budgets of various levels, obtaining additional incentives and opportunities for obtaining quality medical services, as well as, which is no less important, reducing the level of shadow medicine and corruption risks in the medical sector.

In this context, [16, p. 15] emphasizes the formation of an appropriate level of functioning of regional markets of medical services, taking into account the needs of the development of the health care sector of a specific territorially defined unit and the peculiarities of the life of the population of a particular region. The importance of such emphasis is the possibility of a complete transition from an

itemized estimate of financing of health care institutions to the payment of a specific type of medical services provided, which will allow the implementation of a patient-oriented approach to the development of the medical services market. At the same time, the reformatting and modernization of the financing system is considered a significant achievement, in particular, primary health care is financed per person, and the costs of specialized medical care are covered depending on the treated case.

Granting independence to health care institutions of the regional level regarding the management of financial and human resources will allow taking into account the needs of each territorial community when choosing medical services and guarantee a higher level of accessibility, quality and efficiency of relationships between providers and customers of medical services, since it creates an opportunity to ensure enhanced control in the market of medical services both by state authorities and local self-government, and on the part of the public, making it impossible to make “informal” payments, which are common in the healthcare system today.

6. Conclusions

Thus, the study of problematic aspects regarding the changes and features of reforming the medical services market in Ukraine during 1991–2022 give grounds to assert that the entire period of development of the national market of medical services is accompanied by challenges, dangers and destabilizing impact of risks and threats to the existence of Ukraine as an independent, sovereign and democratic state, which were especially aggravated in 2013 – 2014. after the Revolution of Dignity, the annexation of the Autonomous Republic of Crimea and a significant part of Donetsk and Luhansk regions, and deepened after the full-scale military invasion of Ukraine by the Russian Federation on the territory of Ukraine in 2022.

At the same time, it has been revealed that in modern conditions, the market of medical services suffers the greatest negative impact due to the lack of financial resources, the low quality of medical services, the insignificant share of the provision of medical services by private health care institutions and due to the imperfection of the current national legislation regulating the basic principles of the functioning of the health care sector.

The introduced reform of the health care system has been partially implemented, however, the existing measures aimed at changing the market of medical services do not give the desired results, and their imperfection indicates the existence of several shortcomings of such reform, which necessitates the search for ways out of the crisis, which can be achieved as a result of the formation of strategic priorities and the implementation of an effective state policy for the development of the medical services market of Ukraine.

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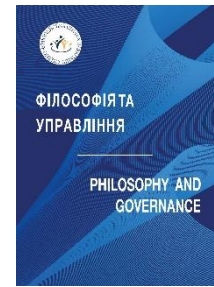
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The Role of “Smart City” Technologies in Strengthening Trust and Transparency of Cities and Agglomerations in the Context of Modern Digital Changes

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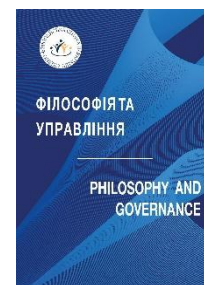
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The article discusses the peculiarities of the impact of Smart City technologies on ensuring the transparency of management of territorial communities and the formation of citizens' trust in local self-government bodies. The relevance of the study is due to the need to introduce modern digital management tools in the context of decentralization and the development of intermunicipal cooperation of territories. In the course of the study, the main components of Smart City technologies have been identified, which ensure an increase in the level of openness of management processes, in particular open data systems, e-governance, digital tools for citizen participation and analytical systems for supporting managerial decision-making. It has been proven that the integration of digital technologies into the public administration system contributes to increasing the accountability of authorities, optimizing the procedures for providing administrative services and expanding the opportunities of citizens to participate in managerial decision-making. Based on the analysis of the institutional development of the Lviv agglomeration, the key directions of digital transformation of territories have been identified. It was established that as of 2025, the agglomeration unites 13 territorial communities, and during the year, three new communities joined it, which contributed to the expansion of institutional capacity. It has been determined that five international grant projects are being implemented within the agglomeration aimed at the development of transport, logistics and environmental infrastructure, in particular projects covering territories of up to 2500 hectares. It is proven that the international recognition of the agglomeration's activities, in particular the receipt of the Seoul Smart City Prize in 2025 and participation in international digital development networks, confirms the effectiveness of the implementation of innovative management approaches. A conceptual model of the impact of Smart City technologies on the transparency of management and citizens' trust is proposed, which reflects the relationship between technological tools, management processes and the results of their implementation. The practical significance of the results obtained lies in the possibility of using the proposed approaches to improve the systems of digital management of territorial communities and ensure their sustainable development.

KEYWORDS

Smart City, digitalization, public management and administration, sustainable development, agglomeration, integrity, local authorities, local self-government (municipal administration).



Роль технологій «Розумного міста» у зміцненні довіри та прозорості міст та агломерацій в умовах сучасних цифрових змін

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СТАТТЯ

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У статті розглянуто особливості впливу технологій Smart City на забезпечення прозорості управління територіальними громадами та формування довіри громадян до органів місцевого самоврядування. Актуальність дослідження зумовлена необхідністю впровадження сучасних цифрових інструментів управління в умовах децентралізації та розвитку міжмуніципальної співпраці територій. У процесі дослідження визначено основні складові технологій Smart City, що забезпечують підвищення рівня відкритості управлінських процесів, зокрема системи відкритих даних, електронного врядування, цифрові інструменти участі громадян та аналітичні системи підтримки прийняття управлінських рішень. Доведено, що інтеграція цифрових технологій у систему публічного управління сприяє підвищенню підзвітності органів влади, оптимізації процедур надання адміністративних послуг та розширенню можливостей громадян щодо участі у прийнятті управлінських рішень. На основі аналізу інституційного розвитку Львівської агломерації визначено ключові напрями цифрової трансформації територій. Встановлено, що станом на 2025 рік агломерація об'єднує 13 територіальних громад, а упродовж року до її складу приєдналися три нові громади, що сприяло розширенню інституційного потенціалу. Визначено, що в межах агломерації реалізується п'ять міжнародних грантових проєктів, спрямованих на розвиток транспортної, логістичної та екологічної інфраструктури, зокрема проєкти, що охоплюють території площею до 2500 га. Доведено, що міжнародне визнання діяльності агломерації, зокрема отримання міжнародної премії Seoul Smart City Prize у 2025 році та участь у міжнародних мережах цифрового розвитку, підтверджує ефективність впровадження інноваційних управлінських підходів. Запропоновано концептуальну модель впливу технологій Smart City на прозорість управління та довіру громадян, яка відображає взаємозв'язок між технологічними інструментами, управлінськими процесами та результатами їх впровадження. Практичне значення отриманих результатів полягає у можливості використання запропонованих підходів для удосконалення систем цифрового управління територіальними громадами та забезпечення їх сталого розвитку.



КЛЮЧОВІ СЛОВА

Smart City (розумне місто), цифровізація, публічне управління та адміністрування, сталий розвиток, агломерація, доброчесність, місцеві органи влади, місцеве самоврядування (муніципальне управління).

1. Introduction

The current stage of development of cities and agglomerations is characterized by deep digital transformations covering the areas of public administration, economy, infrastructure and interaction with citizens. In the context of decentralization and the strengthening of the role of local self-government bodies, smart city technologies are of particular importance as a tool for improving the efficiency of governance, ensuring transparency of government activities and strengthening public trust.

One of the key problems of modern governance at the local level is the formation of open and accountable governance mechanisms capable of ensuring effective interaction between government, business and citizens. The insufficient level of digital integration of certain areas, the fragmentation of the introduction of digital services, the asymmetric development of digital infrastructure and the limited participation of citizens in the processes of e-democracy create risks of reducing the level of trust in local self-government bodies. These challenges are especially relevant for urban agglomerations, which unite several territorial communities and function as single socio-economic systems [13]. In such conditions, there is a need to create integrated digital platforms that ensure transparency of management processes, data openness and effective coordination of intermunicipal cooperation.

An illustrative example of the formation of a modern agglomeration model is the Association of Local Self-Government Bodies "Lviv Agglomeration", which unites the Lviv City Territorial Community as the core and several nearby communities, including Zhovkva, Horodotska, Pustomyivska, Bibrska, Velykolyubinska, Davydivska, Zhovtanetska, Kulykivska, Novoyarychivska, Pidberiztsivska, Obroshynska, and Murovanska. The formation of effective digital governance mechanisms within such an agglomeration requires a systematic approach to the introduction of smart city technologies that can ensure transparency of management decisions, increase the level of accessibility of public services and strengthen citizens' trust in the authorities.

The relevance of the study is due to the growing role of digital technologies in the processes of territorial development management and the need to form new models of interaction between the authorities and citizens. Digital transformation of territorial communities is one of the key factors in ensuring sustainable development, improving the quality of public services and strengthening economic competitiveness at the local level. High level of digital development, which is confirmed by the value of the integral index of digital transformation at the level of 68.3, which allows it to be classified as a municipality with an above-average level of digitalization. High indicators of institutional capacity, development of e-democracy, open data and the introduction of paperless solutions indicate the systematic implementation of the principles of transparency and openness of governance.

At the same time, the analysis of the structure of digital transformation reveals the uneven development of its individual components. In particular, the insufficient level of development of the digital economy, low integration of business into digital services, limited participation of the population in the use of digital tools, as well as problems in the field of cybersecurity, create significant risks for the effective functioning of digital infrastructure and reduce the level of trust in digital solutions [2].

Additional relevance to the study is given by the active development of the Lviv agglomeration as a platform for intermunicipal cooperation. The implementation of joint projects in the areas of logistics, waste management, transport accessibility, and environmental renewability requires integrated digital solutions that ensure transparency of processes, openness of information, and accountability of management decisions. At the same time, the international recognition of the agglomeration, in particular the receipt of the prestigious Seoul Smart City Prize in the Human-CentriCity category and participation in the international Open & Agile Smart Cities, Metrex and Metropolis networks, indicates the potential for scaling innovative approaches to digital governance.

Thus, the study of the role of smart city technologies in strengthening trust and transparency of cities and agglomerations is timely and necessary for the formation of effective models of digital governance in the context of modern transformations.

The purpose of the study and the main tasks to achieve it

The purpose of the study is to determine the role of "smart city" technologies in building trust and ensuring transparency in the management of cities and agglomerations in the context of modern digital changes, on the example of the Lviv agglomeration. To achieve this goal, it is necessary to solve the following main tasks: to analyze the theoretical foundations of the functioning of smart city technologies as a tool for increasing transparency and openness of management; to investigate the current state of

digital transformation of the Lviv City Territorial Community and the Lviv Agglomeration; identify key areas for the implementation of digital solutions that contribute to the development of e-democracy and open data; to identify problematic aspects of the development of digital management systems, in particular in the areas of cybersecurity, digital economy and digital skills of the population; to assess the impact of digital technologies on the formation of citizens' trust in local governments.

The subject of the study

The subject of the study is the processes of implementation and functioning of smart city technologies as a tool for ensuring transparency of management and strengthening trust between local governments, businesses and citizens in the context of digital transformation of urban agglomerations.

2. Literature Review

The problems of the development of "smart city" technologies and their impact on the transparency of management and the formation of public trust are the subject of active scientific research in the world and domestic scientific literature. In modern works, the concept of Smart City is considered as a comprehensive system of integration of information and communication technologies, open data, digital services and innovative management approaches aimed at ensuring sustainable development of urban areas and increasing the efficiency of public administration.

A significant contribution to the development of the theoretical foundations of digital transparency in cities was made by researchers who analyze the role of open data in ensuring citizens' trust. In particular, in the study of Lnenicka et al. [9], regarding the maturity of open data ecosystems in smart cities, it has been proven that the level of openness of information platforms directly affects the effectiveness of interaction between citizens and authorities. The authors have identified four levels of maturity of open data, which allow assessing the level of transparency of digital governance and formulating recommendations for improving it [9]. Modern researchers pay special attention to the formation of trust in digital services based on the transparency of data use. Empirical studies show that the level of user trust in digital platforms increases significantly if they openly inform about the principles of data processing and ensure ethical standards for their use. Thus, transparency is a key factor in building trust in digital services within urban ecosystems [18].

Current international research also focuses on integrating smart city technologies with concepts of urban sustainability and adaptability. Thus, a systematic review published this year by Varzeshi et al. [17] proves that the integration of digital technologies, in particular the Internet of Things, big data analytics and digital governance platforms, creates the prerequisites for increasing the resilience of urban systems and effectively responding to socio-economic challenges. The authors emphasize that the key element of the development of modern cities is the combination of technological solutions with socially oriented approaches to management, which contributes to the formation of citizens' trust in the institutions of power. Similar results have been obtained in studies assessing the role of digital technologies in ensuring the environmental and social sustainability of cities. In particular, in papers published in international journals on urban environmental management, it has been proven that the use of integrated digital resource management platforms contributes to increasing the efficiency of the use of urban resources and the creation of more transparent management mechanisms [1; 19]. These studies highlight that the digitalization of urban systems provides not only technological but also social effects, including increased levels of civic participation.

An important area of modern research is the analysis of the role of digital technologies in the formation of urban sustainability and environmental safety. In the papers on the assessment of the effectiveness of digital urban environment management systems, it is noted that the integration of digital technologies into the processes of transport, energy and natural resources management contributes to the formation of adaptive urban systems and increases their resilience to external challenges [8]. In the context of the technological development of smart cities, much attention is paid to the implementation of modern data management technologies, in particular blockchain technologies. Research in this area demonstrates that blockchain can be used as a tool to ensure transaction transparency, protect information, and increase trust in urban resource management systems [14].

A significant contribution to the development of the theoretical foundations of Smart City was made by Ukrainian researchers. Thus, the works of Ukrainian authors prove that the implementation of the Smart City concept in large cities of Ukraine contributes to the modernization of management

systems, increasing the efficiency of administrative services and the formation of new formats of interaction between the authorities and citizens [6; 7]. These studies emphasize the need to integrate information and communication technologies into all areas of city management to ensure its competitiveness and investment attractiveness.

The works of Ukrainian researchers also consider the impact of the Internet of Things on the development of urban infrastructure and improving the quality of life of the population. It has been established that the implementation of IoT solutions in the field of transport, energy and utility management allows for ensuring the efficient use of resources and increasing the level of comfort of the urban environment [15]. Domestic scientists pay considerable attention to the development of e-governance as the basis for the transparency of the activities of local self-government bodies. The studies emphasize that the use of digital platforms ensures an increase in the efficiency of interaction between the state, citizens and business, as well as helps to reduce the level of corruption and increase trust in state institutions [11]. A separate area of modern research is related to the development of customer-oriented digital services. The analysis of the experience of European countries shows that the introduction of digital e-governance platforms allows for improving the quality of public services and ensuring a higher level of openness of management [3].

Modern research also pays considerable attention to information security issues in Smart City technologies. It has been proven that ensuring cybersecurity is a necessary condition for the functioning of digital platforms, since an insufficient level of information protection can lead to a loss of citizens' trust and a decrease in the efficiency of digital services [12].

In recent years, scientific works have been actively researching the relationship between the development of digital technologies and improving the quality of life of the population. It has been proven that the use of the Smart City concept allows for ensuring the balanced development of territories, increasing the level of environmental safety and creating conditions for economic growth [16].

Thus, the results of the analysis of modern research indicate a significant interest of scientists in the problems of the development of smart city technologies, digital transparency and the formation of citizens' trust in local governments. At the same time, most of the studies are focused either on the analysis of individual technological components or on the consideration of general models of digital management, which necessitates further comprehensive research within specific territorial systems.

3. Problem Statement

Despite the significant development of scientific research in the field of digital transformation and the introduction of smart city technologies, the issues of the integration of digital technologies into intermunicipal management systems of agglomeration type remain insufficiently studied. In particular, mechanisms for ensuring the transparency of management processes at the level of agglomerations, assessing the impact of digital platforms on the formation of public trust in local self-government bodies, as well as identifying effective models for the use of open data and digital services within the framework of multi-level management of territories, require further study. The study of the relationship between the level of digitalization of individual communities and the level of trust of citizens within a single urban agglomeration remains especially relevant, which necessitates comprehensive applied research, in particular on the example of the Lviv agglomeration.

4. Methods and Materials

The methodological basis of the study is a set of general scientific and special methods of cognition, which provide a systematic analysis of the role of "smart city" technologies in strengthening trust and transparency in the management of urban agglomerations in the context of digital transformation. In the process of the study, a systematic approach was used, which made it possible to consider smart city technologies as an integrated set of interconnected digital, organizational and social components aimed at increasing the transparency of management and ensuring effective interaction between authorities, business and citizens. To achieve this goal, the following research methods were used:

- the method of theoretical generalization – to systematize modern approaches to determining the essence of the concept of "smart city", digital governance and e-democracy;

- the method of structural and functional analysis – to study the components of digital transformation of territorial communities and determine their role in the formation of transparent governance;
- comparative method – to compare the level of development of digital technologies in different areas of management and determine their impact on the level of citizens' trust;
- case analysis method – to study the practical experience of implementing smart city technologies on the example of the Lviv agglomeration;
- the method of logical modeling – to form recommendations for improving the mechanisms of transparent digital management in urban agglomerations.

The information base of the study consists of: official statistical materials and analytical reports of local self-government bodies; data on the integral index of digital transformation of the Lviv city territorial community; strategic documents and program materials of the Association of Local Self-Government Bodies "Lviv Agglomeration"; materials of international projects in the field of digital governance and agglomeration development; the results of research by Ukrainian and foreign scientists in the field of digital transformation, e-governance and smart city technologies; public data on the development of open data, e-democracy and digital infrastructure of territorial communities.

A special role in the study is played by the empirical analysis of the digital development of the Lviv City Territorial Community, which is characterized by a high level of institutional digitalization, the introduction of e-democracy and the functioning of open data, which creates the basis for building citizens' trust in digital management tools.

The use of these methods made it possible to ensure the scientific validity of the results obtained, the complexity of the study and the possibility of forming practically-oriented recommendations for the development of transparent digital governance within urban agglomerations.

5. Results and Discussion

Theoretical and applied foundations of the impact of Smart City technologies on the transparency of management

Modern processes of digital transformation of public administration necessitate the formation of new approaches to ensuring the transparency of local self-government bodies and increasing the level of citizens' trust in management institutions. In this context, Smart City technologies are one of the key tools for modernizing management systems that combine digital platforms, information and communication technologies, analytical tools and mechanisms of electronic interaction with citizens.

The Smart City concept provides for the integration of various information systems into a single digital environment, which provides prompt access to data, increases the efficiency of managerial decision-making and creates prerequisites for the formation of an open governance system. Openness of information and transparency of management processes are key conditions for building citizens' trust in the authorities, which is especially important in the context of decentralization and expansion of the powers of local self-government.

In modern conditions, Smart City technologies are considered not only as a tool for technological modernization of the urban environment, but also as a means of forming a new model of interaction between government, citizens and business. The introduction of digital e-governance platforms ensures an increase in the level of accountability of management structures, simplifies access to administrative services and contributes to the development of e-democracy. One of the key elements of ensuring transparency of governance is the use of open data, which creates opportunities for public control over the activities of government bodies and increases the level of accountability of management structures. Open data contributes to the development of new services, the formation of innovative business models and raising the level of awareness of citizens about the processes of managerial decision-making [4].

Digital tools for citizen participation, including electronic petitions, public budgets, digital platforms for discussing draft decisions, and electronic voting systems, play an important role in the formation of transparent governance. The use of such tools ensures the expansion of citizen participation in decision-making processes, which contributes to the formation of trust in the authorities and increases the efficiency of territorial development management.

At the same time, the effectiveness of the implementation of Smart City technologies largely depends on the level of development of digital infrastructure, the availability of qualified human capital and the level of digital competencies of the population [8]. Insufficient levels of digital literacy or limited

access to digital resources can create barriers to the use of digital services and reduce the level of trust in digital management tools.

Of particular importance in the context of the development of transparent digital governance is the provision of information security and protection of personal data. In the context of the widespread use of digital platforms, cybersecurity issues are of strategic importance, since a breach of the security of information systems can lead to a loss of citizens' trust and a decrease in the efficiency of digital services.

Thus, Smart City technologies form a comprehensive mechanism for ensuring management transparency, which is based on the integration of digital technologies, open data, e-democracy mechanisms and modern analytics tools. As a result, a new model of digital governance is being formed, focused on increasing the accountability of management structures, efficient use of resources and strengthening citizens' trust in the authorities.

In order to systematize the key elements of the impact of Smart City technologies on ensuring the transparency of management, it is advisable to highlight the main components of such influence and their functional significance (Table 1).

Table 1. Key components of the impact of Smart City technologies on management transparency and trust building

Smart City Warehouse	Functional content	Impact on transparency	Impact on citizens' trust
Open data	Public access to information on the activities of public authorities	Ensuring the accountability of management decisions	Raising the level of awareness of citizens
E-Governance	Provision of administrative services in digital format	Reduction of bureaucratic procedures	Raising the level of awareness of citizens
E-democracy	Petitions, public budget, electronic consultations	Expanding citizen participation in decision-making	Building trust in management processes
Digital infrastructure	Data networks, data centers, digital platforms	Ensuring the prompt exchange of information	Improving the reliability of digital services
Analytical Systems	Big Data Analysis and Forecasting	Validity of management decisions	Improving management efficiency
Cybersecurity	Protection of information resources	Protection of information and personal data	Increasing the level of trust in digital systems

Source: DEVELOPED by the authors

Presented in Table 1, the components of Smart City technologies demonstrate the systemic nature of their impact on the formation of a transparent management environment. The interaction of these elements ensures the creation of a single digital ecosystem, which contributes to increasing the efficiency of territorial development management and expanding the opportunities of citizens to obtain information about the activities of government bodies. It is important to note that the effectiveness of the implementation of these components depends not only on technological capabilities, but also on the level of institutional maturity of local governments, readiness for digital transformation and the availability of an appropriate regulatory framework. It is the consistency of technological, organizational and managerial components that ensures the achievement of a synergistic effect from the implementation of the Smart City concept.

In addition, the introduction of digital tools helps to increase the transparency of financial flows, optimize the processes of urban resource management and create conditions for public involvement in management decision-making processes. In turn, this creates prerequisites for the formation of long-term citizens' trust in local self-government bodies and the development of partnership relations between the authorities, business and the community. Given the multicomponent nature of the impact of Smart City technologies on the processes of ensuring management transparency, it is advisable to form a generalized conceptual model that reflects the relationships between technological tools, management processes and the results of their implementation.

The proposed conceptual model allows to systematize the main directions of the influence of digital technologies on the formation of an open management system, as well as to determine the logic of the transition from technological solutions to social and managerial results, in particular, increasing the level of citizens' trust and the efficiency of the functioning of local self-government bodies (Figure 1).

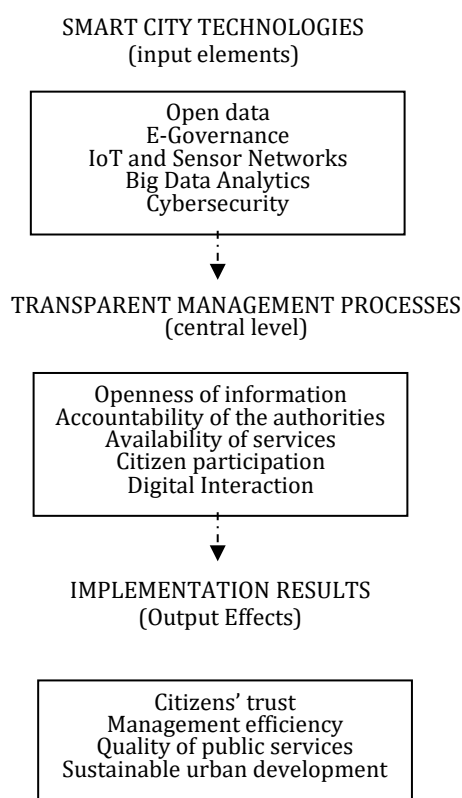


Figure 1. Conceptual model of the impact of Smart City technologies on management transparency and citizens' trust

Source: Developed by the authors

Such a conceptual model demonstrates the sequence of transformation of technological tools into specific managerial results. It reflects the cause-and-effect relationship between the introduction of digital technologies and the increase in the level of transparency of local self-government bodies. The central element of the model is the processes of transparent management, which ensure the integration of technological solutions into the practical activities of authorities. It is at this level that digital resources are transformed into mechanisms for openness of information, accountability of management structures and expansion of citizen participation in decision-making. At the same time, the results of the implementation of Smart City technologies are manifested in increasing the efficiency of management, improving the quality of public services and forming a stable level of citizens' trust in local self-government bodies. The totality of these results creates prerequisites for ensuring the sustainable development of territorial communities and the formation of a modern model of digital governance.

Thus, the proposed model allows for a comprehensive reflection of the mechanism of influence of Smart City technologies on the formation of a transparent management system and can be used as a methodological basis for further research on the processes of digital transformation of territorial communities.

Institutional development and digital transformation of the Lviv agglomeration

Modern processes of decentralization and regional development in Ukraine have contributed to the formation of new institutional models of cooperation between territorial communities, among which agglomeration associations occupy a special place. The level of urbanization activity, a significant concentration of human capital, scientific and educational institutions and digital innovative enterprises. The institutional structure of the agglomeration is formed through mechanisms of intermunicipal cooperation, which provide for the coordination of strategic development documents, coordination of infrastructure projects and the use of common digital management platforms.

An important element of the institutional development of territorial agglomerations is the creation of specialized platforms for intermunicipal cooperation, which ensure the coordination of joint management decisions and the implementation of strategic projects. In this context, a special role is played by the Association of Local Self-Government Bodies "Lviv Agglomeration", which acts as a key organizational basis for the integrated development of territories. As of 2025, the Association comprises

13 territorial communities, with the Lviv City Territorial Community as the core of the agglomeration, as well as Zhovkva, Horodotska, Pustomyivska, Bibrska, Velykolyubinska, Davydivska, Zhovtanetska, Kulykivska, Novoyarychivska, Pidberiztsivska, Obroshynska, and Murovanska. During 2025, three new communities joined the Association, contributing to the expansion of territorial coverage and strengthening the agglomeration's resource potential.

The institutional activities of the Association are characterized by active involvement of international financial support. As of 2024-2025, it is the executor of 5 grant projects funded by international organizations and foundations. The implementation of these projects is aimed at developing intermunicipal cooperation, improving waste management systems, developing transport infrastructure and implementing environmental solutions.

In particular, in 2024, the grant project "Strengthening Effective Democratic Governance in the Lviv Agglomeration" was implemented, within the framework of which the First International Forum of Agglomerations was held, intermunicipal educational events were organized and a local history atlas of the agglomeration territory was created. An important area of activity is also the development of the Strategic Plan for Solid Waste Management of the Lviv Agglomeration for 2025-2035, which provides for the conclusion of intermunicipal agreements in the field of waste management.

Special attention is paid to the development of transport and logistics infrastructure within the framework of digital transformation. The implementation of the project to create a logistics hub in the Lviv agglomeration is aimed at overcoming existing problems, including the lack of a centralized logistics hub, insufficient development of intermodal transportation, and congestion of road infrastructure. At the same time, environmental and infrastructure projects play a significant role, in particular the SpongeWorks project, which covers the territory of a landscape reserve with an area of 2500 hectares, and the Smooty and EMBRACER transport initiatives aimed at increasing population mobility and integrating the agglomeration's transport systems [10].

Important evidence of the effectiveness of the digital transformation of the Lviv agglomeration is its international recognition. In 2025, the Association became the winner of the Seoul Smart City Prize in the Human-CentriCity category, which confirms the effectiveness of the implementation of innovative approaches to the development of territories. In addition, the Lviv agglomeration became the first in Ukraine to receive membership in the international Open & Agile Smart Cities (OASC) network, which provides the opportunity to implement European digital governance standards. Statistical characteristics of the institutional development of the Lviv agglomeration are presented in Table 2.

Table 2. Statistical characteristics of the institutional development of the Lviv agglomeration

Indicator	Meaning	Analytical value
Number of participating communities	13 communities	Formation of a polycentric management structure
New communities in 2025	3 communities	Institutional capacity building
Number of grant projects	5 projects	Active attraction of international funding
Area of environmental projects	2500 hectares	Development of environmental infrastructure
Strategic Period of Waste Management	2025-2035	Long-term development planning
International awards	Seoul Smart City Prize 2025	International recognition of effectiveness
Membership in international networks	OASC, Metrex, Metropolis	Integration into global control networks

Source: Developed by the authors based on [10]

Given in Table 2, statistical characteristics indicate a high level of institutional activity of the Lviv agglomeration and its ability to implement complex intermunicipal initiatives. The growth in the number of participating communities, the implementation of strategic projects and the attraction of international support form the basis for the development of a modern system of territorial management. A special role in this process is played by the integration of digital technologies into the activities of local self-government bodies, which ensures an increase in the level of transparency of management processes and contributes to the formation of effective mechanisms of interaction between citizens and authorities. Thus, the analysis of the institutional development of the Lviv agglomeration allows us to assert that the implementation of Smart City tools in combination with intermunicipal cooperation creates prerequisites for the formation of an integrated territorial management system focused on ensuring transparency, accountability and sustainable development of the region.

One of the key areas of digital transformation of the Lviv agglomeration is the introduction of electronic public administration services that provide citizens with access to administrative services in digital format. The use of electronic platforms helps to reduce the time spent on obtaining services,

increases the transparency of management procedures and creates conditions for effective monitoring of the activities of local self-government bodies. An important tool for the development of the digital environment of the Lviv agglomeration is the introduction of open data systems that provide access to information on the use of budget funds, the implementation of infrastructure projects and the activities of municipal institutions. The use of such tools allows to ensure the accountability of authorities, increase the level of public control and form public confidence in management processes.

An essential direction of the digital transformation of the agglomeration is the development of e-democracy tools, in particular electronic petition systems, public budgeting and digital consultations with the public. Such tools create opportunities for involving citizens in the formation of strategic decisions, contribute to increasing the level of social responsibility of authorities and create conditions for the development of partnership between the authorities and the community. In addition, information and analytical systems for monitoring the state of urban infrastructure, traffic flows and environmental parameters are being actively implemented within the Lviv agglomeration. The use of such systems allows you to carry out operational data analysis and make informed management decisions on the development of the territory.

In order to systematize the key areas of digital transformation of the Lviv agglomeration, it is advisable to summarize the main Smart City tools and their managerial value (Table 3).

Table 3. The main directions of digital transformation of the Lviv agglomeration and their managerial importance

Digitalization direction	Implementation tools	Managerial importance	Expected result
E-Governance	Digital administrative services, online platforms	Optimization of management procedures	Reducing the time of service provision
Open data	Open Data Portals, Budget Transparency	Ensuring accountability	Increasing Citizens' Trust
E-democracy	Petitions, public budget	Involving citizens in governance	Development of partnership interaction
Intelligent transport	Traffic Flow Monitoring	Urban logistics optimization	Congestion reduction
Environmental monitoring	Sensor control systems	Prompt response to changes	Improving the environment
Analytical Systems	Big Data Processing	Validity of decisions	Improving management efficiency

Source: Developed by the authors based on [10]

The results of the study allow us to assert that the digital transformation of the Lviv agglomeration is one of the key factors in ensuring the transparency of management and increasing the efficiency of the functioning of local self-government bodies. The implementation of Smart City tools contributes to the formation of an open management system based on the availability of information, accountability of management structures and active participation of citizens in decision-making processes. An important result is the establishment of a relationship between the level of digitalization of management processes and the level of citizens' trust in the authorities. The use of digital platforms ensures the prompt exchange of information, improves the quality of public services and creates conditions for the effective use of resources of territorial communities. At the same time, the results of the study indicate the need for further development of institutional mechanisms for digital transformation, improvement of the regulatory framework and increase of the level of digital competencies of managerial personnel. The comprehensive implementation of these measures creates prerequisites for the formation of an effective system of transparent management and ensuring the sustainable development of territorial agglomerations.

6. Conclusions

As a result of the study, it was found that Smart City technologies are one of the key tools for ensuring transparency in the management of territorial communities and building citizens' trust in local self-government bodies. The generalization of theoretical approaches made it possible to identify the main components of digital governance, among which open data, e-governance, digital tools for citizen participation and analytical systems for supporting management decisions play a special role. It has been proved that the introduction of Smart City technologies provides an increase in the accountability of management structures, optimization of the processes of providing administrative services and the formation of an open information environment. It has been established that the integration of digital

governance platforms contributes to increasing the level of accessibility of public services and creates preconditions for the development of e-democracy.

Based on the analysis of the digital transformation of the Lviv agglomeration, the key areas of implementation of Smart City tools have been identified, including the development of e-governance, open data systems, e-democracy tools and information and analytical systems for urban infrastructure management. It has been established that the integrated use of these tools contributes to increasing the efficiency of territorial development management and the formation of a stable level of citizens' trust.

A conceptual model of the impact of Smart City technologies on the transparency of management is proposed, which allows systematizing the relationships between technological tools, management processes and the results of their implementation. The practical significance of the results obtained lies in the possibility of using the proposed approaches to develop strategies for the digital transformation of territorial communities and increase the efficiency of the functioning of local self-government systems.

Prospects for further research are the development of methodological approaches to assessing the level of digital maturity of territorial communities, as well as the formation of indicators of the effectiveness of the implementation of Smart City technologies in regional management systems.

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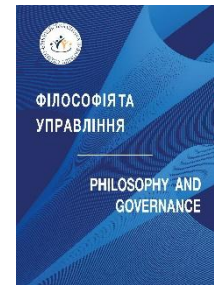
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Development of the Professional Potential of Law Enforcement Agencies for Strategic Cooperation in the Public Sector

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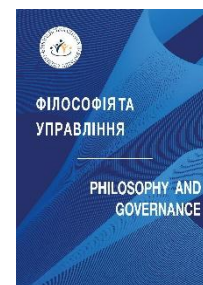
ABSTRACT

The article provides a scientific substantiation of the ways to develop the professional capacity of law enforcement entities to implement strategic interaction in the context of the modernization of Ukraine's public sector. The author proves that the transition from the post-Soviet "power-based" model to a service-oriented paradigm requires the transformation of a law enforcement officer from a mere executor into a "public security manager". The content of the concept of "public sphere" is clarified as a space for open interaction between state institutions, the community, and international partners, as well as the definition of "strategic interaction" as an integrative ability of subjects to act in synergy to achieve long-term security goals. A three-level model of strategic integration is substantiated: the departmental level (inter-agency coordination and a unified information space), the civil-public level (cooperation with military administrations and local governments under martial law), and the social level (implementation of the Community Policing philosophy). Special attention is paid to a systematic analysis of the standards of higher education in the specialty 262 "Law Enforcement." It is established that the Master's level of training (Order of the Ministry of Education and Science No. 1294) is fundamental for the formation of strategic thinking (competence SC 11); however, a need for the intensification of practical courses in crisis management and Big Data was identified. Based on a comparative analysis of international experience (Finland's "joint competence" model, the USA's "Collaborative Leadership," and Poland's "Police Management" concept), proposals for improving the training system in departmental higher education institutions were developed. Successful cases of strategic interaction in Ukraine are analyzed, specifically the "Police Officer of the Community" project and the coordination of security forces within the framework of the Law "On the Foundations of National Resistance." The conclusions identify priority ways to improve personnel potential: legislative consolidation of inter-agency coordination mechanisms, digitalization of management training, and the implementation of a human-centric paradigm for training "community security officer-moderators".



KEYWORDS

professional potential, strategic interaction, public management and administration, law enforcement, service model, higher education standards, institutional resilience.



Розвиток професійної спроможності суб'єктів правоохоронної діяльності до здійснення стратегічної взаємодії в публічному секторі

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У статті здійснено наукове обґрунтування шляхів розвитку професійної спроможності суб'єктів правоохоронної діяльності до здійснення стратегічної взаємодії в умовах модернізації публічного сектору України. Автор доводить, що перехід від пострадянської “силової” моделі до сервісно-орієнтованої парадигми потребує трансформації правоохоронця з суто виконавця у “публічного менеджера безпеки”. Уточнено зміст поняття “публічна сфера” як простору відкритої інтеракції між державними інституціями, громадою та міжнародними партнерами, а також дефініцію “стратегічна взаємодія” як інтегративну здатність суб'єктів діяти у синергії задля досягнення довгострокових безпекових цілей. Обґрунтовано трирівневу модель стратегічної інтеграції: відомчий рівень (міжвідомча координація та єдиний інформаційний простір), цивільно-публічний рівень (співпраця з військовими адміністраціями та ОМС в умовах воєнного стану) та соціальний рівень (реалізація філософії Community Policing). Особливу увагу приділено системному аналізу стандартів вищої освіти спеціальності 262 “Правоохоронна діяльність”. Встановлено, що магістерський рівень підготовки (наказ МОН № 1294) є базовим для формування стратегічного мислення (компетентність СК 11), проте виявлено потребу в інтенсифікації практичних курсів із антикризового і стратегічного менеджменту та цифрових компетентностей. На основі порівняльного аналізу закордонного досвіду (модель “спільної компетенції” Фінляндії, “Collaborative Leadership” США та “Police Management” Польщі) розроблено пропозиції щодо вдосконалення системи підготовки кадрів у відомчих ЗВО. Проаналізовано успішні кейси стратегічної взаємодії в Україні, зокрема проєкт “Поліцейський офіцер громади” та координацію сил безпеки в межах Закону “Про основи національного спротиву”. У висновках визначено пріоритетні шляхи вдосконалення кадрового потенціалу: нормативне закріплення механізмів міжвідомчої координації, цифровізація управлінської підготовки та впровадження людиноцентричної парадигми підготовки “офіцера-модератора безпеки громади”.



КЛЮЧОВІ СЛОВА

професійна спроможність, стратегічна взаємодія, публічне управління та адміністрування, правоохоронна діяльність, сервісна модель, стандарти вищої освіти, інституційна стійкість.

1. Introduction

The current stage of development of Ukrainian statehood is characterized by the transition from the post-Soviet “force” model of law enforcement agencies to the service model of the functioning of such services, other state authorities, local self-government and civil society.

The professional capacity of law enforcement entities to strategically interact in the public sector is a complex category that encompasses the ability to jointly plan, coordinate resources and manage security risks at the level of territorial communities and the state as a whole [3; 4]. According to the “Comprehensive Strategic Plan for Reforming Law Enforcement Agencies as Part of the Security and Defense Sector of Ukraine for 2023–2027”, law enforcement agencies must strengthen their strategic and operational capabilities in order to properly perform the functions defined by the legislation of Ukraine [16]. And according to the Scientific Concept of Legislative Support of the Activities of Law Enforcement Agencies of Ukraine, “there is an urgent need for doctrinal justification for the transition from repressive functions to a service model, the priority of which is to provide citizens with services to protect their rights and ensure public safety” [8].

The practical task is to form a new generation of law enforcement officers who possess not only legal tools, but also strategic management skills within the “security and defense sector”, which, according to the Law of Ukraine “On National Security of Ukraine” [14], includes law enforcement agencies. This requires the modernization of higher education standards and the implementation of the best international experience of interdepartmental cooperation.

2. Literature Review

The issues of professional training and transformation of law enforcement agencies have been studied by leading domestic scientists. Sokurenko in her works considers the training of personnel as a prerequisite for national security, emphasizing the need for a systematic approach to the training of specialists for the security sector [10]. Bezpaloova analyzes the priority areas of development of the law enforcement function in the context of European integration, focusing on the service nature of the interaction between the police and society [1].

The problem of defining the concept of “law enforcement agencies” and their interaction was the subject of scientific works by Tatsii, who noted that “the criterion for distinguishing law enforcement agencies should be not just a law enforcement function, which is carried out by almost all authorities, but the presence of powers to use legitimate coercion and carry out operational-search and investigative actions” [11].

However, despite the thorough developments, the aspect of strategic interaction of law enforcement entities within the public sector remains insufficiently covered in the scientific literature and at the regulatory level. Most studies focus on operational activities, while the capacity to participate in the formation of community security strategies and coordination of efforts within the framework of the “Comprehensive Strategic Plan for Law Enforcement Reform 2023–2027” requires a deeper analysis through the prism of educational standards.

3. Problem Statement

The article is aimed at scientific substantiation of ways to develop the professional capacity of law enforcement entities to carry out strategic interaction in the public sector, to conduct a systematic analysis of the standards of higher education in the specialty “Law Enforcement” and to develop proposals for improving the system of personnel training based on international experience (USA, Finland, Poland).

4. Methods and Materials

The study employs a комплекс of general scientific and specialized methods, including systemic, structural-functional, and comparative legal analysis to substantiate the essence of strategic interaction in the public sector. The empirical base consists of Ukrainian нормативно-правові acts, higher education standards in specialty 262 “Law Enforcement,” scholarly works of domestic and foreign researchers, as well as analytical materials on the reform of the security and defense sector. Content

analysis and generalization methods were used to identify key competencies and gaps in professional training, while comparative analysis was applied to examine international experience (USA, Finland, Poland) in order to adapt best practices to the Ukrainian context.

5. Results and Discussion

In our opinion, professional capacity for strategic interaction is the ability of law enforcement entities and other law enforcement agencies to act in the public sphere jointly to achieve strategic goals. After all, as noted in the "Scientific Concept", "law enforcement agencies should function as a single, coordinated system and component of the security and defense sector of the state" [8].

Strategic interaction in the public sector requires a law enforcement officer to master a three-level integration model, where each level has its own specifics, legal instruments and expected results:

1. *The departmental level* provides for interagency coordination and functional synergy. This level concerns the establishment of interaction within the law enforcement system itself. The problem of this level lies in the existing duplication of functions and the lack of clear legitimation of the list of law enforcement agencies in the criminal procedural legislation [8, p. 29]. Strategic capability at this level involves the implementation of a number of measures, in particular:

- Establishment of effective interaction between the National Police (ensuring public security), the Security Service of Ukraine (protection of state security), the SBI (countering crimes of high-ranking officials) and the ESBU (economic security), which is possible only if a single information space is created. This corresponds to the foreign experience of the United States, where the National Crime Information Center (NCIC) operates [8, p. 48].

- Implementation of an analytics-driven activity model that requires the ability of law enforcement leaders and other actors to jointly analyze threats. This allows us to move from the "forceful repressive model" to preventive activities based on common data [8, p. 30].

- The development of the capacity for interaction allows avoiding conflicts of jurisdiction, which is especially important for newly created bodies (ESBU, NABU). The functional criterion should become the main criterion for distinguishing law enforcement agencies [8, p. 85], which will allow law enforcement officers to clearly understand the limits of their responsibility within the framework of joint operations.

2. *Civil-public level*, which provides for the interaction of law enforcement entities with executive authorities, local self-government and military (military-civilian) administrations. In the conditions of decentralization and the legal regime of martial law, law enforcement becomes an integral element of municipal management. The capacity of law enforcement entities at this level includes:

- Interaction with territorial communities. After all, the professional capacity of an officer (in particular, within the framework of the Community Police Officer project) lies in the ability to participate in the strategic planning of the development of the ATC. This includes the development of local security programs, participation in meetings of local councils, and coordination of efforts to finance security initiatives from local budgets [8, p. 91; 13].

- Cooperation with military administrations. Thus, according to the Law "On the Foundations of National Resistance", law enforcement officers must be able to coordinate strategically with the Territorial Defense Forces of the Armed Forces of Ukraine and Military Administrations [15]. This requires civil-military cooperation skills, security logistics management, and joint support of settlements in the frontline and de-occupied zones.

- Technological integration. Strategic cooperation is implemented through the development of integrated video surveillance and analytics systems, where the resources of law enforcement entities are combined with municipal infrastructure systems. This allows for real-time monitoring of the situation, which is a requirement of the Comprehensive Strategic Plan for Law Enforcement Reform for 2023–2027 [16].

3. *Social level* – implementation of the Community Policing service model. The third, the deepest level of integration concerns interaction with civil society. Transition to the service model as "a priority for providing citizens with services to protect their rights and ensure public safety" [8, p. 1]. This level requires a law enforcement officer to master competencies in:

- Building public trust. Strategic capability is expressed in the ability to communicate transparently and accountably. As the experience of Finland shows, where the level of trust in

the police is 91%, it is openness and integration into social processes that is the guarantor of the effectiveness of law and order [8, p. 58].

- Implementation of the SARA model and public engagement. Ability to apply the methodology of joint problem solving (Scanning, Analysis, Response, Assessment) together with territorial communities. This transforms the law enforcement officer from a “supervisor” into a “partner” and “moderator of social dialogue”.

- Democratic civilian control. The professional capacity of a law enforcement entity to interact at this level includes readiness to work under the supervision of public councils and the media. After all, the functioning of law enforcement agencies should take place exclusively on the basis of the rule of law and democratic civilian control [8, p. 1].

Thus, strategic interaction in the public sector is a tool that allows law enforcement entities to go beyond the boundaries of force response and become an active architect of the security environment. This requires the higher education system (specialty 262 / K9) to form a “human-centered employee” capable of interdisciplinary coordination at all three levels of integration.

As Sokurenko notes, a modern specialist must understand the logic of the functioning of the entire security sector, which requires “interagency synergy and new approaches to personnel management” [10].

The main tool for the development of professional capacity is the system of higher education. In Ukraine, training is carried out according to the standards of higher education approved by the Ministry of Education and Science. The analysis of the bachelor’s level standard (Order of the Ministry of Education and Science No. 578 dated 30.04.2020) did not reveal competence in interaction issues at all [5]. It is only noted that the main results of the training are the coordination of the activities of public security and order entities, as well as communication with individuals and legal entities in order to timely respond to criminal offenses, administrative offenses and events.

Instead, the standard of the master’s level (Order of the Ministry of Education and Science No. 1294 of 22.10.2020) is more relevant within our research, since it is focused on the training of managers. The key professional competencies here are: the ability to interact with representatives of other executive authorities and local self-government, the public on law enforcement issues (SC 11) [6]. This competence can be traced in the results of the RN 2 training, which is indicated in the context of coordination of the activities of public security and order entities.

The analysis of the real state of implementation of these standards in higher education institutions of the Ministry of Internal Affairs indicates a tendency to strengthen the practical component. However, now “there is a need to clarify the list of law enforcement agencies in the criminal procedural legislation in order to legitimize their joint activities” [8]. This means that educational programs should include courses on “Strategic Management in the Field of Public Security and Order” so that graduates can effectively interact with heads of territorial communities and international partners.

In this context, it is worth citing the experience of the EU Member States and the United States, which is critically important for the development of the professional capacity of law enforcement entities for strategic cooperation.

Finland’s experience. Finland’s system is an example of “seamless” interaction. According to Law No. 687 “On Cooperation between the Police, Customs and Border Services” [7], the state has introduced a model of joint competence. This means that under certain conditions, one body can act on behalf of another, which maximizes efficiency in the public sector.

U.S. experience. In the United States, strategic engagement is based on a decentralized but deeply integrated structure. The professional capacity of U.S. law enforcement officers is formed around the ability to use nationwide resources for local security needs [12]. Training of law enforcement officers in the United States includes mandatory modules on “Interagency Cooperation”, which allows them to interact with the private sector and municipalities on an equal footing.

Experience of the Republic of Poland. The Polish model of training and activities of law enforcement entities has undergone a significant transformation since the 2016 reform. The key act was the law “On the Prosecutor’s Office” (Ustawa – Prawo o prokuraturze) [9], according to which the National Prosecutor’s Office was created. The training system at the Police Academy is focused on the concept of “Police Management”. A law enforcement officer at the master’s level masters political science, sociology and management in the public sector, which forms his ability to conduct a strategic dialogue with local self-government bodies (voivodeships and counties) [8, p. 69]. This allows Polish law enforcement

officers to be not only “executors of the law”, but also managers who integrate security functions into the programs of socio-economic development of territories.

Thus, foreign experience proves that the professional capacity for strategic interaction is a product of special legislative regulation (as in Finland) and deep interdisciplinary training (as in Poland and the USA). For Ukraine, the implementation of these approaches requires the consolidation of mechanisms of “joint competence” within the framework of security sector reform.

The most striking example of the implementation of the capacity for strategic cooperation in Ukraine is the Community Police Officer project. This is a model where a law enforcement officer becomes part of the public management of a territorial community. The professional capacity of a Community Police Officer includes:

- joint budgeting, in particular participation in the distribution of community funds for security needs;
- strategic planning, i.e. the development of the “Community Security Passport”;
- social moderation, which consists in coordinating efforts with doctors, educators and social services to prevent offenses. According to the research of Bondarenko, such a model of “Community Policing” increases the level of trust in public authorities in general, and not only in the police [2].

The development of the capacity of law enforcement entities to carry out strategic cooperation became especially important after the adoption of the Law of Ukraine “On the Foundations of National Resistance” [15]. Law enforcement entities have become part of the security forces, which requires them to be able to strategically coordinate with the Territorial Defense Forces of the Armed Forces of Ukraine. This, in turn, requires the following skills from the personnel of law enforcement entities: coordination of joint checkpoints and evacuation measures; interaction with military administrations to ensure the life of cities; joint counteraction to sabotage groups and hybrid threats. Professional capacity in such conditions is the ability to quickly integrate into new hierarchical and horizontal connections of the public sector.

Separately, it is worth noting that modern strategic interaction is impossible without digitalization. The professional capacity of a law enforcement officer today includes digital literacy and the ability to work with Big Data. Digital transformation will contribute to the maximum efficiency and effectiveness of work, strengthening the strategic potential of law enforcement agencies [8]. This requires educational standards (specialty 262 / K9) to strengthen the block of IT competencies.

Thus, on the basis of the analysis, we can substantiate possible ways to improve the professional capacity of law enforcement entities for strategic interaction, in particular, the following:

- To consolidate an exhaustive list of law enforcement agencies and mechanisms of their interagency cooperation.
- To introduce the discipline “Strategic Management in the Field of Public Safety and Order” into master’s programs.
- As a pilot project, create interdepartmental situation centers where law enforcement officers and representatives of local self-government bodies will jointly work out crisis response scenarios.
- To ensure the transition to a human-centered law enforcement officer who perceives his activities as a service to society [1; 8].

The justification of the results shows that the development of the professional capacity of law enforcement entities for strategic interaction is the key to the sustainability of the public sector. This is confirmed by the experience of the USA and Finland, where integrated security management is the standard.

6. Conclusions

The conceptual transformation of the role of law enforcement agencies in the public administration system has been substantiated. It has been proved that under martial law and European integration processes, the professional capacity of a law enforcement officer is transformed from a purely executive function into a complex managerial category. security purposes. A three-level model of strategic integration is detailed, which includes: departmental level; civil-public level; social level.

According to the results of the analysis of higher education standards in the specialty 262 “Law Enforcement”. It has been established that if the bachelor’s level is focused on operational and procedural skills, then the master’s level (according to the order of the Ministry of Education and Science

No. 1294) already contains the necessary framework for the formation of strategic thinking (competence of SC 11). At the same time, the need to strengthen the practical component through the introduction of specialized courses on strategic management and anti-crisis communications has been identified.

Based on the generalization of foreign experience, it has been established that successful strategic cooperation is the result of special legislative regulation. Finland's "shared competence" model, the US interagency coordination system, and the Polish concept of "Police Management" are identified as relevant benchmarks for Ukrainian law enforcement reform. Priority ways to improve professional capacity have been identified, in particular: normative consolidation of mechanisms of interagency coordination; development of digital interaction platforms; transition to a human-centered paradigm of personnel training, where a law enforcement officer acts as a social moderator of community security.

Prospects for further research in this direction lie in the development of specific methods for assessing the effectiveness of strategic interaction of law enforcement entities, as well as in the study of psychological aspects of the readiness of personnel for the transition from the "force" to the "service" model of activity in the context of the post-war recovery of Ukraine.

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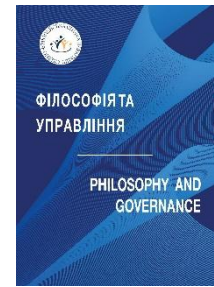
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Justification of Recommendations for Managing Communications Units in Modern Combat Conditions

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ABSTRACT

The article examines the problems of managing communications units of the Armed Forces of Ukraine under modern combat conditions. It is shown that the effectiveness of communications management is determined not only by the technical characteristics of communication equipment, but also by the organization of personnel training, the level of structural branching of the communication system based on the use of various technologies and communication means, the survivability of communication systems, and the interoperability of heterogeneous communication equipment within a unified information environment. The analysis is carried out in three interrelated directions: training of communications specialists to operate under electronic warfare conditions; ensuring structural branching and survivability of communication systems; and organizing interaction between units equipped with different types of communication equipment. Based on a comparative analysis of open materials on communications organization in the Armed Forces of Ukraine and doctrinal documents of the United States and NATO (FM 6-02, AComP-5), key problem areas in the management of communications units under combat conditions are identified. Among them are the predominantly centralized nature of management, insufficient formalization of the communication system, structural branching, limited preparation of operators to function under active electronic warfare influence, as well as difficulties in ensuring interoperability of heterogeneous communication equipment supplied from different sources. The paper systematizes approaches to improving the management of communications units at the tactical level and substantiates practical recommendations aimed at increasing the resilience, survivability, and effectiveness of communication systems. The proposed recommendations can be used to improve training programs for communications specialists, develop regulatory documents, and enhance management practices of communications units within the Armed Forces of Ukraine.

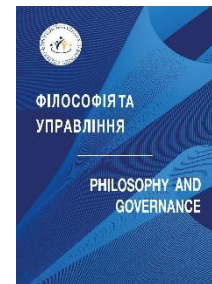
KEYWORDS

communications unit management, combat operations, electronic warfare, structural branching of the communication system, interoperability of communication systems, decentralized management, NATO standards, Armed Forces of Ukraine.



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Обґрунтування рекомендацій щодо управління підрозділами зв'язку в сучасних умовах бойових дій

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СТАТТЯ	АНОТАЦІЯ
Дослідницька DOI: 10.70651/3041-248X/2026.2.16 Отримана: 14.01.2026 р. Прийнята: 16.02.2026 р. Опублікована: 20.02.2026 р. Авторське право © 2026 автора  Цей твір ліцензовано на умовах Ліцензії Creative Commons «Із Зазначенням Авторства – Некомерційна 4.0 Міжнародна» (CC BY-NC 4.0).	У статті досліджено проблеми управління підрозділами зв'язку Збройних Сил України в умовах сучасних бойових дій. Показано, що ефективність управління визначається не лише технічними характеристиками засобів зв'язку, а й організацією підготовки особового складу, рівнем розгалуження структури системи зв'язку на основі використання різної техніки та засобів зв'язку, живучістю систем зв'язку та сумісністю різнотипних засобів у межах єдиного інформаційного середовища. Аналіз проведено за трьома взаємопов'язаними напрямками: підготовка фахівців зв'язку до дій в умовах радіоелектронної боротьби; забезпечення розгалуження структури та живучості системи зв'язку; організація взаємодії між підрозділами, оснащеними різними типами засобів зв'язку. На основі порівняльного аналізу відкритих матеріалів щодо організації зв'язку в ЗСУ та доктринальних документів США та НАТО (FM 6-02, AComP-5) визначено проблемні аспекти управління підрозділами зв'язку у бойових умовах. Серед них виокремлюються переважно централізований характер управління, недостатня формалізація розгалуження структури системи зв'язку та використання альтернативних маршрутів передачі інформації, обмежена підготовка операторів до функціонування в умовах активного радіоелектронного впливу, а також труднощі забезпечення сумісності різнотипних засобів зв'язку, що надходять до підрозділів із різних джерел постачання. Показано, що зазначені проблеми мають взаємозалежний характер і потребують комплексного вирішення. У роботі систематизовано підходи до вдосконалення управління підрозділами зв'язку на тактичному рівні та обґрунтовано практичні рекомендації, спрямовані на підвищення стійкості, живучості й ефективності функціонування системи зв'язку. Запропоновані рекомендації можуть бути використані під час удосконалення підготовки фахівців зв'язку, розроблення нормативних документів і практики управління підрозділами зв'язку ЗСУ.



КЛЮЧОВІ СЛОВА

управління підрозділами зв'язку, бойові дії, радіоелектронна боротьба, розгалуження структури системи зв'язку, сумісність засобів зв'язку, децентралізація управління, стандарти НАТО, Збройні Сили України.

1. Introduction

Management of communications units consists of performing several tasks, one of which is to ensure the exchange of messages in the troop control system. The reliability of the functioning of military communications, its resistance to interference and the continuity of work determine the ability of commanders to coordinate the actions of units and respond promptly to changes in the combat situation. The loss of military communications, even for a short time, can be a critical factor in the course of a battle.

Full-scale hostilities on the territory of Ukraine since February 2022 have posed fundamentally new challenges to the control system of communication units. The enemy's massive use of electronic warfare equipment, unmanned aerial vehicles to detect and destroy communication nodes, as well as cyberattacks on communication infrastructure – all this forms a qualitatively new environment for communication management, which differs significantly from the conditions on which the training of communications units of the Armed Forces of Ukraine until 2022 was focused [12; 13].

The analysis of the management of communications units of the Armed Forces of Ukraine in the conditions of modern hostilities gives grounds to identify several key problems. These include insufficient preparedness of personnel for actions in conditions of active electronic warfare, insufficiently formalized branching of the structure of the communication system based on the use of various equipment and means of communication received by units from partners. The combined impact of these factors reduces the survivability of the communication system, since its effectiveness depends not only on the technical equipment, but also on the organization of management and the level of training of the personnel of communication units [2; 7]. In the article, the branching of the structure of the communication system is considered as the main organizational and technical approach to ensuring its survivability by creating alternative routes for transmitting information in the conditions of fire and the electronic influence of the enemy.

2. Literature Review

The theoretical foundations of the organization of the management of communication units in the Armed Forces of Ukraine are systematized in the textbook by Sholudko et al. [13], which considers the principles of building communication systems and approaches to their management at the tactical level. The issue of the state and prospects for the development of radio communication facilities in the Armed Forces of Ukraine, including the problem of technical diversity, is covered in the work of Lavrut et al. [7].

The key external factor determining the conditions for the management of communication units is electronic warfare. Shamanov and Sorokin [12] analyzed modern electronic warfare methods, showing that suppression of radio communication channels is one of the main tools for influencing the control system. Opirsky and Bybyk [10] systematized methods and means of countering electronic warfare, substantiating the need for an integrated approach. Khudov et al. [5] analyzed in detail the tactical and technical characteristics of short-range electronic warfare systems that directly affect the tactical link of communication. Karlov et al. [4] considered the trends in the development of electronic warfare in the armed conflicts of our time, showing the rapid growth of its role.

The conceptual foundations of network-centric management, which is the basic approach of NATO and sets new requirements for the organization of communication, are considered in detail in the work of Bospalko et al. [2]. The role of countering electronic warfare in protecting one's own communication systems is substantiated in the study of Semenenko et al. [11]. Foreign experience in the management of communications units is recorded in the US Army Field Charter FM 6-02 [3] and the NATO AComP-5 standard [9], which formulates the requirements for decentralized management, redundancy and interoperability. Data on specific parameters of training of US Army communications specialists are given in open official materials [1; 8].

Despite significant achievements in each of the outlined areas, a comprehensive study that would combine the analysis of all three interrelated aspects of the management of communication units – personnel training, branching of the structure and survivability of communication systems, compatibility of means – taking into account the experience of full-scale hostilities in 2022–2024. and with the justification of specific recommendations, there is not enough information in the domestic scientific literature.

3. Problem Statement

The article is aimed at analyzing the key problems of management of communications units of the Armed Forces of Ukraine in the conditions of modern hostilities in three areas – training of personnel, branching of the structure and survivability of communication systems, compatibility of different types of communication means – and substantiation of practical recommendations for improving communication management based on a comparative analysis of the approaches of the Armed Forces of Ukraine and doctrinal documents of the United States and NATO.

4. Methods and Materials

This study is based on a comparative analytical approach aimed at examining the management of communication units of the Armed Forces of Ukraine under modern combat conditions. The research employs qualitative methods, including systematic analysis and synthesis of scientific literature, doctrinal documents, and open-source materials. The empirical and theoretical basis of the study includes Ukrainian academic publications, official military documents, and international doctrinal sources such as U.S. Army Field Manual FM 6-02 and NATO Allied Communications Publication AComP-5, which define key principles of communication systems interoperability, decentralization, and survivability. In addition, open data on the training of communication specialists and official materials from the Command of the Communications and Cybersecurity Troops of the Armed Forces of Ukraine were analyzed to assess practical aspects of personnel preparation. The comparative method was used to identify discrepancies between Ukrainian approaches and NATO standards across key criteria, including management principles, structural branching of communication systems, interoperability of communication equipment, personnel readiness for electronic warfare conditions, and mobility of communication nodes. The synthesis of these findings enabled the formulation of evidence-based recommendations aimed at improving the effectiveness, resilience, and adaptability of communication unit management in contemporary warfare conditions.

5. Results and Discussion

The study is based on the method of comparative analysis of approaches to the management of communications units in the Armed Forces of Ukraine and in the armies of NATO member states. Doctrinal documents of the US Army were chosen as a basis for comparison: field manual FM 6-02 “Signal Support to Operations” [3] and NATO standard AComP-5 [9]. The choice is because the United States is Ukraine’s largest partner in the provision of military-technical assistance, including modern means of communication, and FM 6-02 is one of the most detailed publicly available communications management documents among NATO countries.

The analysis of the state of management of communications units in the Armed Forces of Ukraine was carried out based on official documents and publications of the Command of the Signal and Cybersecurity Troops of the Armed Forces of Ukraine [6], domestic scientific papers [2; 4; 5; 7; 10–13] and open data on specific parameters of training of communications specialists [1; 8]. The criteria of comparative analysis are: the principle of management (centralization/decentralization), the approach to branching the structure of the communication system based on the use of various equipment and means of communication, ensuring the compatibility of different types of means, training of personnel for actions under the influence of electronic warfare means, and requirements for the mobility of communication centers.

Conditions for the management of communications units during hostilities in 2022–2024 differ significantly from those for which the communications units of the Armed Forces of Ukraine were prepared. There are three groups of factors that have fundamentally changed the communication management environment.

The first group **is** the factors of electronic warfare. The enemy systematically uses electronic warfare means to suppress radio communication channels, navigation systems and UAV control channels. Shamanov and Sorokin [12] show that suppression of communication channels is one of the main methods of electronic warfare used at the tactical level. Khudov et al. [5] confirm the massive presence of short-range electronic warfare systems in the combat zone: their tactical and technical

characteristics make it possible to effectively suppress standard tactical radio stations at distances that overlap the tactical zone. Karlov et al. [4] emphasize that the control of the electromagnetic spectrum is becoming increasingly important as one of the key factors in modern armed confrontation.

Opirskyi and Bybyk [10] substantiate that effective counteraction to electronic warfare requires an integrated approach: technical measures (FHSS technology, encryption, pseudo-random frequency hopping) and organizational measures (branching of the structure of the communication system, dispersal of communication nodes, worked out actions of personnel in case of interference). Semenenko et al. [11] single out measures of active protection of their own communication systems (the so-called counter-electronic warfare) as an independent direction, which the Armed Forces of Ukraine did not pay enough attention to.

The second group of factors is the impact of unmanned aerial vehicles. The massive use of FPV drones and loitering ammunition has significantly increased the vulnerability of stationary communication centers to detection and destruction. According to FM 6-02 [3], this threat has existed for several decades and determines the requirement for constant mobility of communication centers: a long stay in one position increases the likelihood of detection by enemy reconnaissance means and subsequent destruction. confirmed this requirement in conditions when the range and accuracy of weapons have increased significantly compared to previous conflicts.

The third group of factors is the technical diversity of communication means. The Armed Forces of Ukraine received a variety of communication equipment from partners: Harris Falcon III and Harris AN/PRC-117G radio stations (made in the United States), SINCGARS (American tactical radio station with FHSS protection), Motorola MTP850 (widely used in NATO structures), etc. [7]. Each of these samples has its own frequency bands, protocols, encryption methods, and FHSS algorithms. Without purposeful work to ensure compatibility, these tools can work effectively only within homogeneous units, but do not ensure interaction between units equipped with different samples.

A comparative analysis of approaches to the management of communications units in the Armed Forces of Ukraine and in accordance with NATO standards is systematized in Table 1.

Table 1. Comparative analysis of approaches to communication management of the Armed Forces of Ukraine and NATO

Communication Management Aspect	Armed Forces of Ukraine (approach to 2022, based on [6; 13])	NATO Standard (FM 6-02 [3], AComP-5 [9])
The principle of management (centralization / decentralization)	The predominance of central planning and the decisive role of the head of communications in the construction of the communication scheme	Combination of central planning and decentralized execution; initiative at the lower levels is a mandatory requirement [3]
Compatibility of communication facilities of different departments	Compatibility is ensured mainly within homogeneous samples of equipment; the integration of foreign funds requires additional standardization	STANAG compatibility is required; Uniform protocols of interaction for all members of the Alliance [9]
Preparation of personnel for actions in electronic warfare conditions	Training of communication specialists for actions in the conditions of electronic confrontation requires systematic development in the educational process [10; 12].	A mandatory element of preparation; practicing the transition to an alternative channel when suppressing the main channel [1; 3]
Application of digital secure protocols at the tactical level	The use of secure digital channels in the tactical link remains limited	Mandatory encryption of tactical-level channels; COMSEC is a system requirement [3; 9]
Mobility of communication nodes	The mobility of communication nodes needs to be strengthened; in the practice of application, attachment to the prepared positions is preserved	Requirement for constant mobility and reduction of time spent in one position [3]

The analysis of the data given in the table indicates the presence of a systemic discrepancy between the approaches of the Armed Forces of Ukraine and the requirements of NATO standards according to all the identified criteria. The most fundamental difference concerns the basic principle of management: if the approach of the Armed Forces of Ukraine was characterized by a predominantly centralized management model, then FM 6-02 [3] and AComP-5 [9] are based on a fundamentally different model: centralized planning is combined with decentralized execution. This means that a

commander of any level has the right and obligation to independently restore communication within his area of responsibility, without waiting for instructions and help from above.

This conceptual difference in approaches to management leads to other identified discrepancies. The decentralized model requires appropriately trained personnel, branching of the structure of the communication system based on the use of different equipment and means of communication – so that each link can independently rebuild the communication system in case of problems. Three aspects of management – training of personnel, branching of the structure of the communication system, its survivability and compatibility of means – are interrelated components of a single problem.

Bespalko et al. [2] substantiate that the network-centric management concept, which is the basis of the modern NATO doctrine, fundamentally changes the requirements for the communication system: it should provide not just the transmission of commands from top to bottom, but a full-fledged horizontal exchange of information between units of the same level. This requires both technical (interoperable protocols, secure digital channels) and organizational (decentralized management procedures) solutions.

Effective management of communication units in the conditions of active electronic warfare directly depends on the level of training of the personnel of the duty shifts. The personnel of the duty shifts who do not know how to properly respond to the suppression of the main channel – to determine the type of interference, switch to an alternative frequency or communication channel, or activate the FHSS mode – will not be able to ensure the continuity of communication regardless of the quality of equipment.

According to an open publication on the launch of the School of Communications and Cybersecurity Specialists, the duration of basic training for sergeants was about two months [6]. For comparison: a US Army Communications Specialist in MOS 25U (Signal Support Systems Specialist) undergoes 16 weeks of Advanced Individual Training after 10 weeks of basic combat training [1]. MOS 25H (Network Communications Systems Specialist) – 19 weeks of AIT [8]. Preparation for actions in electronic warfare conditions is an obligatory element of these programs [1].

In the conditions of modern hostilities, the training of communication specialists for actions in the conditions of electronic confrontation is of particular importance. Shamanov and Sorokin [12] and Opirsky and Bybyk [10] show that electronic warfare is one of the dominant types of influence on the communication system, and the lack of practiced actions in conditions of interference leads to a significant increase in the time of communication restoration when suppressing the main channel.

AComP-5 [9] formulates as a mandatory requirement: the communication system must withstand the failure of any one node without loss of overall connectivity. This requirement follows from the principle of survivability of the communication system as a condition for the continuity of control. FM 6-02 [3] specifies that each communication channel should have a defined alternative channel or route for transmitting information, and the communication scheme should be built on the principle of network topology, not a linear circuit.

In the approaches to the organization of communication described in open sources until 2022, the branching of the structure of the communication system based on the use of various equipment and means of communication was not always considered as a systematically formalized requirement. In the practice of organizing communication at the tactical level, the presence of branching of the structure of the communication system largely depended on the available technical means and specific conditions for performing tasks. Khudov et al. [5] show that short-range electronic warfare means are capable of simultaneously suppressing several frequency bands, which makes it impossible to rely on a single channel. Karlov et al. [4] note that in modern armed conflicts, the loss of a single communication node due to damage or electronic warfare should not lead to a violation of the overall connectivity of the system.

The practice of modern warfare shows that the early construction of an extensive structure of the communication system using various technologies for transmitting information, including a combination of radio, cable and satellite communications, helps to increase the stability of the control system under the active influence of the enemy. Semenenko et al. [11] substantiate that ensuring the survivability of the communication system is a component of counter-electronic warfare and requires a systematic approach, rather than situational solutions.

The problem of compatibility of different types of means of communication has acquired an acute practical dimension after 2022 due to the massive influx of foreign means of communication from

partners. Lavrut et al. [7] record the technical diversity of means in the units of the Armed Forces of Ukraine, emphasizing that it is a systemic problem, not a temporary phenomenon.

AComP-5 [9] establishes that in order to ensure interaction within the alliance, all means of communication must comply with the defined STANAG standards. This involves: the use of standardized frequency bands and protocols; support for uniform encryption algorithms (COMSEC); compatible interfaces for connection to network control systems. When Harris Falcon III (American radio station with FHSS), SINCGARS (American tactical radio station), Motorola MTP850 (European TETRA standard) and domestic means of communication are used simultaneously in one connection, ensuring their compatibility with each other and with partner systems becomes an independent technical and organizational task.

Bespalko et al. [2] emphasize that network-centric control is fundamentally impossible without compatible means of communication: if departments cannot exchange information due to the diversity of technology, horizontal coordination, which is the basis of the network-centric concept, is not implemented. Solving this problem requires both technical measures (gateway solutions, SDR technology) and organizational measures (unified negotiating tables, standardized interaction procedures).

Based on the analysis, five practical recommendations summarized in Table 2 are substantiated.

Table 2. Recommendations for improving the management of communications units of the Armed Forces of Ukraine

No	Recommendation	Justification (based on open data and regulatory sources)	Expected effect
1	Move to a decentralized communication management model at the tactical level	FM 6-02 [3] defines decentralized execution as a basic requirement. Bespalko et al. [2] Justify: network-centric governance requires initiative at the lower levels. Semenenko and others. [11] show that communication protection requires independent action by links when nodes fail	Reducing the recovery time of the broken connection, increasing the survivability of the communication system in case of damage to individual nodes
2	To introduce mandatory branching of the structure of the communication system based on the use of various technologies and means of communication to provide alternative routes for transmitting information	AComP-5 [9] requires: the communication circuit must withstand the failure of any one node without loss of overall connectivity. Khudov et al. [5] show the massive impact of short-range electronic warfare, which makes it impossible to rely on a single channel	Preservation of communication in case of suppression or loss of individual elements of the communication system; Exclusion of a single point of failure in the unit's communication system
3	Ensure interoperability of all communication facilities of the unit through gateway solutions and transition to STANAG protocols	AComP-5 [9] establishes mandatory STANAG compatibility for all members of the alliance. Lavrut et al. [7] record the technical diversity of communication facilities in the units of the Armed Forces of Ukraine. Without compatibility, interaction in joint operations is impossible	Uninterrupted interaction between units equipped with different types of means of communication; Compatibility with partner divisions
4	Improve training programs for communications specialists by expanding practical training and introducing a mandatory module of actions in electronic warfare	Basic training of a communications sergeant in the Armed Forces of Ukraine – 2 months [6], in the US Army – 16 weeks of AIT [1]. Shamanov and Sorokin [12] and Opirsky and Bybyk [10]: suppression of communication channels is the dominant type of electronic warfare influence. Without proven actions in electronic warfare conditions, the operator is not able to switch to an alternative channel in time	Increasing the resistance of the communication system to electronic warfare impact, reduction of the transition time to an alternative channel when suppressing the main
5	Increase the mobility of communication nodes and abandon stationary positions	FM 6-02 [3] requires constant mobility of communication nodes and a reduction of the time spent in one position. Khudov et al. [5] and Karlov et al. [4] record: stationary communication centers have become priority targets for weapons of destruction and UAVs in modern combat operations	Reducing the vulnerability of communication nodes to detection and damage; preservation of the control system during the active use of UAVs by the enemy

The first recommendation – the transition to a decentralized model of communication management – is conceptual and needs to be changed both in regulatory documents and in the practice of training. FM 6-02 [3] clearly states: decentralized execution is not an exception or an emergency

measure, but a basic norm. Each official of the communication center and the person on duty during the organization and duty must have predetermined powers and work out procedures for independent restoration of communication within their area of responsibility. Bespalko et al. [2] justify that without this, the network-centric concept remains a declaration. The implementation of this recommendation requires the inclusion of relevant requirements in the regulatory documents of the Command of the Armed Forces of Ukraine and the Design Bureau of the Armed Forces of Ukraine and the development of decentralized management procedures for tactical exercises.

The second recommendation – to introduce mandatory branching of the structure of the communication system based on the use of various equipment and means of communication – is a direct reflection of the requirements of AComP-5 [9] and combat experience. Technically, this means: for each communication channel (voice, data, UAV control), the unit's communication system must provide for at least one alternative channel or route for transmitting information, implemented on the basis of another technology or frequency range. The combination of radio communication (including FHSS facilities), cable communication and satellite communication (Starlink, etc.) in a single circuit allows you to maintain communication when suppressing any one type. Semenenko et al. [11] consider this approach to the branching of the structure of the communication system as an element of ensuring its survivability in the conditions of electronic confrontation.

The third recommendation – to ensure the compatibility of all communication facilities of the unit – requires two parallel approaches. The technical approach involves the use of gateway solutions and SDR (Software Defined Radio) technology, which allows one device to support several incompatible protocols at the same time. The organizational approach involves the development of uniform negotiating tables and interaction procedures for different types of communication facilities, which is a direct requirement of AComP-5 [9].

The fourth recommendation – to increase the duration of training of communications specialists and introduce an electronic warfare module – is a critical condition for the implementation of all previous recommendations. The effectiveness of communication systems, even with redundancy and compatible means, largely depends on the level of training of personnel for actions in conditions of active obstacles. The basic training of a signal sergeant in the Armed Forces of Ukraine in wartime conditions was about two months [6], which is a much lower figure compared to the training in the US Army – 16 weeks of AIT [1]. Shamanov and Sorokin [12] and Opirsky and Bybyk [10] convincingly justify the need for systematic practice of actions in electronic warfare conditions.

The fifth recommendation – to increase the mobility of communication centers – is a direct response to the threat from UAVs and means of destruction. FM 6-02 [3] defines mobility as a basic operational requirement for communication nodes: the time of deployment and stay in the same position should be minimal. Khudov et al. [5] and Karlov et al. [4] confirm that the detected and fixed communication node is a priority target. Organizationally, this requires working out the standards for deploying and curtailing communication nodes and changing the psychology of personnel: a stationary position is not safe, regardless of its disguise.

6. Conclusions

According to the results of the analysis, significant differences were found between the approaches to the management of communication units in the Armed Forces of Ukraine (until 2022) and the requirements of the doctrinal documents of the United States and NATO (FM 6-02, AComP-5) according to five criteria: the principle of management, branching of the structure of the communication system and the use of alternative routes for information transmission, compatibility of means, preparation for actions in electronic warfare, mobility of nodes. This discrepancy is systemic and cannot be eliminated by targeted measures – it requires an integrated approach.

The study showed that the problems of personnel training, branching of the structure of the communication system and the use of alternative routes of information transmission and compatibility of different types of means should not be considered separately from each other. It is their combination that determines the real stability of the communication system in combat conditions. In this regard, five practical recommendations are proposed regarding the transition to a more decentralized management model, the introduction of an extensive structure of the communication system using alternative routes of information transmission, ensuring the compatibility of communication facilities, improving the training of communication specialists and increasing the mobility of communication centers.

The implementation of the proposed recommendations will contribute to increasing the stability, survivability and adaptability of the functioning of the communication system of the Armed Forces of Ukraine. Prospects for further research are the development of specific training programs with a module for preparing for actions in electronic warfare conditions and methods for assessing the survivability of communication systems of tactical units.

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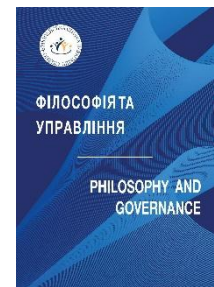
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Creativity as a Way to Overcome the Existential Vacuum of the Individual

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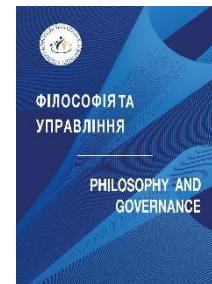


ABSTRACT

The article notes that the processes of total globalisation, digitalisation and social upheavals have brought to the fore a sense of existential emptiness, which, together with the need to find meaning in life amidst an unstable reality, has become a central theme of contemporary philosophy. It has been established that the existential vacuum, conceptualised by V. Frankl, is a dangerous and destructive challenge of our globalised and digitalised age, in which individuals lose confidence in themselves and their abilities and are no longer able to independently perceive the meaning of life and their own value in the world. In the context of modern socio-cultural challenges, existential emptiness has become especially tangible. It transforms traditional ideas about identity and life purpose, nurturing semantic uncertainty as a global problem. It is determined that humanity is not deprived of mechanisms that can reanimate its existence and force it to take a responsible attitude towards its own self-organization and self-identification in the world. Philosophical anthropology states that the fundamental characteristic of human existence is creativity – a specific means of self-realization of the individual, which forms its spiritual essence and modifies the surrounding world., the way out of which can be creativity – a specific means of self-realization of the individual, which forms its spiritual essence and modifies the surrounding world. It is a specific bridge that makes it possible to transition from a state of vacuum to an active discovery of the meaning of life. New life meanings are realized through meaning-making, self-realization, transformative, communicative-cultural and existential-integrative functions. Filling the existential vacuum, creativity allows us to build new meanings, rethink experience and form an active life position. This ability of hers is extremely productively realized in philosophy, psychology, and art therapy.

KEYWORDS

philosophy of creativity, creativity, existential vacuum, personality, person, meaning of life.



Творчість як спосіб подолання екзистенційного вакууму особистості

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СТАТТЯ	АНОТАЦІЯ
Дослідницька DOI: 10.70651/3041-248X/2026.2.05 Отримана: 02.01.2026 р. Прийнята: 04.02.2026 р. Опублікована: 09.02.2026 р. Авторське право © 2026 автора  Цей твір ліцензовано на умовах Ліцензії Creative Commons «Із Зазначенням Авторства – Некомерційна 4.0 Міжнародна» (CC BY-NC 4.0).	У статті констатовано, що процеси тотальної глобалізації, цифровізації та соціальні катаклізми актуалізували відчуття екзистенційної порожнечі, що разом із потребою відшукати життєві сенси у нестабільній реальності стали центральними темами сучасної філософії. Встановлено, що екзистенційний вакуум, концептуалізований В. Франклом, це небезпечний деструктивний виклик глобалізованої та цифровізованої сучасності, у якій окремі представники людства втрачають впевненість у собі й у своїх силах і вже не можуть самостійно побачити життєвого сенсу і своєї цінності в світі. В контексті сучасних соціокультурних викликів екзистенційна порожнеча стала особливо відчутною. Вона трансформує традиційні уявлення про ідентичність і життєве призначення, плекаючи смислову невизначеність як глобальну проблему. Визначено, що людство все ж не позбавлене механізмів, які можуть реанімувати її екзистенцію і змусити відповідально ставитися до власної самоорганізації та самоідентифікації в світі. Філософська антропологія констатує, що фундаментальною характеристикою людського буття є творчість – специфічний засіб самореалізації особистості, що формує її духовну сутність і видозмінює навколишній світ. Вона є специфічним містком, що уможлиблює перехід від стану вакууму до активного віднайдення життєвого сенсу. Нові життєві сенси реалізується через смислотворчу, самореалізаційну, трансформативну, комунікативно-культурну та екзистенційно-інтегративну функції. Заповнюючи екзистенційний вакуум, творчість дозволяє будувати нові смисли, переосмислювати досвід і формувати активну життєву позицію. Така її здатність надзвичайно продуктивно реалізовується у філософії, психології та арт-терапії.



КЛЮЧОВІ СЛОВА

філософія творчості, творчість, екзистенційний вакуум, особистість, людина, сенс життя.

1. Introduction

Процеси тотальної глобалізації та цифровізації, націленість на мультикультуралізм, розмивання ціннісних меж і наше співбуття зі штучним інтелектом, а також соціальні катаклізми, зокрема збройні конфлікти й спричинені ними особистісні втрати, актуалізували відчуття екзистенційної порожнечі, що разом із потребою відшукати життєві сенси у нестабільній реальності стали центральними темами сучасної філософії. Провідні мислителі нашого часу констатують, що дедалі більше людей сьогодні переживають стан так званої смислової дезорієнтації та називають своє життя порожнім, адже не можуть відшукати у ньому бодай однієї ниточки, за яку їм варто було б триматися. Австрійський філософ і психотерапевт V. Frankl [9] назвав подібні відчуття екзистенційним вакуумом, коли життєва мета зникає, ідентичність стає фрагментарною, а внутрішня порожнеча посилюється настільки, що стає загрозливою для цілісності самої особистості. Дієвим механізмом подолання кризи спустошення, можна назвати творчість. Саме вона, не лише у значенні створення культурних цінностей, а й як спосіб самовираження та екзистенційного утвердження людини у світі, трансформує наш досвід і допомагає формувати індивідуальні системи життєвих сенсів. У такому контексті, актуальність нашої роботи вважаємо виправданою і своєчасною, адже вона представить практики та інструменти, за допомогою яких творчий потенціал людства стане фундаментальним антропологічним ресурсом відновлення та смислотворення.

2. Literature Review

Проблема екзистенційного вакууму та пошуку сенсу життя активно досліджується у філософії, психології та психотерапії. В такому ключі N. Bohdanova [5] досліджує креативність, яку вважає ключовим чинником життєтворчості, самопізнання і культурного самовираження людини у світі, що останнім часом змінюється шаленими темпами. Навіть більше, вона переконує, що це не лише інструмент створення нових ідей, а й спосіб самореалізації та розвитку людини і суспільства [5]. Для R. Bogachev et al. [4] творчість є ключовою цінністю людського буття, що розкриває здібності, знання та духовний потенціал особистості. Вона є важливою умовою саморозвитку й самоактуалізації, через яку людина організовує власне буття в культурному та соціальному просторі. Об'єктом дослідження N. Starynska [20] теж є креативність, яка, за її словами, формується під час особистісного розвитку і проявляється у творчості та самозростанні. V. Asakavičiūtė [2] розвиває думку попередньої науковиці і переконує, що культурні кризи є проявом занепаду людської креативності, до якої вона застосовує поняття екзистенційної. Цікаво, що на такі думки її наштовхнула цивілізаційна теорія культурних криз Шпенглера. S. Cherapanova [7] стверджує, що сферою творчої діяльності людини є культура, у якій взаємодіють філософські, наукові та мистецькі начала та формуються нові культурні смисли і способи пізнання світу, які не дають особистості шансу відчувати браку життєвих смислів. V. Grekova [11] побачила у будь-якій екзистенційній кризі переломний етап у житті людини, що суттєво впливає на її життєву позицію та може стати причиною переосмислення власних цінностей і навіть ставлення до світу. Ефективним способом для виходу з такої ситуації є креативність – соціокультурне явище і творча форма діяльності, яка допомагає особистості розвиватися і долати кризові стани [11]. R. Bailey [3] займається проблемами осмисленого життя і констатує, що, на жаль, досі недооціненою є ідея «волі до життя» австрійського психіатра V. Frankl.

3. Problem Statement

Метою цього дослідження є філософське осмислення творчості як способу подолання екзистенційного вакууму особистості. Його ми плануємо проаналізувати в контексті сучасного філософського дискурсу, а ще – розкрити сутність творчості як антропологічної та екзистенційної характеристики людини.

4. Methods and Materials

У процесі роботи було використано цілий комплекс загальнонаукових та філософських методів пізнання, щоб представити творчість як дію, що здатна заповнити екзистенційну порожнечу всередині кожної особистості й активно взаємодіяти зі смислотворенням і внутрішнім досвідом людини. За допомогою аналітичного методу ми конкретизували значення понять «творчість», «екзистенційний вакуум», «особистість», «сенси життя», визначили їх місце у філософському дискурсі, структурували теоретичні підходи до розуміння творчості та виявили їх значення для осмислення внутрішнього духовного досвіду. Метод герменевтики дозволив інтерпретувати ті філософські ідеї та концепції, що стосуються проблеми творчості та екзистенційного виміру людського буття.

Методом філософської рефлексії осмислено внутрішній досвід людини, її намагання самореалізуватися і творити смисли. Застосування системного підходу уможливило розгляд творчості як складного багатовимірного феномена, онтологічні виміри якого можуть бути психологічними, культурними, соціальними і духовними.

Таким чином, використання комплексу філософських методів та залучення широкого кола теоретичних джерел дозволило всебічно дослідити проблему творчості як способу подолання екзистенційного вакууму особистості та визначити її значення у процесі формування життєвих сенсів людини.

5. Results and Discussion

Модерно-постмодерні трансформації суспільства спричинили появу так званого екзистенційного вакууму, філософське коріння якого сягає вчення С. К'єркегора про тривогу як запаморочення від свободи. Суть своїх поглядів данський мислитель представив метафорично, описавши, що може відчувати людина, яка стоїть на краю прірви: 1) боїться впасти, бо її стримує інстинкт виживання; 2) має непереборне бажання кинутися вниз. Друге відчуття, на думку S. Kierkegaard [14], є тривогою, яка дає можливість особистості усвідомити свої абсолютні можливості. Саме тому, наш тривожний стан виникає не через обмеження, а через свободу [14].

Важливим для сучасної інтерпретації поняття «порожнеча» виявилось також припущення М. Haidehher [12] про закинутість у світ. Німецький термін *Geworfenheit* став для нього фундаментальною характеристикою людського буття: ніхто не може обирати час, місце та обставини свого народження, тому, опинившись у світі без попередньої на те згоди, індивід вимушено мусить бути діяльним, відповідальним і реалізованим [12]. Коли ж визначальними для його життєвих орієнтирів стають стереотипи та не завжди виправдані зовнішні очікування, справжнє розуміння власного буття розмивається / зникає і тоді з'являється той «вакуум», що згодом був концептуалізований у дослідженнях V. Frankl [9]. За його словами, це стан, який виникає, коли людина не може нічим себе зацікавити. Вона нудьгує, переживає апатію, втрачає життєві орієнтири. Хоч їй добре відомо, чим би вона хотіла насолодитися, – стверджує австрійський філософ, – однак людина практично не уявляє, для чого живе [9].

Для представників філософії екзистенціалізму проблема втрати сенсу існування завжди була центральною. J.-P. Sartre [19], наприклад, переконував, що наше народження не має наперед заданого сенсу, тому-то ми і мусимо шукати його все життя. Навіть більше, всі ми «приречені на свободу», бо відповідальність за наше життя та усі його смисли належить виключно нам, а ризик утворення екзистенційного вакууму можливий тоді, коли виникне усвідомлення радикальної свободи та відсутності зовнішніх гарантій сенсу [19].

Подібної життєвої позиції дотримувався також А. Camus, розглядаючи людське існування крізь призму абсурду. У «Міфі про Сізіфа» він констатує, що відчуття абсурдності виникає тоді, коли людські бажання внести ясність (знайти логіку і сенси) стикаються із нерозумним мовчанням світу (байдужістю реальності) [6]. Тоді, на переконання N. A. Fadel [8], з'являється порожнеча, яку особи, що її відчують, відчайдушно прагнуть чим-небудь заповнити: розвагами, надмірним споживацтвом, бажанням влади чи безмежного багатства. Іноді вони з головою втікають в роботу, вдаються до кардинальної зміни власної поведінки, однак, таким чином вони лише маскують проблему, бо їх відчуття життєвого наповнення є ілюзорними і віднайти втрачені глобальні сенси не допомагають [8].

Особливо відчутною та актуальною екзистенційна порожнеча стала в контексті сучасних соціокультурних викликів, пов'язаних із нагромадженням надлишкової інформації, швидкими технологічними змінами та нестабільними соціальними структурами, що трансформують традиційні уявлення про ідентичність і життєве призначення, плекаючи смислову невизначеність як глобальну проблему. М. Yamin [21] впевнений, що технологічні та інформаційні революції посилили життєві потреби людства та посилили схильність окремих його індивідів до стресу й психічних розладів. Опинившись у екзистенційному вакуумі, вони відчувають себе безпорадними і такими, що вже не зможуть змінити своє життя на краще [9]. Характерними ознаками їхнього стану є недієздатність, нудьга, відчай, апатія та песимізм, а наслідком – схильність до суїциду [15; 18]. І нездатність побачити цінність у будь-якому зі своїх зусиль.

Показовим у цьому плані став для нас експеримент йорданських дослідників М. Abood, T. Ghbari [1], який вони проводили зі 466 студентами-бакалаврами у першому семестрі 2021–2022 навчального року. За допомогою методу кореляції з валідованими шкалами вчені оцінювали рівні екзистенційного вакууму ($\alpha = 0,90$), оптимізму та песимізму ($\alpha = 0,88$) серед своїх респондентів. І хоч найвищий показник належав оптимістичним настроям, рівень песимізму та екзистенційного вакууму все ж був достатньо високим, причому, жінки демонстрували схильність до песимізму, а чоловіки – до вакууму та оптимізму. У підсумку, дослідники резюмували, що оптимізм здатний зменшувати екзистенційну порожнечу та швидше знаходити життєві сенси [1].

Як бачимо, людство все ж не позбавлене механізмів, які можуть реанімувати її екзистенцію і змусити відповідально ставитися до власної самоорганізації та самоідентифікації в світі. Філософська антропологія (Ясперс, Ніцше, Кассіпер) констатує, що фундаментальною характеристикою людського буття є творчість – специфічний засіб самореалізації особистості, що формує її духовну сутність і видозмінює навколишній світ. Її наявність, власне, відрізняє людину від інших живих істот, які не можуть самотворити себе протягом життя, а тому твердження J.-P. Sartre, що «існування передує сутності» [19] на них і не розповсюджується. Статусу екзистенційної творчості набула тоді, коли почала допомагати особистості надавати сенсу власному існуванню. Позиціонуючи творчість як смислотворення, V. Frankl переконував, що вона допомагає подолати внутрішню порожнечу і робить людину значимою у світі [9], а мистецтво (як творчість), за М. Haidehher, розкриває буття і дозволяє виходити за межі повсякденного досвіду [12]. І. Kant [13] у своїй естетичній концепції трактував творчість як діяльність, що виникає з гармонійної взаємодії розуму та чуттєвості. На його думку, творчість є важливою формою самовираження, яка дає людині змогу виходити за межі буденних обмежень і переживати стан внутрішньої свободи. У цьому сенсі творче самовираження постає як прояв моральної свободи особистості та спосіб реалізації її духовних і естетичних прагнень. Водночас філософ підкреслював, що справжня творчість містить елемент суб'єктивного вибору і поєднує інтелектуальні, емоційні та інтуїтивні аспекти людської природи [13]. А. Maslow [16] зазначав, що творчість, пов'язана із самореалізацією, – це самодостатній процес, який дозволяє людині перебувати у стані постійного внутрішнього розвитку та пошуку нових способів вираження своєї особистості. Творчість у цьому контексті не обмежується традиційними формами мистецтва, а поширюється на всі сфери життя, включаючи професійну діяльність, науку, соціальну взаємодію та особисті стосунки [16]. Для А. Samus творчість була актом внутрішньої свободи і формою духовного опору світу [6].

Творчість можна назвати специфічним містком, що уможливорює перехід від стану вакууму до активного віднайдення життєвого сенсу. Подібну функцію у психоаналізі S. Freud [10] виконує сублімація, що переспрямовує біологічні імпульси у соціально прийнятні форми. У межах нашого дослідження йдеться про екзистенційну парадигму, тому місце лібідо у нас займатиме екзистенційна тривога – «паливо» для творчого акту – страх перед безглуздя, порожнечею та кінцевою природою буття. Річ у тому, що коли людина стикається з абсурдністю світу, вона не завжди може пасивно спостерігати за всім, що відбувається навколо неї. Саме тоді включається творча енергія, здатна утворювати нові структури значення там, де раніше була порожнеча. Це «включення» відбувається поетапно. Спочатку відбувається процес об'єктивації. Як переконує, R. May [17] творча особистість не боїться порожнечі, адже вона втілює цю порожнечу в образи. Так колишнє жакіття стає конструктивним викликом. Наступний етап – динамічний катарсис. Його можна назвати творчою самотрансценденцією, за V. Frankl, яка сигналізує про здатність

людини виходити за межі власного «Я» і спрямовувати свою увагу на об'єкти «поза нею» – інших людей, ідеї чи створення культурних продуктів [9]. Тут долаються дефіцитарні стани – зацикленість на власних стражданнях, нудьга, відчуття безглуздя, – які V. Frankl якраз і називав екзистенційним вакуумом [9].

Можемо констатувати, що творчість допомагає здолати стан відчуження – розрив між внутрішніми бажаннями і соціальними нормами, результатом якого є духовна порожнеча. З філософського погляду, вона є проявом свободи, засобом самопізнання та важливим механізмом формування життєвих сенсів. Не випадково N. Bohdanova [5] називає креативність / індивідуальну творчість важливим ресурсом для досягнення внутрішньої цілісності, оскільки дозволяє людині реалізувати себе не лише як окрему особистість, а й як частину ширшого соціокультурного контексту. Це відображається у творчих досягненнях, які не лише змінюють особисте життя людини, а й позитивно впливають на суспільство та навколишнє середовище [5]. Саме через творчість людина здатна виходити за межі базових умов існування, відкривати нові можливості власного буття та долати стан екзистенційного вакууму.

Роль творчості у конструюванні нових життєвих сенсів реалізується через наступні функції: смислотворчу функцію, яка за V. Frankl, є «волею до сенсу» [9] – допомагає створювати ті діяльнісні продукти, культурні форми та ціннісні орієнтири, що наділяють сенсовістю людське життя; самореалізаційну функцію, яку можна ототожнити з активною життєвою позицією, через яку реалізується особиста духовна свобода; трансформативну функцію, яка, за аналогією до «граничної ситуації» Ясперса, здатна перебудувати індивідуальний кризовий досвід на нові життєві сенси; комунікативно-культурну функцію, через яку творчість визначається засобом створення і передачі культурних смислів, через які людина комунікує зі світом, переборюючи відчуття внутрішньої та зовнішньої ізоляції; екзистенційно-інтегративну функцію, коли внутрішні конфлікти, емоції та переживання формують нашу ідентичність як цілість.

Як бачимо, долаючи / заповнюючи екзистенційний вакуум, творчість дозволяє будувати нові смисли, переосмислювати досвід і формувати активну життєву позицію. Така її здатність надзвичайно продуктивно реалізовується у філософії (як акт смислотворення, через який людина формує власне розуміння життя та здійснює свободу вибору), психології (як механізм самореалізації та внутрішньої інтеграції, що сприяє переосмисленню досвіду, емоційній регуляції та подоланню екзистенційної порожнечі) та арт-терапії, де стратегічними вважаються:

- творче самовираження через музику, письмо, живопис, фотографію чи вірші – внутрішня порожнеча, таким чином, перетворюється на символічні образи / нові смислові структури досвіду;
- наративна творчість – переосмислення власної життєвої долі через ведення життєписів чи побудову автобіографічних текстів, котрі узагальнюють цінність особистості та формують у неї смислове відчуття;
- творче експериментування з новими ролями – волонтерством, новими зацікавленнями (хобі) і навчальними навичками, що створюють ауру власної важливості / впливовості в світі;
- спільна творчість і культурна участь у театральних студіях, де мінімізується відчуття ізоляції, а екзистенційний вакуум практично не відчувається.
- творче осмислення повсякденності – куховарство, домашній дизайн, фотографування, блогінг теж можна розглядати як акти творчості, що збагачують життя людини найрізноманітнішими сенсами.

6. Conclusions

Встановлено, що екзистенційний вакуум, концептуалізований V. Frankl, це небезпечний деструктивний виклик глобалізованої та цифровізованої сучасності, у якій окремі представники людства втрачають впевненість у собі й у своїх силах і вже не можуть самостійно побачити життєвого сенсу і своєї цінності в світі. В контексті сучасних соціокультурних викликів екзистенційна порожнеча стала особливо відчутною. Вона трансформує традиційні уявлення про ідентичність і життєве призначення, плекаючи смислову невизначеність як глобальну проблему, виходом із яких може бути творчість – специфічний засіб самореалізації особистості, що формує її духовну сутність і видозмінює навколишній світ. Вона є специфічним містком, що уможлиблює перехід від стану вакууму до активного віднайдення життєвого сенсу. Нові життєві

сенс реалізується через смислотворчу, самореалізаційну, трансформативну, комунікативно-культурну та екзистенційно-інтегративну функції. Заповнюючи екзистенційний вакуум, творчість дозволяє будувати нові смисли, переосмислювати досвід і формувати активну життєву позицію.

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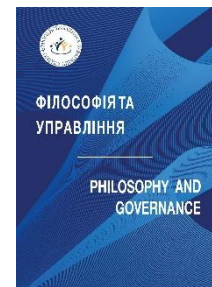
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Philosophy of Responsibility in the Age of Technology: Between Anonymity and Control

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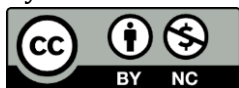
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ABSTRACT

The relevance of the study is due to the rapid expansion of digital technologies, which leads to a fundamental transformation of classical ideas about individual and collective responsibility. The article aims to carry out a comprehensive socio-philosophical analysis of the processes of digitalization as a factor in the reformatting of subjectivity, freedom of speech and the ethical principles of urban space. The work is aimed at overcoming technological determinism by appealing to anthropological constants and classical philosophical heritage, in particular the ideas of J. G. Fichte, in the context of the challenges of algorithmic control and the ecological crisis. The study deconstructs the concept of "digitalization" as an ideological construct that imitates scientific objectivity and justifies the transition from passive models of liberal freedoms to a dynamic paradigm of communicative participation. It is proven that in the conditions of manipulative influence of large language models capable of influencing political beliefs through post-optimization methods, the philosophical ideas of J. G. Fichte should be considered as a tool for protecting the cognitive autonomy of the individual. An analysis of international experience, in particular the European AI Act (AI Act 2024), revealed the formation of a risk-oriented model of responsibility, where the transparency of algorithms and human supervision become mandatory regulatory guidelines. It is established that the digitalization of the sociosphere finds its constructive embodiment in the strategies of an intelligent city, where the introduction of biomorphic technologies and electromobility allows harmonizing the artificial and natural environment, minimizing the anthropogenic load on ecosystems. The study confirms that responsibility in the digital age is shifting from the plane of technical serviceability to the dimension of ethical subjectivity and legal accountability of algorithmic systems. The philosophy of technology is identified as a necessary methodological basis for designing a human-centered future, where digital tools serve as a means of strengthening freedom, not an instrument of alienation. Prospects for further exploration are related to the development of ethical protocols for the interaction of the subject with AI and the study of socio-psychological comfort in biomorphic urban structures.



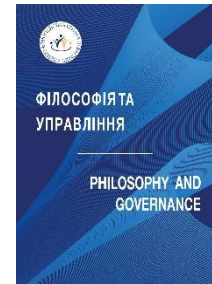
KEYWORDS

ethics, J. G. Fichte, subjectivity, urbanism, philosophy of responsibility, philosophy of technology, digitalization, artificial intelligence (AI)



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Філософія відповідальності в епоху технологій: між анонімністю та контролем

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СТАТТЯ

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Актуальність дослідження зумовлена стрімкою експансією цифрових технологій, що призводить до фундаментальної трансформації класичних уявлень про індивідуальну та колективну відповідальність. Метою статті є здійснення комплексного соціально-філософського аналізу процесів цифровізації як чинника переформатування суб'єктності, свободи слова та етичних засад міського простору. Робота спрямована на подолання технологічного детермінізму через звернення до антропологічних констант та класичної філософської спадщини, зокрема ідей Й. Г. Фіхте у контексті викликів алгоритмічного контролю та екологічної кризи. У ході дослідження деконструйовано концепт «цифровізації» як ідеологічного конструкту, що імітує наукову об'єктивність, та обґрунтовано перехід від пасивних моделей ліберальних свобод до динамічної парадигми комунікативної партисипації. Доведено, що в умовах маніпулятивного впливу великих мовних моделей, здатних впливати на політичні переконання через методи постоптимізації, філософські ідеї Й. Г. Фіхте варто розглядати як інструмент захисту когнітивної автономії особистості. Аналіз міжнародного досвіду, зокрема європейського Акта про ШІ (AI Act 2024), виявив формування ризик-орієнтованої моделі відповідальності, де прозорість алгоритмів та людський нагляд стають обов'язковими нормативними орієнтирами. Встановлено, що цифровізація соціосфери знаходить своє конструктивне втілення у стратегіях інтелектуального міста, де впровадження біоморфних технологій та електромобільності дозволяє гармонізувати штучне та природне середовище, мінімізуючи антропогенне навантаження на екосистеми. Дослідження підтверджує, що відповідальність у цифрову епоху зміщується з площини технічної справності у вимір етичної суб'єктності та правової підзвітності алгоритмічних систем. Філософія технологій визначена як необхідна методологічна база для проектування людиноцентричного майбутнього, де цифрові інструменти слугують засобом зміцнення свободи, а не інструментом відчуження. Перспективи подальших розвідок пов'язані з розробкою етичних протоколів взаємодії суб'єкта з ШІ та вивченням соціально-психологічного комфорту в біоморфних урбаністичних структурах.

КЛЮЧОВІ СЛОВА

етика, Й. Г. Фіхте, суб'єктність, урбаністика, філософія відповідальності, філософія технологій, цифровізація, штучний інтелект (ШІ).

1. Introduction

The rapid progress of digital technologies, artificial intelligence and global communications is changing not only social institutions, but also the very foundations of ideas about responsibility. In the digital space, the boundaries between private and public, individual and collective are gradually blurred, and the usual tools for ensuring responsibility are ineffective. Chairman of the Board of Directors of Google E. Schmidt, together with the founder and director of the Google Ideas Research Center J. Cohen, emphasizes in his book that the Internet is one of the few inventions that remains partially incomprehensible to humanity. What began as a tool for electronically transmitting data between two computers, the size of a room, has evolved into a ubiquitous and multifaceted means of expressing human energy and creativity. The Internet is constantly changing, becoming bigger and more complex every moment. It is a source of both enormous benefits and potentially destructive threats, and only now are we beginning to realize its impact on our world [15, p. 9].

The issue of the relationship between anonymity and control acquires special social significance in modern conditions. On the one hand, anonymity in the digital environment serves as an important tool for protecting privacy, promotes freedom of expression and creates conditions for open criticism of government structures. However, on the other hand, it can also become the basis for impunity, the spread of disinformation and manifestations of deviant behavior. At the same time, the growing trend towards increased digital control by state and corporate practices carries potential threats, including restrictions on civil liberties and violations of fundamental human rights. Today, a significant part of digital communication is carried out in a technological and informational and economic environment, which was impossible to even roughly imagine either in 1791, when the right to freedom of speech was enshrined in the First Amendment to the US Constitution, or in 1859, when John Stuart Mill outlined his ideas about freedom of expression in his work "On Freedom". In this regard, it was impossible to predict what consequences the institutionalization of fundamental communicative freedoms, concentrated mainly around freedom of expression as a right to protection from state interference, could entail, given the specifics of modern digital realities [16, p. 167].

Artificial intelligence (AI) is one of the most significant phenomena of our time, according to O. Ivanova, which radically changes the ways of human interaction with technology and the environment. The rapid development of this field puts forward several new and complex tasks for philosophy, among which ethical challenges related to the preservation and rethinking of the anthropological dimension of human subjectivity are of particular importance. At the center of these ethical and ontological discourses is the human personality with its capacity for self-awareness, free will and moral responsibility [7, p. 72]. At the same time, algorithmic systems are increasingly penetrating various spheres of social activity, generating the risk of depersonalization of human subjectivity and blurring of its autonomous boundaries. Clarification of this problem requires a thorough philosophical dialogue between the humanistic and technological traditions, taking into account the strengthening of the influence of machine solutions. The anthropological dimension in this context aims to explore the essence of man as a subject of thinking, acting and reflection under the influence of the progress of AI. The question becomes urgent whether AI poses a threat to the identity of human subjectivity or, on the contrary, can serve as a means of its transformation. In this regard, the need to discuss the ethical principles of interaction between man and technology is becoming more and more relevant. Maintaining an anthropocentric position in a world that is rapidly transforming in the direction of technological reality requires close attention and comprehensive theoretical understanding.

2. Literature Review

The study of the transformation of responsibility in the context of digital expansion is an interdisciplinary problem encompassing classical philosophy, AI ethics, media philosophy and urban studies. The anthropological risks of AI and the blurring of the boundaries of human autonomy and human presence in the digital world in general have already become the subject of scientific attention by various scientists [7; 3; 16]. Many scientists are focused on issues related to the ethical use of modern technologies, in particular, AI and its impact on various spheres of life and on the person himself as a person and his identical dimensions [4; 9]. The eco-urban and socio-technological dimensions of responsibility are presented in the article by O. Levchenkov [11], where the philosophy of technology is considered as a normative basis for strategic planning of urban space. The issues of biomorphism,

environmental ethics and the relationship between artificial and natural environments in the context of the climate crisis are investigated by M. Orel [13]. Despite a considerable amount of scientific research, there is still a need for an integrated analysis that would connect classical interpretations of a person as a subject with modern mechanisms of algorithmic influence and new models of ethical use of AI, urban infrastructure planning, and virtualization of various spheres of life, which determines the relevance of this article.

3. Problem Statement

The purpose of this article is a socio-philosophical understanding of the transformation of the concept of responsibility in the context of the expansion of digital technologies, algorithmic control and exacerbation of environmental challenges of modern man-made society. An important stage of the work is the analysis of the structural shift in the understanding of freedom of speech in the digital age, which requires justification of the transition from the classical liberal model of the right to protection from interference to the socio-philosophical model of the right to participate in the construction of communication structures. Special attention is paid to the study of the manipulative potential of AI, in particular regarding the political views and preferences of voters. Why is the philosophical heritage of J. G. Fichte opposed to the autonomy of subjectivity and the value of the human personality. The study is aimed at theoretical substantiation of the role of the philosophy of technology and the concept of biomorphism as a normative basis for the design of intelligent urban space, which provides an ethically justified symbiosis of technological progress, social welfare and environmental safety of the sociosphere.

4. Methods and Materials

The methodological basis of the study is a complex of general philosophical and special scientific methods that allow to carry out an integrative analysis of technological transformations in socio-cultural and ethical dimensions. The leading method in the work is the hermeneutic method used to reinterpret the classical philosophical heritage in the context of modern digital realities. The use of the phenomenological approach made it possible to analyze the change in the structure of self-consciousness and identity of the subject in the conditions of algorithmic influence and digital anonymity. The empirical basis of the study is the results of current research on the manipulative potential of AI, as well as regulations related to digitalization. The analysis of the eco-urban aspect and the concept of biomorphism was carried out with the involvement of methods of the system approach and social ecology. The combination of these methods has provided multifaceted coverage of the issue of responsibility, from individual ethical choices to global regulatory regulation.

5. Results and Discussion

Today, social transformations are often united under the concept of digitalization. The first notable reaction to these changes is the emergence of new terms, theories and methodologies. The analysis of modern social transformations shows that most of them today are labeled with the term "digitalization" without an alternative. At first glance, such a large-scale technological shift requires the immediate creation of fundamentally new theoretical frameworks, concepts and research methods. From a purely technical point of view, digitization is the process of converting continuous signals into discrete ones, which is uninformative for humanitarian and socio-philosophical knowledge. Much more important is the social aspect of this process, which, despite its ubiquity, remains conceptually vague and devoid of a clear empirical essence. In our opinion, it is advisable to interpret the modern discourse around digitalization through the prism of organizational theories as a "rationalized myth". Such myths reflect the expectations of the external environment: scientific and social institutions accept the attribute "digital" as a marker of modernity and legitimacy, often neglecting its real theoretical validity. In this context, digitalization appears more as an identity-forming heuristic that structures the political and scientific field, rather than as an independent research category [8]. Critical deconstruction allows us to change the focus of research: instead of chasing changing technological forms, we propose to focus on the constants of human communication and being. The digital changes we perceive are only an occasion to develop a deeper understanding of those fundamental mechanisms of subjectivity and

interaction that remain unchanged. It is this methodological step that allows us to turn to the classical philosophical heritage and current ethical challenges in the fields of freedom of speech, AI, and socio-ecological design of urban space in our further analysis.

M. Werner comprehends the contribution of philosophy in times of digital transformation using the example of freedom of speech. It is about how the digital transformation of communication causes a structural shift: from limitations in the ability to express to limitations in the ability to perceive, gradually exacerbating the problem of perception, which first began to take shape in the age of mass information. This shift exposes the problem of applying traditional, mostly defensive concepts of liberal freedom of speech to the new conditions of digital communication. This can give rise to difficulties, for example, in determining the role and responsibility of the so-called "intermediaries", i.e., platforms and channels that facilitate information exchange. The solution of such issues cannot depend only on the self-regulation of private entities. The role of philosophy in overcoming these challenges is largely determined by the fundamental socio-philosophical positions that underlie its approach to these issues. In contrast to K. Weber's libertarian understanding of digital freedom of speech as a purely freedom of information exchange, the idea of expanding the traditional protective aspect of freedom of speech by supplementing it with the rights to participate (ensuring equal access to communicative opportunities) and the rights to co-creation (joint participation in the construction of communication structures) is proposed. In this context, philosophy can play a meaningful role in accurately delineating such communicative rights within a complex media ecosystem and a multi-level network of functionally differentiated sub-publics, acting as a partner in interdisciplinary dialogue alongside other fields of knowledge. Analyzing digital transformation through the prism of the philosophy of responsibility, M. Werner comes to the conclusion that the traditional liberal model of freedom of speech as a "right to protection from interference" (*Abwehrrecht*) has exhausted its regulatory potential. Because in a situation where digital platforms are turning into "global arbiters of communication", a dangerous vacuum of responsibility arises. Under the conditions of anonymity of digital entities and private ownership of means of communication, control over the truth is actually delegated to algorithms. Therefore, responsibility in the digital age should be based on the reinterpretation of freedom: not just as the absence of censorship, but as the right to fair participation in the formation of communication structures [16, p.160, 177].

At the same time, algorithmic systems are increasingly penetrating various spheres of social activity, generating the risk of depersonalization of human subjectivity and blurring of its autonomous boundaries. Clarification of this problem requires a thorough philosophical dialogue between the humanistic and technological traditions, taking into account the strengthening of the influence of machine solutions. The anthropological dimension in this context aims to investigate the essence of the human being as a subject of thinking, acting and reflection under the influence of the progress of artificial intelligence. The question becomes urgent whether artificial intelligence poses a threat to the identity of human subjectivity or, on the contrary, can serve as a means of its transformation. In this regard, the need to discuss the ethical principles of interaction between man and technology is becoming more and more relevant. Maintaining an anthropocentric position in the world, which is rapidly transforming in the direction of technological reality, requires close attention and complex theoretical understanding [7, p. 72].

In the modern era, when digitalization processes radically transform social structures and affect individual identity, turning to classical philosophy opens up unexpected prospects for analyzing and comprehending these changes. The philosophy of Johann Gottlieb Fichte, a representative of German idealism, is an exceptional source for critical reflection on the challenges and opportunities that arise in the context of social digitalization. The thinker once noted in one of his speeches that a person cannot be inherited, sold, or donated, and could never become someone's property, because he belongs to himself and must remain so. In her innermost essence, there is a divine spark that elevates her above the animal world, making her a fellow citizen of the universe, the first link of which is God, that is, her conscience. It is this inner conscience that teaches a person to unconditionally and categorically desire one and not the other. She makes this decision completely freely, without outside coercion. If a person must obey the voice of his conscience, which is his absolute moral law, then external influence on him is impossible; It must be free from any interference. That is why no external force can prevail over its will. It must act in accordance with its internal law and remain free. The only source of power for a person is his internal law, and if he allows external authority to be imposed on him, he will contradict his own moral principle, erasing his humanity and slipping to the level of animals [2].

His reflections on the nature of self-awareness, intersubjectivity, and ethical responsibility provide valuable theoretical tools for analyzing issues related to individual identity in a digital world. In addition, judgments about the phenomenon of recognition and ethical responsibility contribute to a deep understanding of the processes of constituting the subject and the community. These ideas are of particular importance in today's world, where interaction is increasingly carried out through digital technologies. Digitalization processes, which are becoming more and more widespread, cause the transformation of social interactions, opening up both new opportunities and a number of challenges for society. Modern digital technologies contribute to the emergence of innovative forms of network communication and the creation of new communities. At the same time, raising questions about established notions of identity, recognition, and ethical behavior. The central thesis for J. G. Fichte about the need to be recognized by others as a fundamental condition for the formation of self-consciousness provides significant guidelines for analyzing the processes of digital identity formation and the role of social media platforms in modern society. His reasoning on mutual recognition and ethical responsibility within the community offers an important conceptual toolkit for understanding the ethical implications of digital interactions and shaping appropriate behavioral strategies in the digital reality. J. G. Fichte's commitment to education and cultural development as fundamental factors of social progress and ethical capacity opens up important prospects for analyzing the role of digitalization in modern education and cultural processes. His belief that individual freedom and ethical subjectivity are shaped and strengthened through education and active participation in cultural life is echoed in the current debate about democratizing access to knowledge through digital technologies. At the same time, it allows us to critically reflect on both the scale of opportunities and the risks associated with the implementation of digital models of education [10].

The rapid development of AI is fundamentally transforming the political arena, breaking the established rules of the game. Modern AI technology not only improves traditional tools of political practice but also offers fundamentally new opportunities for both strategic planning and, unfortunately, the manipulation of public opinion. At the present stage, AI functions as a powerful analytical tool that allows you to conduct research on social and political trends with unprecedented accuracy, predict election results, and optimize all aspects of communication with voters. AI has significant potential to transform electoral processes, contributing to their efficiency, transparency, and security. In particular, AI tools can be used to automate voter verification and improve the accuracy of vote counting, which can ultimately provide more reliable election results. However, along with these benefits, there are significant ethical risks, including data privacy violations, the spread of disinformation, manipulation of citizens' electoral behavior, and bias in AI algorithms. In order to realize the positive potential of AI and, at the same time, minimize possible risks, as I. Maine and E. Bukohwo argue, it is necessary to implement a reliable regulatory framework. It provides for the priority of principles such as transparency, fairness and accountability. The priority tasks in this case are to protect voters' personal data, overcome disinformation, and ensure that AI systems are acceptable. It is also crucial to develop clear ethical standards and offer citizens access to educational materials about AI technologies. A balanced and responsible approach to the use of AI can not only optimize the results of the electoral process, but also ensure that elections remain free, fair and transparent even in the age of digital transformations. In the future, it is expected to develop an ethical framework based on trust, as well as the introduction of blockchain technologies for verification and certification of electoral processes and documents, which will further strengthen their integrity [12, p. 3218].

However, the authors of the study "The levers of political persuasion with conversational artificial intelligence" found that AI chatbots can influence voters' political beliefs. The most effective means of increasing the persuasiveness of AI were post-learning methods and strategies through prompting, which increased the level of persuasion by 51% and 27%, respectively. These advantages often exceeded those achieved by substantially expanding the model. Personalization of arguments based on user data, on the other hand, had a relatively weak impact on AI's ability to persuade. The main factor that ensured a high level of persuasiveness was the density of information: the most successful models filled their arguments with a significant amount of factual data. At the same time, a disturbing trade-off between persuasiveness and accuracy was observed: the same approaches that contributed to the growth of persuasiveness, in particular post-learning and information-oriented prompting, often led to a decrease in the actual accuracy of the information created. The fundamental mechanism of AI-based political manipulation is content personalization, especially within social media. Modern algorithms are able to analyze every aspect of user activity, from search queries and preferences to online interactions.

Based on this detailed profile, AI technologies generate targeted advertising messages and informational materials that resonate with the specific preferences and beliefs of individual voters. The effectiveness of this approach increases exponentially due to the impact on the emotional level of communication, which goes beyond rational perception. This contributes to the establishment of a powerful emotional connection between the voter and the proposed ideas or policies. However, this process also has significant challenges. The use of AI in politics deepens existing social divisions, increasing the risk of social polarization. This is an important consequence that cannot be ignored in today's digital world. This study demonstrates that the persuasiveness of modern AI systems, as well as technologies of the near future, will be largely determined not so much by the scale of models or the level of personalization, but by the use of post-training methods and prompting techniques. It is these approaches that allow large language models (LLMs) to efficiently generate relevant information in dialogue mode. At the same time, the analysis revealed a potentially troubling trade-off: optimizing AI to achieve persuasiveness could lead to greater use of misleading or false information. These findings form an empirical framework for developers and policymakers, providing them with tools to identify and solve problems related to the application of AI for persuasion. In addition, it is critically important to implement preventive measures that would ensure a balance between the legitimate use of AI in the political sphere and minimizing the risks of manipulation and the spread of disinformation [5].

AI has significantly transformed modern election campaigns, significantly influencing their mechanism and strategies. Today, AI technologies are actively used to accurately target voters, create personalized content, optimize communication processes, and even, unfortunately, spread misinformation. In response to these challenges, many countries around the world are working on developing a legislative framework to regulate the use of AI in electoral procedures. For example, in the United States, there is currently no detailed legislative framework at the federal level that would regulate the use of AI. But several important initiatives have already been proposed:

- AI Transparency in Elections Act: Requires reporting on the use of AI in political advertising. Political messages containing images, audio, or video created or significantly modified using generative AI should have a clear warning about the use of such technologies. The draft law clarifies that content is considered to have been substantially altered if AI has been used to create or edit it significantly, except for minor changes, such as cropping or color correction;

- Protect Elections From Deceptive AI Act: Aims to prohibit the use of misleading AI-powered content in federal elections. If the voice or image of a federal candidate has been used in such material, he or she may file a civil lawsuit seeking to prohibit the further distribution of harmful content or seek damages, including compensation for legal fees and litigation;

- Honest Ads Act: aims to update election campaign finance legislation to reflect the new realities of digital advertising.

The implementation of the above initiatives is accompanied by significant challenges, such as the need to align them with freedom of speech and resistance from the tech industry. In addition, the jurisdiction of federal agencies such as the Federal Communications Commission (FCC) and the Federal Election Commission (FEC) remains limited. Other countries are also developing and implementing relevant regulatory legislation. For example, Bill C-63 (2024) in Canada aims to combat the spread of harmful content on the Internet. It covers, in particular, the issue of deepfakes, which can affect the course of electoral processes or damage the reputation of individuals. And the Australian government has introduced a draft law to amend communications legislation called the Communications Legislation Amendment (Combatting Misinformation and Disinformation) Bill 2024. However, the draft law caused a lot of criticism related to accusations of possible restrictions on freedom of speech [14].

The European Union has established itself as a global leader in shaping the regulatory framework for AI regulation. The AI Act (2024) structures AI systems according to risk levels and defines requirements for their security and transparency. AI systems used in electoral processes are classified as high-risk and require careful regulation. The EU's approach to AI regulation is distinguished by its comprehensiveness and proactivity, being an integral component of the overall digital development strategy. European regulators are focusing on preventing potential risks, not just responding to their consequences. The AI Act is an example of the EU's commitment to a comprehensive approach to regulation that covers all Member States [1].

The European AI Act aims to promote the responsible development and implementation of AI technologies within the EU. The document aims to minimize potential risks to the health, safety and rights of citizens. It sets clear requirements and responsibilities for developers and users of different

types of AI applications. Companies seeking to operate or continue their activities in the EU market are required to prepare to comply with the new rules. The AI Act provides for a single EU-wide legal framework based on a forward-looking definition of AI and a risk-based approach. Most AI systems, such as spam filters or video games with AI elements, do not have additional requirements. Companies can implement voluntary codes of conduct on their own. Certain systems, such as chatbots, must notify users that they are interacting with AI. Also, AI-generated content should be clearly labeled. While systems related to AI-based medical software or personnel selection solutions must meet stringent requirements. This includes risk mitigation measures, high-quality datasets, transparent information for users, ensuring human oversight, and other measures. It is unacceptable, according to the law, to use AI technologies for purposes such as social scoring of citizens by governments or companies. It is considered a threat to basic human rights and is strictly prohibited. The law laid the foundation for the ethical and safe development of AI in the EU countries, taking into account both its opportunities and risks [6].

In addition to paying attention to the philosophical understanding of the changes caused by the technological development of the late twentieth and twenty-first centuries related to freedom of speech and political risks, it is worth emphasizing the environmental aspects of such technologization. In today's international context, there is a clear trend of integrating environmental innovations with digital technologies in order to promote the sustainable development of urban areas. Of particular importance in this process is the field of electromobility, which is recognized as a fundamental direction for reducing the level of harmful emissions and creating a "green" energy infrastructure in the context of urbanization. The effectiveness of the implementation of the principles of electromobility is largely determined by the provision of appropriate methods of energy production and storage, as well as the possibility of integrating renewable energy sources into large-scale transport systems. Practical experience in installing environmentally friendly charging stations (CPRs) shows several positive consequences, including reducing greenhouse gas emissions, optimizing resource consumption and improving overall energy efficiency.

In addition to the obvious positive advantages, this also gives rise to new challenges related to the need to develop reliable electrical infrastructure, ensure cybersecurity in networks, and introduce standardization and proper technical support. All of the above necessitate coordinated actions on the part of government agencies and the corporate sector. The further development of the digital society is increasingly associated with the use of the powerful potential of AI. The approach to the mass use of AI for ecological and human-centered urbanization involves not only the automation of certain procedures, but also the formation of a qualitatively new approach to the organization and functioning of urban systems. The use of AI technologies to carry out high-precision analysis of huge data arrays in real time, which in turn contributes to a prompt response to social and environmental challenges. This process includes both the optimization of transport logistics to reduce environmental pollution and the introduction of smart energy management systems, which have the potential to significantly reduce the anthropogenic burden on ecosystems. An important element of this approach is the data that serves as the basis for their collection, processing and targeted use in the context of urban planning.

Within the framework of the smart city paradigm, which is based on data management, all components of the urban ecosystem, from transport infrastructure to utility systems, are integrated into a single digital information space. This helps to increase the transparency of management processes and makes it possible to more effectively assess and manage potential risks, in particular those of an environmental nature. However, along with the many advantages of such a transformation, there are also serious challenges. The issues of confidentiality and ethics are becoming more and more relevant, because the environment that is constantly monitored can limit the privacy of citizens and will require significant changes in legal regulation.

In the context of the philosophy of technology, researchers focus on the importance of integrating the technological aspect into the basis of philosophical research. This allows for a deeper understanding of societal transformations and their consequences. If earlier technology was perceived mainly as an applied science, today its impact goes far beyond these limits, encompassing significant anthropological and sociocultural aspects. For example, the philosophy of technology can not only contribute to a deeper conceptual understanding of technological progress but also lay a normative basis for the development of technological projects and strategic decision-making. This approach avoids the gap between theoretical philosophical discussion and the practical use of innovations, which often causes insufficient attention to ethical and environmental issues in the creation of new technologies [11, p. 133].

Given the modern pursuit of economic benefits and competitive advantage, representatives of global elites often resort to actions that degrade and destroy natural systems. Such interference significantly damages public health and threatens the planet's ecological integrity. O. Spengler once predicted a conflict between technology and culture, fearing that uncontrolled technological progress could lead to the destruction of cultural traditions. M. Heidegger also drew attention to the fundamental influence of technological progress, considering it as a force capable of significantly transforming human existence. K.-O. Apel emphasized that scientific achievements in the conditions of technological progress pose a serious ethical challenge for humanity, requiring collective solidarity and responsibility for the consequences of this development. Similar opinions were expressed by representatives of the humanistic direction of philosophy, such as A. Maslow, who called for the creation of a humanistic philosophy of biology, as well as R. Atfield, who laid the foundations of environmental ethics. These studies highlight the importance of rethinking human interaction with the environment and ethical responsibility for its condition. The contribution of the Chicago School of Sociology to the development of philosophical and social understanding of urban problems deserves special attention. Its researchers, who called themselves humanistic ecologists, emphasized that the artificial urban environment and natural landscapes are closely interconnected with social structures and affect the formation of a sense of comfort and well-being of urban residents. Modern Western researchers of biomorphism, including S. Bergen, T. Bitley, M. Cadenaso, P. Kindel, R. Costanza, P. Nieman, D. Friedli, study the relationship between living and artificial nature in the context of the aggravation of the environmental crisis, climate change, and natural disasters, which are aggravated by digitalization and virtualization of life processes. Thus, the topic of biomorphism is gradually gaining popularity in the humanitarian sphere, but there is still a lack of a socio-philosophical approach for a deeper understanding of this phenomenon. There is also a lack of integration of theoretical developments with practical analysis of urban everyday life [13, p. 160-162]. The philosophy of the city should be aimed at interaction with other areas of empirical urban planning, such as the theory of the city. Thanks to this, it not only adopts new knowledge but also actively contributes to the development of other disciplines, offering primarily conceptual analysis and perspectives.

6. Conclusions

The perception of digital transformation as an ideological construct that imitates scientific objectivity allows us to go beyond purely technological determinism and focus on existential constants that determine the essence of human interaction, regardless of the tools for its implementation. The classical concepts of liberal freedom, focused on passive protection against interference, turn out to be relevant only partially, giving way to a dynamic model of communicative participation, which involves the active involvement of the subject in the construction of network architecture and overcoming the algorithmic monopoly on truth. In our opinion, the intellectual heritage of German idealism is of particular importance, in particular Ficht's ideas about the self-worth of the "I" and the role of intersubjective recognition, which serve as a reliable conceptual shield against the leveling of the personality in the conditions of total datafication. The empirically confirmed impact of dialogue systems on voters' beliefs actualizes the need for a transition to proactive regulatory regulation, embodied in modern international acts based on the priority of human oversight and transparency of machine decisions. Finally, the architectonics of the future sociosphere is seen in the implementation of biomorphic strategies for urban development, where digital tools and environmental innovations are subordinated to humanistic guidelines, transforming the philosophy of technology from an abstract discipline into an effective methodological framework for creating a safe and harmonious living space. Further scientific research in this direction should focus on the empirical verification of ethical protocols for human interaction with generative AI models, in particular in terms of their impact on the cognitive autonomy of the individual.

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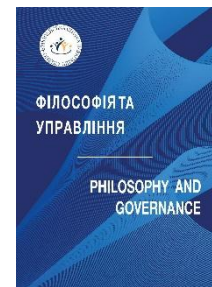
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The Relationship Between Natural and Digital Human Rights: Problems of Legal Definition

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ABSTRACT

This paper delves into the link connecting innate and digital human entitlements via a philosophical viewpoint. Special attention is paid to viewing digital prerogatives as a potential continuation of established notions of innate law. The chief difficulties mentioned concern the lack of a common method for specifying a person's digital entitlements and the intricacy of harmonizing these with natural rights. The aim of this study is a deep philosophical and legal comprehension of the bond between original and digital human entitlements, and to confirm the workability of creating a global understanding of digital rights. The research utilises dialectical, historical-philosophical, comparative-legal, formal-legal, systemic, hermeneutic, axiological, and generalisation techniques. The outcomes showed that an individual's digital entitlements surface as a fresh facet of protecting volition and privacy amid digitalisation; they partly uphold the notion of inherent rights, yet concurrently necessitate their separate legal and philosophical foundation due to the distinct features of the digital realm. The fundamental essence of human entitlements as a philosophical and legal concept within jurisprudence is clarified. The substance and chief characteristics of innate human rights are examined, and their standing in the contemporary legal structure is established. The development of scientific methods for comprehending human entitlements and their impact on shaping the contemporary notion of rights is examined. The substance and juridical essence of electronic human entitlements as an element of information statute are unveiled. The primary categories of digital entitlements are established, and their characteristics are described amid society's digitalization. Worldwide legal standards regarding human rights are examined. The link between inherent and electronic human privileges is explored, with their connection and potential ordering ascertained. Difficulties within the judicial definition of digital human privileges are noted, principally the lack of a uniform approach to their grasp. Disagreements between local and worldwide laws concerning the control of digital entitlements are assessed. The potential for merging legal positivism with inherent law perspectives during the specification of digital rights is evaluated. Conceptual frameworks for grasping digital rights as a fresh phase in the progression of personal freedoms amid worldwide digital metamorphosis are sketched out.



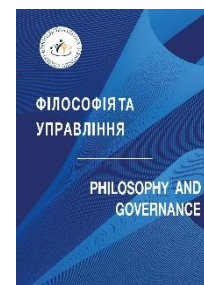
KEYWORDS

human dignity, freedom, digital environment, human identity, personal autonomy, natural and digital human rights, international standards, legal regulation, legal definitions.



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Співвідношення природних та цифрових прав людини: проблеми правової дефініції

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СТАТТЯ	АНОТАЦІЯ
Дослідницька DOI: 10.70651/3041-248X/2026.2.11 Отримана: 08.01.2026 р. Прийнята: 11.02.2026 р. Опублікована: 15.02.2026 р. Авторське право © 2026 автора  Цей твір ліцензовано на умовах Ліцензії Creative Commons «Із Зазначенням Авторства – Некомерційна 4.0 Міжнародна» (CC BY-NC 4.0). OPEN  ACCESS	У статті досліджено співвідношення природних і цифрових прав людини крізь призму філософії. Особливу увагу приділено осмисленню цифрових прав як можливого продовження класичних ідей природного права. Ключовими труднощами виокремлено відсутність спільного підходу до визначення цифрових прав особистості, складність їх узгодження з природними правами. Метою дослідження є усебічне філософсько-правове осмислення співвідношення природних і цифрових прав людини та обґрунтування можливості створення загальної дефініції цифрових прав. У дослідженні використано діалектичний, історико-філософський, порівняльно-правовий, формально-юридичний, системний, герменевтичний, аксіологічний та метод узагальнення. Результати дослідження показали, що цифрові права особистості постають як новий вимір захисту волі та приватності в умовах цифровізації. З'ясовано сутність прав людини як філософсько-юридичної категорії у межах правової філософії. Проаналізовано сутність і ключові ознаки природних прав людини та визначено їх місце в сучасній правовій системі. Досліджено еволюцію наукових підходів до розуміння прав людини та їх вплив на формування сучасної концепції прав. Розкрито зміст і правову природу цифрових прав людини як складової інформаційного права. Визначено основні види цифрових прав та охарактеризовано їх особливості в умовах цифровізації суспільства. Проаналізовано міжнародно-правові стандарти у сфері прав людини. Досліджено співвідношення природних і цифрових прав людини, встановлено їх взаємозв'язок та можливу ієрархію. Виявлено проблеми правової дефініції цифрових прав людини, зокрема, відсутність єдиного підходу до їх тлумачення. Проаналізовано колізії між національним і міжнародним правом у сфері регулювання цифрових прав. Оцінено можливості поєднання юридичного позитивізму з природно-правовими підходами у процесі визначення цифрових прав. Окреслено концептуальні підходи до осмислення цифрових прав як нової стадії еволюції прав особистості в умовах світової цифрової трансформації. КЛЮЧОВІ СЛОВА людська гідність, свобода, цифрове середовище, людська ідентичність, автономія особи, природні та цифрові права людини, міжнародні стандарти, правове регулювання, правові дефініції.

1. Introduction

Virtual reality, as a new dimension of human existence, creates a unique space for the formation of personality. The digital environment poses several difficult tasks for a person: on the one hand, the danger of interference in personal life increases, and on the other hand, there are problems of guaranteeing equal access to digitalization. Under such circumstances, the established ideas about the rights of the individual, which have crystallized in the material world, require revision and adaptation to the peculiarities of digital existence [7, p. 5].

Digital reality is becoming not only a technical, but also a philosophical challenge: it forces us to reconsider the very essence of human freedom, autonomy and dignity, raises questions about the balance between innovation and ethical principles, and also requires the formation of new categories of legal and moral protection that take into account the dynamics of the digital environment. The formulation of the problem of defining digital human rights as a new category in law is due to the rapid digitalization of society and the emergence of new technologies that radically change the ways a person interacts with information, other people and the state. Traditional concepts of human rights formed in the physical world do not always adequately reflect the challenges of the digital environment, in particular, algorithmic control, collection and processing of personal data, artificial intelligence, platform economy, and digital surveillance [4, p. 183].

Digital rights of the individual appear as a response to these challenges and must guarantee the protection of the will, privacy, and autonomy of the individual in the digital environment. At the same time, their legal definition encounters numerous difficulties. Thus, digital rights need to be formulated as a separate, autonomous category that preserves the philosophical core of natural rights, but takes into account the specifics of the digital environment and new ways of implementing and protecting human rights. The problem of rethinking human rights in the context of technological transformation is that the classical concepts of freedom, dignity and privacy were formed in the physical, "real" world and do not always adequately reflect the new challenges of the digital environment [9]. With the advent of the Internet, artificial intelligence, big data and algorithmic control, there is a need to revise traditional approaches to human rights, because digital technologies create new forms of interference in private life, new opportunities for manipulation and inequality of access to information [4, p. 183]. This forces the legal system and the philosophy of law to seek a balance between the protection of fundamental values and the development of technology, rethinking the very principles of human rights: their universality, limits and ways of implementation. At the same time, the task arises to determine which human rights should be logically transformed in the digital dimension, and which require the creation of new, specialized categories – digital rights that can ensure the dignity and autonomy of the individual in the context of global technological transformation.

Philosophical and legal approaches to understanding the will, dignity and autonomy of a person are based on two interrelated planes: ontological and normative [7, p. 5]. From a philosophical point of view, will is considered the ability of a person to independently determine their own actions and life priorities, and autonomy is considered an internal ability for self-government and moral responsibility. Dignity in this context is a cornerstone value that outlines the inviolability of a person as a subject of law, regardless of external circumstances [24]. From a legal point of view, freedom, dignity and autonomy are embodied in specific legal guarantees and human rights: the right to privacy, freedom of speech, the right to choose a lifestyle and participate in public life. Rethinking these categories in modern conditions of digitalization requires taking into account the specifics of new forms of interaction and control [18]. The synthesis of philosophical and legal approaches allows not only to formulate the content of fundamental rights in the digital age, but also to create the basis for the emergence of digital human rights that ensure the realization of freedom, dignity and autonomy in the new technological conditions.

2. Literature Review

Recent years have shown a rapid increase in scientific interest in the relationship between natural human rights and the so-called "digital rights", which is due to the digitalization of social relations, the development of artificial intelligence, big data and the platform economy. In the works of D. Byelov and M. Bielova [7, p. 5], digital rights are perceived as a continuation of natural rights. A similar position is taken by K. Bieliakov et al. [4, p. 183], who emphasize the integrative nature of digital rights.

J. Cohen [9] analyzes the transformation of the right to privacy under the conditions of algorithmic governance. In the European scientific tradition, quite considerable attention is paid to the normative consolidation of electronic rights. In particular, the works of K. Yeung and M. Lodge [24] studied the impact of EU regulations (GDPR, AI Act) on the change of human rights. Y. Shany [18, p. 461] studied the transformation of international law, in particular, human rights under the influence of digitalization. He proposed the concept of “three generations of digital rights” and proved that digital rights are not separate, but are part of the existing system of international law. S. Shaelou and Y. Razmetaeva [17, p. 567] focused on the impact of artificial intelligence systems on fundamental human rights. Their work is to form an approach to combining the digital legal order with the principle of the rule of law and European heritage. A. Dukalskis [11, p. 334] examines the political influence of states on changing human rights standards in global institutions. A. Ahmed Taha [1, p. 429] focused on international legal mechanisms for the protection of human rights in the digital age. S. Tillaboev [20, p. 45] has actually classified digital human rights and defined their main types. G. Teravosa and S. Nagari [19, p. 1] investigated digital constitutionalism and the adaptation of human rights to technological changes.

Thus, the scientific discussion is at the stage of forming conceptual foundations. The proposed article aims to overcome these gaps by clarifying the legal definition of digital rights and substantiating their relationship with natural human rights, which will form a more holistic theoretical model in this area.

3. Problem Statement

The purpose of the study is to philosophically and legally comprehend the content and boundaries of freedom, dignity and autonomy of the individual, as well as to analyze the transformation of these fundamental values in the digital environment to clarify the correlation of natural and digital human rights and substantiate the prospects for their generally accepted definition.

4. Methods and Materials

The study was based on a comprehensive review of scientific works related to the theoretical, legal and philosophical aspects of natural human rights, the development of the concept of digital rights, the problems of digitalization of society, as well as the issues of freedom, dignity and autonomy of the individual in the context of modern technological transformations.

One of the most important research methods was comparative legal analysis to outline different legal approaches to the definition of “human rights” and “digital rights”; dialectical method for analyzing the development and relationship of natural and digital human rights, historical and philosophical method for studying the evolution of concepts of natural rights; formal legal method for the study of legal norms in their “pure” form; a systematic method for considering human rights as a single structure; hermeneutic method for interpreting the content of basic concepts and categories; axiological method for studying the value foundations of human rights and a method of generalization for formulating conclusions.

5. Results and Discussion

The idea of natural rights in classical philosophy is based on the belief that human rights are inseparable from human nature and do not depend on the state or legislation. John Locke considered natural rights as rights to life, liberty and property; he emphasized that their protection is the main goal of the creation of any state, and the violation of these rights is morally unacceptable and legitimately allows resistance to tyranny. Jean-Jacques Rousseau emphasized the freedom and equality of people [21, p. 438]. Human dignity as an ontological basis of rights means that the value and inviolability of a person are recognized as a fundamental characteristic of his being, regardless of external circumstances or legal norms. In a philosophical sense, it is an intrinsic property of a person that determines their right to respect, self-realization and protection from any form of humiliation or discrimination. The issue of the universality of natural rights causes active discussions in the philosophy of law and international law. On the one hand, natural rights are proclaimed as the Universal Declaration of Human Rights [18, p. 461]. On the other hand, in practice, the implementation of these rights largely depends on historical, social, economic and political conditions, which calls into question their absolute universality.

Many researchers emphasize that the universality of natural rights is an ideal that serves as an ethical and legal guideline rather than a complete reality, because specific forms of protection and guarantees of human rights vary from society to society. However, it is the desire for universality that determines the basis of international human rights standards and stimulates the development of a global legal culture, forming a common basis for the protection of freedom, dignity and autonomy of the individual in various contexts, including the digital age [17, p. 567].

The consolidation of natural rights in international legal acts, in particular in the Universal Declaration of Human Rights of 1948, became an important stage in the formalization of the ideas of natural law in the global legal space. The Declaration declares that all human beings are born free and equal in dignity and rights, recognizing the fundamental rights – to life, liberty, personal integrity, participation in public and political life – as universal and inalienable [22]. This document establishes the legal basis for human protection at the international level [21, p. 438]. In the context of digital transformation, there is a need to rethink human rights, because classical concepts of natural rights do not always adequately correspond to the specifics of algorithmic control, collection and processing of personal data, artificial intelligence and digital platforms. The digital environment not only changes the forms of implementation of fundamental rights, but also gives rise to new categories – digital human rights, which should ensure the protection of dignity, freedom and autonomy of the individual in the new technological conditions [1, p. 429].

The digital environment is becoming a new dimension of human identity. Virtual platforms, social networks, digital services and online communities allow a person to spread their own ideas, maintain social connections and create virtual projections of themselves, which often become an extension of the physical self [17, p. 567]. In this context, digital identity is not a simple reflection of real life, but acts as an autonomous component of the individual, which has its own rights, duties and vulnerabilities. On the one hand, the digital environment expands the possibilities of self-expression and autonomy; on the other hand, it increases the risks of manipulation, interference with privacy and control by the state or corporations [11, p. 334]. According to Michel Foucault's ideas, power manifests itself in complex networks of social practices, norms and discourses. In the digital age, these ideas take on a new meaning: algorithms, big data, artificial intelligence, and digital platforms act as tools of “distributed power” that form models of action, assess risks, and regulate user behavior [14, p. 146].

This leads to the transformation of the subject of law, which emphasizes the need to rethink the legal mechanisms of protection. In this regard, there is a need for the formation of digital human rights, which take into account new forms of power and control, ensure the protection of privacy, freedom and autonomy of a person in the context of digital surveillance and algorithmic regulation of social actions [18, p. 461].

The modern digital environment creates new challenges for the usual understanding of freedom. In this light, freedom ceases to be a full-fledged right, turning into the subject of delicate control mechanisms, which often remain invisible to the person of the law. The task is complicated by the fact that digital surveillance is carried out not only by the state, but also by international technology companies, which accumulate and process significant amounts of data, outline patterns of behavior and create conditions for social and financial influence [21, p. 334]. This creates a paradox: man formally remains free, but his freedom is largely determined by algorithmic structures, which requires a rethinking of human rights in the digital age.

In this regard, there is a need to form digital human rights that would ensure a balance between the development of technology and the protection of autonomy, privacy and freedom of the individual, establishing new boundaries of power and control in the digital space. Digital human rights arise as a necessary response to fundamental changes taking place in the way of existence of a modern person in the context of digital transformation [7, p. 5]. Artificial intelligence, algorithmic systems, big data, and global digital platforms not only change social, economic, and communication practices but also affect the very essence of human existence, creating new existential challenges [19, p. 1]. They do not replace natural rights, but act as their logical continuation in the new conditions, reflecting the need for the right to adapt to the existential challenges of the digital age and protect a person both in the physical and virtual worlds.

The digital transformation of modern society creates new conditions for human existence, in which interaction, communication and self-expression take place not only in the physical, but also in the digital environment. Digital reality forms a unique space of existence where the social, cultural and professional roles of an individual are realized, while exposing them to algorithmic control, data

collection and processing, artificial intelligence and global platforms. In these conditions, there is a need to rethink the traditional concepts of human rights: freedom, dignity and autonomy of the person, which have historically been formed in the physical world [15, p. 11]. Digital human rights appear as a new category that ensures the protection of fundamental human values in the digital space and defines the limits of the influence of the state, corporations and algorithmic systems (Table 1).

Table 1. International Standards and Practice of Legal Regulation of Digital Rights

Adjustment level	Organization / State	Basic Standards / Documents	Key provisions
International	Council of Europe	Digital Rights Resolutions and Recommendations	Personal Data Protection, Countering Algorithmic Discrimination, Digital Security of Citizens
	UN	Resolutions of the General Assembly and Human Rights Committees	The right to access information, freedom of expression in the digital environment, protection from digital surveillance
European Union	EU	GDPR (General Data Protection Regulation)	Privacy standards, control over the processing of personal data, rights of data subjects
USA	United States (federal and state level)	Privacy and data protection laws (e.g. CCPA)	Personal data protection, digital privacy, limitations of algorithmic profiling
Asia and Africa	China, India, South Africa	National laws on cybersecurity, data regulation, and digital platforms	Protection of digital freedoms, cybersecurity, regulation of online content; The level of implementation of digital rights varies

Source: Formed by the author based on [5, p. 110; 3, p. 106; 8, p. 635]

Digital human rights are a logical continuation of natural rights in new technological conditions and, at the same time, require their own legal and philosophical definition. The key aspect that will be taken into account is ensuring a balance between the development of digital technologies and guaranteeing fundamental human rights, as well as the adaptation of international standards to the challenges of the digital age [1, p. 429]. In the modern world, rapid digitalization is changing fundamental aspects of human existence, creating new conditions for the implementation of human rights and freedoms. Traditional natural rights, which have historically been formed on the basis of the concepts of inherent dignity, freedom and autonomy of a person, are increasingly interacting with digital rights that arise as a response to the challenges of the information and technological environment [3, p. 106].

The correlation of natural and digital human rights is becoming a central issue of modern jurisprudence and philosophy of law, since digital rights do not replace classical rights, but expand their scope and require a rethinking of protection mechanisms. The relevance of the study is due to the need to form a comprehensive legal system that can ensure the implementation of fundamental human rights both in the physical and digital environments, as well as guarantee a balance between individual freedom and technological control [14, p. 146]. Digital human rights are seen as a logical extension of natural rights in the digital environment, where traditional freedom, autonomy and dignity of the individual are realized through new technological tools.

With the growth of digital technologies, there is a phenomenon of duplication and expansion of the content of classical rights. For example, freedom of speech is implemented both in the physical environment and in the online space, which creates a need to determine the limits of responsibility, admissibility of speech and restrictions on digital platforms. Similarly, the right to privacy is complemented by digital rights to the protection of personal data, and the right to access information is complemented by digital rights to information security and transparency algorithms [3, p. 106]. Such a "multiplicity" of rights can lead to conflicts in legislation, ambiguity of interpretations and difficulties in protecting human rights in real and digital spaces at the same time.

Digitalization and the application of artificial intelligence (AI) and big data technologies pose new challenges for human rights. Algorithmic assessment of user behavior, automated decision-making in the financial, educational, or medical fields, as well as modeling social processes, can restrict freedom, create risks of discrimination, and violate the right to privacy. In addition, the collection and processing

of large amounts of data often take place without the explicit consent of the user, which calls into question the effectiveness of traditional mechanisms for protecting rights [6, p. 228].

In such conditions, there is a need for the formation of specific digital rights. International standards – recommendations of the Council of Europe and UN resolutions, serve as a guideline for states to adapt national legislation to these challenges. The correlation of natural and digital human rights reflects the modern process of adaptation of classical concepts of freedom, dignity and autonomy to the conditions of the digital environment [2, p. 130]. Natural rights enshrined in national constitutions and international acts, such as the Universal Declaration of Human Rights of 1948, serve as the basic basis for the formation of digital rights. They define fundamental values that digital rights only expand or detail in new technological conditions [25].

Digital rights can be seen as derivatives of natural rights that arise in response to specific challenges of the digital environment – personal data protection, digital privacy, freedom of access to information and autonomous management of digital identity [16]. Digital rights arise as derivative or detailed implementations of these fundamental freedoms in the digital environment, providing protection of the individual from algorithmic control, digital surveillance and privacy violations.

Table 2 demonstrates the logical relationship between natural and digital rights, provides examples of international standards and national legislation governing digital freedoms, and reflects a possible hierarchy of these rights. It allows you to clearly see how digital rights specify and complement traditional human rights, ensuring their relevance in the modern information environment.

Table 2. Correlation of natural and digital human rights

Natural law	Digital law	Relationship / Comment	Hierarchy/role in the system
Right to privacy	Right to digital privacy, protection of personal data	Digital law details classical law, adapting it to the online environment	Natural law is basic, digital law is a tool for its implementation
Freedom of speech	The right to freedom of expression in the digital space	Ensures the implementation of freedom of speech through online platforms	Natural law is fundamental, digital – concretization in the digital environment
Right of access to information	The right to digital access to knowledge and information resources	Digital law expands traditional access, taking into account the Internet and digital databases	Digital Law as a Mechanism for the Practical Implementation of Natural Law
The right to autonomy and self-determination	The right to control one's own digital identity	Protects the autonomy of the individual in the face of algorithmic control and digital surveillance	Digital law ensures the practical implementation of autonomy in the digital environment
The right to dignity	The right to protection from digital manipulation and cyberbullying	Covers the moral and social aspects of dignity in the online space	Digital law complements natural law, ensuring its relevance in the digital world

Source: Formed by the author based on [16; 13; 12]

Natural rights remain the fundamental foundation, while digital rights act as tools for the practical implementation of these freedoms in the digital space. The hierarchy of rights requires adaptation of classical principles and simultaneous adherence to international standards [22]. International standards, such as the GDPR, UN Resolutions and recommendations of the Council of Europe, establish general principles for the protection of digital freedoms [26, p. 268]. Similarly, freedom of speech and digital access to information in some states may be limited by censorship or security norms that contradict international standards.

Such conflicts emphasize the need for harmonization of national and international legislation, the creation of mechanisms for harmonization of norms and effective international instruments for the control and protection of digital rights. Without this, there is a risk of legal gaps, violations of digital freedoms and inequality in access to human rights protection in the global digital environment [3, p. 106]. In addition, there are difficulties with the classification of digital rights. Some researchers divide them into derivatives of natural rights (the right to digital privacy, freedom of speech on the Internet), others – into independent categories that regulate the interaction of a person with information systems, algorithms and artificial intelligence [10, p. 59]. The lack of a unified classification system complicates

both the practical implementation of users' rights and the formation of coordinated international regulation.

This creates additional risks for the effective protection of digital rights. Solving this problem requires an interdisciplinary approach that combines legal, philosophical and technological aspects, as well as the development of unified terms and classifications of digital rights at the international level. D. Bielov et al. [5, p. 110] emphasize that the lack of uniform standards of digital rights leads to conflicts between national and international norms, in particular in the field of personal data protection and freedom of expression in the digital space. M.A. Airapetov notes that these collisions create legal uncertainty for users and emphasize the need to harmonize national legislation with international standards [2, p. 130]. I.V. Zakharchuk [26, p. 268] emphasizes that national laws must take into account international norms of digital rights. Kh. Didukh states that a comparative review of Ukrainian and European legislation reveals differences in the use of words and grouping of digital rights [10, p. 59].

T. Yamnenko and D. Misko emphasize that the variety of terms – “digital rights”, “information rights”, “electronic rights” – complicates the creation of a systematic classification and harmonization of national and international legislation [23, p. 101]. K. Bieliakov et al. [4, p. 183] note that digital rights have a dual character: they are both derived from natural rights and specific to the digital environment, which requires a clear definition of their nature and boundaries of application.

Legal positivism focuses on the formal consolidation of rights in certain norms and laws, which ensures their legal clarity and verifiability. In the case of digital rights, this means creating clear legislative decrees on personal data protection, digital privacy, access to information, and algorithmic fairness. Such positivist provisions allow establishing specific rights and obligations, determining punishment for violations and guaranteeing law enforcement effectiveness [17, p. 567].

According to D. Belov and M. Belova, the combination of positivist and natural law approaches allows the formation of digital rights as a legal category that is both specific and universal, ensuring a balance between normative certainty and fundamental freedoms [7, p. 5]. K. Bieliakov et al. emphasize that the integration of these approaches contributes to the creation of a system of digital rights that takes into account both the transformation of society and the sustainable values of human dignity [4, p. 183]. The combination of positivism and natural law is the best way for the development of digital rights, as it ensures their formal consolidation in the legal system and, at the same time, observance of fundamental human freedoms and principles of justice. This approach allows laying a solid foundation for further harmonization of national and international legislation in the field of digital rights.

Natural rights, formulated by classical thinkers such as John Locke and Jean-Jacques Rousseau, reflect fundamental values: the right to life, liberty, property and dignity. In the digital age, these values need to be adapted to new realities, where human interaction with information technologies, algorithms and big data becomes the main factor in the realization of rights [21, p. 438].

Digital rights include, in particular, the right to digital privacy, protection of personal data, access to information, freedom of expression online and control over digital identity. They arise as a response to new existential challenges: algorithmic control, digital surveillance, data manipulation and concentration of information power. According to D. Belov and M. Belova, digital rights form a new level of legal protection, which allows combining the fundamental principles of natural rights with modern technological challenges [7, p. 5]. K. Bieliakov et al. emphasize that digital rights are not autonomous from natural ones, but act as their technological and normative continuation, which ensures the universality and practical implementation of rights in the digital environment [4, p. 183].

The combination of humanistic values with modern technologies means that digital rights must take into account the principles of dignity, autonomy, privacy and freedom, even if they are implemented through algorithms or big data. As D. Belov and M. Belova note, the formation of digital rights should be based on the fundamental principles of natural rights in order to provide an ethical and legal basis for the digital society [7, p. 5]. K. Bieliakov et al. add that only the integration of humanistic values into regulations and technological practices allows creating a sustainable system of digital rights that protects users from the risks of the digital age and ensures their right to personal autonomy [4, p. 183].

The search for a balance between technological progress and humanistic values is to create a digital space where innovations do not replace human rights, but serve their implementation. Legislative certainty, international standards and philosophical understanding of dignity and freedom form the basis for such a balance, allowing to combine the effectiveness of technology with respect for fundamental human values. Digital human rights in today's globalized world require harmonized international standards that ensure their universality and effectiveness in different countries [10, p. 59].

The UN, through its resolutions and initiatives, defines general principles for the protection of digital rights, such as the right to privacy, access to information, freedom of expression online, and protection of personal data.

The Council of Europe develops specific legal standards and recommendations that take into account the specifics of digital technologies. According to D. Belov and M. Belova, the involvement of international organizations in the formation of digital ethics makes it possible to harmonize national practices with global standards, which creates legal mechanisms for protecting the individual in the digital environment [7, p. 5]. K. Bieliakov et al. add that international institutions not only form norms, but also contribute to the development of a universal concept of digital rights, which integrates technological innovations and humanistic values [4, p. 138]. International organizations act as key agents of the global ethics of digital rights, forming a framework for the coordinated implementation of digital freedoms and the protection of human dignity in the digital space. They ensure a balance between technological progress and fundamental values, creating the basis for the further development of international law in the field of digital technologies.

The system of digital human rights requires a clear legal definition and systematic harmonization with natural rights. Scientifically grounded proposals for improving the legal definition include the following areas:

1. Unification of terminology and classification of digital rights. It is necessary to establish uniform terms that reflect the specifics of digital rights, for example: "the right to digital privacy" "the right to control personal data", "the right to digital autonomy". As noted by T. Yamnenko and D. Misko, a clear definition of digital rights contributes to their harmonization at the national and international levels [23, p. 101].

2. Combination of natural law and positivist approaches. The natural law approach defines universal principles (dignity, freedom, autonomy), and the positivist approach ensures their formalization in laws. V. Bochkova and N. Baadzhi emphasize that the integration of both approaches makes it possible to create digital rights that are both normatively defined and universal [6, p. 228].

3. Harmonization of national legislation with international standards increases legal certainty and protection of users [2, p. 130].

4. The creation of global digital ethics implies the need for ethical awareness of digital rights as a basis for legal regulation [5, p. 110].

Improving the legal definition of digital rights requires a systematic approach that integrates:

- clear terminological framework;
- integration of positivist and natural law approaches;
- harmonization with international standards;
- adaptability to technological changes;
- formation of global digital ethics.

Digital rights, therefore, are a logical continuation of natural rights, but they also carry a specific worldview content: they form a new concept of human interaction with technology, define the ethical framework of the digital society, and emphasize the importance of a humanistic approach in technological innovations. As I. Pyvovar notes, digital rights are both legal and philosophical in nature [15, p. 11]. S. Shaelou and Y. Razmetaeva emphasize that digital rights create the basis for comprehensive protection of the individual in the global information space [17, p. 567]. The philosophical understanding of digital rights allows us to see them not only as a legal norm, but also as a worldview category that forms a new idea of freedom, responsibility and autonomy in the context of globalization of the information space.

6. Conclusions

In the process of research, it was found that digital human rights are a logical continuation and development of natural rights adapted to the conditions of the digital space. It is determined that the lack of a single terminology and delimitation of digital rights creates legal uncertainty and complicates effective legal ordering. Digital rights have not only a legal, but also a philosophical and ideological dimension, which emphasizes their role in the formation of a new understanding of the will, duty and independence of a person in digital reality. Based on the analysis, it is advisable to unify the terminology and classification of digital rights, harmonize national legislation with international standards, integrate the principles of natural law into positivist norms, take into account the dynamics of technological

development and form a global digital ethics that combines technological development and humanistic values.

The implementation of these measures will create a system of digital human rights that will be effective, universal and humanistically oriented, capable of ensuring the protection of fundamental freedoms in the context of the rapid development of the digital environment.

Further scientific research should focus on detailing the classification of digital rights, developing means of their flexible implementation in the context of rapid technological progress, determining the effectiveness of international norms and practices of the national legal system, as well as on the worldview of digital rights as a category that combines the will, respect and independence of the individual in the digital space.

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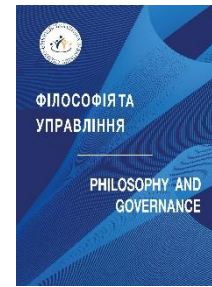
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Integration of the Spiritual Component into Psychotherapeutic Assistance to Combatants

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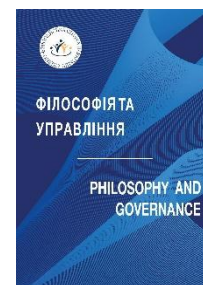
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While the war continues in Ukraine, issues related to effective methods of psychotherapeutic assistance to combatants are becoming increasingly relevant and practical. In addition to medical aids, art therapy, physical rehabilitation methods, etc., attention is also being paid to the spiritual components of such assistance. In particular, we are talking about the religious factor as one of the elements of psychological support for veterans. With the help of spiritual and religious formats of interaction, it is possible to work more deeply with existential experiences, take into account the moral and ethical aspects of psycho-emotional traumas and consider ways to overcome the consequences of war in each specific case. The purpose of the article is to study the possibilities of spiritual and religious factors for providing psychotherapeutic assistance to veterans as a component of their support and adaptation to the realities of life. The study showed that spiritual and religious assistance is effective when psychological, theological and social approaches interact. In this case, support from the state and international organizations is important. Among the features of the Ukrainian combat experience, the defensive nature of the war on its own territory, the destructive influence of enemy IPSOs, as well as the change or destruction of worldview and historical and cultural landmarks, are highlighted. Within the framework of rehabilitation, spirituality is considered as a kind of adaptation mechanism and a source of emotional stability. An important role in the provision of psychotherapeutic assistance belongs to the consolidated cooperation of psychologists with military chaplains, in particular through educational activities. It is separately emphasized that the combination of secular and religious aspects forms an effective integrated model of assistance that contributes to the improvement of a person's mental health. The conclusions emphasize that the formation of an appropriate legislative framework, the creation and development of appropriate institutions, as well as solving the problems of psychotherapeutic assistance to participants in hostilities at the state level and international support, contribute to the involvement of spiritual and religious methods for the successful reintegration of people into peaceful life. It is emphasized that spirituality is an important element in restoring the internal emotional integrity of combatants, their mental well-being, and successful integration into civilian life. The military chaplain acts as a significant person in the rehabilitation process, helping to move from psycho-emotional trauma to finding new meanings in life.



KEYWORDS

health, healing, Bible, Church, religion, spirituality, crisis, chaplain.



Інтеграція духовного компоненту в психотерапевтичну допомогу учасникам бойових дій

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Допоки в Україні триває війна, все більшої наукової актуальності та практичного значення набувають питання, пов'язані з ефективними методиками психотерапевтичної допомоги учасникам бойових дій. Окрім медикаментозних засобів, арттерапії, фізичних методів реабілітації тощо, звертають увагу й на духовні компоненти такої допомоги. Зокрема, йдеться про релігійний чинник як один з елементів психологічної підтримки ветеранів та ветеранок. За допомогою духовних та релігійних форматів взаємодії можна глибше працювати з екзистенційними переживаннями, враховувати морально-етичні аспекти психоемоційних травм і розглядати шляхи для подолання наслідків війни у кожному конкретному випадку. Мета статті полягає у вивченні можливостей духовних та релігійних чинників для надання психотерапевтичної допомоги ветеранам як складової їхньої підтримки та адаптації до реалій життя. Дослідження показало, що духовно-релігійна допомога є ефективною при взаємодії психологічного, теологічного та соціального підходів. При цьому важливою є підтримка держави й міжнародних організацій. Серед особливостей українського бойового досвіду виділено оборонний характер війни на власній території, деструктивний вплив ворожих ІПСО, а також зміну чи руйнування світоглядних та історико-культурних орієнтирів. У рамках реабілітації духовність розглядається як своєрідний механізм адаптації та джерело емоційної стійкості. Важлива роль у наданні психотерапевтичної допомоги належить консолідованій співпраці психологів із військовими капеланами, зокрема, й через освітні заходи. Окремо акцентовано, що поєднання світських і релігійних аспектів формує ефективну інтегровану модель допомоги, яка сприяє поліпшенню ментального здоров'я людини. У висновках підкреслено, що формування відповідної законодавчої бази, створення та розвиток відповідних інституцій, а також вирішення проблем психотерапевтичної допомоги учасникам бойових дій на рівні держави та міжнародної підтримки, сприяють залученню духовно-релігійних методів для успішної реінтеграції людей у мирне життя. Наголошено, що духовність є важливим елементом відновлення внутрішньої емоційної цілісності учасників бойових дій, їхнього ментального добробуту та успішної інтеграції у цивільне життя. Військовий капелан виступає значущою персоною у реабілітаційному процесі, допомагаючи перейти від психоемоційної травми до пошуку нових сенсів життя.



КЛЮЧОВІ СЛОВА

здоров'я, зцілення, Біблія, Церква, релігія, духовність, криза, капелан.

1. Introduction

Restoring the mental health of combatants is an extremely difficult task, which is not limited exclusively to the activities of a psychologist or psychotherapist. To achieve a lasting result, an integrated approach is needed. Without the implementation of systemic measures, the process of reintegration of a person who has been exposed to military trials can stretch for an indefinite period [25, p. 88]. The full healing of a person who was a participant in hostilities, risked his life and health every day, saw death and lost loved ones, requires not only time and significant resources, but also an understanding of the importance of religion and spirituality for such recovery, overcoming the crisis and further full-blooded life. For a combatant, war is not only a physical threat or psychological stress.

2. Literature Review

Secular and religious strategies of psychological well-being are singled out and analyzed by V. Sirko [17]. The researcher considers "(...) strategies of involvement in a religious organization, active interaction with members of religious communities (...)" [17, p. 103]. V. Zuikov [31] focused on the psychological skills and abilities of chaplains and clergymen involved in the comprehensive support and realization of veterans of the War of Ukraine for Independence. In his article, the scientist focused special attention on chaplains as the primary link of such assistance [31]. The regional specifics of educational, medical and military chaplaincy of the UGCC in wartime were studied by A. Zhuk and O. Yegreshiy [28]. O. Tashkinova and V. Oliarnyk [18] studied the role of military chaplains in the social support of the military and their families.

Chaplains, as an important component of the spiritual life of military personnel, have become the subject of scientific attention for Yu. Rusnak [15]. The formation of the domestic model of military chaplaincy is devoted to the article by L. Nepipenko [12]. The experience of military chaplains of different countries, primarily NATO, was studied by O. Tereshchuk [19]. Also important is the article by M. Drapohuz [5], who considered the challenges faced by military chaplains and proposed ways to solve them as an active chaplain of the Armed Forces of Ukraine. Issues related to the history of the formation of military chaplaincy in Ukraine, the specifics of its development, and the role for military personnel, especially in wartime, are covered in the publications of C. Zdioruk [27], O. Sagan and I. Harat [16], I. Pylypiv and R. Deliatynskyi [14], M. Dolganova and I. Chobit [4].

N. Zhyhaylo and M. Tsymbaliuk [30] revealed the importance of the spiritual factor for the rehabilitation of military personnel after demobilization. N. Prorok et al. [13] approached the consideration of religiosity as "(...) psychological adaptation mechanism that supports people in crises (...)" [13, p. 129]. It is also important to pay attention to the dissertation research of A. Makovsky [8], which deals with pastoral activity in the psychological support of border guards. The article by B. Blahyi [2] deals with the interaction of psychological support, spiritual support and interfaith dialogue in the face of aggression. In the article by N. Zhyhaylo and N. Kostruba [29], the "Model of Involvement of Military Chaplaincy in the System of Psychological Support of Military Personnel" is proposed and analyzed.

3. Problem Statement

During the war, a significant number of people face mental trauma, which can later transform into more serious mental disorders or psychosomatic illnesses. This is especially true for combatants. In this context, the importance of military chaplains, priests and pastors of various denominations is growing significantly. They have become an important link in providing primary crisis care to both military personnel and veterans who are overcoming the difficult process of returning to civilian life [31, p. 414]. It is spiritual care that becomes the bridge that helps veterans overcome the existential crisis and find support for themselves.

4. Methods and Materials

The source base for writing our article was the regulatory legal acts of Ukraine, materials from the websites of religious denominations and organizations, interviews with clergy and the military, as well

as scientific publications related to the topic of the study. In addition, we turned to news sites where you can get important factual and analytical information. The comparative approach in the course of the study made it possible to identify the peculiar features of the War of Ukraine for Independence. Thanks to the axiological approach, the role and capabilities of military chaplains in the process of psychotherapeutic support of war veterans were studied. With the help of the hermeneutic method and the processing of the content of the relevant sites, we were able to assess the directions and problems and achievements in working with traumatic experiences. Using the case method, we considered specific examples of integrating spiritual and religious components into psychotherapeutic practices aimed at helping participants in hostilities in Ukraine, as well as studied the experience of training military chaplains to fulfill such a spiritual mission.

5. Results and Discussion

At the end of 2021, the Law “On the Military Chaplaincy Service” came into force in Ukraine. The question of the need for such a structure in Ukraine arose in the early 1990s. participate in the rehabilitation of personnel in need of psychological assistance (...)” [26].

Since 1993, on the initiative of a group of Christian officers of the Armed Forces of Ukraine, an association of Christian military personnel has been operating. Over time, its activities expanded and the organization was called “All-Ukrainian Interconfessional Christian-Military Religious Brotherhood”. The Brotherhood is a unique religious organization formed within the framework of the provisions of the Law of Ukraine “On Freedom of Conscience and Religious Organizations” on the initiative of the five largest Ukrainian churches in 2000, a voluntary association of believing military personnel and law enforcement officers, including persons who are in reserve or retired. Representatives of the civilian population and clergy who have expressed a desire to participate in the activities of its branches can also join the ranks of the Brotherhood. The basis of cooperation is the principle of interfaith cooperation. The activities of the Brotherhood are primarily aimed at integrating the moral and spiritual values of traditional Ukrainian Christian churches with the intellectual and organizational resources of current and former military personnel. This is carried out to ensure the constitutional right of military personnel to freedom of conscience, promote their spiritual development, maintain psycho-emotional balance, educate young people and provide spiritual care. The fundamental basis of the Brotherhood’s activities is Christian values, as well as national and military-patriotic traditions of the Ukrainian people. The brotherhood includes military personnel of various Christian denominations, including commanders, educators, engineers, lawyers, journalists and former soldiers in reserve [1].

The functioning of military-religious services in many countries of the world, as well as the nature of their tasks, indicates that they not only provide satisfaction of religious needs. These services are integrated into the system of psychological influence on personnel, regardless of the worldview beliefs of each serviceman. Religious education is an integral part of the combat and moral-psychological training of the military and is aimed at fulfilling its main task, that is, maintaining a high level of spiritual and patriotic mood and combat readiness of troops [9, p. 174].

As noted by C. Zdioruk [27], “military priests perform a double function – they provide military personnel with the implementation of their religious needs, as well as advise commanders on the moral and psychological state of troops. Modern military specialists consider religious education among personnel as one of the forms of mitigation of psychological tension associated with the functioning of the complex army system “serviceman-military-technical complex” [27, pp. 2–3]. The founder of the humanistic school of psychology, A. Maslow, in his hierarchy of human needs, singled out the need for security and protection as one of the basic components of human life. In the same context, the system of religious beliefs helps the human being to order his existence and interaction with the environment, uniting them into a wholeness filled with meaning. This, in turn, gives a sense of security. The representative of humanistic psychoanalysis, E. Fromm, also noted that religion often serves people as a basic orientation that gives their lives meaning [9, p. 174].

It should be emphasized that, firstly, hostilities are taking place in our native land. Secondly, hostilities take place in any climatic and weather conditions, without a break for lunch or vacation. Thirdly, a long and indefinite stay in the war zone, without clear and standardized rotations. Fourthly, an incredibly large number of traumatic brain injuries caused by blast waves and unprecedented artillery shelling is in the history of almost all combatants [3, pp. 11–12]. Sixthly, the “drone war”, which gives rise to a new understanding of the course of the war and the advantages of certain means of

destruction in it [32]. Fifth, the enemy is the nearest neighboring country and its population, which for a long time were considered by many as a “fraternal people” that are culturally and mentally close. Sixth, combatants may have relatives and loved ones who are now on the other side, both physically and mentally. In addition, there may be relatives who are in the occupied territories, and their fate is not always known. Seventhly, an active and powerful IPSO on the part of the Russian Federation, which affects the moral and psychological state of veterans [3, pp. 11–12].

From the standpoint of religious ethics and spiritual principles, the chaplain is able to provide reasoned answers that, at the same time, have a positive effect on the psychological state of the military. Such support is of particular importance in situations where a person loses faith and hope under the pressure of enemy forces or an intense information attack. In such circumstances, the spiritual values of the religious worldview act as a powerful source of inspiration, helping to strengthen the spirit and restore faith in the possibility of success and contribute to the healing [7, p. 52]. As Father Rostyslav Vysochan noted in his interview:

“In fact, as a military chaplain, I have very often seen people who do not believe in God in war. But a serviceman who is in combat conditions is influenced by a lot of different stress factors, and this allows him to think about deep things. And these questions that touch on the supernatural, they somehow push a person to search for this truth. And accordingly, we can say that, probably, a certain percentage in the direction of an increase in believers is happening, but this is not a statement one hundred percent that war is some kind of place where people begin to believe in God en masse” [24].

His words are complemented by Father Konstantin Kholodov:

“I will continue Father Rostyslav’s thought: war is a place, a time when everything that is in a person either blossoms or rots. If a person has some good beginnings that were sown by parents, upbringing, teachers, and priests, then they will give their growth (if a person wants it, if not, then it will all perish). For the most part, when a person sees death in front of him, he has two options – either to run away from it or not to notice it. And now the Gospel teaches us not to notice death, we are taught by the Lord, who says, “Do not be afraid,” who says, “I am with you, who yourself has overcome death. And in fact, the serviceman then remembers death not as the end of his life, but as a part of his life, and this, in fact, is why faith deepens. The task of the chaplain is to take care not only of believers, but of everyone, to help everyone, to serve everyone” [27].

It is necessary to dwell more substantively on the program “Healing the Wounds of War”. It was approved by a resolution of the Synod of Bishops of the UGCC (Rome, September 3–13, 2023). The program is the result of joint work of the UGCC Commission on Pastoral Care together with specialists from the UCU Institute of Mental Health. Already on September 18, 2023, a course for pastors began for the clergy of the UGCC at the Patriarchal House (Lviv), which covered several areas: theology, pastoral work and mental health. Also, in the future, a course for the wives of clergy and monastics. Funding for the course was provided with the support of the Canadian Embassy and the Canadian Foundation for Local Initiatives. The course was joined mainly by pastors from the East and South of Ukraine. It is important that, in addition to teaching, priests and theologians have the opportunity to share their experiences related to the war. As the course teacher Oleh Romanchuk noted, “When a person says at confession that he has survived rape or has signs of PTSD after the war, he may not know what is happening to him. But the priest can help her understand this with the hope that there is a way of healing, to guide and to be there. Even though professional assistance is a very important component, pastoral support is no less a source of support. Therefore, it is very important to provide pastoral support with sensitivity and wisdom” [21].

On May 26, 2025, in Kyiv, at the residence of His Beatitude Sviatoslav, a meeting was held with R. Dallaire, a Canadian writer, former senator and retired general, who commanded the UN peacekeeping contingent in Rwanda during 1993–1994. R. Dallaire arrived together with his wife M. — K. Michaud. The meeting was also attended by R. van Vooren, Dutch human rights activist, head of the Federation of the Global Initiative in Psychiatry and professor at Vytautas Magnus University in Kaunas. General R. Dallaire presented to the Head of the UGCC initiatives aimed at studying mental health needs in Ukraine, in particular among the families of military personnel and veterans. During the meeting, he shared his experience in reforming the mental health support system among veterans of the Canadian Armed Forces during his leadership of the Senate Committee on Veterans Affairs. The main goal of this initiative is a thorough study of the challenges faced by the mental health of Ukrainians as a result of Russia’s continued aggression. General R. Dallaire, together with representatives of public organizations and the Institute of Psychiatry of Taras Shevchenko National University of Kyiv, is working to involve the

governments of Canada, Sweden and the Netherlands in the implementation of a long-term mental health support program for military and veteran families in Ukraine. The Head of the UGCC emphasized that caring for the mental health of Ukrainians has been one of the main priorities of the pastoral activity of the UGCC, since the Revolution of Dignity. He acquainted the audience with the key tasks of the UGCC clergy training program entitled "Healing the Wounds of War". They also discussed the initiatives of the Department of Military Chaplaincy and other commissions of the Patriarchal Curia aimed at supporting the mental and spiritual health of the Ukrainian nation. Particular attention is paid to the families of servicemen, the dead and missing, as well as the wounded and released from captivity [23].

The program "Healing the Wounds of War" is extremely important because, as noted by the psychotherapist and teacher of the course, Sister Maria Kinas, none of the priests who studied in seminaries had the opportunity to master the discipline of pastoral support during the war. Now this problem has become even more relevant, because we had to face some confusion, since the clergy was not properly prepared for such challenges. Within the framework of the program, the focus on addressing mental health issues provides a deeper understanding of the psychological trauma caused by war. An important component is the presentation of certain practical methods that priests can use in their pastoral work [22]. Thus, by combining knowledge of the Bible and psychology, a clergyman has the opportunity to support combatants for their spiritual healing and adaptation to current realities. However, it is important to note that a clergyman should not replace a psychologist, but his awareness of the processes of the human psyche will allow him to provide support and assistance more effectively.

Let us also recall the OCU documentary project "I am a chaplain". The project participants share their thoughts on victory, the one that is achieved not only on the battlefield, but also in the soul of a person who survived, preserved faith and humanity. The project aims not only to reveal the figures of chaplains, but also to emphasize that the spiritual struggle is as significant as the military. After all, victory is born in the belief that good is stronger than evil [11]. In addition, on May 21–22, 2025, the First Military Forum of OCU Chaplains was held in the assembly hall of the Kyiv Orthodox Theological Academy. Before the start of the event, a solemn prayer service for victory and peace in Ukraine was held, led by His Beatitude Metropolitan Epiphanius. The forum was attended by the hierarchs of the OCU, representatives of the Armed Forces of Ukraine, intelligence, the Ministry of Defense, the National Guard of Ukraine, the State Border Guard Service, foreign chaplains, as well as more than a hundred military chaplains of the Church. At the beginning of the meeting, the Primate addressed the audience with a pastoral speech. He emphasized that without our Armed Forces, Ukraine would no longer exist, and without chaplains, it would be difficult to imagine a new Ukrainian army. Awards were also presented to chaplains who arrived from Estonia and Latvia. At the invitation of the head of the Synodal Administration of the Military Clergy, Metropolitan John of Cherkasy and Chyhyryn, the rector of the Academy, Protopresbyter Yaroslav Romanchuk, took part in the forum. In his welcoming speech, he emphasized the importance of systematic training of chaplains and the prospects for the further development of this ministry. He noted that such activities are not only a source of spiritual support for the defenders of the Fatherland, but also a symbol of the real presence of the Church next to those who defend peace and truth every day [6].

We also recall the forum of military chaplains "Being Near". It was organized in February 2026 by the Department of Culture and Tourism of the Ternopil Regional Military Administration. During the forum, the issue of an individual approach to each serviceman in the war zone, the importance of spiritual support for the wounded in medical institutions, assistance to the families of the dead, as well as work with veterans after their demobilization, was considered. The participants of the event exchanged professional experience and analyzed current challenges that they have to face in their daily activities [20].

Military medical institutions have the position of military chaplains in their staffing lists. The activities of military chaplains are aimed at forming trusting and supportive relationships with wounded servicemen. At the same time, one should be prepared for possible manifestations of depressive and aggressive behavior, other complex emotions, which are a natural reaction of people to extremely traumatic events. It is important to consider that although religion often serves as a spiritual foundation for many soldiers, not all soldiers are religious, and even among believers, religion does not always occupy a central place in their worldview. Thus, the role of the chaplain includes the ability to focus on those aspects of the warrior's personal beliefs that he himself considers the most important. It can be religion, spirituality, nature, scientific research or any other significant life values [10, p. 404]. The task

of the chaplain is to help a person understand his own priorities and invent an internal resource to maintain his moral and psychological state.

It is worth noting that among military chaplains, in addition to Christians, there are Muslim chaplains and Jewish chaplains. Taking into account confessional diversity, as well as the presence of atheists and agnostics among military personnel, is necessary for the formation of truly balanced and democratic approaches to psychotherapeutic support for combatants.

6. Conclusions

In accordance with the Law of Ukraine “On the Military Chaplaincy Service”, as well as thanks to the activities of religious organizations, state and international institutions, a system of constructive cooperation between the state and religious communities has been formed in Ukraine. The military chaplain has become a full-fledged part of the Resistance Forces of Ukraine, acting not only as a person who meets religious needs but also as someone who provides primary crisis care and long-term spiritual support for combatants.

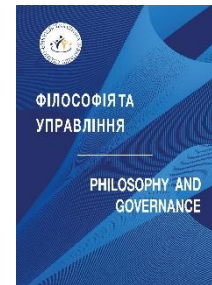
The psycho-emotional trauma experienced by combatants is a complex phenomenon that goes beyond only clinical manifestations, encompassing deep existential experiences. A person who has experienced such an experience faces difficult changes in the inner world. Therefore, healing cannot be limited to medical or psychological approaches; it also includes a spiritual component that contributes to the restoration of a holistic worldview and overcoming personal crises. At the same time, it is not necessary to be a religious or religious person.

The peculiarities of Ukraine’s War of Independence, including hostilities in the native land, the collapse of the myth of the “fraternal people” and the impact of enemy information and psychological operations, make the importance of the spiritual dimension even more significant. In situations where key social and family ties are being destroyed, religious faith and biblical meanings can serve as guidelines that restore a person’s sense of security and control over their lives. Next, it is important to integrate the spiritual component through the creation of joint protocols for collaboration between psychotherapists and military chaplains. This approach will ensure the integrity of the healing process, which is critical for the successful adaptation of veterans to civilian life.

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Socio-Psychological Actualization of Religiousness in War Conditions: An Attempt at Religious Science Objectivation and Expert Evaluation

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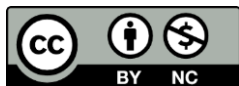
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ABSTRACT

The actualization of religiosity during the full-scale war in Ukraine is endowed with a socio-psychological context and takes place against the background of the strengthening of the relationship between religious and national identity, the growing role of the Church in the development of a consolidated civil society. The revitalization of religion today is considered a process of restoring the influence of religious reflection, spiritual values and practices, which involves the positioning of the synergy of culture and religion in the substantive value dimension, manifested through the search for meaning and intellectualization of the phenomenon of faith. Special attention is paid to the socio-psychological functions of religiosity in the conditions of war, in particular, the support of psychological resilience, spiritual recovery and the formation of value-meaning orientations of the individual. The growing role of media religiosity and digital forms of religious interaction, which contribute to the consolidation of society and the expansion of citizens' participation in spiritual life, is analyzed. The importance of religious examination and institutional and legal mechanisms in ensuring national security and effective state-confessional interaction in wartime conditions is considered separately.



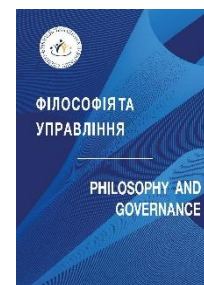
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religiosity, socio-psychological activity, revitalization of religion, Church, war, religious reflection, expertise, freedom of conscience, religious practices.



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Соціально-психологічна актуалізація релігійності в умовах війни: спроба релігієзнавчої об'єктивзації та експертної оцінки

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Актуалізація релігійності у часі повномасштабної війни в Україні наділена соціально-психологічним контекстом та відбувається на тлі укріплення взаємозв'язку між релігійною та національною ідентичністю, зростання ролі Церкви у розвитку консолідованого громадянського суспільства. Ревіталізація релігії на сьогодні розглядається як процес відновлення впливу релігійної рефлексії, духовних цінностей і практик, що передбачає позиціонування синергії культури та релігії в субстанційному ціннісному вимірі, проявляючись через пошук сенсу та інтелектуалізацію феномену віри. Особлива увага приділяється соціально-психологічним функціям релігійності в умовах війни, зокрема підтримці психологічної резильєнтності, духовного відновлення та формуванню ціннісно-сміслових орієнтирів особистості. Проаналізовано зростання ролі медіарелігійності й цифрових форм релігійної взаємодії, що сприяють консолідації суспільства та розширенню участі громадян у духовному житті. Окремо розглянуто значення релігієзнавчої експертизи та інституційно-правових механізмів у забезпеченні національної безпеки й ефективної державно-конфесійної взаємодії в умовах війни.

КЛЮЧОВІ СЛОВА

релігійність, соціально-психологічна активність, ревіталізація релігії, Церква, війна, релігієзнавча рефлексія, експертиза, свобода совісті, релігійні практики.

1. Introduction

Reflection on the socio-psychological functionality of religion is currently taking place in the context of the analysis of the formation of religious consciousness through the prism of war, aspects of national and cultural self-awareness, social responsibility and the place of the religious component in them. The revitalization of religion and the growth of the role of the Church in the dynamics of the development of modern Ukrainian society in the crisis conditions of war takes place at different levels, from theoretical-methodological to practice-oriented, which is due to both internal socio-political crises and the influence of globalization trends, which in synergy determine the current configuration of religious identity and determine the relationship between the secular and sacred planes of human existence.

Against the background of increased institutional dynamics of religious organizations in Ukraine, there is a need to develop and implement conceptual approaches to an adequate assessment of religious transformations. Modern sectoral discourse actualizes the need to analyze the processes of desecularization, secularization and post-secularity in the context of an interdisciplinary understanding of religious dynamics.

Today, religious expertise is positioned as an effective mechanism for normative, conceptual and axiological support for state-confessional interaction, which opens up new horizons for the practical interpretation of empirical dynamics in the field of religious studies within the narratives of modern social development under the influence of war. This actualizes the need for a more detailed study of the outlined concepts.

2. Literature Review

At the current stage of the socio-psychological actualization of religiosity, the research discourse focuses on the influence of religion as a powerful socio-psychological factor, which often serves as a determinant of moral choice and self-identification in wartime. In particular, as Volotovska [18], Kulahina-Stadnichenko and Nedavna [11], Prorok et al. [14], religious studies reflection in crisis conditions focuses on rethinking the role of the phenomenon of faith in successfully overcoming psychological trauma and post-traumatic stress disorder, spiritual support, and analysis of ecumenical relationships. Reflection, according to the authors, is currently undergoing a transfer from theoretical and methodological analysis to a practical dimension. To continue, Kolodnyi and Filipovych [9], Panok and Predko [13] highlight the specifics of religious reflection in the time of a full-scale war: the growth of social influence, focusing on spiritual crises and the search for meaning, ethical assessment of the positions of influential religious figures, and the ecumenical dimension against the background of Russian aggression.

The issue of religious expertise is included in the circle of scientific research by Geraskov [3], Khmilovska [7], Fylypovych et al. [2]. The authors position it as a necessary element of protecting the national interest during Russia's military aggression and the basis for decision-making by relevant state institutions to prevent destructive influence on society through religious structures. Several scholars [1; 5] emphasize the need to use new approaches to analyzing the transformation of key narratives of religious socialization and identity.

Certain aspects of the studied problems are reflected in the works of Kostrub [10], Lomachinska et al. [12], Rybachuk [16], and Kharevych [6]. At the same time, despite the significant attention of modern scientists to the problem under study, the aspects of religiosity as a factor in the formation of the social and psychological basis for the development of society require additional study.

3. Problem Statement

The purpose of the study is to identify and substantiate the socio-psychological transformations of the phenomenon of religiosity during a full-scale war, in particular in the context of religious reflection and expert assessment.

4. Methods and Materials

The methodological basis of the study is an interdisciplinary approach that combines the provisions of religious studies, social psychology, sociology of religion and philosophy of culture. The theoretical basis was made up of modern scientific publications of Ukrainian and foreign researchers devoted to the transformations of religiosity, the socio-psychological functions of religion and the phenomenon of religious reflection in the context of crisis social processes and military conflicts. The empirical materials of the study were the results of sociological surveys by the Kyiv International Institute of Sociology and the Razumkov Centre on the level of trust in religious institutions and the dynamics of religiosity in Ukrainian society, as well as regulatory documents of Ukraine in the field of state-confessional relations.

In the process of research, a complex of general scientific and special methods was used. In particular, the method of theoretical generalization and systematization – for the analysis of modern approaches to understanding the phenomenon of religiosity; comparative analysis – to compare the dynamics of socio-psychological functions of religion in the pre-war and war periods; hermeneutic method – for interpreting the content of religious and socio-cultural narratives; expert and analytical approach – to assess the role of religious expertise in the national security system. Elements of statistical analysis are also used to summarize the data of sociological research and their interpretation in the context of socio-psychological transformations of religiosity.

The application of a comprehensive methodology made it possible to reveal the relationship between social, psychological and institutional aspects of the development of religiosity in wartime, as well as to ensure the validity of conclusions about its role in maintaining psychological stability, social solidarity and the formation of value and semantic guidelines of Ukrainian society.

5. Results and Discussion

Both civilians and military personnel in wartime need support to strengthen resilience and adaptability, create a stable spiritual support, activate internal personal reserves, and strengthen the value and semantic sphere to achieve a sense of security, social integration, and support [19].

The main directions of actualization of religiosity during the war are:

- moral and social support;
- psychological resilience in the face of distress, loss and the need to adapt to harsh realities;
- formation of the phenomenon of media religiosity through the transfer of traditional religious experience using digital technologies for greater integration into the life of the Church, involvement in common prayer, spiritual accompaniment;
- support of value-semantic concepts in crisis and extreme situations during the war, which allows you to give meaning to trials.

The expansion of the range of opportunities for the development of religiosity in modern conditions of information and communication systems is accompanied by an increase in its influence on the formation of public opinion and moral and ethical assessment of social processes, determining the level of interfaith tolerance in society, and influencing the development of future generations. In this context, the results of sociological surveys on the level of public trust in the Church as one of the key determining institutions of civil society are seen as representative.

Thus, according to the official data of the Kyiv International Institute of Sociology, in the period 2017–2020. The level of trust was in the range of 52–57% [8]. The active revitalization of religion in Ukraine at the beginning of the full-scale war is demonstrated by the results of a survey by the Razumkov Centre [15]. In 2022, the percentage of people who positioned themselves as believers increased to 74% (compared to 2021, when the value reached 68%). Already in 2023, this level decreased to 70.5%, and in 2024, to 68% (Figure 1).

It is obvious that the phenomenon of religiosity in the context of the information in Figure 1 positions its perception by society, for the most part, as a resource for overcoming crisis psychological stress. Thus, religious overcoming is one of the most common forms of overcoming, regardless of the initial cultural and religious affiliation of the individual. Within the framework of any religious practice, “salvation” acts as the central semantic construct: from “salvation” in Christianity, the fundamental value and semantic concept, to prosperity in Taoism or awakening in Buddhism.

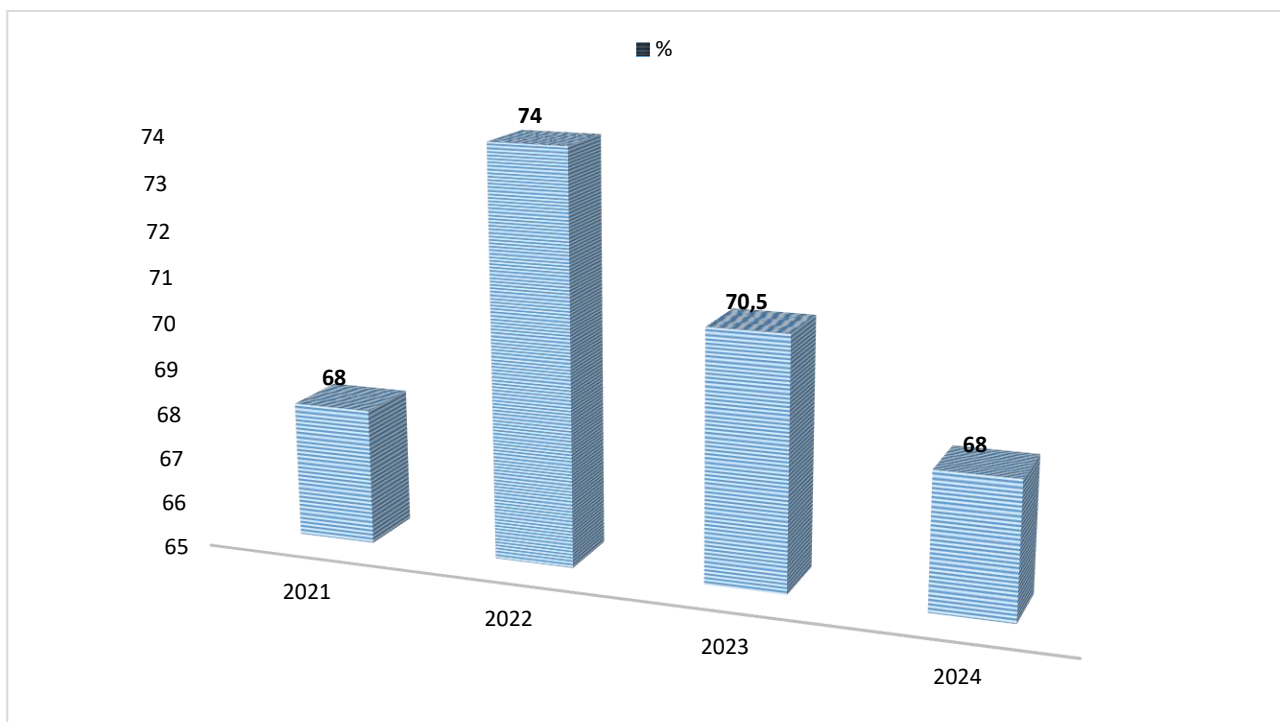


Figure 1. Dynamics of the level of religiosity of Ukrainian society

Source: [15]

In order to fully understand the dynamics of attitudes towards religion in times of war, it is necessary to differentiate the definitions of “religiosity” and “religious faith”. Thus, religious faith is considered the highest value, a special system of worldview, a stable conviction in the truth of the provisions of the sacred texts of a particular religion. At the same time, religiosity is a characteristic of quantitative and qualitative certainty of the subjective assimilation of religious norms, ideas, values, and their influence on life and behavior.

Focusing on the peculiarities of the dynamics of the social context of religiosity, it is advisable to note the key narratives in the present time, in particular, the active and in-depth expansion of the boundaries of educational and scientific activity in the field of theological science; holding sectoral public events; the integration of theological concepts with secular ones as a result of the combination of theology and sociology. In the concepts and directions of religious philosophy, philosophy of religion, and philosophy of culture (which are associated with reflective structures in the religious tradition), it is possible to find logical and terminological analogies with secular forms of scientific knowledge.

The definition of cultural meanings in religious definitions allows us to identify some general concepts of the dialogue between religion and culture: a person who believes in Absolute values and God's providence, shows greater value and social responsibility in crisis conditions, does not lose hope and maintains his own resilience. Therefore, in modern aspects of the Church's religious activity, it is necessary to focus on such formats of interaction with society, where social issues are represented in the format of the search for a practical space of hope as the essence of the axiological foundations of religions. Messages of this kind will serve as a positive motivation for solidarity, social activity, mutual assistance, and mutual support in times of war [4].

Religious studies should be determined in times of war as a component of a holistic national security strategy based on the principles of freedom of conscience and religious pluralism. One of the basic decisions in this direction was the adoption of the Law of Ukraine No. 3894-IX “On the Protection of the Constitutional Order in the Field of Activities of Religious Organizations” on 20.08.2024 [17]. It defines a priority set of measures to limit the influence of foreign religious structures, including the Russian Orthodox Church, bans the activities of affiliated religious organizations, outlines the main mechanisms for checking their ties with the aggressor, and provides for the possibility of applying judicial sanctions. The above-mentioned law also introduced a ban on propaganda of the ideology of the “Russian world”, which contributes to ensuring national security interests and countering destructive external influence through religious structures.

Considering the main institutional and legal instruments of sectoral control, it is necessary to pay attention to the functionality of religious expertise in wartime. The method is based on the principle of cumulation of professional judgments, as well as hermeneutic interpretation and intersubjectivity, which is especially effective in studying the dynamics of dogmatic systems and transforming the processes of religious socialization and identity.

By allowing for the formation of a prognostic model verified by expert opinion, religious expertise pursues such goals as maintaining the validity of sectoral institutional decisions and monitoring compliance. A certain unattainability of such goals is explained, to a large extent, by the shortage of professional religious studies expert personnel, which is facilitated by the gap between academic science and applied activities, as well as the problem of the outflow of intellectual personnel abroad. Applied religious analysis and expertise require the support of the international community of religious experts, which will increase the level of institutionalization of analysis and forecasting based on expertise and the quality of management of the religious situation, and will contribute to the formation of a culture of strategic thinking of the political and managerial elite regarding decisions in the religious life of Ukrainian society.

As for the socio-psychological context of the functions of religiosity in wartime, it is advisable to note the effectiveness of the use of religious values to find a way out of crises, accept difficult experiences, and increase resilience, which becomes especially relevant against the background of the prevalence of post-traumatic stress disorder both among the civilian population and among military personnel. Increased risks of the syndrome, the prevalence of which reaches 80%, during the war arise due to traumatic experiences and loss of loved ones. Practical programs of spiritual recovery, for the most part, are aimed at integrating religious and cultural-historical heritage into the rehabilitation process of persons critically affected by the war. The significance of these initiatives for the effective fight against psychological disorders has been confirmed by numerous scientific developments.

In fact, spiritual positive changes in this context should be considered as a separate approach that should be used within the framework of psychological practice. In particular, veterans of military operations quite often prefer clergy as an alternative to psychological assistance. The involvement of the clergy is especially valuable in cases where it is necessary to discuss mental health problems, relationships, and traumas. Media resources and digitalization open up broad prospects for actualizing religious reflection for religious overcoming, developing trust in social support, stimulating resilience, and engaging cognitive resources.

Based on the above, it is advisable to single out three main aspects of the socio-psychological actualization of religiosity in times of war:

- 1) value and semantic formation, which contribute to the effective rethinking of experience, even extremely negative, to finding new meaning in the events experienced;
- 2) psychological well-being of the individual, maintaining self-confidence, positive perception of the world;
- 3) practical social support, positioning oneself as a part of the community (Church).

Today, religious organizations have an important role to play in supporting humanitarian and volunteer activities, achieving better psychological adaptation of the population to the challenges of war. At the same time, key attention should be paid to the development of media religiosity: digital solutions transform the religious experience, involve young people in online services, and virtual participation in the meeting of the Church, consolidating society in crisis conditions.

6. Conclusions

The results of the study represent a gradual increase in the influence of religiosity on the development of society during the war, with a qualitative shift in emphasis in socio-psychological functionality. The revitalization of religion today is considered a process of restoring the influence of religious reflection, spiritual values and practices, which involves the positioning of the synergy of culture and religion in the substantive value dimension, manifested through the search for meaning and intellectualization of the phenomenon of faith. Religiosity in the conditions of an exhausting war is an influential social factor that determines moral choice, social unity and psychological stability. At the same time, religious practices allow you to quickly adapt to new realities, overcome traumatic events, find new meanings and activate internal resources, and strengthen psychological resilience

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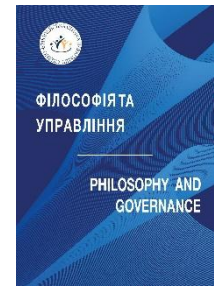
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Innocent Gisel – Theorist of Moral Theology of the Postmodern Era

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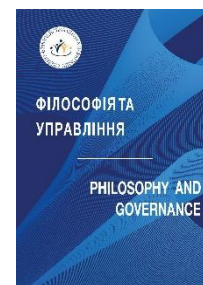
ABSTRACT

The historical figure of Innocent Gisel is viewed through the prism of the postmodern era and represents a representative of the cohort of influential Ukrainian cultural and church figures of the mid-seventeenth century. Innocent Gisel is one of the most active participants in the Council of the Kyiv Orthodox Metropolis in 1640, within the framework of which the “Catechism” of the Orthodox Church was adopted, and several decisive steps were implemented in the context of further reforming the church and the religious sphere of life. Being a famous theologian, Innocent Gisel was one of the first scholars to begin teaching the subject of philosophy at the Kyiv-Mohyla Collegium. For a rather long time, the theologian performed the duties of the abbot of the Kyiv-Pechersk Monastery. At this time, Innocent Gisel continued the course initiated by Metropolitan Petro Mohyla, aimed at improving church life in the Kyiv Orthodox Metropolis. With the blessing of the theologian and under his personal guidance, several significant church and religious publications were published in the printing house of the Kyiv-Pechersk Monastery, which comprehensively contributed to the improvement of certain aspects of church life. In particular, among them, it is necessary to single out a voluminous treatise on the problems of moral theology entitled “Peace with God to Man”, which was published in 1669. The mentioned edition became the first treatise in the Orthodox Church of the early modern period, which opened up various aspects of the interpretation of issues of religious morality, taking into account the peculiarities of the development of society at that time. “Peace with God to Man” had a significant impact on the progress of the Ukrainian theological space and the national culture of the turn of the 17th – 18th centuries. Despite the fact that “Peace with God to Man” appeared more than 350 years ago, its narratives have not lost their relevance and can be successfully used by modern Orthodox theologians in the process of considering religious, moral and social issues. Evidence of the lasting significance of the influence of the theological practice of Innocent Gisel is the reprinting of “Peace with God to Man” in 2012 in Ukrainian.



KEYWORDS

axiology, spirituality, Innocent Gisel, moral theology, religious faith, holiness, conformism, postmodern.



Інокентій Гізель – теоретик морального богослов'я доби постмодерну

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СТАТТЯ	АНОТАЦІЯ
Дослідницька DOI: 10.70651/3041-248X/2026.2.08 Отримана: 06.01.2026 р. Прийнята: 08.02.2026 р. Опублікована: 12.02.2026 р. Авторське право © 2026 автора  Цей твір ліцензовано на умовах Ліцензії Creative Commons «Із Зазначенням Авторства – Некомерційна 4.0 Міжнародна» (CC BY-NC 4.0).	Історична постать Інокентія Гізелю розглядається через призму доби постмодерну та репрезентує представника когорти впливових українських культурних і церковних діячів середини сімнадцятого століття. Інокентій Гізель – один із найбільш активних учасників собору Київської православної митрополії 1640 р., у рамках якого було прийнято «Катехізис» Православної Церкви, а також реалізовано низку визначальних кроків для подальшого реформування церковно-релігійної життя Київської Митрополії. Будучи відомим богословом, Інокентій Гізель одним із перших учених розпочав викладання предмету філософії у Києво-Могилянському колегіумі, а також тривалий час виконував обов'язки настоятеля Києво-Печерського монастиря, системно продовжуючи започаткований митрополитом Петром Могилою курс удосконалення внутрішнього життя та устрою церкви. За його благословенням та під його особистим керівництвом у друкарні Києво-Печерського монастиря вдалося видати багато значущих книг церковно-релігійного змісту, серед яких особливе місце належить об'ємному трактату «Мир з Богом чоловіку». Праця побачила світ 1669 р., ставши першим фундаментальним виданням в лоні Православної Церкви ранньомодерного періоду. Книга містила системний виклад основних проблем морального богослов'я, богословське тлумачення релігійної віри та моралі, враховуючи при цьому особливості розвитку тодішнього суспільства. Поява трактату «Мир з Богом чоловіку» здійснила неабиякий вплив на духовно-інтелектуальний поступ українського богословського простору та істотно скоригувала траєкторію розвитку національної соціокультурної парадигми наприкінці XVII – на початку XVIII століть. Попри те, що «Мир з Богом чоловіку» видрукували 350 років тому, його наративи не втратили своєї актуальності і в наш час. Їх можна й потрібно використовувати для переосмислення та переоцінки духовно-моральних ціннісних орієнтирів сучасного розвитку людства, для обґрунтування ідеології стійкості, формування механізмів протистояння та боротьби за власну національну духовно-культурну, релігійну й політичну ідентичність. Свідченням тривалого й неперехідного значення богословської практики, слова та подвижницького чину мислителя є перевидання його «Миру з Богом чоловіку» в 2012 році українською мовою.



КЛЮЧОВІ СЛОВА

аксіологія, духовність, Інокентій Гізель, моральне богослов'я, релігійна віра, святість, конформізм, постмодерн, український соціум, ідентичність.

1. Introduction

A review of generalized interpretations and modern branch scientific research in the field of religious conceptualization of the theological teaching of Innocent Gisel about religious morality gives grounds to assert that the level of study and public reception of the thinker's work requires a closer acquaintance, but also the substantiation of new ideological and semantic, value and theoretical and methodological approaches.

Modern philosophical thought undergoes constant dynamics in its development, causes changes in the religious and ecclesiastical sphere, and therefore the necessity and legitimacy of a complex religious objectification of the influence of the theological hamartological concept of Innocent Gisel on the formation of moral theology of the postmodern era, and on intellectual activity, becomes quite natural of modern Orthodox theologians, aimed at systematization and new theological interpretation of important issues of religious and moral content and socio-legal nature.

2. Literature Review

In literary discourse, one of the first works, where an extensive review of the activities of Innocent Gisel was presented, was the publication of a thorough study of ancient Ukrainian writing, carried out by Mykola Sumtsov – “Innocent Gisel”. Although the publication was not voluminous and similar to a comprehensive analysis of the writer's work, it nevertheless became significant in the context of the representation of the figure and intellectual heritage of Innocent Gisel as one of the brightest representatives of the traditionalist hesykhats and exponents of the Kyiv community of scientists and theologians of the middle of the XVII century. His activities are closely connected with the Kyiv-Mohyla Academy and the monastic life of the Pechersk Lavra.

Representatives of the scientific, historical and theological discourse of the late nineteenth and early twentieth centuries. saw in this scholarship a scholastic tradition, sometimes completely detached from the realities of life at that time. These narratives formed a rather negative, somewhat skeptical perception of the intellectual achievements of Ukrainian thinkers of the modern era, in particular, Innocent Gisel. One of the first to make such a statement was Mykola Sumtsov.

Certain specific steps to restore the perception and “rehabilitation” of ancient Kyiv scholarship were taken by Dmytro Chyzhevsky, although modern researchers have an ambiguous and sometimes quite skeptical attitude to his generalizations, in particular, Professor Petro Kraliuk.

The fact is that D. Chyzhevsky developed his scientific Ukrainian studies, being largely detached from the environment about which he wrote. And he did it under the influence of Western ideologies. He wrote “Ukrainian Literary Baroque. Essays”, in which the key narratives are the comprehension of the leading trends in the development of literary life of the 18th century, in which the work of Innocent Gisel was easily integrated into the phenomenon of the Ukrainian Baroque, but for some reason, D. Chyzhevsky did not pay enough attention to this fact.

In another work “Essays on the History of Philosophy in Ukraine”, the scientist also bypasses the figure of Innocent Gisel, even though he has long received well-deserved recognition as one of the most talented teachers-pioneers of philosophical knowledge at the Kyiv Collegium, as well as the author of several important philosophical works.

A rather interesting fact is that the “rehabilitation” of philosophical teaching at the Kyiv-Mohyla Academy took place during the Soviet period. Thus, in the sixties, within the framework of the activities of the Institute of Philosophy of the Academy of Sciences of the Ukrainian SSR, an initiative research center was formed, which made the main efforts to translate lectures by teachers of the Kyiv-Mohyla Academy from Latin. The result of such activity was the publication of the works of Stefan Yavorsky, Feofan Prokopovich, Sylvester Kulyabka, Heorhiy Konyskyi, Manuylo Kozachynskyi, Joseph Kononovych-Gorbatsky, Stefan Kalinovsky and other prominent figures of that time. In addition, some works of Ukrainian philosophers of the turn of the XVI-XVII centuries were published. The main platforms for the regular publication of the results of research work were the periodical “Philosophical Thought”, within which there was a special section “Philosophy at the Kyiv-Mohyla Academy”.

3. Problem Statement

The purpose of the study is to position a comprehensive analysis of the conceptual religious studies activity of the theorist of moral theology of the postmodern era Innocent Gisel.

4. Methods and Materials

The methodological and theoretical basis of the work was formed taking into account the priority principles of the implementation of system research, based on an integrated approach. In order to fully disclose the problem, several theoretical research methods were used, in particular, historical-philosophical and philosophical-cultural methods, holistic and systematic analysis, synthesis, methods of comparison, generalization and some others.

Holistic and systemic analysis, as well as synthesis, were used to isolate the most significant aspects and basic concepts of the phenomenon under study. The dialectical method, comparison and generalization were used in order to detail the system of definitions, identify basic categories and theoretical generalizations, and form the concept of an integral process.

The historical-philosophical method provided for an effective combination of theoretical-logical and empirical-historical scientific methods, while the main principle was the unity of subject-content and methodological aspects of philosophical knowledge.

The philosophical-culturological method provided for the use of initial categories in the context of the initial categories. At the same time, the basis was an approach to the phenomenon under study, based on the concepts of integrity and generality, as well as the interdependence of individual elements.

5. Results and Discussion

The figure of Innocent Gisel, the defining theorist of moral theology of the postmodern era, has a significant role in the formation of the religious and cultural vector of the development of Ukrainian lands in the period of the mid-seventeenth century. However, despite the significance of the influence of the philosopher-theologian on the dynamics of religious, ecclesiastical and social life, aspects of his life and creative path were out of the attention of scientists for a long period. A similar trend is characteristic of the writer's fundamental works, in particular, the treatise "Peace with God to Man", which was once published under the guidance and with the blessing of Innocent Gisel.

Analyzing the key narratives of the treatise "Peace with God to Man", it should be noted that this work is actually positioned as the first example of systematic work in the field of moral theology within the framework of the development of Ukrainian Orthodoxy. The key goal of the philosopher is to transfer to the reader the main aspects of the essence of the Christian ethical teaching, which is presented on the basis of clarifying the attitude of man to God, society and his own soul [1, pp. 103–132]. In these aspects, the phenomenon of morality is closely associated with piety and piety, while being considered inseparably from the criticism of unworthy patterns of behavior, unworthy customs of participants and other "abnormalities" of society.

It is expedient to position Innocent Gisel's treatise "Peace with God to Man" as a summary statement of Christian dogmas and basic religious and moral principles determined by the religious worldview [12, pp. 168–170]. The philosopher presents religious morality as a phenomenon endowed with divine origin. At the same time, its norms are influenced by socio-cultural dynamics and complement it to a certain extent. The justification of such a position in the treatise "Peace with God to Man" takes place in the format of representation in the text of the norms of religious morality, which are based not only on the biblical commandments, works of the Christian tradition, the teachings of the Church Fathers, but are also largely regulated by the realities of Ukrainian society at that time [2, pp. 163–165].

The specificity of the presentation of the thoughts of the moral theologian Innocent Gisel, which is clearly visible in the work "Peace with God to Man", is that religious and moral aspects are considered through the prism of the phenomenon of sin and its atonement. The lion's share of the theologian's attention is paid to the confrontation between good and evil, the opposition of moral virtues and sinfulness, and the phenomenon of moral duty in the life of a Christian. Such an orientation of philosophical thought was aimed at expanding the range of cultural achievements that could be used by the Orthodox in practical life.

In scientific discourse, it is customary to consider both “Peace with God to Man” and the activities of Innocent Gisel as a whole in the context of the cultural specifics of the Ukrainian Baroque period. The theorist of moral theology was one of the brightest and most original figures of the Orthodox Church of the period of confessionalization. The historical figure of Innocent Gisel is considered in the context of an intellectual figure who made significant efforts to establish the Baroque culture in the Ukrainian lands, which contributed to the synthesis of Western and Eastern religious-philosophical thinking paradigms [4, pp. 257–266].

The activities of Innocent Gisel in several directions were a continuation of the work of the Kyiv Metropolitan Petro Mohyla [8]. As a theorist of moral theology, Gisel made efforts to achieve greater orderliness of church life, strengthening the main church structures in Ukrainian society in the middle of the seventeenth century. During this period, there was a fierce struggle for Ukrainian territories between the Catholic Polish-Lithuanian Commonwealth, Orthodox Muscovy and Muslim Turkey and the Crimean Khanate. Against the background of this struggle, the philosopher Innocent Gisel defended the interests of the Kyiv Metropolis, primarily the Kyiv-Pechersk Lavra [14]. The figure was focused on practical support for Orthodox Muscovy, because Left-Bank Ukraine was under its control. It is this fact that explains some of the narratives of Innocent Gisel’s Muscophilia, which found direct expression in his work – in particular, in the work “Synopsis” and the above-mentioned treatise “Peace with God to Man”, which were published under the personal leadership of Gisel [13, pp. 176–190].

At the same time, ardently defending the interests of the Kyiv Metropolis, the theologian made efforts to preserve its autonomy as much as possible and supported opponents of mandatory subordination to the Moscow Patriarchate. In his work “Peace with God to Man”, the figure proposed a broad classification of sin as a moral defect to be interpreted in a theological context. Innocent Gisel brings sins of a purely religious or ecclesiastical nature to the fore. Next, the philosopher positions sins that are related to secular life, for example, family relationships, professional activity and other aspects of social life [10, pp. 183–193].

It should be noted that it is quite problematic to achieve a clear distinction between the above-mentioned secular and religious components in the system of interpretation of sins in Gisel’s work “Peace with God to Man”. In their interpretation, in addition to the primary reference to the Bible and the works of the Church Fathers, the theologian relies on the realities of the life of Ukrainians at that time. At the same time, in the context of the analysis of common (universal) sins, the author appeals to the current church tradition and focuses on religious aspects.

Separately, it should be noted that Innocent Gisel was not inclined to absolutize the concept of sin as a moral violation. The theologian noted that quite often social circumstances actually force a person to act sinfully or make sinful decisions. The philosopher was convinced that such acts would not be considered a sin or would significantly mitigate their consequences. The author noted that the “removal” of sin is possible through repentance, confession and penance.

Interpreting the issues of penance and confession, Innocent Gisel focuses considerable attention on psychological issues. The theologian emphasizes that the process of repentance presupposes a person’s awareness that the root cause of sin lies in himself [7, pp. 420–275]. A clergyman who listens to confession and imposes penance must note key psychological aspects, identify the level of sincerity of the individual, and determine the likelihood of confession under duress. When imposing penance, the priest must find the optimal “golden mean”, i.e. not give penance excessive heaviness, or vice versa – lightness, to avoid rejection or depreciation of such a way of combating sin in the individual [6, pp. 281–283]. The priest must be able to focus the penitent’s thoughts in the vector of the search for the right path of correction.

Repentance in the context of Innocent Gisel’s interpretation is understood not as a traditional confession, but as a deep awareness of one’s own sinful act, the fallacy of such a path, as well as stimulation of the penitent’s desire not to repeat such sinful actions in the future.

The theorist of moral theology in his work “Peace with God to Man” refers to sins against the Ten Commandments (the commandments of Moses), the Ten Commandments of the Church, sins against the Holy Spirit, theological virtues, as well as sins that are possible during the performance of church sacraments. Despite their primarily religious character, according to Innocent Gisel, they are endowed with a fragmentary general (universal) character, because they are directly related to both clergy and secular people. The theorist refers to purely ecclesiastical sins, primarily sins that occur during the performance of church sacraments. Many “universal” aspects are present in the Ten Commandments of the Church (the Decalogue of Moses). Among them is the prohibition of murder, theft, perjury, etc.

A thorough description of the list of sins of a religious and ecclesiastical nature, and most of all sins against the Ten Commandments of the Church, as well as practical instructions for their resolution, performed by Innocent Gisel, were aimed primarily at confessionalization, increasing the involvement of broad social strata of the population in church life, as well as intensifying the role of the Orthodox Church in social development [11].

Innocent Gisel in his treatise "Peace with God to Man" refers to universal sins as a manifestation of moral violations (gluttony, pride, covetousness, impurity, envy, anger and laziness), as well as sins against works of mercy and those that cry out to heaven. The theologian pays maximum attention to the seven deadly sins, analyzing in detail their potential manifestations, as well as the main fruits (consequences).

It is worth noting that in the process of interpreting the so-called universal sins, Innocent Gisel refers primarily to biblical texts, as well as the leading works of the Church Fathers. Appearing as a socially responsible theorist, the author also refers to the key Ukrainian realities of that time, notes current events and phenomena, shows personal sympathy for the poor, and also directly makes it clear that most sins are characteristic primarily of rich and proud self-confident people [3, pp. 227–266; 14, pp. 176–190]. Innocent Gisel describes the sins of secular people in a differentiated way for each state. The theologian focuses on the primary need for those in power to treat their subjects humanely, and calls on representatives of the social lower classes to respect the authorities and their masters, not to raise riots or uprisings [5, pp. 167–193].

In fact, it can be argued that in the treatise "Peace with God to Man" the theologian carefully reflects the life picture of Ukrainian society in the postmodern era. The philosophical vision of Innocent Gisel is based on the belief that the institution of the family is the basis of social relations. Thus, in the above treatise, considerable attention is focused on family sins [13; 15]. Giving a logical advantage to the patriarchal family of that time, the author demonstrates a fervent conviction in the need to develop harmonious moral relations and a humane attitude of men toward women. Innocent Gisel paid considerable attention to children, their upbringing, instilling in them faith in God, good, deep moral customs [9, pp. 195–262].

However, the theologian positions the Orthodox clergy as the main social force, considering it as a structured phenomenon divided into bishops, monks, and white parish clergy. An important role in Gisel's theoretical developments is assigned to the urban environment – the author talks about different categories of citizens (artisans, merchants, judges, court clerks, doctors, etc.). The philosopher singled out the category of warriors in a separate group, which was relevant for Ukraine at that time, where continuous wars were fought.

Innocent Gisel was well aware of the specifics of the life of the Ukrainian Orthodox clergy, as well as the tangential defects and violations inherent in this environment. Even when describing the sins of clergy, the theorist relied on contemporary realities. Moreover, the theologian realized that the clergy, being influenced by the development of trade and market relations, increasingly began to "serve mammon".

It should be summarized that, as a theorist of moral theology of the postmodern era, Innocent Gisel focused on the model of a socially structured, stable society. The theologian realized that the Ukrainian society of that time was far from ideal, and representatives of various social classes, including the clergy, often committed deliberately immoral acts. The theorist was convinced that people endowed with power and wealth do so on a larger scale and more often. Gisel attributed to the church the functionality of correcting such a situation, promoting greater morality in societies. At the same time, clergy must be deeply aware of the nature of sin, its classification, to instruct people accordingly, confess and impose penance on them. Such an approach, according to Innocent Gisel, should have a positive impact on the process of regulating social relations.

6. Conclusions

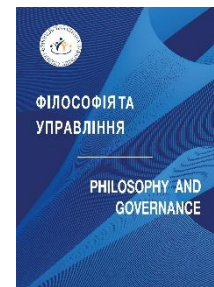
The theorist of moral theology of the postmodern era, Innocent Gisel, sought to improve the church life of that time. His broad analytical view synergized the theoretical foundations of religious and ecclesiastical activity, the specifics of the social development of contemporaries, and the most noticeable moral dilemmas. The theologian was able to identify a number of moral violations in the activities of the higher clergy, the elimination of which, according to Gisel, would increase the effectiveness of the Orthodox Church in Ukraine. The theoretician fervently insisted on the need for the responsible

performance of their duties by the clergy and made significant efforts to direct the activities of confessors, monks and preachers in the proper direction.

The implementation of the basic requirements proposed by Innocent Gisel for the Orthodox clergy fully corresponded to the spirit of confessionalization. At the same time, the moral guidelines presented in the treatise "Peace with God to Man" created an orientation vector towards the achievement of a certain social ideal, which may seem, at first glance, somewhat utopian. However, it is in this social utopia of Innocent Gisel that the theologian's desire to normalize social relations, to give them greater perfection, is represented.

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Buddhist Conceptualization of Time: From the Theory of Momentariness (Kṣaṇikavāda) to the Space-Time Continuum (Kālacakra)

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ABSTRACT

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Despite the intensification of dialogue between Buddhism and Western science within the framework of interdisciplinary research in phenomenology and the cognitive sciences, a systematic approach to the Buddhist philosophy of time remains underdeveloped, which limits the scope for comparative analysis. This article attempts to trace the development of the Buddhist concept of time, from the theory of momentariness (kṣaṇikavāda) from Abhidharma to the Tantric teaching on cyclical and multi-layered temporality (Kālacakra). The study was based on a historical-philosophical analysis of the formation of Buddhist rationality within the Indo-Tibetan Buddhist tradition. This perspective made it possible to overcome the methodological limitations of interpretations of Buddhist temporality exclusively through the prism of causality or theories of thought. Static analysis made it possible to identify the radicalisation of the theory of momentariness in the Hinayana schools (Vaibhashika and Sautrantika) and the deconstruction and phenomenologisation of time in Madhyamaka and Yogacara. Dynamic analysis made it possible to identify four key turning points in the development of Buddhist rationality – idealistic, epistemological, trans-empirical and post-canonical – and their influence on the transformation of the concept of time and the integration of the doctrine of momentariness into the tantric model of cyclical time, formulated in the Kalachakra tradition of the doctrine of time. The findings of this study contribute to broadening the methodological basis for dialogue between Buddhism and Western science.

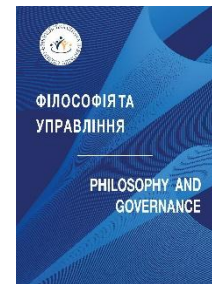
KEYWORDS

Buddhist philosophy; philosophy of time; Time Studies; Buddhist Studies; Tibetan Studies; kṣaṇikavāda (doctrine of momentariness); Buddhist rationality; Kālacakra (The Wheel of Time); Tibetan Buddhism; Buddhism–Western science dialogue; interdisciplinary research.



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Буддійська концептуалізація часу: від теорії миттєвості (Kṣaṇikavāda) до просторово-часового континууму (Kālacakra)

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Випускниця аспірантури.

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СТАТТЯ	АНОТАЦІЯ
Дослідницька DOI: 10.70651/3041-248X/2026.2.15 Отримана: 13.01.2026 р. Прийнята: 15.02.2026 р. Опублікована: 19.02.2026 р. Авторське право © 2026 автора  Цей твір ліцензовано на умовах Ліцензії Creative Commons «Із Зазначенням Авторства – Некомерційна 4.0 Міжнародна» (CC BY-NC 4.0). 	Незважаючи на інтенсифікацію діалогу між буддизмом і західною наукою в рамках міждисциплінарних досліджень у феноменології та когнітивних науках, системний підхід до буддійської філософії часу залишається недостатньо розвиненим, що обмежує можливості компаративного аналізу. У цій статті робиться спроба простежити розвиток буддійської концепції часу – від абгідгармістської теорії миттєвості (кшанікавада) до тантричного вчення про циклічну та багатшарову темпоральність (Калачакра). Дослідження спиралося на історико-філософський аналіз становлення буддійської раціональності в індо-тибетській буддійській традиції – така оптика дозволила подолати методологічні обмеження інтерпретацій темпоральності крізь призму причинності або теорії мислення. Статичний аналіз дозволив зафіксувати факт радикалізації теорії миттєвості в школах гінаяни (вайбгашика і саутрантика) та деконструкцію і феноменологізацію часу в мадх'ямаці і йогачарі. Динамічний аналіз дозволив виокремити чотири ключові повороти в становленні буддійської раціональності – ідеалістичний, епістемологічний, транс-емпіричний та пост-канонічний – і їх вплив на трансформацію концепції часу, в тому числі, інтеграцію доктрини миттєвості в тантричну модель циклічного часу, сформульовану в традиції вчення про час Калачакри. Результати дослідження сприяють розширенню методологічної основи для діалогу між буддизмом і західною наукою. КЛЮЧОВІ СЛОВА буддійська філософія; філософія часу; студії часу; буддійські студії; тибетські студії; kṣaṇikavāda (теорія миттєвості); буддійська раціональність; Колесо Часу; Kālacakra (Калачакра); тибетський буддизм; діалог буддизм-наука; міждисциплінарне дослідження. СКОРОЧЕННЯ БН буддизм і західна наука (використовується для позначення акторів діалогу між буддизмом і західною наукою) КЧ Калачакра

1. Introduction

У межах сучасного міждисциплінарного діалогу між буддизмом і західною наукою (БН), зокрема когнітивних та нейронаукових досліджень [38, с. 132–133], поступово відбувається зсув від об'єктивістського розуміння часу як фізичної міри тривалості до його феноменального осмислення як переживаної темпоральності суб'єкта. Саме цей перехід від «досвіду від третьої особи» до «досвіду від першої особи» формує методологічне тло нейрофеноменології [5, с. 2] та актуалізує проблему темпоральності як центральну для досліджень свідомості суб'єкта [17, с. 92].

Формування засадничих принципів нейрофеноменології пов'язане з проєктом Франсіско Варели (1946–2001), який розглядав пізнання не як репрезентацію наперед заданого світу, а як процес втілення світу розумом «на основі історії різноманітних дій, які виконує істота у світі» – це той самий енактивізм, який дозволяє помітити фундаментальну циклічність в науковому методі, що з точки зору філософські налаштованої когнітивної науки, стає центральною ідеєю Варели [64, с. 9]. Дослідник наголошував, що розум і світ виникають разом в процесі енакції, і спосіб їх виникнення в будь-якій конкретній ситуації не є випадковим [71, с. 177]. В цілому, енактивістський підхід виходить з того, що сприйняття є перцептивно керованою активністю, а когнітивні структури виникають з повторюваних сенсомоторних патернів, що дозволяють цій активності бути перцептивно керованою [71, с. 173]. А за допомогою теорії аутопоезису, що підкреслює ключову роль суб'єкта у формуванні таких когнітивних структур, Варела акцентував увагу на можливості інтеграції феноменологічного опису часу в наукове дослідження.

Подальший розвиток цих ідей здійснює Шон Ґаллагер в проєкті натуралізації феноменології [27, с. 94], де темпоральність розглядається крізь призму проблеми самості, зокрема у розрізненні мінімальної та наративної самості [26, с. 14–15], а також у феномені «умоглядного теперішнього» [27, с. 94], вимагаючи нефізикалістського аналізу часу. Водночас, послідовниця Варели, Клер Петіменже розробляє мікрофеноменологічні методи систематичного доступу до мікродинаміки переживань [49], намагаючись легітимізувати інтерсуб'єктивно верифікований опис «досвіду від першої особи», зокрема досвіду медитативних практик [50; 51].

В цілому, енактивістський підхід функціонує як важливий компонент методологічної рамки, що уможливорює продуктивне співвіднесення нейронаукових моделей пізнання з буддійською феноменологією досвіду – зокрема феноменологічними описами, представленими в *абгідгармі*¹ [71, с. 221], – але без редукції однієї до іншої, оскільки відкриває перспективу аналізу діяльній природі свідомості та створює концептуальні умови для інтеграції формалізованих першоособових описів з емпіричними даними.

Водночас нейрофеноменологам дорікають за самообмеження дослідженнями медитативних станів [23, с. 39] і брак інтеграції буддійського епістемологічного арсеналу у роботу з темпоральністю. Як зазначається в критичних оцінках, це зумовлено відсутністю системної реконструкції саме буддійського розуміння часу та його внутрішньої еволюції.

Таким чином, постає необхідність реконструкції буддійської концептуалізації часу – не як емпіричного переживання, а як філософськи відрефлексованої проблеми, що визначає сам спосіб організації досвіду. Без такої реконструкції компаративні та міждисциплінарні дослідження в межах діалогу БН залишаються фрагментарними.

2. Review of Primary Sources

Компаративні студії часу

У західній філософії XX століття (напередодні діалогу БН) здійснювалися спроби систематизації різних вже сформованих поглядів на час.

Джеральд Вітроу (1912–2000) у своїй узагальнюючій праці *The Natural Philosophy of Time* (1961) визнав час як ілюстрацію універсального світового порядку, але й не відкинув його зв'язку із людською свідомістю [75, с. 47]. Звертаючись до дослідження «впорядкування в часі»,

¹ Абгідгарма (санскр. abhidharma; тиб. chos mngon pa) – «за-явищем». Тексти по буддійській метафізиці, які містять космологію, феноменологію досвіду та класифікацію усіх явищ. Присутнє у всіх трьох колісницях буддизму (гінаяні, махаяні, ваджраяні), хоча залежно від філософської школи може відрізнятися за змістом і інтерпретаціями окремих положень.

Вітроу окреслив обмеженість теорій моментів і протиставив їм подієву модель темпоральності: моменти не мають самостійного онтологічного статусу, тоді як саме події, впорядковані у причинно-наслідкові ряди, формують структуру часу [75, с. 36]. Ця теза узгоджується з реляційною теорією Ляйбніца і протистоїть ньютонівському уявленню про абсолютний час, а підхід, у якому моменти є похідними від подій, став важливим концептуальним підґрунтям для подальших феноменологічних досліджень часу.

Міждисциплінарний вимір проблеми часу було розгорнуто в проєкті Юліуса Фрейзера (1923–2010) під назвою International Society for the Study of Time, що розпочався зі збірки *The Voices of Time* (1966), яка продемонструвала варіативність моделей часу в різних наукових і культурних традиціях [24, с. xviii]. У цьому ж виданні Хадзіме Накамура (1912–1999) звернув увагу дослідників на парадигмальні відмінності між західними й буддійськими уявленнями про час, підкреслюючи роль мовних структур (на прикладі санскриту) у формуванні просторово-часової організації досвіду [24, с. 77–91].

У межах компаративної філософії часу Девід Калупагана (1936–2014) наполягав на тому, що буддійські принципи непостійності та відсутності вічної субстанції з самого початку задають процесуальну модель реальності [40, с. 181], а принцип залежного виникнення формує реляційне розуміння буття, у якому темпоральність не є автономною сутністю, а постає внутрішнім виміром взаємопов'язаних феноменів [40, с. 182].

Історико-філософську перспективу дослідження часу продемонструвала класифікація режимів темпоральної орієнтації Кшиштофа Помяна (*L'Ordre du temps*, 1984), в якій було простежено перехід від хронометрії (календарного та годинникового вимірювання, що спираються на природний циклічний час) та хронографії (складання історичних хронік в певній послідовності, що спирається на історичний локальний час) до хронології (відстежування періодів трансформації природи і історичних змін цивілізацій разом). Але особливого статусу у цьому контексті набувало визначення Помяном хронософії, як рефлексії над глобальними трансформаціями світу, що тяжіє до уявлень про атемпоральність² або «вічне теперішнє» [52, с. 13].

Феноменологічна проблематизація часу отримала подальший розвиток і у працях вже згаданого нами «натур-феноменолога» Шона Ґаллагера (*The Inordinance of Time*, 1998) – зокрема, про невизначеність часу і розробку ідеї «умоглядного теперішнього» на тлі когнітивного парадоксу [25, с. 4]: коли теперішнє постає як вузлова точка перетину пам'яті, сприйняття і смислу, що вимагає ускладнення лінійних моделей темпоральності.

Загалом, з критичним аналізом гегемонії історичного (модерного) часу на матеріалах компаративних студій виступає сучасна дослідниця темпоральності Шоналіка Каул [42, с. 3]. Каул наголошує, що сучасна історіографія не просто описує минуле, а нав'язує єдиний режим часу, який витісняє й спотворює інші темпоральні уявлення, особливо домодерні та неєвропейські, зберігаючи при цьому колоніальну логіку навіть у постмодерному академічному полі. Відповіддю на це, на погляд Каул, має бути не просто включення альтернатив, а радикальна проблематизація самого поняття часу через введення домодерних південноазійських темпоральностей як рівноправних режимів пізнання, що мають трансформувати глобальний інтелектуальний порядок у бік несуперечливої, плюральної епістемології [42, с. 5].

Отже, ми фіксуємо, що попри всю методологічну різноманітність, західні підходи до дослідження часу здебільшого залишаються прив'язаними до лінійно-послідовних моделей темпоральності та аналітичного розрізнення суб'єкта й об'єкта пізнання. Це виявляє їх обмеженість при зустрічі зі східними традиціями, де час мислиться як функція когнітивних процесів і інструмент практик трансформації досвіду. І саме в цьому контексті звернення до буддійської філософії стає методологічно вмотивованим – ми фокусуємося на її поглядах на досвід часу.

² У цьому дослідженні функціонально еквівалентно використовуються такі пари понять: атемпоральність / позачасовість (відсутність темпоральної диференціації); свідомість / розум (когнітивний вимір досвіду); причинність / каузальність (причинно-наслідкова зумовленість); буття / існування (модус наявності).

Буддійські студії гінаяни

Ранньою спробою системного підходу до темпоральності в буддизмі стала теорія миттевості³ *кшанікавада* (*kṣaṇikavāda*, *skad cig ma smga ba*)⁴, яка була сформована ще в межах абгідгармічної традиції. Обговорення *часу* було цілком органічним для дискусій шкіл гінаяни, про що свідчать полемічні матеріали «Катхаватху»⁵ (*"Kathāvatthu"*) – тексту, що демонструє наміри логічно вибудовувати аргументацію проти хибних тлумачень спірних доктринальних положень буддизму і торкається, зокрема, питань існування та вмісту минулого та майбутнього [61, с. 98–103]. Але завдання позбавитися від всіх апоретичних напружень, що виникають при застосуванні *кшанікавади* – зокрема проблеми пояснення тяглості кармічних зв'язків, пам'яті та розуміння шляху до пробудження як процесу – виявилось неможливим без руйнації буддійської доктринальної логіки, що і зумовило переосмислення теорії миттевості і самої логіки в магаяні та ваджраяні.

Академічні ж дослідження *кшанікавади* в межах гінаяни зазвичай здійснювалися або крізь призму теорії мислення, із зосередженням на аналізі свідомості [44, с. 17], або на атомізації феноменів у *часі*, коли існування тлумачиться як послідовність миттєвих подій [59, с. 1], або просто крізь призму каузальності [3, с. 123].

Буддійські студії магаяни і ваджраяни

Щоправда, Аніндіта Балслев однією з перших здійснила системний компаративний аналіз концептуалізації *часу* в індійській філософії, залучивши тексти не тільки гінаяни, але й магаяни, не кажучи про небуддійські джерела (Веди, Магабгарата, Пурани тощо). Методологічно її дослідження було спрямоване на реконструкцію ранніх буддійських спроб філософського осмислення *часу*, здійснену переважно в межах доктрини миттевості і крізь призму теорії причинності (*pratītyasamutpāda*, *rten cing 'brel bar 'byung ba*) та онтологічних дискусій про свідомість і буття [3, с. 107–128].

Балслев наголосила, що буддизм від самого початку відмовився не лише від креаціонізму та ідеї вічної душі, але й від уявлень про незмінність буття та унітарність *часу* [3, с. 80–81] – у такому контексті буддійська реальність постає як потік (*saṃtāna*, *rgyud*), *час* редукується до миттевостей (*kṣaṇa*, *skad cig*), а буття – до мерехтіння феноменів у часовій послідовності. Онтологічна єдність цього потоку, за висновком Балслев, для буддистів є результатом концептуального та лінгвістичного конструювання. Революційною дослідниця вважала буддійську тезу про те, що незмінне не може вважатися існуючим [3, с. 81], бо такий підхід зумовив радикальну перебудову всієї базової філософської проблематики індійської інтелектуальної традиції та зробило *час* і буття фундаментальними об'єктами системного аналізу [3, с. 115].

Водночас Балслев методологічно розширила дослідження *часу*, залучаючи до розгляду філософію мови, і почала з вчення індійського граматиста Бгартригарі (*Bhartṛhari*, V ст.), підкреслюючи, що пізнання в Бгартригарі – включно з пізнанням вищої реальності – нерозривно пов'язане зі словом, що має природу свідомості і може бути подане у вигляді триступеневої моделі (слово зовнішнє, середнє та внутрішнє). Саме це, на думку Балслев, дозволило показати темпоральність як структурну умову вербальної комунікації [3, с. 103–104]. Водночас Балслев наголосила на принциповій відмінності буддійської позиції [3, с. 102]: на відміну від індуїстських лінгвістичних філософів, буддисти розглядали слова не як засоби розкриття реальності, а як суб'єктивні конструкції *вікальні* (*vikalpa*, *rtog pa*), що лише моделюють її невимовну природу *анабгілан'я* (*anabhilāpya*, *brjod du ma mchis pa*).

³ Тут і далі: буддійська теорія миттевості – це вчення про миттевість існування феноменів, де мить (*kṣaṇa*, *skad cig*) визначається як найкоротший проміжок часу (на відміну від розуміння часового інтервалу будь-якої тривалості або навіть часових відносин взагалі – під назвою *kāla*, *dus*). При цьому уявлення про «найкоротший» часовий інтервал має в традиції відносний і значною мірою інтуїтивний характер, бо воно зумовлене теоретичною інтерпретацією, характерною для певного історико-філософського контексту.

⁴ В цьому дослідженні використовуються правила міжнародної транслітерації: для санскритських термінів – IAST; для тибетських термінів – Wylie.

⁵ Текст «Катхаватху» впорядкував буддійський чернець Моґґаліпуттатісса (*Moggaliputtatissa*, 327–247 до н.е.) з Паталіпутри, засновник традиції Тхеравади (належить до гінаяни). Текст входить до Палійського канону (Кошик Абгідгарми) [30, с. 72–73], містить 200–252 спірних питання (в залежності від редакції).

3. Problem Statement

Існуючі методологічні підходи та їх обмеження

Балслев загострила нашу увагу на тому, що проблематизація часу неминуче піднімає питання свідомості: з одного боку, відповідно до позиції Васубандгу (Vasubandhu, ?IV ст.), представника школи гінаяни, очищений від *афектів* (kleśa, nyon mongs) розум розкриває свою природу як позачасову; з іншого, у буддійській логіко-епістемологічній традиції магаяни (Дігнага (Dignāga, ?480–?540), Дгармакірті (Dharmakīrti, 600–660), Шантаракшити (Śāntarakṣita, ?725–?788)) – миттєвість постає як засаднича характеристика свідомості [3, с. 112]. Таким чином, оптика буддійської теорії каузальності дозволила Балслев зафіксувати одночасну темпоральну і позачасову природу свідомості, однак зупинила її аналіз на рівні миттєвостей, не відкриваючи перспективи проблематизації самої позачасовості. І тому було три перешкоди:

(1) причинність і теорія взаємозалежного походження в буддійській традиції не одне і те саме (фактично, Балслев розглядає теорію причинності в широкому розумінні, тобто маючи на увазі просто зв'язки між причиною та наслідком, побудова яких в компетенції свідомості, але не враховує при цьому можливість досвіду прямого досягнення порожнечі (проживання самого «провалля», над яким ці зв'язки будуються), яке характерно для вузького, більш строгого, буддійського розуміння причинності⁶);

(2) можна зафіксувати зв'язок між часом та існуванням, але про існування на якому рівні йдеться – на конвенційному чи абсолютному (відповідно до буддійської теорії *двох істин* (dvayaśatya, bden pa gnyis)) – тому і казати про мінливість як ознаку реальності, щонайменше, некоректно, якщо не вказувати цей рівень;

(3) невимовність остаточної реальності, яку згадує Балслев, є ключовою ідеєю для магаянської філософської школи *йоґачара*⁷, а не для школи *мадґ'ямака*⁸. Також, хоча сама лінгвістична стратегія буддійської думки, у якій значення⁹ постає через заперечення протилежного¹⁰ [3, с. 102] і веде до визначення тривалості як ментальної конструкції, а не онтологічної даності, в буддизмі магаяни формується чіткий запит на позачасовість остаточної (істинної) реальності, яка відкривається в результаті трансцендування зумовлених темпоральних мовних структур. І саме цей запит реалізується в подальшому через мовленнєві та ритуальні практики (практики мантраяни¹¹). У цьому сенсі буддійська традиція не те що заперечує незмінність буття й унітарність часу, а радше диференціює рівні темпоральності, що змушує нас постійно робити застереження до радикальних висновків Балслев.

На тлі таких перешкод, на наш погляд, тема з філософією мови та запропонованою до розгляду схемою Бгарттригарі темпоральності зовнішнього, середнього, внутрішнього слова – не була вичерпана, бо явно потребувала більш складної моделі темпоральності, ніж та лінійно-послідовна, яку пропонує *кшанікавада* (наприклад, концентричні зовнішнє, внутрішнє та альтернативне колеса часу у вченні Калачакри (kālacakra, dus khor), що обертаються мовленням¹²).

⁶ Ґрунтовні коментарі по питаннях складнощів викладу теорії причинності – зокрема, про визначення семантичного поля самого санскритського терміну «праті'ясамутпада» в тибетській магаяні та ваджраяні – ілюструють можливість широкого та строгого буддійського розуміння самої теорії: як просто «зв'язок на ґрунті взаємозалежності» (rten 'brel) (тиб.) або як «виникнення у зв'язці на ґрунті взаємозалежності» (rten cing 'brel bar 'byung ba) (тиб.), тобто пустотності, відповідно [8, с. 243].

⁷ Yōgācāra (санскр.), rnal 'byor spyod pa (тиб.) – «практика йоґи». Школа філософії магаяни.

⁸ Madhyamaka (санскр.), dbu ma (тиб.) – «серединний шлях». Школа філософії Магаяни.

⁹ Тут і далі: У цьому дослідженні ми не акцентуємо особливу увагу на строгому розрізненні понять «сенса», «смыслу» і «значення». У межах західної філософської традиції їх можна інтуїтивно розвести таким чином: сенс – як те, що досягається в акті чуттєвого сприйняття; смысл – як те, що формується в процесі осмислення, концептуалізації та інтерпретації в конкретному дискурсивному, історико-філософському або доктринальному контексті; значення – як конвенційно закріплений зміст поняття, зв'язаний з конкретним знаком. Водночас у буддійській герменевтичній традиції подібні розрізнення певною мірою нівелюються через введення поняття «смыслу-мети» (artha, don), яке охоплює як сам акт означування, так і його референтність (спрямованість на означуване), і сам референт, перебираючи на себе функцію епістемічного механізму. І в подальшому під «знанням» ми будемо мати на увазі саме такий «смыслу-мету» в буддійському розумінні – як структурний принцип, що уможливорює, хоча й не гарантує, трансцендування мовних форм і відкритість до позаконцептуального досягнення реальності.

¹⁰ В цій тезі викладено суть буддійської теорії значень апоха (aroha, gzhan sel), яка була розроблена логіко-епістемологом зі школи йоґачари – Дігнаґою [62, с. 64–65]. Апоха – «виключення»; технічний термін, «який описує розуміння через негативний процес виключення: тобто, ... поняття передають значення лише тією мірою, якою вони “виключають” інші значення: наприклад, поняття “стілець” розуміється свідомістю лише шляхом виключення всього іншого, що “не є стільцем”» [7, с. 58].

¹¹ Мантраяна – «колісниця інструменту розуму» (санскр.), синонім тантраяни і ваджраяни. Назва походить від слів «мантра» («ман» = «мислення/розум», «тра» = «інструмент») та «яна» («колісниця»)

¹² Йдеться про опис мандали (maṇḍala, dkhyil 'khor) КЧ – «коло/кільце/куля» (санскр.), що символізує простір феноменального світу, що створюється розумом, та який приховує, але уможливорює розкриття в своєму центрі істинної пустотної природу цієї свідомості, шлях до якого пролягає через циклічне самовдосконалення (наприклад, шляхом вправлення у 10 досконалостей:

Дослідницьке завдання

Отже, якщо для розгляду *кшанікавади*, що спирається на одновимірну модель часу, редукція методологічних підходів до теорії каузальності була припустима, то для подальшого заглиблення у дослідження не тільки причинно-наслідкових, але й одночасно суб'єктно-об'єктних зв'язків (тобто континуальностей в контексті філософування шкіл магаяни і ваджраяни)¹³ – вона не припустима (і не з питань етики, а з питань неефективності). Тому можна сказати, що таке методологічне обмеження актуалізує потребу в альтернативних дослідницьких підходах до аналізу складніших моделей темпоральності, ніж просто торія миттєвості, що формуються в пізній буддійській традиції.

4. Methods and Materials

Крізь призму становлення буддійської раціональності

У буддійській традиції вчення про час Калачакра (КЧ) тлумачиться як спроба розширити теорію *кшанікавади* без її заперечення¹⁴: миттєвість зберігається як характеристика феноменального досвіду, але перестає функціонувати як універсальний принцип темпоральності. Запроваджуючи через КЧ модель просторово-часового континууму у формі циклічної взаємодії зовнішнього, внутрішнього та «іншого» колеса часу [72, с. 22–24], буддійська традиція релятивізує лінійну послідовність митей і звертає увагу на ноуменальний вимір континуальності, що не має субстанційної природи. У цій перспективі теорія миттєвості не скасовується, а виявляє власні методологічні межі.

Аналіз КЧ як пізньої ітерації буддійської концептуалізації часу вимагає виходу за межі абгідгармістської каузальної моделі. Циклічна і багаторівнева темпоральність КЧ потребує складнішої аналітичної оптики, здатної врахувати не лише зв'язки між миттю-причиною та миттю-наслідком, а й кореляції між суб'єктом-спостерігачем і об'єктом спостереження. Тому у даному дослідженні запропоновано звернення до реконструкції становлення буддійської раціональності, щоб отримати більш витончену оптику для дослідження концепції часу.

Обґрунтування ускладненого методологічного підходу

Обґрунтування валідності такого методологічного підходу тримається на трьох зафіксованих і досліджених буддологами фактах: на (1) ускладненні логічного апарату буддійського дискурсу (при переході від гіаяни до магаяни), (2) *епістемологічному повороті* в буддійському філософуванні (магаяни) та (3) введенні просторово-часового континууму як розширеної рамки викладу непостійності у ваджраяні.

(1) Д. Прамітха визначає буддійську теорію миттєвості як специфічну модифікацію вчення про залежне виникнення, у межах якої і причина, і наслідок мисляться як події миттєвого характеру – і відповідно до цієї позиції, будь-яка річ перестає бути тотожною самій собі вже в момент власного виникнення, оскільки її існування не триває поза межами окремої миті [53, с. 1]. Існування в буддизмі, за версією Прамітхи, є миттєвою подією, тому феноменальний світ постає як сукупність таких миттєвих подій, а уявлення про сталість і безперервність існування перетворюється на фантазію, що виникає внаслідок послідовності подібних, але не тотожних між собою миттєвостей. Тому проблема розпізнавання об'єктів в буддизмі, продовжує Прамітха, набуває специфічного розв'язання: суб'єктивні пізнавальні акти, спрямовані на різні миті, мають справу не з одним і тим самим об'єктом, а лише з подібними утвореннями, які помилково приймаються за ідентичні; і розпізнавання ґрунтується на когнітивному змішуванні подібності й тотожності, що й зумовлює хибне уявлення про тривалість і сталість.

Отже, ми наблизилися до буддійського вдивляння в дискретність феноменального потоку, в межах якого події, що розкриваються як феномени «тут-і-зараз», виявляють між собою певний «порожній» простір. При цьому простір у буддійській традиції визначається не позитивно, а апофатично – як відсутність перешкод (бо перешкоди – то і є феномени). Тому простір між

щедрості, дисципліні, співчутті тощо). Символом процесу обертання колес часу є літери санскритської абетки, розташовані по зовнішньому колу мандали.

¹³ У традиції такі перехресні потоки свідомості символічно співвідносяться з ваджрою (vajra, rdo rje) як образом «діамантової» непохитності функціонування потенційної основи буття, що уможливорює прояв феноменального світу.

¹⁴ Вчення КЧ пропонує власну космологію, яка дещо відрізняється від подібних ідей в Абгідгармі та вченні Дзогчен. Аналіз таких розбіжностей провів один із засновників позасектантського буддійського руху ріме (ris med) Джамг'юн Конг'трюл Лодро Тайе ('jam mgon kong sprul blo gros mtha' yas, 1813–1899), який констатував наявність різних рівней усвідомлення, на яких відбувається концептуалізація цих космологій: «І хоча ці космології зображують різні підходи, вони не протистоять одна одній, а навпаки, вміщують одна одну» [34, с. 39–40].

миттєвостями – це безопорна безодня, що протиставляється схильності розуму шукати і хапатися за феномени та, як наслідок, марити їх тотожністю і вибудовувати в уяві причинно-наслідкові ланцюжки.

Так в загальних рисах виглядає буддійська спроба окреслити позафеноменальний механізм встановлення зв'язку між причиною та наслідком – механізм, який принципово не може бути схоплений розумом без ризику його гіпостазувати. Водночас утримання від уречевлення цієї принципової не-фіксації (для *мадг'ямаки*) або не-визначеності (для *йогачари*), за традицією, уможлиблює розпізнавання тантричної перспективи, яку можна описати як ментальну континуальність, тобто *тантру* (tantra, rgyud) – *невимовну* (anabhilāpya, brjod du med pa) тяглість свідомості, що не зводиться до сукупності феноменальних моментів та зв'язків між ними, а є самим принципом утворення цих зв'язків. Доступ до такої континуальності відкривається через апоретичний розрив мислення, який перетворюється в інструмент виявлення меж раціонального дискурсу і осягнення пустотності основи феноменального існування (для *мадг'ямаки*) або нескінченного потенціалу її можливостей (для *йогачари*): в першому випадку, на рівні філософських рефлексій, традиція проблематизує онтологію буття, в другому – його феноменологію.

І для узгодження семантичних просторів таких перехресних дискурсів логіка неминуче ускладнюється, намагаючись вербалізувати нетривіальні критерії істинності.

Ускладнення в магаїні починається з тетралемі Наґарджуни *чатушкоті* (catuskoṭi, mi gzhi), яка підважує бінарну структуру мислення, а потім посилює її структурою аргументації під назвою *діамантова крихта* (rdo rje gzegs ma)¹⁵. Але якщо апофатична логіка сутр магаїні демонструє розрив між концептом і реальністю (про що свідчить не тільки визначення самого простору, але й подальша розробка теорії значень *апоха* (ароха, sel ba)¹⁶, що будується на елімінативному принципі [18, с. 233; 62, с. 64–65]), то ваджраяна намагається працювати з цією розірваністю як з умовою реставрації функціональної єдності. У такій перспективі *чатушкоті* може розглядатися як передумова розгортання тантричної семіотики, що переводить апофатичне заперечення у площину інтегративного досвіду.

(2) *Епістемологічний поворот* – виявлений та описаний Вінсентом Ельтшинґером – пов'язаний із формуванням буддійської теорії достовірного пізнання та логіки, розроблених Дігнагою (V–VI ст.) і Дгармакірті (VII ст.) [22]. У центрі філософського аналізу опиняється питання достовірності пізнання, що визначається через два його види: *прямого сприйняття* (pratyakṣa, mngon sum) та *умовиводу* (anumāna, rjes dpag). У тибетській традиції ці ідеї були систематизовані у дисциплінах традиційної епістемології (blo rig) і логіки (rtags rig) та введені до системи монастирської освіти, зокрема через підручники Чхапи Чхьок'ї Сенґе (cha pa chos kyi seng ge, 1109–1169)¹⁷ і Цонгкхапи (tsong kha pa, 1357–1419)¹⁸.

Буддійська раціональність у цьому контексті постає як система аналізу взаємодії *суб'єкта* (yul can) і *об'єкта* (yul), що починається з класифікації пізнавальних актів. Таким чином, буддійська раціональність вибудовується навколо низки фундаментальних дихотомій¹⁹: достовірного і недостовірного пізнання, концептуального і неконцептуального пізнання, прямого сприйняття та умовиводу тощо. Саме цей «дихотомійний арсенал» створює

¹⁵ Буддійський вчений Джам'янґ Шепа ('jam dbyangs bzhad pa, 1648–1721/1722) коментує роздуми Камалашілі (Kamalaśīla, 740–795) про суть аргументу діамантової крихти, що за традиційною думкою підриває усю логіку феноменальної причинності: це спростування чотирьох альтернатив імплікації – дійсні речі виникають не з себе, не з іншого, не з обох разом, не без причин; і це тому, як зазначає автор, що навіть ефективні (тобто ті, що функціонують) речі не мають самосущої природи [33, с. 785, 789]. Саме з окремих текстологічних зауваженнях Гопкінса, стає очевидним значущість багатозначної логіки, що на той час вже застосовувалась в буддійських філософських викладах і вимагала розширення раціонального інструментарію: цей новий інструментарій мав забезпечити дискусію в різних вимірах, коли те, що обговорюється, може бути істинним, може не бути істинним, може бути і не бути істинним, може не бути і не бути істинним – а це і є практичне застосування чатушкоті [35, с. 14; 54, с. 19, 85]. І вводиться таке ускладнення в логіці суджень саме для того, щоб охопити не тільки явні зв'язки між феноменами, але й всі потенційно можливі тенденції, що в подальшому ці зв'язки конституують.

¹⁶ Апофатичний вимір концептуально артикульованого досвіду можна інтерпретувати як наслідок механізму виключення, розробленого Дігнагою та Дгармакірті у межах буддійської теорії значення. Згідно з цією моделлю, як ми вже згадували, значення встановлюється через заперечення іншого, що виявляє негативну структуру самого процесу концептуалізації. У такій перспективі аналіз концептуалізації часу у вченні КЧ може бути прочитаний як дослідження меж концептуальної артикуляції часу – меж, які на семантичному рівні виявляються результатом застосування механізму виключення, а на рівні досвіду можуть постати як модус позачасовості.

¹⁷ Назва підручника – bsduṣ grwa («Зібрання тем»).

¹⁸ Назва підручника – sde bdun la 'jug pa'i sgo don gnyer yid kyi mun sel («Брама, що веде до семи трактатів <Дгармакірті>: розвіювання темряви розуму шукачів знань»).

¹⁹ Дослідники зазначають: навколо дихотомій будується і вся онтологія Дгармакірті [18, с. 62].

семантичний простір мислення, у якому тантра функціонує як особлива мовна стратегія, що виявляє апоретичну напругу між полярностями досвіду та спрямовує її до інтеграції.

(3) Введення просторово-часового континууму набуває завершеної форми у вищих *тантрах* (anuttara-yogatantra, rnal 'byor bla med kyi rgyud), зокрема у КЧ. Тут темпоральність постає як багаторівнева циклічна зміна простору, що дозволяє трансцендувати феноменальний світ через трансформацію самого досвіду часу. Модель КЧ описує три взаємопов'язані цикли часу – *зовнішнє, внутрішнє і альтернативне колеса часу* – які утворюють концентричну структуру, в центрі якої умовно розташовується перехід до іншого виміру темпоральності, який на феноменальному рівні може видаватися порожечею, позачасовістю тощо. Таким чином, вчення КЧ демонструє доволі витончений підхід до викладу ідей щодо часу – і це вартує окремого дослідження.

Ключові першоджерела

Базові тексти вчення КЧ з'являються в X–XI ст. на санскриті [29, с. 211] і перекладаються тибетською у XI ст. В 1027 р. – в Тибеті приймають на державному рівні календар за системою розрахунків, що базується на концепції часу, яку пропонує вчення КЧ, і починає розгортатися традиція тибетських коментарів до вчення. В XIV ст. базові тексти вчення входять до Тибетського буддистського канону як ті, що належать до слів Будди²⁰.

До базових текстів вчення належать скорочена версія корінного тексту «Славетна королівська тантра колеса часу»²¹, ключовий коментар «Бездогане світло»²², фрагмент корінного тексту «Частина посвяти»²³.

Скорочена версія корінного тексту – наразі це ключовий базовий текст, що презентує вчення КЧ. Він складається з п'яти розділів [29, с. 211–214]: I Розділ – «Розділ зовнішнього світу» (Lokadhātu Paṭala, 'jik rten gyi kham rnam par bkod pa'i le'u), II Розділ – «Розділ внутрішнього світу» (Adhyātma Paṭala, nang nges pa zhes bya ba'i le'u), III Розділ – «Розділ посвяти» (Abhiṣeka Paṭala, mngon par dbang bskur ba'i le'u), IV Розділ – «Розділ практики» (Sādhana Paṭala, sgrub thabs kyi le'u), V Розділ – «Розділ знання» (Jñāna Paṭala, ye shes kyi le'u).

²⁰ До дослідження було залучено скорочену версію корінного тексту КЧ на санскриті в ред. Б. Банерджі [4]; коментар «Бездоганне світло» в ред. Дж. Упадгьяї, Самдг'онга Рінпоче та ін. (в трьох томах) [55–57], а також тибетською – відцифровані тексти з Дергесського Канону [10; 12] та Літангського кан'юру [66; 67] (обидві редакції належать до однієї групи так званих східних редакцій кан'юрів, які на відміну від західних пекінських редакцій демонструють більш повні тексти першоджерел [20, с. 70; 21, с. 300–301, 304]). Фрагмент корінного тексту вчення КЧ використовувався у версії Дергесського канону [11] та дві редакторські версії Дж. Орофіно [48].

²¹ Повна назва скороченого варіанту корінного (втраченого традицією) тексту вчення КЧ: на санскриті – Paramādibuddhoddhritasāṅgikālasakranāmatantrarājā; тибетською – mchod ki tang poi sangs rgyuds las phyung ba rgyud kyi gyal po dpal gus kyi 'khor lo zhes bya ba; українською (пер з тиб.) – «Славетна калачакра, королівська тантра, що походить від вищого первинного будди».

Повні назви в санскритській та тибетській редакціях можуть дещо відрізнятися, тому верифікація текстів, зазвичай, відбувається поверхово в порівняльному перекладі санскритського і тибетського варіантів [4; 12; 66].

За традицією, корінний текст був отриманий Сучандрою (Sucandra, ?X–?IX ст. до н.е.) – першим з дгарма-раджнів (королів дгарми) країни Шамбгали від самого Будди Шак'ямуні. Текст в традиції не зберігся. Скорочена версія корінного тексту вчення була складена Яшасом (Yaśas, III ст. до н.е.), восьмим королем Шамбгали і першим з калкі-королів Шамбгали (королів визволителів від невігластва). Традиційний переклад скороченої версії з санскриту на тибетську здійснили: Соманатха (somanātha), Дро Шерап-драк ('bro shes rab grags), редактори – Шанг'тзон Доде-пел (zhang ston mdo sde dpal), Цюлтрім-дар (tshul khriṃs dar), Шонг'тзон (shong ston). Цей текст досліджували – Джон Н'юмен (1987), Весна Волес (2001, 2004, 2010), Урбан Гаммар (2005). Текст входить до першої з 10 частин Пекінського Канону кан'юру, яка називається «Тантра» (rgyud). За Нартанським Каноном – належить до дванадцятого розділу кан'юру «Тантра» (rgyud). За Чонеським Каноном – входить у першу частину кан'юру, яка називається «Збірка тантр» (rgyud 'bum). За Ур'їнським Каноном – входить до колекції «100 000 таємних мантр» (gsang sngags rgyud 'bum du grags pa'i skor). За Дергесським Каноном – належить до розділу тантр кан'юру (D (Derge Kangyur), rgyud, vol. ra, ff. 22b–128b (Toh. 362)) [70, с. 67].

²² Повна назва базового коментаря до КЧ: на санскриті – Vimalaprabhāṇānamūlatantrānusāriṇī dvadaśasāhasrikālaghukālasakratantārājāṭīkā; тибетською – bsdu pa'i rgyud kyi rgyal pod dus kyi 'khor lo'i 'grel bshad rtsa ba'i rgyud kyi rjes su 'jug pa stong phrag bcs gnyis pa dī ma med pa'i 'od ces bya ba; українською (пер з тиб.) – «Бездоганне світло, дванадцятитисячовіршовий коментар до Калачакри, королівської скороченої тантри, що слідує за кореневою тантрою» [10; 55–57; 66; 67].

За традицією, головний коментар було складено Пундарікою (Puṇḍarīka, II ст. до н.е.), другим калкі-королем Шамбгали. Перекладачі з санскриту на тибетську – Соманатха, Дро Шерап-драк [67, с. 691]. В більшості редакцій тибетських буддистських канонів входить до тенг'юру, хоча деякі його перші версії входять навіть в кан'юр, настільки важливим вважається цей коментар в тибето-буддистській традиції [74, с. xi]. Цей текст досліджувала – Весна Волес (2001). Текст, що належить до Пекінського Канону – входить в тенг'юр до корпусу «Колісниця мантри як плоду» (тибетською – 'bras bu snangs kyi theg pa'i skor). За Нартанським Каноном входить в тенг'юр, до корпусу текстів «Колісниця мантри як плоду» (тибетською – 'bras bu snangs kyi theg pa'i skor). В Ур'їнському та Дергесському канонах – входить до кан'юру, в частину «Коментарі до Калачакри – Бездоганне світло» (dus 'khor 'grel bshad dī med 'od) (D (Derge Tengyur), rgyud 'grel, vol. tsa, ff. 1a–361b (Toh. 1347)) [70, с. 216].

²³ Канонізований фрагмент, який залишився від корінного тексту КЧ: на санскриті – Sekoddeśa, тибетською – dbang mdor bstan pa, українською (пер з тиб.) – «Частина посвяти» [11; 48]. Перекладачі з санскриту – Соманатха, Дро Шейрап-драк, редактор – Рінчен Г'елцен (rin chen rgyal mtshan). Входить до Тибетського буддистського канону, до кан'юру (D (Derge Kangyur), rgyud, vol. ra, ff. 14a–21a (Toh. 361)) [70, с. 67].

Зовнішнє колесо часу описано в I розділі. До нього входять космологічний наратив, есхатологічний міф, історія утопічної країни благоденства Шамбгали та її правителів – фактично, тут йдеться про закони кругообігу життя умовно зовнішнього феноменального простору індивідууму у часі [1; 47].

Внутрішнє колесо часу описано в II розділі. До нього входять опис системи внутрішніх каналів, вітрів, крапель – фактично, йдеться про закони кругообігу життя умовно внутрішнього феноменального простору індивідууму у часі [72].

Інше колесо часу описано в III, IV, V розділах. Деталі посвяти, практики і ключові максими вчення про досягнення знання – зосереджені саме в цих розділах. Тут йдеться про істинну іншість, природу якої ми маємо винайти і природа якої пов'язана з колапсом феноменального простору і трансцендуючим часом, що відкривають шлях до пробудження [73; 74].

Таким чином, звернення до КЧ вимагає від дослідників не лише розширення поняття часу, а й переосмислення самої методології його дослідження через власний досвід. Аналіз крізь призму становлення буддистської раціональності дозволяє інтегрувати миттєвість, причинність і циклічність у єдину концептуальну рамку, в якій час постає не як абстрактна величина, а як структурний вимір пізнання.

5. Results and Discussion

Статичний аналіз

За доксографією тибетської *магаяни*, існує чотири основні філософські школи буддизму: *вайбгашика*²⁴, *саутрантика*²⁵, *йогачара* та *мадг'ямака* [33, с. 192]. Така класифікація є усталеною в тибетській філософській традиції й використовується як аналітична схема для зіставлення онтологічних, епістемологічних і сотеріологічних позицій різних напрямів буддистської думки.

Школа *вайбгашики*, або *сарваствівада*²⁶, належить до традиції *гінаяни*. В контексті наших досліджень, можемо зазначити, що ця школа не визнає *самопізнання* (*svasamvedana*, *rang rig*), проте стверджує реальне існування зовнішнього світу, у зв'язку з чим її представників зазвичай характеризують як філософів-реалістів.

Вайбгашика є єдиною школою, яка визнає можливість одночасного існування причини та наслідку, на чому ґрунтується її розуміння тривалості в теоретизуваннях про *три часи* (*traikāla*, *dus gsum*): у такій перспективі *минуле* визначається як стан, у якому причина і наслідок уже вичерпалися; *теперішнє* – як ситуація, де причина вже вичерпалася, тоді як наслідок ще триває; а *майбутнє* – як стан, у якому і причина, і наслідок ще не вичерпалися [16, с. 255]. Попри внутрішні розбіжності щодо того, чи слід тлумачити *три часи* як трансформації самих феноменів, їхніх характеристик, контекстів або взаємозв'язків, *вайбгашики* загалом поділяють позицію, за якою *майбутнє* є ще не-досягнутим (в сенсе не-довершеним), *минуле* – таким, що вже припинилося, а *теперішнє* – тим, що виникло і ще триває.

Вайбгашика розглядає *три часи* як субстанційні, оскільки час тлумачиться як ознака *дгарми*, а *дгарма*, згідно з їх *абгідгармічним* визначенням, це явище, що тотожне власній ознаці. Таким чином йдеться про *дгарми*, які тривають від початку свого існування до завершення, та мають *три часових* модуси існування, з яких лише *теперішній час* має каузальну ефективність.

Саутрантика або *сутравада*²⁷ є ще однією філософською школою *гінаяни*, яку особливим чином виокремлює тибетська *магаяна*. Її представників також ідентифікують як реалістів, хоча й у більш поміркованому сенсі, бо на відміну від *вайбгашиків*, *саутрантики* стверджують, що реально існує лише *теперішнє*, а одночасне існування причини та наслідку неможливе. Унаслідок останнього *дгарми* втрачають характеристику тривалості й постають у вигляді послідовностей миттєвостей, у яких вони виникають і зникають, щоб виникнути наступної миті.

Таким чином, *саутрантика* визнає, що в кожному миті виникає щось принципово нове: перебування феномену в наступну мить означає його попередній розпад, а за неможливістю захопити оком таке мерехтіння, відмінність наступної миті феномену від попередньої оманливо інтерпретується як старіння [33, с. 241]. У цьому сенсі *минуле* – це феномен, зруйнований уже в другу мить свого існування, від якого залишився лише відбиток (в пам'яті); *майбутнє* – феномен,

²⁴ Vaibhāṣika (санскр.), bye brag smra ba (тиб.)

²⁵ Sautrāntika (санскр.), mdo sde pa (тиб.).

²⁶ Sarvāstivāda (санскр.), thams cad yod pa smra ba (тиб.) – «школа, для якої існує все».

²⁷ Sūtravāda (санскр.), mdo sde pa (тиб.) – «послідовники сутр».

що ще не виник, хоча його причина вже наявна; *теперішнє* є неподільною єдністю феномену і часу. *Минуле* локалізується в потоці досвіду після зникнення феномену, а *майбутнє* – до його виникнення, що робить можливою реконституцію феномену в кожному наступному мить.

Отже, *саутрантика* намагається поєднати дискретну теорію миттєвості із визнанням певного ментального континууму, який зберігає імпульс до наступного прояву феномену.

Традиційні джерела свідчать, що і *вайбгашика*, і *саутрантика* приймають *кшанікаваду* як базову теорію часу, хоча й у різних інтерпретаціях. Проте в обох випадках теорія миттєвості потребує інструменталістського уточнення поняття *миті*. Так, Васубандгу в автокоментарі до своєї «Енциклопедії дгарм» визначає *мить* як 1/65 того інтервалу часу, який необхідний людині для клацання пальцями; 120 таких митей становлять одну секунду, 60 секунд – одну хвилину, 30 хвилин – одну годину, 30 годин – одну добу, а 30 діб – один місяць [16, с. 267]. У цьому розумінні *мить* постає як найменший інтервал часу. Але таке визначення *миті* не приймається усіма буддистськими філософськими школами одноставно: у деяких джерелах *мить* встановлюється як 1/365 або 1/368 від того часу, що потрібен для клацання пальцями. *Магаяна* зрештою знімає цю суперечку, визнаючи максимальне число ділення як 365 [16, с. 268–269]. Така інформація потребує подальшого дослідження, але навіть на ознайомчому рівні можна помітити, що число 365 явно перегукується з кількістю сонячних світанків протягом одного календарного року. Це свідчить про певні спроби ввести шкалу вимірювання земної *часу* у відповідність з рухом найбільшого спостережуваного для людини об'єкту – небосхилу – і співставити цей рух зі змінами психо-фізичного стану людини²⁸ (чи то клацанням пальцями, чи то кліпанням очима, чи то промовлянням односкладового звуку, аж до дихання чи серцевого пульсу – будь-якої миттєвої акції, яку людина може зафіксувати в собі власним розумом) [16, с. 270].

Що стосується філософських шкіл *магаяни* – *мадг'ямаки* та *йоґачари*, – їхні міркування щодо *миті* істотно відрізняються від позицій шкіл *гінаяни*. Зокрема, на відміну від останніх, які визнають неподільність найкоротшої *миті*, *магаянські* школи загалом уникають проблематики неподільності як такої.

Філософів *магаяни* зазвичай характеризують як ідеалістів, і цей онтологічний зсув пов'язують насамперед із іменем Нагарджуни (II-III ст.), який висловив сумнів щодо субстанційного існування *трьох часів* (разом чи окремо), оскільки у такому разі вони мали б або злитися у нерозрізнувану точку, або розпастися як незалежні сутності – такий висновок ґрунтується на застосуванні ним в логіці міркування методу доведення до абсурду (*prasaṅga*, *thal 'gyur*) [16, с. 256]: Нагарджуна аргументує, що при усіх тих вступних припущеннях, що визнає *гінаяна*, навіть «найкоротша» *мить* повинна мати початок, середину і кінець, а отже, вона не може бути дійсно неподільною [16, с. 271] – і такий поділ нескінченний, а інтервали *часу* при ньому взаємообумовлені.

Таке міркування приводить *мадг'ямаку* до висновку про пустотну природу *трьох часів*: вони існують лише як концептуальні позначення, встановлені на основі спільної домовленості [16, с. 265].

Опонентом *мадг'ямаки* виступає школа *йоґачари*, що апелює до ідеї невимовності остаточної істини. Асанґа (IV ст.), засновник цієї школи, зазначає, що «час приписується безперервному виникненню причин і наслідків» [16, с. 255], але поняття приписування тут є концептуально значущим і пов'язаним з ученням про три виміри буття, точніше про *три буття* (*tribhāva*, *kham s gsum*): уявне (*parikalpita*, *kun brtags pa*), залежне (*paratantra*, *gzhan dbang*) та довершене (*pariṇiṣpanna*, *yongs grub*) [38, с. 138]. У цьому контексті *три часи* належать до сфери уявного виміру, тобто постають як ментальні конструкти, що не мають онтологічної реальності. Такий підхід надає можливості визнати ілюзію потоку миттєвостей, але не втратити зв'язок з реальністю самого потоку ілюзій: за миттєвостями простирається неохопна концепціями потенційність як можливість динамічного прояву феноменів.

Таким чином, філософи *магаяни* (а саме, послідовники сутраяни) в різний спосіб, але підходять до межі раціонального мислення, апелюючи до ідеї концептів як умоглядних утворень, які можуть лише символічно позначати отриманий в процесі пізнання досвід. Це неминуче порушує питання статусу *часу* як категорії, пов'язаної з непостійністю зумовлених феноменів, з об'єктивацією уявних конструкцій і дотичністю останніх до істинної реальності. Усвідомлення таких меж водночас відкриває можливість спрямувати погляд за горизонт

²⁸ *yathā bāhye tathā dehe* (санскр.) – «як зовні, так і в тілі», структурний принцип вчення КЧ, що виражає відповідність між космологічним, тілесним та часовим порядками.

концептуалізації і зосередитися на чистому досвіді свідомості без позначень. Саме на цьому тлі проблеми мови/мовлення набувають особливої уваги, що зумовлює трансформацію дискурсу сутр і появу нових форм викладу вчення – насамперед буддійської тантри (тобто вчення тантри).

Динамічний аналіз

Ми відстежили і зафіксували чотири повороти (включаючи *епістемологічний* поворот Ельтшингера) в становленні буддійської раціональності, які викликали структурні зміни у концептуалізації часу.

Перший поворот – ідеалістичний (2 хвили).

Початковий аналіз в *гінаяні* був зосереджений на *дгармах* як елементарних феноменах досвіду, що постають у режимі *кшанікавади* – потоці миттєвостей. Відтак формується феноменологія п'яти угруповань, тобто п'яти *скандг* (*skandha*, *phung po*), в межах якої час імпліцитно мислиться як послідовність виникнення і зникнення окремих явищ. Онтологічний акцент тут ще зберігається на феноменальному потоці як множинності моментів.

Магаяна здійснює принциповий зсув в цій оптиці. Першу хвилю такого зсуву репрезентує Нагарджуна. Його критика спрямована не лише проти субстанційної онтології²⁹, але й проти епістемологічної валідності самої моделі дискретної темпоральності. У своїх «Строфах про основи серединного шляху» (зокрема в розділах про рух і час³⁰) Нагарджуна демонструє, що ані мить, ані *три часи* не можуть бути встановлені як самосущі реальності: *час* не має власної основи, не може бути схопленим і не витримує аналізу в категоріях причини та наслідку³¹.

Таким чином, метод Нагарджуни – радикальна деконструкція будь-якої аксіоматичної позиції – поширюється й на темпоральність. Ідея *трьох часів* визнається їм лише на конвенційному рівні (в межах теорії двох істин), але в перспективі абсолютної істини вона втрачає онтологічний статус³². Таким чином, *час* позбавляється субстанційності та навіть феноменальної самодостатності: він постає як умовна конструкція, залежна від концептуального встановлення. Це і є перша хвиля ідеалістичного повороту – демонтаж субстанційності часу.

Другу хвилю розгортає Асанга, засновник *йогачари*. Але якщо *мадг'ямака* деконструює будь-яку онтологію часу, то *йогачара* здійснює позитивну реконфігурацію: переносить центр аналізу з різноманітних феноменів лише на один – на *свідомість* (*віджняну*³³). Час при цьому перестає мислитися як умовна характеристика зовнішнього потоку і набуває статусу модусу свідомості, а сама темпоральність інтерпретується як самовияв континууму свідомості.

У цій перспективі *йогачара* вирізняє *самосвідомість* (*svasaṃvedana*, *rang rig*), *афективно зумовлене мислення* (*kleśamanas*, *nyon yid*) і *базову свідомість* (*ālayavijñāna*, *kun gzhi rnam par shes pa*), останню в якості сховища відбитків-слідів досвіду (*saṃskāra*, *'du byed*) та звичаєвих тенденцій (*vāsanā*, *bag chags*). В такому контексті «теперішнє-зараз» постає не як об'єктивна точка часу, а як акт самопізнання. Миттєвість визначається не тривалістю, а принциповою нетривалістю у другому моменті³⁴: виникнення і розпад збігаються в одному акті. Відтак

²⁹ «Коштовне намисто» (*ratnāvali*, *rin chen phreng ba*):

yathānto 'sti kṣaṇasyaivam ādir madhyaṃ ca kalpyatām | tṛyātmakatvāt kṣaṇasyaivam na lokasya kṣaṇam sthitiḥ | (I.69) traikālyavyativṛttātmā loka evaṃ nu ko 'rthataḥ |yo 'sti nāsty athavāpi syād anyatra vyavahārataḥ | (II.14) (санскр.)

Якщо мить має кінцевий момент, ми повинні припустити, що вона має також два інших моменти, а саме початковий і середній, але оскільки мить складається з трьох моментів, світ не триває лише мить. (I.69) Що ж тоді, за своєю суттю є цей всесвіт, про який виходячи за межі три-часових відносин, не можна сказати, що він є чи ні, окрім як з точки зору загальної прийнятої істини? (II.14) [69, 322–323]

³⁰ Йдеться про «Строфи про основи серединного шляху» (*mūlamadhyamakakārikā*, *dbu ma rtsa ba'i tshig le'ur byas pa*) та автокоментар «Сміливе заперечення догматів» (*akutobhaya*, *ga las 'jigs med*), де Нагарджуна піднімає в розділах II та XIX питання дослідження руху і часу, відповідно [13].

³¹ *[de ltar dus gsum dag tu yang||srid pa'i rgyun ni mi rigs na||dus gsum dag tu gang med pa||de ni ji ltar srid pa'i rgyun]* (тиб.)

Якщо в трьох часах||потоку існування не встановлено,||то як може бути потоком існування те,||що в трьох часах не встановлено? [13]

³² «Сімдесят строф про пустотність» (*śūnyatāsaptati*, *stong nyid bdun cu pa*), де Нагарджуна продовжує міркування про зумовленість, існування та час:

[gans med phan tshun las grub dang||'chol phyir rang nyid ma grub phyir||dngos po med phyir dus gsum ni||yod pa ma yin rtoḡ pa tsam] (тиб.)

З опорою на становлення не у взаємозалежності та||через помилкове розуміння самовстановлення,||через непостійність – три часи||виявляються неіснуючими як проста мисленнєва вигадка. [13]

³³ *Vijñāna* (санскр.), *nam par shes pa* (тиб.).

³⁴ В *йогачарі* миттєвості набули статус миттєвостей свідомості, які можуть бути пов'язані як з виникненням, тривалістю, так і з розпадом континууму свідомості. Асанга в своєму «Компендіумі тем» (*Vastusaṃgrahaṇi*) пише: «...існує < два континууми зумовлених сутностей>: (1) континуум, який є продовженням від одного життя до іншого, та (2) континуум, який є продовженням від однієї миті до іншої... Що стосується миттєвої природи другого континууму, новітнє виникнення зумовлених сутностей є

часовий континуум стає функцією структури свідомості, а не зовнішнього порядку буття в миттєвостях.

Саме тут ідеалістичний характер повороту стає методологічно очевидним: *час* повністю втрачає онтологічну самостійність; його статус остаточно редукується до умовної когнітивної конструкції; темпоральність безпосередньо виводиться зі структури свідомості.

Таким чином, перший поворот у буддійській традиції можна визначити як перехід від феноменології дискретних дгарм до критики та реконфігурації самого горизонту темпоральності. Якщо рання модель *кшанікавади* ще припускала множинність моментів як елементів реального зовнішнього потоку, то *магаяна* – спершу через деконструкцію, а згодом через когнітивну редукцію – переводить *час* у площину умовності та свідомості. Саме це виправдовує означення цього етапу як ідеалістичного повороту.

Другий поворот – епістемологічний (2 хвили).

Унаслідок епістемологічного повороту, описаного Ельтшінгером, остаточно формується буддійська раціональність і закладається підґрунтя для аналізу потенціалу концептуалізації *часу* та його можливого трансцендування – від опанування методів *достовірного пізнання* (pramāṇa, tshad ma) до безпосереднього *знання* (jñāna, shes pa) реальності як такої. Цей поворот означає зміщення акценту з абхїдгармістської систематизації дгарм на дослідження умов достовірності їх пізнання. Хоча кульмінація процесу припадає на VI–VII ст., його підготовка розгорнулася вже на межі IV–V ст., коли увага буддійських мислителів поступово перейшла від структур психічного досвіду до аналізу актів мислення [22, с. 71–72].

Іманентним каталізатором цього зсуву став дискурс школи *йогачари*, яка не тільки систематизувала класи дгарм з часовими параметрами [2], але й переорієнтувала сотеріологічну епістемологію з проблематики *пустотності* (śūnyatā) на *всеохопну-уяву-нереального* (abhūtaparikalpa, ma yin kun rtog), яка створює хибний дуалізм між *суб'єктом* (grāhaka, yul can) і *об'єктом* (grāhya, yul) та відображає в умі залежну природу виникнення феноменів (paratantra svabhāva, gzhan gyi dbang gin go bo nyid)³⁵. Це підняло теоретичне осмислення на вищий рівень абстракції та послабило прив'язку до психометричної дискретності *часу*: *кшанікавада* стала лише окремим аспектом ширшого розуміння темпоральності.

Перша хвиля епістемологічного повороту пов'язана з працями Дігнагі і Дгармакірті – засновників логіко-епістемологічного напрямку в буддійській філософії.

Дігнага в «Проясненні інструментарію достовірного пізнання» (Pramāṇasamuccayavṛtti) критично розглядає *визначення*³⁶ (lakṣaṇa, mtshan nyid) *сприйняття*, яке надав свого часу Васубандгу. В трактаті «Правила диспуту» (Vādaividhi), Дігнага тлумачить самі *визначення* вже «в дусі своєї лінгвофілософії, за якою мова посиляється не на зовнішні об'єкти і не на унікальний приватний сенсорний досвід, а на загальні характеристики, що виявляються ментальними конструктами», тобто *вікальпами* (vikalpa) [46, с. 108, 110]. Дігнага зауважує, що мова віддзеркалює не реальність як таку, а нашу домовленість щодо значення слів. І хоча Дігнага визнає чуттєвий досвід за реальність, але вербалізацію цього досвіду повністю ставить в залежність від екзегези слів.

За ним Дгармакірті наполягає на наявності лише двох видів достовірного пізнання: *пряме сприйняття* та *умовивід*. Але як зауважує Джордж Дрейфус, складність епістемологічної системи Дгармакірті полягає в тому, що його *пряме сприйняття* лише схоплює об'єкти пізнання, не здійснюючи жодної мисленнєвої операції [18, с. 88], і тому не отримує ніякого зв'язку з *умовиводом*, що оперує логікою та правильно побудованими аргументами для висновків. Унаслідок цього виникає проблема так званого «перцептивного судження»: воно б мало бути або різновидом *сприйняття* (що імплікувало б реальність універсальї, які буддійськими логіко-епістемологами були від самого початку відкинуті як об'єкти достовірного пізнання³⁷), або

виникненням, а мить виникнення, яка не триває далі цього, є розпадом. Тривалість лише в момент виникнення є тривалістю» [16, с. 276].

³⁵ За йогачарою, є три рівні сприйняття реальності або «три саомбуття» (trivabhāva, ngo bo nyid gsum): уявний рівень, на якому з'являються концепції (parikalpita, kun tu brtags pa) – тобто яким все видається; залежний рівень – яким чином виникає, тобто з причин та умов; остаточної рівень (pariṇiṣpanna, yongs su grub pa) – коли усвідомлюється взаємозалежність феноменів і відкривається сутність того, що є насправді, поза межами концептуалізації.

³⁶ Один з етапів процедури буддійського диспуту, на додачу до уддеші (bstan pa, називання), лакшани (mtshan nyid, визначення), парікши (brtag pa, з'ясування потенціалу визначення).

³⁷ При цьому Дрейфус нагадує, що ця стандартна інтерпретація онтології Дгармакірті надається в межах поглядів саутрантиків, для яких сприйняття зовнішніх об'єктів пояснюється за рахунок причинно-наслідкових зв'язків, за якими неподільні атоми, до яких редукується ця реальність, взаємодіють з моментами свідомості [18, с. 85]. Отже Дрейфус висловлюється щодо неоднозначності

окремим видом достовірного пізнання, не зводимим ані до *прямого сприйняття*, ані до *умовиводу* – що суперечить вже введеній двочленній схемі *прамани*³⁸.

Спробу розв'язати цю напругу здійснив Дгармоттара (Dharmottara, ?750-?810), який у руслі *чінтаматри*³⁹ спробував переосмислити миттєвість⁴⁰ як проблему розривів *сприйняття* в *часі* – ідея полягала в здатності *сприйняття* до концептуалізації безперервності [60]. Для цього Дгармоттара, як свідчить Дрейфус, запропонував розрізнення двох типів універсалій: властивостей, що існують незалежно від суб'єкта пізнання, та властивостей, що існують залежно від нього. Відповідно, універсалії, від яких відмовлявся Дгармакірті, були інтерпретовані як перший тип, тоді як непостійність віднесено до другого. У результаті замість моделі точного, але пасивного зіткнення сприйняття з «оголеною» реальністю, Дгармоттара запропонував концепцію активного когнітивного сприйняття [18, с. 444]. Саме так Дгармоттара розгорнув другу хвилю епістемологічного повороту⁴¹ – радикалізацію *прамани* через ідеалізацію *прямого сприйняття*.

У межах цього епістемологічного повороту *чінтаматра* формує специфічний підхід до *часу* [31, с. 366]. Принципово розшаровуючи свідомість вже на вісім діапазонів⁴² і зміщуючи акцент із удавано зовнішніх об'єктів на емпіричного суб'єкта, носія латентних звичаєвих тенденцій та відбитків-слідів досвіду, що зберігаються в його *базовій свідомості*, *чінтаматра* фактично визнає суб'єктно-об'єктну дихотомію оманною, але в наслідок якої потенційність *базової свідомості* кінетизується в миттєвості (kṣaṇa, skad cig). І в цьому контексті теперішній момент стає теоретично обґрунтованим доступом до абсолютної реальності (принаймні в межах окремої буддійської філософської школи). Саме таким чином формується ідея трансцендування *часу*.

Зрештою, *чінтаматра* загострила проблему надмірного теоретизування, що може послаблювати йогічну практику [45]. І в контексті нашого дослідження, саме цей філософський стиль уможливив наступний поворот – не лише до зближення філософування з йогічною практикою, а й до їхнього взаємного перетворення, де трансценденція мислиться як винесення за дужки дискурсивних мовленнєвих форм і зосередження на безпосередньому проживанні реальності.

Третій поворот – транс-емпіричний (3 хвили).

Третій поворот пов'язаний із конкретними спробами реалізації буддійського методологічного плюралізму, що дозволив здійснити перехід від концептуального осмислення пустотності феноменів на відносному рівні (через достовірне пізнання) до її безпосереднього йогівського сприйняття на абсолютному рівні.

Перша хвиля позначена формуванням ідеї транс-емпіричного *часу* та інтеграцією нової практики темпоральності в буддійську релігійно-філософську культуру за зразком КЧ. Новизна вчення КЧ, як вищої тантри, полягала у спробі актуалізувати позамежну мудрість *праджняпараміту* (praññāpāramitā, shes rab gyi pha rol tu phyin pa) в парі з методом *бодгічінти* (bodhicitta, byang chub kyī sems), зберігаючи при цьому об'єктом *достовірного пізнання* (зокрема прямого йогівського *сприйняття*) – природу *часу*. А йдеться тут саме про інтеграцію філософської рефлексії та йогічної практики. За словами Дакворта щодо особливого

такої інтерпретації, тому що у самого Дгармакірті можна виявити певні пасажі, якими він намагається париувати опонентам, які роз'яснюють його підхід до реальності зовнішніх об'єктів: вони, тобто атоми, існують як на індивідуальній основі, так і на основі скупчення [18, с. 87–88]. Таким чином, в онтології Дгармакірті фіксується певна неоднозначність, що ховається за відсутністю достатньої деталізації його текстів і призводить до різночитань, у тому числі, в межах самої традиції.

³⁸ «Достовірне пізнання» (санскр.).

³⁹ «Лише розум» (санскр.) – радикальна гілка філософської школи йоґачари. Тибетський термін – sems tsam.

⁴⁰ Така миттєвість в традиції називається – kṣaṇabhaṅga (санскр.), skad cig ma 'jig pa чи skad cig ma'i 'jig pa (тиб.). Цим терміном позначається концепція, що констатує: всі зумовлені явища виникають, існують та припиняють існування протягом однієї виокремленої миті часу.

⁴¹ Заради справедливості варто зазначити, що Ельтшинґер дещо по-іншому оцінює проблему так званого «перцептивного судження» системи Дгармакірті. Ельтшинґер порушує питання наявності у пізнього Дгармакірті можливості «оціночної раціональності» (evaluative rationality) для опрацювання даних сприйняття та звертається до поняття yukti (санскр.) або rigs pa (тиб.) – обґрунтованої аргументації як потенційної ланки між прямим сприйняттям і умовиводом. За словами дослідника, yukti становить когнітивне застосування двох засобів достовірного пізнання та поширюється на емпіричні стани речей (dr̥ṣṭārtha), тоді як транс-емпіричні об'єкти (viprakṛṣṭa) належать до юрисдикції āgama – авторитету писання [20, с. 193–194]. Водночас, оскільки писання інколи торкається емпіричної сфери, воно потребує раціональної оцінки, і саме yukti постає інструментом такої критичної перевірки.

⁴² В канонічній «Сутрі зішестя на Ланку» (Laṅkāvatāra Sūtra, lang kar bshegs pa'i mdo), програмному тексті філософії чінтаматри, зокрема у її II Розділі, йдеться про вісім діапазонів свідомості – 5 сенсорних свідомостей (на рівні органів чуття), концептуальна свідомість, самосвідомість і базова свідомість (репозитарій відбитків досвіду і прихованих тенденцій мислення, дій тощо) – зокрема, про моментальну природу базової свідомості [64, с. 203].

філософського горизонту тантри – саме завдяки специфічній глибинній мудрості, що спирається на *праджняпараміту* і *бодгічїтту*, відбувається деконструкція онтології *абгідгарми*: від трансцендентної пустотності сутр до іманентної пустотності тантр [19, с. 103–104].

В цілому, поєднання методу і мудрості⁴³ у вищій тантрі, за традицією, має забезпечити трансформацію філософсько-дискурсивних практик у йогічні – характерну рису *ваджраяни*. У цьому контексті, за Джамгьоном Конгтрюлом (у викладі Дакворта), ядром феноменального світу постає глибинна мудрість (*jñāna, ye shes*), а не карма [19, с. 101]. Тому західні буддологи прийшли до ідеї гнозису, який вони стали асоціювати з буддійським поняттям *джняна* (*jñāna, ye shes*) і розглядати як вищу реальність, досягнення якої і є метою вчення КЧ [72, с. 143–144].

Тибетський «Блакитний літопис» (*deb ther sngon po*), складений буддійськими вченими в XV ст., свідчить, що текстова традиція буддійського вчення КЧ почала формуватися на теренах Індостану в X–XI ст. [58, с. 753] і поширювалася Тибетом двома основними лініями практиків і перекладачів у співпраці з кашмірськими й неварськими⁴⁴ пандітами⁴⁵ [47, с. 106]. Сьогодні КЧ публічно передається школами *гелуг*⁴⁶, *джонанг*, *каг'ю* і позасектантським рухом *ріме*; у *н'інгма* вона також зберігається, але класифікується дещо по-іншому в межах тантричної типології [39, с. 60].

Головний базовий текст КЧ структурно відтворює просторово-часовий континуум як паттерн світобудови: зовнішній (Розділ I), внутрішній (Розділ II) та інший або альтернативний цикл часу (розділи III, IV, V). Особливого значення набуває есхатологічний міф, який звучить в Розділі I, про останню битву з невіглаством, яке інтерпретується як хибне розуміння *часу* (КС.I:26)⁴⁷ [4, с. 7; 66, с. 5–6]. Шамбгала постає моделлю шляху до альтернативної темпоральності – такого собі поєднання ідеального простору й часу, утопії та ухронії, що уможливорює досягнення знання через поєднання методу і мудрості. Розділ V, так званий розділ гнозису, завершує останню стадію вчення зняттям завіси з істинного знання *часу*, в результаті чого практик реалізує остаточне пробудження, набуваючи *тіла дгарми* (*dharmakāya, chos sku*), а саме його вищого рівня *тіла знання* (*jñānakāya, ye shes sku*).

Але визнання КЧ в Тибеті набуло не лише релігійного, а й історично-культурного значення: запровадження календарної системи на її основі сприяло впорядкуванню історичних хронік, започаткуванню доксографічних оглядів і формуванню традиційних прикладних наук [37, с. 89], зокрема *розрахунків зірок* (*skar rtsis*) та *науки зцілення* (*so ba rig pa*). А завершальним етапом таких інтелектуальних практик стала нова інтерпретація пустотності, що сформувалася у XII–XIII ст., і яку саме можна розглядати як другу хвилю третього повороту.

Девід Бьортон, в пошуках тантричної філософії, зазначає, що саме епістемологічний зсув у бік ідеалізму, на тлі переінтерпретації філософії *мадг'ямаки* і *йогачари* (коли частина *мадг'ямаків* схилилися до того, що все, окрім абсолютної реальності, пустотне від істинного існування, а частина *йогачаринів* звела абсолютну реальність до чистої свідомості, спустошеної від афектів), призвів до утвердження природи будди (*tathāgatagarbha, de bzhin gshegs pa'i snying po*) як абсолютної реальності, що постає як об'єкт специфічного неконцептуального гнозису, що доступний лише для просвітлених істот, та провокує дуже непросту філософську дискусію з приводу контрверсійності своєї специфічності [6, с. 156–157]. А вчення КЧ в такому контексті стає послідовною й масштабною артикуляцією такого тантричного гнозису.

Яскравою ілюстрацією зазначеної тенденції стає школа *джонанг*, для якої теорія і практика КЧ стали центральними. Саме в цій школі формується доктрина *пустотності-від-іншого*⁴⁸, що пов'язана з іменем Долпопи Шераба Г'елцхена (*dol po pa shes rab rgyal mtshan, 1292–1361*). У своєму філософському трактаті «Гірська дгарма» (*ri chos*) Долпопа обґрунтовує методологічне поєднання сутричних і тантричних підходів, наполягаючи, що сутру слід тлумачити через

⁴³ Метод (*upāya, thabs*) та мудрість (*prajñā, shes rab*) – ключовий концепт вчень буддійських вищих тантр, і пов'язаний він з необхідністю поєднання практики бодхічїтти як методу зі знанням сутр *праджняпараміти* – лише так, за традицією, опанування цими вченнями дає плід. Зародження бодгічїтти («пробуджений ум»), фактично, є гарантом наявності співчуття (*karuṇā, snying rje*) до живих істот.

⁴⁴ Невари – автохтонне населення долини Катманду, Непал.

⁴⁵ *Raṇḍītaḥ* (санскр.) – «вчений», знавець традиційної духовної літератури, наук, мистецтва.

⁴⁶ Туквен Лобсанг Чок'ї Н'іма (*thu'u bkwan blo bzang chos kyi nyi ma, 1737–1802*), автор тибетського буддійського програмного трактату «Туквен Друмта» («Кришталева люстра філософських систем», *grub thabs shel gyi me long*) системно викладає всі школи тибетського буддизму, зокрема, *гелуг* (*dge lugs*), *джонанг* (*jo nang*), *каг'ю* (*bka' brgyud*), *н'інгма* (*nying ma*) [65].

⁴⁷ Тут: головний базовий текст вчення КЧ, I Розділ, 26 вірш.

⁴⁸ Ще одна назва доктрини – *mahāmadhyamaka* (санскр.) або *жентонг* (*gzhan stong*) (тиб.). Зазвичай «пустотності-від-іншого» протиставляється «пустотність-від-себе» (*rang stong*).

тантру, а тантру – через сутру [32, с. 6–7]. Це спричиняє нову інтерпретацію пустотності як абсолютної реальності, що перевищує рівень відносної негативної діалектики.

Категорія часу відіграє в цьому трактаті принципову роль. У частині I «Основа» (gzhi), *такість*⁴⁹ (tathātā, de nyid) подається як вільна від *миттєвостей*, навіть від однієї миті, бо знаходиться за межами відносного циклічного часу. Таким чином, глибинну мудрість варто шукати на рівні часу трансцендентного [32, с. 161]. У частині II «Шлях» (lam), методика реалізації цієї *такості* описується як неконцептуальне усвідомлення через йогівське *пряме сприйняття* [32, с. 201]. У частині III «Плід» ('bras bu) йдеться про стан за межами *трьох часів*, існування й неіснування, де первісна мудрість актуалізується як повна нероздільність *основи й плоду*. Долпопа наголошує, що вчення КЧ і є суттю істинного розуму просвітлення, що трансформується в споконвічну мудрість, яка досягається поза межами миттєвості і взаємозалежності [32, с. 434, 697; 47, с. 115].

Таким чином, вчення КЧ провокує і підводить філософську рефлексію до тривимірного розуміння часу: умовного (конвенційного), іманентного (вкоріненого в природі живих істот) і трансцендентного – як позачасової потенційності поза межами концептуальності, що має іманентну здатність феноменалізуватися⁵⁰. У цьому контексті категорія часу стає засобом артикуляції абсолютної пустотності.

Третя хвиля *третього повороту* пов'язана із загостренням етичної проблематики. З одного боку, йдеться про реформу, спрямовану на зміцнення монастирської дисципліни та повернення ченців до контрольованих форм навчання і практики; з іншого – про подолання зростаючого захоплення надздібностями (siddhi, dngos grub), що почали розвиватися у практиків тантри і які традиційно розглядаються як вкрай небезпечна спокуса, що здатна посилювати чіпляння за *его*.

Ці питання стали центральними в діяльності Цонгкхапи (tsong kha pa, 1357–1419), засновника школи *гелуг*. Його етична програма завершилася систематизацією тантричної дисципліни, зокрема щодо практиків КЧ. На відміну від Долпопи, який наголошував на пріоритеті безпосередньої реалізації вчення над формальним дотриманням монастирських правил [32, с. 179], Цонгкхапа підкреслював необхідність суворого збереження обітниць як передумови автентичної тантричної практики. У цьому контексті позиція Цонгкхапи може розглядатися як реакція на ризик розмивання межі між монастирським і мирським способом життя та перетворення досягнень реалізації у самоціль.

З метою відновлення етичного балансу Цонгкхапа формулює докладні приписи щодо дотримання тантричних обітниць у праці «Плодове гроно досягнень» (dngos grub kyi snye ma), спираючись на своє попереднє масштабне «Велике пояснення етапів на шляху таємної мантри» (sngags rim chen mo). Особливу увагу він приділяє практикам КЧ [68, с. 148–164], що може свідчити як про полемічний контекст доби [63, с. 98], так і про значущість цього вчення для тибетської традиції.

В контексті нашого дослідження, в частині специфічності вчення КЧ, Цонгкхапа зауважує на наявності двох різних способів отримання вищих посвят, зокрема в яких використовується *простір* (10 напрямків) та *час* (календарний ритм). Також він попереджає про наслідки порушень обітниць – йдеться про вісім грубих та чотирнадцять *корінних падінь*⁵¹ (mulapati, rtسا ltung).

Четвертий поворот – пост-канонічний (6 хвиль).

Передумовою такого повороту була остаточна легітимація тибетською традицією буддистських текстів, перекладених з санскриту, і складання Тибетського канону. Визначною фігурою цього процесу був Бутьон Рінчендруб (bu ston rin chen grub, 1290–1364). Це той самий вчитель і вчений, що згадується в «Блакитному літописі» як одна з двох ключових фігур поширення вчення КЧ [58, с. 755–756]: Рінчендруб, який перший здійснив систематизацію текстів вчення КЧ, уклавши власну історію вчення на основі їх редагування, коментування,

⁴⁹ Синонім істинної природи реальності.

⁵⁰ Долпопа через рефлексію на час спромігся презентувати на словах пустотність абсолютного рівня – бо проблематизація часу відкриває шлях до вирви в просторі, навколо якої останній само-обертається, виблискуючи пустими формами (stong gzugs).

⁵¹ Корінні падіння мають моральну природу і виглядають як порушення внутрішнього устава сангхи – на кшталт, проявів неповаги до вчителя, вчення, а також критики інших практикуючих та зневаги до жінок. Грубі падіння ближче до контакту з зовнішнім світом – вони стосуються порушень таємниці посвяти, розголосу вчення, лихослів'я тощо. За традицією, грубі падіння вважаються ознакою деградації практики та втрати благословіння, а корінні падіння втягують в посмертні пекельні світи сансари – це те, що за традицією гарантує виникнення перешкод для благих перероджень при посмертних медитаціях.

забезпечуючи текстам КЧ канонічний статус, і Долпопа, який спираючись на КЧ, сформулював новий дискурс про пустотність. Своїми працями ці два великі буддійські мислителі засвідчили, що особливістю нового вчення про *час* є те, що емпіричний вимір КЧ став підґрунтям розвитку двох із десяти традиційних буддійських наук, які функціонували у тісному взаємному зв'язку.

І саме після створення Тибетського канону, тобто в так званий пост-канонічний період, інституційно і інтелектуально сформувалися дві основні школи астрономічних розрахунків *часу*:

- Традиція Цхурпху (tshur phu), що спиралася на коментарі до КЧ, укладені в XIV ст., зокрема на «Компендіум астрономії», приписуваний Кармапі III [29, с. 337–342].

- Традиція Пхугпа (phug pa), заснована у XV ст., набула впливу через хронологічні розробки та коментарі, зокрема пов'язані з розробками Норсанга Г'яцо [29, с. 321–337], автора великого тлумачення одного з базових текстів КЧ, а саме «Прикраси бездоганного світла» [43].

Такою науковою була перша хвиля пост-канонічного повороту.

Друга хвиля розпочалася з написання історичного трактату «Блакитний літопис», заснованого на новому літосчисленні, що побудовано на базі розрахунків календарів за КЧ. Але тут варто згадати, що така свідомо історизація процесу поширення буддійського вчення в Тибеті відбувалася в складному ідеологічному контексті: у XVI ст. протистояння між *гелуг* і *каг'ю* [41, с. 134–135] супроводжувалося тривалими репресіями проти послідовників Цонгкхапи й істотно вплинули на розвиток традиції. Цей період послаблення впливу школи *гелуг* позначився «другим диханням» школи *джонанг* і появою доксографічного трактату її вчителя Таранатхи (Tāranātha, 1575–1634) – послідовника вчення *жентонг*. Таранатха здійснює ретроспективний огляд буддійських і небуддійських релігійно-філософських систем і обґрунтовує новий підхід до визначення сутр остаточного смислу (полеміка в межах буддійської екзегези): це ті сутри, що проголошують споконвічність *татхагатагарбги* і *дгармакаї* та сприяють осягненню абсолютної реальності як «пустотності-від-іншого» [9, с. 163–164, 469]. Це був ідеологічний зсув у вирішенні онтологічних проблем буддійської філософії.

Паралельно, загострюються методологічні суперечності між прихильниками різних розрахункових систем календаря, зокрема між школами Цхурпху ('tshur phu) та Пхугпа (phug pa) [29, с. 8–9, 321, 337; 58, с. 755]. Спроби уніфікації зоряних розрахунків вилилися у масштабний проєкт, ініційований Далай-ламою V і реалізований під керівництвом Десі Санг'є Г'яцо (sde srid sangs rgyas mtsho, 1653–1705): було створено оглядові праці з традиційних астрономії і медицини, з термінології, ритуалістики та історії, що дозволило систематизувати знання про формування традиції розрахунків *часу*, науку про рух небесних тіл та кругообіг першоелементів в природі (nag rtsis). Такий проєкт, хоча й не набув тотальної популярності в традиції, оголив особливості різних календарних розрахункових систем, класифікуючи їх, тому залишився в історії як потужна спроба об'єднання тибетських буддійських традицій. Такою була третя хвиля.

Четверта хвиля припадає на другу половину XVII – першу половину XVIII ст., коли ідеологічні трансформації в Тибеті супроводжувалися перегрупуванням політичного впливу у Внутрішній Азії. Ґрунтуючись на стандартизованій за КЧ хронології, почалися систематичні виклади філософських шкіл – виходять доксографічні твори «Великий виклад філософських систем» (скорочена назва: grub mtha' chen mo) [33] від Джам'янґа Шепи⁵² ('jam dbyangs bzhad pa, 1648–1721) та «Коштовне намисто» (скорочена назва: rin che 'phreng ba) [36]⁵³ від Кьончока Джіґме Ванґпо (dkon mchog 'jigs med dbang po, 1728–1791). У цих текстах категорія *часу* розглядається крізь призму різних буддійських онтологій, що дозволяє простежити взаємозв'язок між концепціями свідомості, буття та темпоральності.

Наступною хвилею стала поява позасектантського руху *ріме* (ris med) як спроби метадискурсивного узагальнення тибетської буддійської традиції. Один із його засновників, Джамґон Конгтрюл Лодрью Тхайє (kong sprul blo gros mtha' yas, 1813–1899), аналізуючи, зокрема, космологічні моделі різних колісниць, підкреслював їхню комплементарність: гінаяна визнає існування кінцевого числа світів, що створюються кармою живих істот; магаяна схиляється до ідеї нескінченної кількості світів, які виникають завдяки прихильності пробуджених істот (зокрема, бодгісаттв) і зумовленості існування «затмарених» істот; ваджраяна всю увагу зосереджує на одній-однісінькій світовій системі [34] (устрій якої

⁵² Джам'янґ Шепи – лінія тулку (sprul sku), тобто перероджень великих вчителів в школі 'гелуг', в якій Кьончок Джіґме Ванґпо був Другим Джам'янґ Шепію.

⁵³ Повна назва підручника: grub pa'i mtha'i mam par bzhad pa rin po che'i 'phreng ba («Презентація філософських систем: коштовне намисто»).

прописаний в КЧ, але визнається скоріш не як астрофізичний об'єкт, а як модель внутрішньої трансформації мікрокосму відповідно до макрокосму (*yathā bāhye tathā dehe*), оминаючи взагалі розмову про кількість світів. Така позиція засвідчує перехід від емпіричного опису кількісних моделей світобудови в системі координат «добре-пагано» до розгляду якісного аксіологічного виміру, який забезпечує умови виникнення світу як такого, в якому категорія *часу* постає як континуальний корелят просторової мінливості та інтенція, що виходить з фундаментальної основи буття.

Шосту хвилю становить започаткування діалогу БН. Його явна фаза розпочалася в 1981 р. з Гарвардських лекцій Далай-лами XIV [15] та першої публічної передачі вчення КЧ на Заході (США). В своїх виступах Далай-лама XIV вже тоді привернув увагу академічних кіл до аналітичного потенціалу буддійської думки, її моральної філософії, поглядів на свідомість та концепцій різних рівнів осягнення реальності. Органічним на той час кроком стало заснування інституту Mind & Life у США, де нейробіолог Франсіско Варела започаткував міждисциплінарну програму з нейрофеноменологічних досліджень.

Важливою віхою на цьому етапі стала публікація першого тому з наукової серії праць Далай-лами XIV «Science and Philosophy in the Indian Buddhist Classics» [16], де на основі класичних джерел систематизовано буддійські уявлення про фізичний світ і *час*: від абгідгармічної миттєвості зумовлених феноменів до космології КЧ з її моделлю циклічних еонів формування, тривалості та руйнації – опис світової системи як такої, що не має абсолютного початку і кінця, але проходить певні стадії трансформації і визначає простір розвитку свідомості, в тому числі, і для інтелектуального зіставлення буддійського філософування з сучасними науковими концепціями.

Сьогодні діалог БН інституціалізується через створення нових освітніх проєктів (наприклад, університету Emory, США), перекладацьких ініціатив (наприклад, UMA Tibet) та розвиток міждисциплінарних напрямів, зокрема контемплативних наук. Таким чином, концептуалізація *часу* в тибетській традиції не просто проходить шлях внутрішньо-доктринальних дискусій, а й сприяє міжцивілізаційному філософсько-науковому діалогу.

6. Висновки

Щоб відстежити процес концептуалізації *часу* в буддійській філософії і отримати можливість вийти за межі теорії миттєвості, було здійснено спробу ускладнити методологію дослідження і змінити оптику теорії причинності на оптику становлення буддійської раціональності. Саме цей підхід дозволив простежити інтеграцію *кшанікавади* в тантричне вчення про *час* КЧ, бо просторово-часова модель, що лежить в основі КЧ, вимагає ширшого контекстуального поля для інтерпретації, яке і було забезпечене проведеним нами історико-філософським аналізом.

Результати статичного аналізу концептуалізації *часу* в буддійській філософській традиції були отримані на матеріалі тибетської *магаєнської* доксографії – зокрема текстів Джам'янга Шепи та Кьончока Джігме Вангпо. Такий аналіз дозволив окреслити специфіку темпоральних уявлень у чотирьох класичних школах буддизму: *вайбгашика* трактує *час* у модусі грубої непостійності (все народжується і вмирає) та визнає реальність *трьох часів*; *саутрантика* обґрунтовує тонку непостійність (все виникає і зникає кожної миті), визнаючи онтологічно реальним лише *теперішній час*; *мадг'ямака* розглядає *час* як пустотну й реляційну конструкцію, невстановиму на абсолютному рівні; *йогачара*, визнаючи пустотність *часу*, надає йому феноменологічний статус як необхідної умови когнітивного впорядкування досвіду.

Проведений нами динамічний аналіз концептуалізації *часу* дав змогу виокремити чотири історико-філософські повороти у становленні буддійської раціональності, кожен із яких розкриває нові аспекти темпоральності.

Перший поворот – *ідеалістичний* – позначає перехід від онтологічно реалістичного розуміння *часу* до його конвенційної інтерпретації. Його перша хвиля пов'язана з філософією пустотності (*шун'явадою*), сформульованою Нагарджуною; друга – з філософією свідомості (*віджянавадою*) у вченні Асанги.

Другий поворот – *епістемологічний* – зміщує акцент з конвенційності *часу* на його пізнавальний аспект. Поворот відбувається в межах *прамана*-традиції, започаткованої Дігнагою

та розвиненої Дгармакірті (перша хвиля), а згодом радикалізованої у працях Дгармоттари (друга хвиля).

Третій поворот – *транс-емпіричний* – означає перехід до трансцендентно-іманентного виміру часу. Перша хвиля повороту пов'язана з формуванням буддійської традиції текстів і практик вчення КЧ; друга – з філософською рефлексією на вчення КЧ у працях Долпопи Шераба Г'ялцена і розробка іншого погляду на пустотність; третя – з етико-дисциплінарною реформою Цонгкхапи, зокрема, для послідовників вчення КЧ.

Четвертий поворот – *пост-канонічний*, що почав визрівати після впорядкування Тибетського буддійського канону. Перша хвиля була пов'язана з інституціалізацією буддійських традиційних наук, що базуються на вченні про час КЧ. Друга хвиля – зі складанням історичних хронік на базі розробленої календарної системи КЧ. Третя хвиля – зі спробою уніфікації буддійських наук. Четверта хвиля принесла узагальнюючі доксографічні праці Джем'янг Шепи та Кьончока Джіме Вангпо. П'ята хвиля позначилася активізацією позасектантського руху ріме і масштабними буддійськими науково-філософськими трудами, зокрема, Джемгона Конгтрула Лодрьо Тхайє, який приділив багато уваги саме вченню КЧ. На шостій хвилі було започатковано діалог БН.

Перспектива, що відкривається в результаті проведених розвідок, – історична траєкторія концептуалізації часу на тлі становлення буддійської раціональності, яка явно демонструє, що буддійські науки функціонують у парадигмі, відмінній від західної наукової моделі. Формалізація цієї відмінності можлива лише через звернення до теоретичних засад КЧ, які включають: (1) специфічну космологічну систему координат, що поєднує емпіричні дані (астрономічні розрахунки в геоцентричній системі координат) з перспективою *досвіду від першої особи*; (2) нормативно-етичний вимір вчення про час, який вказує на незавершеність секуляризації буддійського наукового знання; (3) специфічні медитативні практики, що спрямовані на трансформацію філософської рефлексії в йогічну інтеграцію досвіду, у межах якої концептуалізація з перспективою деконструкції та феноменологічної редукції постають як когнітивно-методологічні інструменти дослідження умов активізації процесів смислотворення, ідентифікації, самоідентифікації та формування інтерсуб'єктивних інтенцій.

Вчення КЧ відкриває також перспективу досягнення буддійської позачасовості (атемпоральності) через розрізнення модусів роботи з феноменальністю: з одного боку – дослідження феноменів поза операцією концептуальної диференціації, з іншого – шляхом виявлення негативної структури самого процесу концептуалізації. У межах буддійської традиції, де мінливість і тимчасовість (що відображають суть непостійності) постають як засадничі доктринальні принципи, вихід за межі темпоральності може інтерпретуватися як корелят остаточного звільнення. У цьому світлі стає зрозумілим, чому КЧ – як вчення, що проблематизує досвід, рефлексію та усвідомлення часу, – у працях західних буддологів нерідко постає прикладом «гностичного» типу дискурсу. Проте це питання виходить за межі даного дослідження й окреслює перспективу подальшої дискусії.

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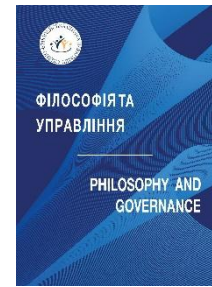
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Innocentius Giselu's Hamartological Concept as an Integral Component of Post-Scholastic Moral Theology and Modern Bioethics

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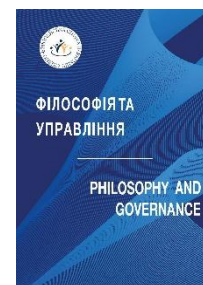
ABSTRACT

The article provides a religious analysis of the hamartological views of Archimandrite Innocentius Giselu as a component of post-scholastic moral theology and a potential tool for solving modern bioethical dilemmas. The historical and theological context of the formation of the doctrine of sin within the framework of the Catholic and Orthodox reforms of the 16 – 17th centuries is analyzed. The evolution of the classification of sins from the early Christian period to the Council of Trent is briefly characterized. It is shown that the development of confession and the detailing of moral responsibility in the works of Kyiv scholars of that time became a response to the demands of the modern era and the complex processes of religious identification. It is emphasized that the hamartological system of I. Gisel, outlined in the work "Peace with God to Man", offers a rationalized model of evaluating actions through the prism of conscience and free will. The article also examines the factors of the spiritual and worldview formation of the thinker and theologian, in particular his appeal to neo-scholasticism and Aristotelianism. Special attention is paid to the analysis of the treatise "Tractatus de anima", which reveals the level of comprehension of anthropological problems of the Baroque era. The role of the situational approach to the analysis of sin is highlighted, when the assessment of an act depends on specific circumstances, which correlates with the methodology of modern bioethical expertise. Gisel's vision of the autonomy of bodily forms until their revival by the soul creates an intellectual basis for discussions regarding the status of the embryo and the limits of intervention in biological nature. It is proven that the Christian understanding of the individual as a holistic psychosomatic unity, uniting different levels of being, is significant for the protection of human dignity in the conditions of biotechnological progress. The philosophical and theological views of I. Gisel can serve as an ethical safeguard against the destruction of the human image, harmonizing scientific achievements with the spiritual purpose of the individual.



KEYWORDS

pious life, bioethics, faith, hamartology, spirituality, national-religious identity, moral theology, religious-theological discourse, religious morality, holiness.



Гамартологічна концепція інокентія Гізеля як невід'ємна компонента постсхоластичного морального богослов'я та сучасної біоетики

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СТАТТЯ	АНОТАЦІЯ
Дослідницька DOI: 10.70651/3041-248X/2026.2.17 Отримана: 15.01.2026 р. Прийнята: 17.02.2026 р. Опублікована: 21.02.2026 р. Авторське право © 2026 автора Цей твір ліцензовано на умовах Ліцензії Creative Commons «Із Зазначенням Авторства – Некомерційна 4.0 Міжнародна» (CC BY-NC 4.0).	Здійснено релігієзнавчий аналіз гамартологічних поглядів архімандрита Інокентія Гізеля як складник постсхоластичного морального богослов'я та потенційний інструмент вирішення сучасних біоетичних дилем. Проаналізовано історико-богословський контекст формування вчення про гріх у межах католицької та православної реформ XVI-XVII ст. і увиразнено еволюцію класифікації гріхів від ранньохристиянського періоду до Тридентського собору. Доведено, що розвиток сповідництва та деталізація моральної відповідальності в працях київських учених тієї доби стали відповіддю на не лише ідейно-ціннісні та світоглядні запити епохи модерну, а й складні процеси релігійної ідентифікації зумовлені формуванням потридентської еклезіальної реальності. Підкреслено, що гамартологічна система І. Гізеля, викладена, зокрема, у трактаті «Мир з Богом людини» – раціоналізована модель оцінки вчинків з позицій християнсько-богословського та антропологічного вчення про сумління та свободу волі. Дослідницьку увагу також сфокусовано на визначенні основних чинників духовно-світоглядного формування релігійного мислителя, зокрема його звернення до ідейно-ціннісного потенціалу неосхоластики й аристотелізму. Рельєфне відображення та переосмислення в статті знайшли Гізелеві конотації, викладені у трактаті про душу, що дало можливість виявити рівень осмислення кола антропологічних проблем барокової епохи представниками ісихастсько-традиціоналістського руху на українських землях. Новизною статті можна вважати обґрунтування ролі ситуативного підходу до аналізу гріха, коли оцінка вчинку залежить від конкретних обставин, що корелює з методологією сучасної біоетичної експертизи, а також релігієзнавчо-богословську експлікацію християнське розуміння особистості як цілісної психосоматичної єдності, що об'єднує різні рівні буття та є значимим для захисту людської гідності в умовах біотехнологічного поступу. Водночас автор запропонував цілісне бачення Гізельського трактування автономності тілесних форм до моменту їхнього оживлення душею, створюючи інтелектуальне підґрунтя для дискусій щодо статусу ембріона та меж втручання в біологічну природу. Релігійно-богословські погляди І. Гізеля можуть слугувати етичним запобіжником проти деструкції людського образу, узгоджуючи наукові досягнення з духовним призначенням особистості.



КЛЮЧОВІ СЛОВА

благочестиве життя, біоетика, віра, гамартологія, духовність, національно-релігійна ідентичність, моральне богослов'я, релігійно-богословський дискурс, релігійна мораль, святість.

1. Introduction

The relevance of the analysis of the hamartological concept of Archimandrite Innocent Gisel is due to a number of good reasons. It is about rethinking the classical categories of guilt, sin and responsibility in the conditions of the modern biomedical paradigm. First, it makes it possible to expand the theoretical and methodological potential of modern religious and theological discourse, introducing elements of post-scholastic moral theology, which harmoniously combines rational systematization with spiritual experience. Second, the study of the creative heritage of I. Gisel, as a representative of Kyiv scholarship of the 17th century, makes it possible to reconstruct a specifically Ukrainian model of intellectual synthesis, where the ascetic tradition of hesychasm meets the Western European scholastic methodology. Their contribution deeply reflects the socio-ecclesiological and political views of their time [11, p. 86].

In the modern era, the rapid acceleration of scientific and technological progress and the expansion of the limits of humanity's rational capabilities open up new ways of influencing human nature (genetics, transplantology, reproductive technologies). This gives rise to several moral and philosophical challenges, where the line between treatment and destruction of the human image becomes increasingly thin, and the issues of spirituality and identity acquire a new meaning. The absolutization of scientific achievements without a value filter is a dangerous position that ignores the spiritual dimension of being [14, p. 150]. The emergence of bioethics as a response to these challenges requires not only new protocols, but also an appropriate anthropological and ethical basis. Here, the hamartological concept of I. Gisel appears as an element of moral navigation.

Focusing research attention on the hamartological system of Innocent Gisel as the basis of the moral theology of the Christian ascetic of faith and piety of the modern era provides the article with novelty in view of modern biotic problems and their holistic and systematic reflection in catechetical and educational-methodical literature and workshops on moral, liturgical, and pastoral theology.

2. Literature Review

Several scientific works devoted to the spiritual aspects of the history of Ukraine and the historical and cultural features of the development of Ukraine during the life and activities of Innokenty Gisel give us an idea of the general background of the formation of his worldview and intellectual reflections. Among such scientists, we note the works of Abramovych, Sokhan, Yakovenko [1; 2; 17; 22; 23].

The spiritual background of the era is highlighted in the publications of Shkribniak and Tsisar [16], Chornomorets [5]. Analysis of the theologian's spiritual heritage, his ideas, views, theoretical and practical contribution to the development of theology, philosophy, history, as well as religious and church activities, became the subject of scientific attention in the studies of Tsisar and Kraliuk [21], Tsisar [20], Dovga [6; 7], Isichenko [10].

The study of the "Synopsis" was devoted to the publications of Zhilenko [25], Kohut [12], Syrtsova [19]. A significant historiographical and source-based achievement is the publication of several volumes of the works of Gisel with comments by researchers, articles by scholars, photo illustrations, and a catalog of the theological works of the archimandrite [8; 9].

3. Problem Statement

The aim of the article is a religious analysis of the hamartological concept of Innocent Gisel as a component of classical moral theology and modern problems of bioethics.

Research tasks:

1. To analyze the specifics of the formation and ideological-theological and moral-ethical content of the hamartological views of Archimandrite Innocent Gisel;
2. To explain the features of the thinker's hamartological system and to substantiate Giselevoy's leading ideas about conscience and free will;

To substantiate the role of a situational approach to the analysis of sin and the formation of a Christian understanding of the individual as a holistic psychosomatic unity to create not only an intellectual basis for discussions on the status of the embryo and the limits of intervention in biological

nature, but also to crystallize an ethical safeguard against the destruction of man as a creation of God and a social being.

4. Methods and Materials

The methodological framework of this study is based on an interdisciplinary approach that combines methods of religious studies, theology, and philosophy. The research employs historical-comparative analysis to examine the development of hamartological doctrines from early Christianity to the post-Tridentine period, as well as hermeneutic and textual analysis for interpreting the works of Innocent Gisel, particularly his treatises "Peace with God for Man" and "Tractatus de anima". The study also utilizes the method of conceptual reconstruction to systematize Gisel's understanding of sin, conscience, and free will, alongside a situational-ethical approach that allows correlating his ideas with contemporary bioethical discourse. The materials of the research include primary theological texts of the 17th century, patristic sources, scholastic and neo-scholastic writings, as well as modern scholarly publications in the fields of moral theology and bioethics.

5. Results and Discussion

As early as the beginning of the 3rd century, a unique system of classifying sins began to take shape in Christianity. It involved dividing them into three main categories:

1. Everyday sins. This group included minor offenses that could be forgiven without the need for public repentance.

2. Minor or moderate sins. Christians who committed sins of this type were obligated to confess and perform the appropriate penance.

3. Grave sins. This category included three main types of serious offenses: murder, idolatry, and lewd conduct. For the commission of such sins, the Church applied excommunication, prohibiting the participation of murderers, idolaters, fornicators, and adulterers in the church community. They could not be returned to Eucharistic unity even before death, regardless of the repentance they had shown. Prayer was still offered for such sinners and they had to do penance until death, relying on the mercy of God. But already at the beginning of the 13th century. Mendicant monastic orders, such as the Dominicans, Franciscans, and Carmelites, began to play a significant role in the development of confession in the West. This influence was reflected in all subsequent Western theological literature [10].

The Reformation movements of the 16th–17th centuries viewed the sacrament of penance through the prism of a general renewal of spiritual life and the purification of church practice from formal elements that had lost relevance for the Christian community. The Catholic Reformation accepted the challenge of Protestantism in the field of the doctrine of the sacraments, in particular sacramentology. The Council of Trent (1545–1663) devoted one of its meetings in Bologna on March 29, 1547, to criticizing Protestant views on the sacrament of penance. Later, at the 14th session of the council on November 25, 1551, one of the fundamental documents for the Catholic Reformation was approved: "The Doctrine of the Sacrament of Penance." The procedure for penance implied sincere sorrow for sins and contrition. For this spiritual and moral state, a sharp feeling of pain, guilt, and disgust for the sin committed, along with a firm decision not to sin again, was required.

Confession remained important. It consisted of a detailed examination of one's own conscience and the recognition of sins that had seriously offended God. This was followed by atonement, which involved punishments (penance) voluntarily accepted or imposed by the priest to cleanse one from sins. The inclusion of various prayers in the sacrament of Confession was encouraged, although it was not considered an integral and canonical component of the sacrament, according to scholastic theology [10].

The Orthodox Reform, the key theological center of which was Kyiv during the time of Petro Mohyla, paid special attention to spiritual revival, in particular, the restoration of the practice of performing the sacrament of repentance. The Catechism, published in the Kyiv Lavra printing house with the blessing and undoubted participation of Metropolitan Petro Mohyla in 1645, confirms not the borrowing of Catholic reforms or the Latinization of the church consciousness of the Kyiv Metropolis, but rather the streamlining of the processes of spiritual renewal of Orthodoxy in Kyiv. In the introduction to the "Great Requirement of Petro Mohyla", we read the following lines:

"You now have a book that you really need. You will find in it the celebration of the Seven Mysteries of the Church, which I compiled according to the Greek euchologies and old handwritten Slavic Trebniks. You have in it a certain teaching about what a mystery is, what its power and effectiveness are, how you should prepare for the performance of the mystery, how to carefully and reverently celebrate them and present them to the faithful, how to teach the people of God to approach the Mysteries and behave accordingly in various cases that may arise. You have in this book a living rite and order of various consecrations and various prayers and molebens... You have a certain teaching about the entire church order" [3].

This renewal was caused by the post-Trentine reforms in the Christian West, the intensification of Orthodox-Catholic dialogue in Ukraine after the Union of Brest in 1596, and the desire to move away from medieval forms of the Church's presence in society. It was intended to give church service more evangelical flexibility, dynamism, and professionalism. With the beginning of the struggle for the Hetmanate in 1648, Ukrainians increasingly realized the importance of their religious identity and faith. The failed alliance with Moscow in 1654, the disappointment and mental crisis of the Cossack elites during the era of Ruin, the new conservative context of the Muscovite kingdom, the danger of the incorporation of the Kyiv Metropolis into the Moscow Patriarchate, which was actively opposed by Innocent Gisel, the contradictory consequences of the implementation of the Orthodox Reform by the Moscow Church - this is the socio- political and worldview background that created the conditions for the appearance of the book "Peace with God for Man" [10].

Required to dwell more objectively on those factors that influenced the spiritual and worldview formation of Innocent Gisel himself. Investigating the value-worldview positions and religious morality, understanding of holiness and hamartology in the activities and theological heritage of I. Gisel, it is worth noting that he actively turned to ancient works, the works of the Fathers of the Church, medieval scholastics, representatives of neo-scholasticism, as well as writers of modern times. I. Gisel was one of the first philosophers of the Kyiv-Mohyla Academy to mention the heliocentric theory of M. Copernicus. His position echoes the ideas of other Ukrainian thinkers of previous eras. In his philosophy and faith, I. Gisel combined Aristotelianism with elements of Christian Neoplatonism. One of the central ideas of the religious and theological discourse in I. Gisel's reasoning was the concept of God as a necessary and self-sufficient entity. The theologian considered the being of God as absolutely identical to His essence and existence. God is immaterial, immortal, perfect, one, omnipresent and acts as the free cause of all that exists [4, pp. 9–10].

"Tractatus from anima" I. Gisel reflects the level of understanding of anthropological and psychological problems of his time, contains elements of the theory of knowledge, as well as information about the structure and functions of the human body in accordance with the ideas of the Baroque era. The work separately considers medical terminology, which was relevant in Ukraine in the 17th century. The text sets out the views of the Mogilev professor on a number of anthropological issues that were relevant for the scholastic tradition of the Baroque era. Among the main topics of discussion are the issues of the essence of the soul, its properties, the relationship between unity and plurality of forms, the problem of species, as well as active and passive intellect, which is closely related to the issue of cognition, free will, etc. I. Gisel describes the nature of the soul, relying on the teachings of Aristotle, and offers two definitions. According to the first, the soul is the primary act of a body endowed with organs, which is capable of life. In the second definition, the soul appears as the principle due to which we live, move and exist. Thus, the interpretation of the soul by the Mogilev professor demonstrates the inclination of his ideas towards the framework of essentialist ontology. Representatives of this approach, in particular, were Duns Scotus and Francisco Suarez. This ontology was fundamentally different from the existentialist ontology of Thomas Aquinas, in which essence was considered as really distinct from existence. Recognizing that the human soul has a single three-level nature, I. Gisel is inclined to consider certain differences between these levels. I. Gisel believes that individual parts of the body exist independently in their being, not thanks to the soul, but with the help of some other form or forms. In confirmation of this, the author of the " Tractatus from anima " notes that the soul appears in the body only when its parts already exist as separate parts: the embryo has a head separated from the legs, and the heart from the liver. In his opinion, these forms arise independently, and not as a result of the arrival of the soul. I. Gisel believes that the soul is the first act of the organic body, which awakens its potential and translates it into a state of actuality. It is distinguished by its ability to contribute to the formation of the body and serve as its complement. The main purpose of the soul is to ensure the work and vital activity of the body. At the same time, I. Gisel, perceiving the body as a material structure or

as a system of still inanimate attitudes - forms, considers it not as a random construction, which to some extent correlates with a partial substance. Rather, he is inclined to believe that the body is a formation formed from partial substantial forms that come to life and come to life with the arrival of the soul. The treatise of the professor of the Kyiv-Mohyla Academy I. Gizel, as well as his entire philosophical course, testifies to an important stage in the development of Ukrainian intellectual thought of the 17th century, marked by the transition to a new paradigm of thinking. This transition is associated with the introduction of the early modern version of scholastic Aristotelianism. Such a shift in thinking contributed to significant progress in the intellectual development of Ukraine, laying the foundation for its philosophical and scientific tradition [18, pp. 52–53, 58, 63, 70–71, 81].

As noted by Ya. Zatylyuk, Innokenty Gizel, archimandrite of the time of Ruina (1656–1683), attracted the attention of researchers mainly as the author (or, perhaps, the editor) of the “Synopsis” and as a far-sighted church figure. He is considered a master of political balance. Demonstrating loyalty to the Moscow Tsar, he at the same time confidently defended the interests of the Kyiv Metropolis and his monastery. However, not so much works, which highlight the intellectual content of his works and himself as a bright representative of Petro Mohyla’s associates. The main reason for such a gap, apparently, lies in insufficient attention to the theological and philosophical heritage of I. Gizel. Without an analysis of his spiritual and intellectual activity, it is difficult to understand more deeply both the peculiarities of church life and social relations of the Hetmanate of the second half of the 17th century, and the mentality of that era in general [24].

The main aspects of I. Gizel’s religious and philosophical teachings are God, the world and man. The relationship of these elements is considered in ontological, epistemological and moral contexts, which constitutes a meaningful space for his theoretical searches. A significant part of the teachings is devoted to natural philosophy, the central element of which is God. Avoiding excessive anthropomorphization, the thinker describes this concept through such terms as “source”, “root”, “free reason”, “boundless perfection”, etc. The philosopher and theologian carefully substantiated the principles of humanism, calling for active participation in public life. In his opinion, free labor is the highest meaning of human existence. He associated the achievement of earthly happiness with such values as patriotism and freedom. The main principle that, in his opinion, a person must adhere to is service to the common good. The thinker viewed human life as a process of constant change, covering various spheres of existence. At the same time, he paid attention not only to the internal metamorphoses of the individual but also to transformations in nature and society. This is especially clearly reflected in his reflections on the causes of human sin, types of moral defects, the movement of celestial bodies, the interaction of the elements and the variability of living nature [4, p. 12].

Realizing that a person, even being prone to errors and moral violations, still does not sin with every thought, word, or deed, the Church set itself the task of teaching both clergy and laity to distinguish between grave (mortal) sins and venial sins. Another important task was to outline the boundaries between everyday functioning in everyday life, which includes the creation of material goods, procreation, protection of one’s own interests and the interests of the family, and truly sinful actions. The existential basis of such a distinction is conscience, which compares each action with a certain ideal positive standard, each time assessing the nature of behavior, the appropriateness and acceptability of specific actions, as well as the correspondence of one’s own moral “I” to the chosen standard. Given that the creation of a universal moral standard is impossible due to its relativity, conscience faces serious challenges. Every time the will strives to perform a certain action or achieve a certain goal, it exerts pressure on the mind, urging it to approve this intention and implement it. In such situations, conscience acts as a judge who evaluates intentions and actions, determining the criteria by which they should be judged. The task of conscience is to find the golden mean, a balanced position that will avoid the extremes of excessive permissiveness and excessive restriction of the will, which prohibits it from acting. The reference point in these matters was to be the updated moral teaching presented in special manuals or advisors for the clergy and their flock [7, pp. 110–111].

Innocent Gizel’s treatise “Peace with God for Man” is the first significant work in the field of moral theology. The main idea of “Peace with God for Man” boils down to a call for collective awareness of sins committed and repentance of the entire Orthodox community. Only after this is it possible to achieve reconciliation with God, and with it real, true peace [21, p. 177]. As stated in the text of the treatise:

“It should be known that sacrilegious thoughts do not originate with man, but are inspired by the devil himself, and a man must overcome these thoughts with contempt, considering them to be nothing, as if they were some most delusional ghost, and not a real evil. And a man must console himself with the

images of the saints, because many of them endured such filthy blasphemies, but did not lose their sanctity, nor did they distance themselves from the grace of the Lord. While enduring these passions, a man should not even show weakness or be sad, because he does not consent to these blasphemous thoughts. And even if it seemed to someone that he consented to them, let him know that since he hates them, he therefore does not want them. Therefore, there is no consent to them; therefore, be completely carefree, man. And do not be saddened by these evil thoughts that haunt you, because as soon as you become sad, your enemy, the devil, will immediately rejoice, because it is precisely for this reason that he inspires blasphemous thoughts in a person, to upset and cause grief. And as soon as the devil sees a sad and sorrowful person, he immediately rejoices. But when a person neglects these blasphemous thoughts and does not beat himself up over them, but even mocks himself at them, then the ashamed devil flees away. Therefore, a person should not be embarrassed and discouraged when blasphemous thoughts take possession of him, because for this patience a crown awaits him..." From the book "Peace with God for Man" (part 3, chapter 5) [13].

The perception of free will as an important moral value in the Catholic tradition and in the theology of the Kyiv-Mohyla Academy is closely connected with the dogma of merit formulated at the Council of Trent (1545–1563). This dogma asserts that a person is capable and obliged to achieve justification through his own free and good deeds. In the treatise "Peace with God for Man", the concept of honor is highlighted in the chapters that explain the nature of sin as a phenomenon, as well as in more specific parts that describe mortal sins, sins against the Ten Commandments of God and the Ten Church Commandments. In addition, the text pays attention to advice on the correction of the one who has sinned and the process of forgiveness of offenses. Sins are described with the detail inherent in legal texts. They are classified by type, analyzed through various precedents, and illustrated in detail by examples from real life. In his analysis of the interpretation of the Law, I. Gisel proposes to move from a literal understanding of it to a situational approach, where the assessment of each specific act depends not so much on the action itself, but on the conditions under which it was committed. These circumstances can either weaken or strengthen guilt. Thus, sins that traditionally belong to the category of mortals can be mitigated, forgiven, or even not considered sins at all, while seemingly harmless actions can acquire the meaning of a grave sin. I. Gisel attaches greater importance to the ethical and moral relationships of a person both with himself and with other people. In this context, a violation of the moral and ethical norms of secular life, which are consistent with natural law and age-old customs, is considered the basis of a situation in which an ordinary sin can develop into a grave one. At the same time, I. Gisel admits the possibility of justified violation of some prohibitions, if natural law and a reasonable assessment of the circumstances require it. For example, violation of the commandment "thou shalt not kill" can be considered permissible in cases where it is a question of protecting one's own life or property. In such situations, such actions are not considered a sin. The treatise "Peace with God to Man" demonstrates that the author, having deep knowledge of the Catholic and Protestant ethics of his time, managed to direct Orthodox moral theology into a practical plane. He sought to formulate recommendations for righteous behavior, adapted to the realities of earthly existence, integrating many innovations into Christian ethics that reflected the everyday practices of his contemporaries [7, pp. 137, 145–146, 158].

The Church's teaching on holiness, the creation of man in the image and likeness of God, as well as on marriage and the birth of children, provides an opportunity to morally evaluate bioethical issues, harmonizing them with the will of God. In Orthodoxy, biomedical ethics is considered a component of moral theology and serves as one of the ways to protect the godlike dignity and freedom of the individual and holiness. Christianity within the framework of the Orthodox theological tradition offers its understanding of the essence of the individual and its spiritual purpose. Gregory the Theologian gives the concept of the individual a unique meaning, defining it as a unique, intelligent, perfect and independently existing singularity. The individual cannot be identified exclusively with the soul. It should be considered as a way of existence that gives the whole being a personal dimension, penetrating its essence. The individual performs an integrating function, uniting different levels of being and forming their integrity. It is the force that ensures the unity of the soul and body of man, just as the personality of Christ unites His divine and human natures. Through this connection, the body is capable of receiving spiritualization, and the soul is a bodily experience. The disclosure of the human personality occurs through relationships with other individuals. However, its deepest essence and highest purpose are achieved only through involvement in the Divine Person.

Thus, within the framework of Christian Orthodox anthropology, the true dignity of man is not determined by his independent value as the center of the world, but is revealed in the manifestation of the image and likeness of God, as well as in the desire to become like the Creator through the path of spiritual perfection. Bioethics determines the necessary conditions for every believer to live and complete their life with dignity in accordance with the Christian faith. At the same time, it establishes clear ethical boundaries for intervention in the field of medicine, preventing human attempts to replace God, modifying or improving His creation according to their own preferences. The ethical challenges of modernity are largely related to the latest achievements of biomedical technologies. Bioethics explores issues such as the role of sexuality and the morality of various forms of sexual behavior, the moment of the origin of human life, and also provides a moral assessment of such practices as abortion, artificial insemination, genetic engineering, euthanasia, or cremation [Priest Pavlo Melnyk, Melnychuk]. Christian anthropology, which considers the person as a holistic way of existence of the soul and body, becomes the main safeguard against the reduction of a person to a biological object. Establishing clear ethical boundaries for intervention in human nature is not a restriction of freedom, but, on the contrary, an act of protecting the godlike dignity of the individual from attempts at technological substitution of the Creator.

6. Conclusions

Religious studies analysis, based on achievements in religious-philosophical and historical-theological thought, gives grounds to argue that with a situational and fragmentary appeal to the intellectual heritage of Innocent Gisel, the importance of its complex multidisciplinary reflection is obvious. The hamartological concept of the thinker deserves special attention, which appears as an important component of classical moral theology and modern problems of bioethics.

Hamartological reasoning and explanations are an intellectual bridge between Baroque scholasticism and modern ethics. His teaching on sin and repentance shifts the focus from the formal fulfillment of the law to the inner desires and intentions of the individual and his peace with God.

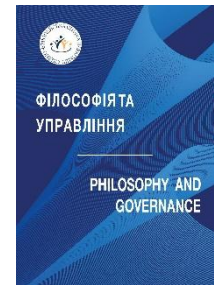
The anthropological views of this spiritual intellectual and ascetic of faith and piety, as one of the brightest representatives of the traditionalist-hesychast movement in Ukraine, with his Orthodox religious-theological interpretation of the individual as the integrity of the soul and body, form an important basis for the ethical-theological assessment of biomedical technologies.

At the same time, the situational approach in the moral theology of the 17th century, in fact, became the forerunner of modern bioethical expertise. Thus, taking into account the circumstances of the act and the priority of the common good allows integrating scientific achievements into the system of Christian values without losing spiritual identity and holiness. Bioethics through the prism of the philosophical-theological and ideological heritage of I. Gisel and Orthodox anthropology act as one of the leading moral guidelines that prevent attempts to replace God in medicine. It affirms the idea that true progress is possible provided that the image and likeness of God in man is preserved.

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Cultural Foundations of Law: On the Issue of Comparative Analysis of Modern Concepts

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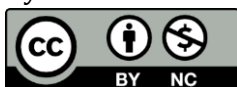
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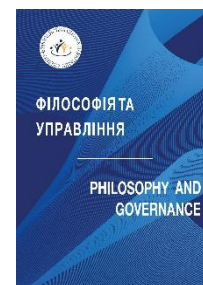


ABSTRACT

The article examines the cultural foundations of the formation of legal concepts of the Modern Age through the prism of their cultural dimensions and the peculiarities of the interpretation of law as a socio-cultural phenomenon. The relevance of the study is due to the growing interest in interdisciplinary analysis of law, which allows us to consider legal ideas not only as the result of normative thinking, but as a manifestation of broader cultural processes that were formed in the European intellectual tradition of the Modern Age. The article aims to carry out a comparative analysis of the legal concepts of this period and determine their cultural dimensions that influenced the formation of modern legal understanding. The study used methods of comparative analysis, historical and philosophical generalization, cultural approach and conceptual analysis, which allowed us to reveal the peculiarities of the formation of legal ideas in the context of socio-cultural transformations of the Modern Age. The analysis showed that the legal concepts of this era were formed under the influence of changes in philosophy, political thought and social values. It is established that the cultural dimensions of law are manifested through the interaction of legal norms with moral, religious and political factors of the development of society. Particular attention is paid to approaches to measuring and interpreting the cultural dimensions of legal concepts, which allows for a deeper understanding of the evolution of the ideas of natural law, social contract and principles of freedom and justice. The results of the study showed that the cultural foundations of modern law are multidimensional and are determined by a combination of philosophical, political and social factors. Comparative analysis made it possible to identify common features and differences between different concepts of law, as well as to determine their influence on the formation of modern legal culture. The conclusions establish that the cultural approach to the study of law expands the methodological possibilities of legal research and contributes to a deeper understanding of the socio-cultural nature of legal institutions and ideas.

KEYWORDS

cultural foundations of law, measurements, dimensions of law, cultural dimensions, legal culture, Modern times, comparative analysis.

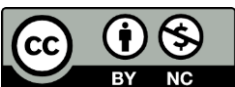


Культурні засади права: до питання порівняльного аналізу концепцій Нового часу

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СТАТТЯ	АНОТАЦІЯ
Дослідницька DOI: 10.70651/3041-248X/2026.2.06 Отримана: 03.01.2026 р. Прийнята: 05.01.2026 р. Опублікована: 10.02.2026 р. Авторське право © 2026 автора  Цей твір ліцензовано на умовах Ліцензії Creative Commons «Із Зазначенням Авторства – Некомерційна 4.0 Міжнародна» (CC BY-NC 4.0).	У статті досліджено культурні засади формування правових концепцій Нового часу крізь призму їхніх культурологічних вимірів та особливостей інтерпретації права як соціокультурного феномена. Актуальність дослідження зумовлена зростанням інтересу до міждисциплінарного аналізу права, який дозволяє розглядати правові ідеї не лише як результат нормативного мислення, а як прояв ширших культурних процесів, що формувалися в європейській інтелектуальній традиції Нового часу. Метою статті є здійснення порівняльного аналізу концепцій права цього періоду та визначення їхніх культурологічних вимірів, що вплинули на становлення сучасного праворозуміння. У дослідженні використано методи порівняльного аналізу, історико-філософського узагальнення, культурологічного підходу та концептуального аналізу, що дозволило розкрити особливості формування правових ідей у контексті соціально-культурних трансформацій Нового часу. Проведений аналіз показав, що правові концепції цієї епохи формувалися під впливом змін у філософії, політичній думці та суспільних цінностях. Встановлено, що культурологічні виміри права проявляються через взаємодію правових норм із моральними, релігійними та політичними чинниками розвитку суспільства. Особливу увагу приділено підходам до вимірювання та інтерпретації культурних вимірів правових концепцій, що дозволяє глибше зрозуміти еволюцію ідей природного права, суспільного договору та принципів свободи і справедливості. Результати дослідження засвідчили, що культурні засади права Нового часу мають багатовимірний характер і визначаються поєднанням філософських, політичних та соціальних чинників. Порівняльний аналіз дозволив виявити спільні риси та відмінності між різними концепціями права, а також визначити їхній вплив на формування сучасної правової культури. У висновках встановлено, що культурологічний підхід до дослідження права розширює методологічні можливості правничих досліджень і сприяє глибшому розумінню соціокультурної природи правових інститутів та ідей.



КЛЮЧОВІ СЛОВА

культурні засади права, вимірювання, виміри права, культурологічні виміри, правова культура, Новий час, порівняльний аналіз.

1. Introduction

Право є одним із ключових інститутів організації суспільного життя, що забезпечує регулювання взаємовідносин між людьми та визначає загальні правила їх співіснування. Водночас право не може розглядатися виключно як система нормативних приписів або інструмент державного управління, оскільки воно формується в ширшому соціокультурному контексті. У цьому сенсі право виступає складовою культури, відображаючи цінності, моральні уявлення та світоглядні орієнтири суспільства. Саме тому дослідження культурних засад права набуває особливого значення для розуміння генези правових інститутів і механізмів їх функціонування.

Актуальність теми дослідження пов'язана з переосмисленням ролі культури у формуванні соціальних процесів у сучасній гуманітарній науці. Упродовж тривалого часу у вітчизняній науковій традиції домінував матеріалістичний підхід до пояснення суспільних явищ, відповідно до якого право розглядалося переважно як інструмент державного примусу або як засіб реалізації інтересів економічно панівних груп. Такий підхід значною мірою звужував розуміння природи права, оскільки залишав поза увагою духовні, моральні та культурні чинники, що історично впливали на формування норм людського співіснування [21].

Водночас право історично виникало і розвивалося як система правил, що регулюють взаємовідносини між людьми на основі певних уявлень про справедливість, свободу та відповідальність. Ці уявлення формувалися в межах культурного розвитку суспільств і значною мірою були пов'язані з моральними та релігійними традиціями. У цьому контексті культура може розглядатися як фундаментальна основа формування соціальних інститутів, а правові норми – як результат історичного розвитку людських цінностей та ідеалів.

Особливого значення для формування сучасного праворозуміння набули концепції Нового часу, коли в європейській інтелектуальній традиції відбувалося становлення модерних уявлень про державу, владу та природні права людини. Саме в цей період формуються теоретичні підходи до обґрунтування правових норм, що поєднували раціоналістичне осмислення суспільних процесів із моральними та духовними уявленнями про природу людських взаємовідносин [13]. Ідеї природного права, суспільного договору та свободи особистості стали основою подальшого розвитку правової думки та заклали підвалини сучасних концепцій прав людини і правової держави.

У сучасному науковому дискурсі для аналізу складних соціальних явищ дедалі частіше використовується поняття «вимір» або «виміри». У гуманітарних дослідженнях воно застосовується для позначення певних напрямів аналізу чи критеріїв оцінювання різних аспектів суспільних процесів. Використання поняття «культурологічні виміри» у дослідженні права дозволяє розглядати правові концепції не лише з позицій політико-правових чи соціально-економічних факторів, а й з урахуванням культурних, моральних і духовних засад їх формування [7].

З огляду на це особливої актуальності набуває порівняльний аналіз концепцій права Нового часу з позицій розгляду їх культурних засад. Такий підхід дозволяє глибше зрозуміти історичні витоки сучасного праворозуміння, а також виявити ціннісні та духовні чинники, що вплинули на формування ідеї природних прав людини. Застосування поняття «виміри» як методологічного інструменту відкриває можливість конкретизувати критерії порівняння правових концепцій та уточнити зміст культурних засад права.

2. Literature Review

Аналіз наукових праць, присвячених взаємозв'язку права і культури, демонструє широкий спектр підходів до осмислення права як складного соціокультурного феномена. У сучасній гуманітарній науці дедалі більше уваги приділяється дослідженню культурних засад права, оскільки правові норми формуються не лише під впливом політичних чи економічних чинників, але й у межах певних культурних традицій, моральних уявлень та світоглядних орієнтирів суспільства. Особливо актуальним є такий підхід у контексті аналізу концепцій Нового часу, коли відбувалося формування модерних уявлень про свободу, справедливість, природні права людини та роль держави у регулюванні суспільних відносин.

Так, I. Kritsak, I. Ishchyk [9] у своїх дослідженнях звертає увагу на культурну зумовленість права, підкреслюючи, що правові норми відображають систему цінностей суспільства та формуються в межах його історико-культурного розвитку. На їхню думку, право є важливим елементом духовної культури, що поєднує нормативні, моральні та світоглядні компоненти [9]. V. Kaluha [4] у своїх філософських працях розглядає культуру як фундаментальну основу соціального буття людини, наголошуючи, що саме культурні процеси формують систему смислів і цінностей, які визначають характер суспільних інститутів, включаючи правові.

S. Yosypenko [22] досліджує історико-філософські аспекти розвитку української культури та підкреслює значення духовних традицій у формуванні суспільних норм і цінностей. Його підхід дозволяє розглядати право як результат культурної еволюції суспільства, у межах якої відбувається формування уявлень про справедливість, свободу та відповідальність [22]. M. Porovuch [18] у своїх працях аналізує культурні виміри суспільного розвитку, підкреслюючи, що культура виступає системою смислів, через яку людина осмислює соціальну реальність. У цьому контексті право розглядається як один із механізмів упорядкування соціальних відносин на основі певних культурних цінностей [18].

S. Mahera [12] досліджує історичні особливості розвитку української культури та інтелектуальної традиції, наголошуючи на значенні культурних чинників у формуванні соціальних інститутів та політико-правових систем. Її роботи дозволяють глибше зрозуміти історичний контекст становлення правової культури в європейській традиції [12]. T. Haltseva, O. Zinenko [3] аналізують культурно-історичні процеси формування національної ідентичності, підкреслюючи роль культурних і духовних чинників у розвитку суспільних інститутів, у тому числі правових.

У юридичній науці питання культурних засад права розробляються у працях M. Koziubra [8], який підкреслює необхідність розглядати право як явище культури, що функціонує в межах певної системи соціальних цінностей. На його думку, правові норми не можуть існувати поза культурним контекстом, оскільки вони відображають моральні та духовні орієнтири суспільства [8]. O. Lytvynov [11] у своїх дослідженнях розглядає право як феномен культури, аналізуючи його філософські та соціальні засади й підкреслюючи значення духовних чинників у формуванні правових норм.

O. Bazaev [1] здійснює порівняльний аналіз правових традицій та наголошує на впливі культурних факторів на формування правових систем. Він підкреслює, що правові інститути формуються під впливом історичних, культурних та цивілізаційних особливостей розвитку суспільства [1]. M. Panforova [16] досліджує філософські засади праворозуміння та звертає увагу на ціннісний характер права, що проявляється через його зв'язок із культурою та моральними принципами суспільства.

У сучасному науковому дискурсі дедалі частіше використовується поняття «вимір» або «виміри» для аналізу складних соціальних і культурних явищ. Yu. Sabadash [19] у своїх культурологічних дослідженнях звертає увагу на особливості використання цього поняття в гуманітарних науках та підкреслює необхідність його методологічного уточнення при аналізі культурних процесів. N. Liashova, N. Bielik [10] у педагогічних дослідженнях наголошують на взаємозв'язку між порівнянням і вимірюванням як операціями мислення, які дозволяють систематизувати та оцінювати різні аспекти соціальної реальності.

Порівняльний культурний підхід до аналізу соціальних процесів використовується також у міжнародних дослідженнях. Так, O. Khovrun, O. Dombrovska [6] аналізують правові механізми культурної дипломатії та підкреслюють роль культурної спадщини у формуванні національної ідентичності та міжнародної взаємодії. I. Shpektorenko [20] у своїх дослідженнях розглядає культурні та соціальні чинники розвитку державних інститутів, наголошуючи на необхідності врахування культурного контексту при формуванні політико-правових систем.

Попри значну кількість наукових праць, присвячених взаємозв'язку права і культури, деякі аспекти цієї проблематики залишаються недостатньо дослідженими. Зокрема, бракує комплексного порівняльного аналізу культурологічних вимірів правових концепцій Нового часу, а також уточнення методологічних підходів до використання поняття «культурологічні виміри» у правових дослідженнях. Саме ці питання потребують подальшого наукового опрацювання.

3. Problem Statement

Метою цього дослідження є наукове обґрунтування культурологічних засад права та здійснення порівняльного аналізу правових концепцій Нового часу з позицій розгляду їх культурних засад. Особлива увага приділяється виявленню культурних, світоглядних і ціннісних чинників, що вплинули на формування уявлень про право, свободу, справедливість і природні права людини в європейській інтелектуальній традиції цього періоду. У межах дослідження ставиться завдання проаналізувати основні підходи до розуміння взаємозв'язку права і культури, визначити методологічне значення поняття «культурологічні виміри» для аналізу правових явищ, а також дослідити особливості формування правових ідей Нового часу у контексті соціокультурних трансформацій європейського суспільства.

4. Methods and Materials

Дослідження ґрунтується на всебічному аналізі наукових праць у галузі філософії права, культурології, історії філософії та теорії держави і права, що присвячені проблемі взаємозв'язку права і культури. Основною метою було вивчення культурних засад формування правових концепцій Нового часу та визначення їхніх культурологічних вимірів у контексті розвитку європейської інтелектуальної традиції.

Матеріалами дослідження стали наукові публікації українських та зарубіжних авторів, присвячені аналізу культурних аспектів права, історії правової думки та філософських засад праворозуміння. Особливу увагу приділено працям, у яких право розглядається як елемент культури та як результат історичного розвитку цінностей і світоглядних орієнтирів суспільства.

Одним із основних методів дослідження став порівняльний аналіз, що використовувався для вивчення різних правових концепцій Нового часу та їхніх культурних передумов. Порівняння ідей представників європейської філософсько-правової думки дозволило виявити спільні та відмінні риси у трактуванні природи права, ролі держави та значення прав людини. Такий підхід сприяв більш глибокому розумінню культурних основ формування правових інститутів.

У дослідженні також застосовано історико-філософський метод, який дав змогу проаналізувати розвиток правових ідей у контексті соціокультурних трансформацій Нового часу. Цей метод дозволив простежити еволюцію уявлень про право та визначити роль культурних чинників у становленні модерних концепцій правової держави та громадянського суспільства.

Крім того, використано метод концептуального аналізу, спрямований на уточнення змісту таких понять, як «культурні засади права», «культурологічні виміри» та «правова культура». Застосування цього методу дозволило визначити їх методологічне значення для дослідження правових явищ та систематизувати різні підходи до їх інтерпретації у сучасній науковій літературі.

У роботі також застосовано елементи культурологічного підходу, що передбачає розгляд права як складової ширшої системи культурних цінностей і соціальних норм. Такий підхід дав змогу дослідити взаємозв'язок правових ідей із моральними, релігійними та світоглядними уявленнями відповідних історичних епох.

Поєднання зазначених методів дозволило комплексно проаналізувати культурні засади правових концепцій Нового часу та визначити їх значення для формування сучасного розуміння права як соціокультурного феномена.

5. Results and Discussion

Аналіз культурних засад права в контексті правових концепцій Нового часу дозволяє розглядати право не лише як інструмент регулювання соціальних відносин, а передусім як явище культури. У сучасному науковому дискурсі все більшого значення набуває підхід, відповідно до якого право формується в межах певних культурних систем цінностей і світоглядних орієнтирів. Саме тому застосування поняття «вимір» («виміри») у дослідженні правових явищ дозволяє більш комплексно аналізувати їхню природу та історичний розвиток.

У гуманітарних науках поняття «вимір» використовується як методологічний інструмент для визначення напрямів оцінювання певних соціальних чи культурних явищ. Як зазначає М. Попович, вимір можна розуміти як спосіб впорядкування значень і цінностей, що розглядаються як різновиди однієї загальної цінності або смислу. Такий підхід дозволяє застосовувати категорію вимірів до аналізу права як складного соціокультурного феномена.

Поняття вимірів тісно пов'язане з процесами порівняння і вимірювання, які в гуманітарному пізнанні виступають інструментами упорядкування та оцінювання явищ соціальної реальності. Як зазначає N. Nestoruk [14], порівняння є операцією мислення, за допомогою якої класифікуються та оцінюються об'єкти, що мають спільні або відмінні ознаки [14, с. 7-8]. У цьому контексті вимірювання можна розглядати як узагальнену форму порівняння, що дозволяє визначати певні критерії оцінки явищ культури, включаючи правові інститути.

У межах проведеного дослідження було здійснено порівняльний аналіз основних правових концепцій Нового часу з погляду їх культурних засад. Особливу увагу приділено ідеям Т. Гоббса, Б. Спінози та Дж. Локка, які відіграли важливу роль у формуванні модерного розуміння права та держави.

Відомо, що у своїй праці «Левіафан» Т. Гоббс намагався застосувати до аналізу суспільних процесів методи, характерні для природничих наук. Під впливом ідей Г. Галілея та Р. Декарта він прагнув описати державу як своєрідний механізм або «штучний організм». Однак поряд із механістичними аналогіями мислитель приділяв значну увагу моральним і релігійним аспектам суспільного життя, що дозволяє говорити про наявність у його концепції певного культурного виміру. Держава у Гоббса виступає не лише політичним інститутом, але й своєрідним культуротворчим механізмом, покликаним забезпечувати порядок і стабільність у суспільстві.

Інший підхід демонструє Б. Спіноза, який у «Теологічно-політичному трактаті» розглядав моральні та правові норми у тісному зв'язку з релігійними уявленнями та текстами Святого Письма. Спіноза виходив із раціоналістичної інтерпретації релігії, розглядаючи Бога як основу природного порядку світу. У цьому контексті право людини на існування, свободу думки та самовираження розглядається як природне і невід'ємне. Таким чином, у концепції Спінози можна виокремити важливий культурний вимір права, що пов'язаний із моральними та духовними цінностями.

Особливе значення для розвитку теорії природних прав людини мала політико-правова концепція Дж. Локка. У своїх працях він полемізував із представником патріархальної теорії Р. Філмером, який обґрунтовував абсолютну владу монарха божественним походженням влади. Локк, навпаки, виходив із ідеї природних прав людини – права на життя, свободу та власність. Важливо, що аргументація Локка значною мірою спиралася на християнські моральні настанови, що свідчить про тісний зв'язок його концепції з релігійними та культурними традиціями європейського суспільства.

Результати порівняльного аналізу культурних засад правових концепцій Нового часу подано в таблиці 1.

Таблиця 1. Культурологічні виміри правових концепцій Нового часу

Мислитель	Основна праця	Ключова правова ідея	Характеристика культурологічного виміру
Т. Гоббс	«Левіафан» (1651)	Держава як штучний механізм (Левіафан) для подолання «війни всіх проти всіх» та забезпечення порядку через суспільний договір	Поєднання механістичної картини світу (вплив природничих наук) з біблійною міфологією та морально-релігійними настановами, що легітимізують владу як культуротворчий чинник стабільності
Б. Спіноза	«Теологічно-політичний трактат» (1670)	Невід'ємні природні права людини (на існування, свободу думки), що випливають з раціонально-природного порядку, ототожненого з Богом	Раціоналістичне тлумачення релігійних текстів та обґрунтування свободи совісті через пантеїстичне розуміння Бога як основи природного права
Дж. Локк	«Два трактати про правління» (1689)	Природні права (життя, свобода, власність) як основа суспільного договору та обмеження влади монарха	Поєднання критики патріархальної традиції з християнськими моральними настановами, що виводять права людини з релігійно-етичного розуміння гідності особистості
Р. Філмер	«Patriarcha» (1680)	Абсолютна влада монарха має божественне походження, успадковане від біблійного Адама	Релігійно-традиційний вимір, заснований на буквальному тлумаченні Старого Заповіту та сакралізації патріархальної моделі влади

Джерело: розроблено автором за даними, наведеними у [2; 5; 15; 17].

Як показує проведений аналіз, культурологічні виміри правових концепцій Нового часу можна систематизувати за кількома основними напрямками:

- релігійно-етичний вимір;
- раціоналістичний вимір;
- соціально-політичний вимір;
- культурно-історичний вимір.

Схематично взаємозв'язок цих вимірів у формуванні правових ідей Нового часу можна подати у вигляді концептуальної моделі (рис. 1):

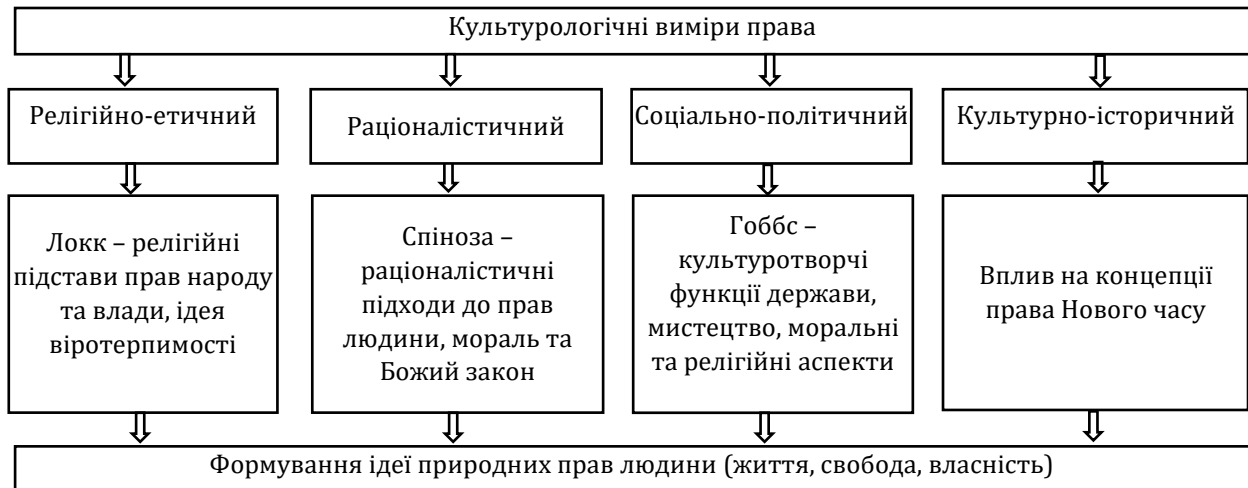


Рис. 1. Основні культурологічні виміри формування правових концепцій Нового часу

Джерело: розроблено автором.

Отримані результати свідчать, що правові концепції Нового часу формувалися під впливом не лише політичних або економічних факторів, але й широкого комплексу культурних чинників. Релігійні уявлення, моральні норми, філософські ідеї та соціальні практики разом утворювали культурний контекст, у межах якого формувалися основні принципи модерного праворозуміння.

Порівняльний аналіз також показує, що навіть ті концепції, які прагнули до раціонального пояснення права, не могли повністю відокремитися від культурних і духовних основ суспільства. Саме тому ідея природних прав людини, яка сформувалася у Новий час, значною мірою спиралася на моральні та релігійні уявлення про гідність людини.

Важливим аспектом сучасного осмислення культурних засад права є також звернення до проблеми національної ідентичності. У цьому контексті українські дослідники культури та історії підкреслюють необхідність аналізу правових традицій у ширшому культурно-історичному контексті. Такі підходи дозволяють краще зрозуміти процес формування національної правової культури та її взаємозв'язок із європейською інтелектуальною традицією.

Таким чином, застосування категорії культурологічних вимірів у дослідженні правових концепцій дозволяє розширити методологічні можливості правової науки та сприяє більш глибокому розумінню права як явища культури. Порівняльний аналіз показує, що культурні чинники відіграють ключову роль у формуванні правових ідей та інститутів, а також у розвитку сучасного праворозуміння.

6. Conclusions

Проведене дослідження культурних засад правових концепцій Нового часу дозволяє сформулювати низку узагальнюючих положень, що мають теоретичне та методологічне значення для сучасної правової науки та культурології.

У результаті аналізу теоретичних підходів до розуміння взаємозв'язку права і культури встановлено, що право є не просто системою нормативних приписів або інструментом державного управління, а передусім складним соціокультурним феноменом, який формується в межах певної системи цінностей, світоглядних орієнтирів та моральних уявлень суспільства.

Культура виступає фундаментальною основою становлення правових інститутів, визначаючи зміст і спрямованість правових норм відповідно до історично сформованих уявлень про справедливість, свободу та людську гідність.

Обґрунтовано методологічне значення поняття «культурологічні виміри» для дослідження правових явищ. Застосування цієї категорії дозволяє розширити аналітичні можливості правової науки, оскільки дає змогу розглядати правові концепції не лише крізь призму політичних чи економічних чинників, але й з урахуванням культурних, моральних, релігійних та світоглядних засад їх формування. Поняття виміру виступає інструментом упорядкування та порівняння різних аспектів правової реальності, що сприяє більш глибокому розумінню природи права як явища культури.

Здійснений порівняльний аналіз правових концепцій Т. Гоббса, Б. Спінози, Дж. Локка та Р. Філмера засвідчив, що культурні чинники відігравали визначальну роль у формуванні модерних уявлень про право, державу та природні права людини. Попри відмінності у філософських підходах та політичних позиціях зазначених мислителів, їхні концепції об'єднує глибинний зв'язок із культурними традиціями європейського суспільства – релігійними уявленнями, моральними настановами, раціоналістичними філософськими системами та історичним досвідом соціальної взаємодії.

Виявлено та систематизовано основні культурологічні виміри правових концепцій Нового часу, до яких належать: релігійно-етичний вимір (вплив християнської моралі та біблійних текстів на обґрунтування правових норм); раціоналістичний вимір (осмислення права через філософські системи, що поєднували наукову картину світу з духовними цінностями); соціально-політичний вимір (формування правових інститутів під впливом суспільних практик та політичних процесів); культурно-історичний вимір (зв'язок правових ідей з історичним досвідом та національними традиціями).

Доведено, що навіть ті правові концепції Нового часу, які прагнули до раціонального пояснення права та відокремлення його від релігійних догматів, не могли повністю звільнитися від впливу культурних і духовних основ суспільства. Ідея природних прав людини, яка стала фундаментом сучасного праворозуміння, сформувалася значною мірою під впливом моральних та релігійних уявлень про гідність людини, що свідчить про нерозривний зв'язок правових і культурних цінностей.

Обґрунтовано необхідність подальшого дослідження культурних засад права в контексті національної правової традиції, зокрема української. Аналіз правових ідей та інститутів у ширшому культурно-історичному контексті дозволяє глибше зрозуміти процеси формування національної правової культури, її взаємозв'язок із європейською інтелектуальною традицією та визначити перспективи подальшого розвитку правової системи України в умовах сучасних соціокультурних трансформацій.

Таким чином, застосування категорії культурологічних вимірів у дослідженні правових концепцій Нового часу дозволило не лише розширити методологічний інструментарій правової науки, але й поглибити розуміння права як складного соціокультурного феномена, що формується під впливом ціннісних, світоглядних та духовних чинників. Культурні засади права, виявлені в процесі порівняльного аналізу концепцій європейських мислителів, зберігають своє значення для сучасного праворозуміння та розвитку правових систем, орієнтованих на утвердження прав і свобод людини як найвищої соціальної цінності.

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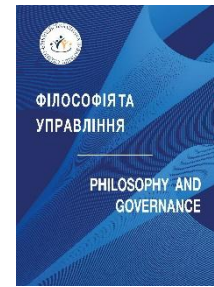
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Semiotics of Style: How Personal Style Shapes Social Signals and the Perception of Women in Society

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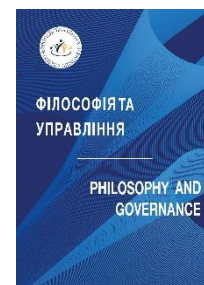


ABSTRACT

Dress communicates social information faster than speech, yet the semiotic structure of this communication remains underspecified in both academic literature and styling practice. Research in person perception has established that clothing-based trait inferences occur within 100 to 130 milliseconds and persist even when perceivers are instructed to disregard them. Sociological work, separately, has shown that dress functions as a marker of cultural capital and a vehicle of class distinction. What neither tradition offers is a practitioner-oriented framework for constructing a coherent visual message across different social fields. Drawing on semiotic theory, person perception research, Bourdieu's concept of habitus, and the author's decade of consulting experience with over 200 female clients, this study proposes a "style code" model. Six semiotic channels through which personal style transmits social signals are identified and classified by their denotative and connotative functions. A four-stage style code construction process (Identity Audit, Context Mapping, Code Assembly, Calibration) is formalised, and three types of signal mismatch (overcoding, undercoding, identity-signal conflict) are defined with case illustrations from consulting practice. Results indicate that signal clarity and signal consistency, rather than aesthetic appeal alone, determine whether a style code succeeds in its communicative function. Practical relevance extends to executive coaching, career transition consulting, and digital personal branding. The proposed framework also demonstrates how style decisions can be translated into a repeatable diagnostic tool for consultants working across professional contexts. In this way, the article positions personal style not only as aesthetic expression, but also as a measurable communicative resource in the formation of social capital.

KEYWORDS

fashion semiotics, social signaling, first impressions, style code, cultural capital, person perception, professional identity.

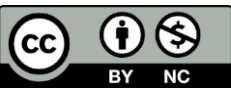


Семіотика стилю: як персональний стиль формує соціальні сигнали та сприйняття жінок у суспільстві

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СТАТТЯ	АНОТАЦІЯ
Дослідницька DOI: 10.70651/3041-248X/2026.2.18 Отримана: 17.01.2026 р. Прийнята: 19.02.2026 р. Опублікована: 23.02.2026 р. Авторське право © 2026  автора Цей твір ліцензовано на умовах Ліцензії Creative Commons «Із Зазначенням Авторства – Некомерційна 4.0 Міжнародна» (CC BY-NC 4.0). OPEN ACCESS 	Одяг передає соціальну інформацію швидше, ніж мова, проте семіотична структура цього спілкування залишається недостатньо визначеною як в академічній літературі, так і в практиці стилю. Дослідження сприйняття особистості встановили, що висновки про риси характеру на основі одягу виникають протягом 100–130 мілісекунд і зберігаються навіть тоді, коли сприймачам наказують їх ігнорувати. Соціологічні дослідження окремо показали, що одяг функціонує як маркер культурного капіталу та засіб класової відмінності. Жодна з традицій не пропонує орієнтованої на практиків основи для побудови цілісного візуального повідомлення в різних соціальних сферах. Спираючись на семіотичну теорію, дослідження сприйняття особистості, концепцію габітусу Бурдьє та десятирічний досвід автора в консультуванні з понад 200 клієнтками, це дослідження пропонує модель «коду стилю». Шість семіотичних каналів, через які особистісний стиль передає соціальні сигнали, ідентифіковано та класифіковано за їхніми денотативними та конотативними функціями. Формалізовано чотириетапний процес побудови коду стилю (аудит ідентичності, контекстне картування, складання коду, калібрування), а також визначено три типи невідповідності сигналів (надкодування, недостатнє кодування, конфлікт ідентичності та сигналу) з ілюстраціями випадків з консалтингової практики. Результати показують, що чіткість сигналу та узгодженість сигналу, а не лише естетична привабливість, визначають, чи успішно код стилю виконує свою комунікативну функцію. Практична актуальність поширюється на коучинг керівників, консалтинг з питань кар'єрного переходу та цифровий персональний брендинг. Запропонована структура також демонструє, як рішення щодо стилю можуть бути перетворені на повторюваний діагностичний інструмент для консультантів, які працюють у різних професійних контекстах. Таким чином, стаття позиціонує особистий стиль не лише як естетичне вираження, а й як вимірюваний комунікативний ресурс у формуванні соціального капіталу. КЛЮЧОВІ СЛОВА семіотика моди, соціальна сигналізація, перше враження, стильовий код, культурний капітал, сприйняття особистості, професійна ідентичність.

1. Introduction

Every morning, before a single word is spoken, a decision is made that will shape how colleagues, strangers, and cameras read the person who made it. Roland Barthes [3] argued in 1967 that fashion operates as a language, complete with its own syntax and paradigmatic choices, but most people who get dressed each day do not think of themselves as composing sentences. For women in professional and public life, however, the analogy is more literal than metaphorical: research conducted over the past two decades has shown that clothing transmits trait-level information to observers at speeds that precede conscious evaluation, and that the social consequences of this transmission are neither trivial nor easily reversed.

Willis and Todorov [17] demonstrated that judgments of trustworthiness, competence, and likability crystallise within 100 milliseconds of viewing a face. Oh, Shafir, and Todorov [13] extended this timeline to clothing, finding that economic status inferences drawn from dress formed in as little as 129 milliseconds and remained stable even when participants were explicitly told that clothing was not a reliable indicator of competence. Hester and Hehman [9] synthesised these and adjacent findings into a model proposing that dress feeds four distinct inference streams: social category membership, mental states, social status, and aesthetic taste. Observers do not simply notice what someone is wearing; they extract from it a compressed dossier of who that person is, what they value, and where they stand in the social order. Critically, this extraction happens before the perceiver has any say in the matter.

Semiotics provides the vocabulary for dissecting this process. Barthes [3] treated the fashion system as a full-blown language: each garment choice functions as a sign that simultaneously denotes a practical purpose (warmth, coverage, mobility) and connotes a social meaning (authority, rebellion, approachability). In his analysis, selecting a black turtleneck over a white blouse is not a matter of preference but a paradigmatic substitution, analogous to choosing one word over another in a sentence, and carrying comparable consequences for the message received. Owyong [14] pushed this further by demonstrating that clothing signs go beyond reflecting power relations; they actively construct them: a judge's robe does not describe authority so much as it produces it. Dress, as Barnard [2] observed, is one of the few sign systems that operates continuously, involuntarily, and in the physical presence of both sender and receiver. Unlike spoken language, which can be withheld, a clothed body is always broadcasting.

Bourdieu's [4] concept of habitus adds a layer that pure semiotics misses. Taste in clothing, in his framework, is not a free individual choice but a disposition shaped by class position, education, and accumulated cultural capital. A woman who grew up in a household where tailored jackets signalled professional seriousness carries that association into her adult wardrobe without deliberating over it; another woman, from a background where tailored jackets signalled inaccessibility, may avoid them for reasons she cannot fully articulate. Entwistle [6] connected this insight to the body itself, proposing that dress is an "embodied practice" through which social structure is inscribed on individual experience. Davis [5] charted the resulting ambivalence: fashion simultaneously promises self-expression and enforces conformity, and navigating between these poles requires a competence that is rarely taught explicitly.

For women specifically, this navigation carries a double load that research has only recently begun to quantify. Howlett et al. [11] found that provocativeness in female work attire interacts with perceived occupational status in ways that have no parallel for men: a senior woman in a subtly provocative outfit was rated lower on competence than the same woman in a conservative one, while equivalent variations in male attire produced no competence penalty. Guy and Banim [8] described three distinct self-images that women manage through dress: the woman they want to be, the woman they fear being, and the woman they are most of the time. Peluchette, Karl, and Rust [15] reported that women in corporate settings made more deliberate, more anxious, and more context-sensitive clothing choices than their male counterparts, treating each outfit as a form of strategic communication rather than routine self-presentation. Taken as a body of evidence, these findings suggest that women's dress operates under tighter semiotic constraints and higher social stakes than men's, making a structured approach to style construction not a luxury but a practical necessity.

2. Literature Review

2.1. *Clothing as a semiotic system: structure, codes, and levels of meaning*

Barthes [3] proposed that fashion operates through two simultaneous registers. At the denotative level, a garment refers to its material properties and practical function: a wool coat denotes warmth, a high-visibility vest denotes a construction site. At the connotative level, the same garment carries social meaning that varies with the cultural context in which it is worn: a wool coat from Loro Piana connotes wealth and restraint; a high-visibility vest worn at a protest connotes solidarity with manual labour. Barthes insisted that the connotative layer is not an optional add-on but the primary channel through which fashion communicates, because receivers decode social meaning automatically while the denotative layer fades into the background of everyday perception.

Owyong [14] applied social semiotic analysis to specific garment configurations and found that dress signs cluster into codes: combinations of elements that, read as a unit, produce a recognisable social message. A dark suit, white shirt, and leather briefcase constitute a code legible as “corporate authority” in most Western professional settings; replacing any one element (a bright patterned shirt, a canvas backpack) destabilises the code and alters the message. Owyong’s contribution was to show that the power of dress lies not in individual items but in their co-occurrence, and that disrupting one element of a dress code can shift the perceived social position of the wearer more sharply than adding or removing an entire outfit layer.

Barnard [2] extended the communication analogy by distinguishing between intentional and unintentional dress signals. A person may choose a blazer to project competence (intentional signal), but the fit of that blazer, its age, and the way it sits on the body may simultaneously communicate economic constraints or physical self-neglect (unintentional signals). For styling practice, this distinction carries weight: a practitioner must manage not only what the client intends to say through dress but also what the dress says without the client’s knowledge.

Davis [5] identified a deeper complication: fashion signs are what he termed “undercoded”, meaning they carry no fixed referent. Unlike traffic signs, where red invariably means stop, clothing signs shift meaning across time and context. A leather jacket connotes rebellion in one decade and nostalgia in the next, authority in one social field and irrelevance in another. This instability is not a flaw in the system but its defining feature, and managing it is part of what makes style construction a skilled practice rather than a rule-following exercise. For the model proposed later in this study, undercoding is the central problem: a style code exists precisely to stabilise the meaning of an outfit across the contexts in which the wearer moves.

2.2. *Person perception and the speed of dress-based inference*

While semioticians analysed what dress communicates, experimental psychologists measured how fast it does so. Willis and Todorov [17] established the baseline: trait judgments from facial exposure stabilise within 100 milliseconds, and additional viewing time increases confidence but not the direction of the judgment. Oh, Shafir, and Todorov [13] isolated clothing as an independent variable by presenting the same faces in digitally altered “richer” and “poorer” garments. Competence ratings shifted with the clothing even at 129-millisecond exposures, and the effect persisted across four experiments that progressively constrained participants’ ability to rely on dress cues, including explicit instructions to ignore clothing altogether.

Howlett et al. [10] tested a subtler manipulation: the same male model photographed in a bespoke suit and an off-the-rack suit that differed only in minor details of cut and proportion. With facial information removed and exposure limited to five seconds, participants rated the bespoke suit higher on confidence, success, and expected salary. Earnings of participants moderated the effect, with higher earners giving lower ratings to both suit types, suggesting that dress-based inferences interact with the perceiver’s own socioeconomic position.

Hester and Hehman [9] synthesised this body of work into a theoretical model that places dress alongside face, body, and context as coequal inputs to person perception. Their model identifies four inference streams that perceivers draw from dress: social identity (group membership signals such as subcultural affiliation or religious observance), cognitive and emotional states (mood cues conveyed through colour or formality level), social status (economic and professional standing), and aesthetic judgment (taste, creativity, attention to detail). No prior model in social cognition had given this structural weight; most treated it as noise or controlled it out of experimental designs. What Hester and

Hehman's framework makes explicit is that removing dress from a person perception model is like analysing speech while ignoring vocabulary. Table 1 consolidates these findings by mapping each inference stream to the experimental evidence that supports it and the dress elements most strongly associated with it.

Table 1. Inference streams from dress: evidence-based and associated style elements

Inference stream	Key evidence	Dress elements most associated	Speed of formation
Social identity (group membership)	Rafaeli, A., and Pratt, M. G. [16]: personality judged from full-body photos; clothing contributed independently	Subcultural markers, religious garments, brand logos, colour conventions	Rapid but context-dependent; accuracy improves with cultural familiarity
Cognitive/emotional states	Hester & Hehman [9]: colour and formality level feed mood and intentionality inferences	Colour saturation, brightness, formality gradient, grooming level	Moderate; requires more than silhouette-level information
Social status	Oh et al. [13]: economic status inferred at 129 ms, persistent under instruction to ignore; Howlett et al. [7]: bespoke vs. off-the-rack shifts perceived salary	Fabric quality, garment fit, brand visibility, accessory cost signals, shoe condition	Very fast (sub-200 ms); resistant to correction
Aesthetic taste	Hester & Hehman [10]: perceivers infer creativity, attention to detail, cultural sophistication from outfit composition	Colour coordination, pattern mixing, proportion play, unexpected combinations, textural contrast	Slower; requires full-outfit evaluation

Source: Compiled by the author based on [7; 9; 10; 13; 16]

Several observations emerge from this consolidation. Status inferences are the fastest and most resistant to override, which explains why “dressing for the job you want” persists as advice despite its apparent simplicity: the perceptual system locks onto status cues before higher-order reasoning can intervene. Aesthetic inferences, by contrast, require longer processing and depend on the perceiver's own cultural literacy, making them the most variable across audiences. Identity and state inferences fall between these extremes, operating quickly when the perceiver has relevant cultural schemas (recognising a hijab, a punk safety pin, a mourning colour) and slowly or inaccurately when they do not.

For a stylist working with a client who must navigate multiple social fields, this hierarchy of speed and stability has direct implications. Status signals should be treated as the foundation of any style code because they are read first and revised last. Aesthetic signals, being perceiver-dependent, should be calibrated to the specific audience rather than optimised for universal appeal. Identity signals require the most careful handling because they can trigger categorical judgments (positive or negative) before the perceiver processes any other information.

2.3. Dress, habitus, and social capital

Bourdieu [4] did not write about fashion directly, but his framework of habitus, field, and capital provides the most robust sociological account of why people dress the way they do and what they gain or lose by it. Habitus, the set of durable dispositions acquired through socialisation, shapes taste in clothing below the threshold of conscious choice. A woman raised in an academic household may gravitate toward understated, quality fabrics and minimal jewellery without having been explicitly taught to do so; her counterpart from an entrepreneurial family may favour bolder self-presentation for equally unexamined reasons. Neither is dressing “freely”; both are expressing dispositions that correspond to the cultural capital accumulated in their respective fields.

Entwistle [6] translated Bourdieu's abstract framework into a theory of the “dressed body”, arguing that clothing is the material interface between the social structure and the individual's lived experience of it. Dress is not something applied to the body like paint to a wall; it is constitutive of how the body is experienced, moved, and presented. A woman in a structured blazer holds her shoulders differently than the same woman in a draped cardigan, and this postural shift feeds back into how she is perceived, creating a loop between garment, body, and social reading.

Rafaeli and Pratt [16] examined this loop within organisations, distinguishing between homogeneous dress norms (uniforms, formal dress codes) that signal group belonging and heterogeneous norms (casual or creative environments) that signal individual autonomy. Their key insight was that dress operates as both a signal to outsiders and a self-regulatory mechanism for insiders: wearing the “right” clothes communicates membership and, simultaneously, reinforces the wearer's identification with the group. For women entering a new professional field, this dual function

creates a specific challenge. Adopting the field's dress code too quickly can feel like identity erasure; resisting it can trigger exclusion signals from gatekeepers who read non-conforming dress as a lack of commitment or competence.

Adam and Galinsky [1] provided experimental evidence for this self-regulatory mechanism through their encloded cognition paradigm. Wearing a garment described as a "doctor's coat" improved sustained attention relative to wearing the identical garment described as a "painter's coat". Clothing, their data showed, not only sends signals outward; it sends them inward, altering the wearer's cognitive state through symbolic association. In terms of style code construction, this means that the practitioner must consider not only what a garment communicates to observers but what it communicates to the client herself: a style code that reads well to the audience but undermines the wearer's confidence or focus has failed on a dimension that external observers cannot see.

2.4 Gender and the double semiotic load

Guy and Banim [8] interviewed women about their wardrobes and identified a tripartite structure of dress-related identity: "the woman I want to be" (aspirational outfits kept for important occasions), "the woman I fear being" (garments associated with negative self-images, often hidden at the back of the closet), and "the woman I am most of the time" (the default wardrobe that negotiates between aspiration and anxiety). No equivalent tripartite structure has been documented for men, suggesting that women's relationship to dress carries a psychological complexity that men's, on average, does not.

Howlett et al. [11] quantified one consequence of this complexity. In their experiment, a female model was photographed in work outfits that varied along a provocativeness continuum (skirt length, neckline depth, button closure). When the model was described as holding a senior management position, increased provocativeness produced a statistically significant drop in perceived competence. When described as a receptionist, the same variation produced no competence penalty. Men in equivalent manipulations (open collar, fitted shirt) showed no competence penalty at any occupational level. Female dress, put plainly, is read through a competence-warmth trade-off that male dress largely escapes.

Peluchette, Karl, and Rust [15] surveyed 180 professionals and found that women reported significantly higher levels of strategic deliberation in their clothing choices than men. Women were more likely to select outfits based on anticipated audience reactions, more likely to change outfits after initial selection, and more likely to report anxiety about clothing "mistakes". Johnson, Lennon, and Rudd [12] reviewed three decades of research on dress and self-perception and concluded that the relationship is bidirectional: clothing shapes how others see the wearer, but it also shapes how the wearer sees herself, and for women, this feedback loop is both more active and more fraught than for men. What emerges from these findings is that women's dress management is, at its core, a navigation problem: the wearer must steer between competing signals with limited room for error.

Gjoni [7] situated this navigation within a broader sociocultural frame, arguing that fashion functions simultaneously as a tool of individual identity construction and a mechanism of societal regulation. Women who dress "too well" for their perceived status are read as overreaching; women who dress "below" their status are read as not caring. Locating the signal level that fits the social field without triggering either reading demands cultural literacy, contextual awareness, and continuous calibration. It is this navigation problem, formalised and made teachable, that the style code model proposed in the results section is designed to address.

3. Problem Statement

Despite the convergence of research streams, no published model translates semiotic theory, person perception data, and sociological analysis into a tool that a practitioner can use to help a client construct a deliberate, context-sensitive style code. Barthes [3] decoded fashion at the level of the system; Hester and Hehman [9] mapped what perceivers extract from dress; Bourdieu [4] explained why taste is distributed unequally. None addressed the constructive question: given a specific woman, with a specific identity and a specific social field to enter, how should her visual message be assembled? Answering this question is the purpose of the present study. It sets out, first, to identify and classify the semiotic channels through which personal style transmits social signals; second, to analyse how style functions as a mechanism for building or eroding social capital depending on context; and third, to

propose a style code construction model that practitioners can apply across different professional and social environments.

4. Methods and Materials

Semiotic analysis, following Barthes [3], was applied to deconstruct style configurations into their constituent signs and to trace how denotative and connotative layers interact within a single outfit. Each garment element was coded along two axes: what it denotes materially (fabric, cut, colour value) and what it connotes socially in a given context (status, creativity, approachability, authority). Coding was performed independently for five social fields (corporate, creative, academic, social, digital) because the same sign can carry different connotations across fields, as Davis [5] demonstrated with the concept of undercoding.

Discourse analysis was used to compare dress expectations across these five fields. Published dress codes from three corporate organisations, two creative agencies, and two academic institutions were collected and analysed for the signal types they explicitly or implicitly prescribe. Where written codes were unavailable, observational data from the author's consulting work substituted, with field notes recording the dominant silhouette, colour range, formality gradient, and accessory norms encountered in each setting.

Empirical grounding came from the author's consulting records spanning 2016 to 2025, covering over 200 female clients in Kyiv and New York. Client cases were selected for analysis when they involved a documented context transition (entering a new professional field, shifting from corporate to entrepreneurial work, preparing for public-facing roles) because such transitions make the navigation problem described in Section 2.4 most visible. Three assessment criteria guided the evaluation of each style code outcome: signal clarity (whether the intended social message was received by the target audience, assessed through client-reported feedback from colleagues and contacts), signal consistency (whether the message remained stable across the client's typical social environments), and signal authenticity (whether the client recognised herself in the constructed code, assessed through post-consultation interviews).

5. Results

5.1. Taxonomy of style signals: six semiotic channels

Semiotic analysis of the author's consulting cases, cross-referenced with the dress code data collected across five social fields, yielded six channels through which personal style transmits social information. Each channel operates at both the denotative and connotative levels described in Section 2.1, but their relative weight in the overall style code shifts depending on context.

Silhouette and fit constitute the first channel perceived by an observer. A structured, close-fitting silhouette connotes discipline and professional seriousness in corporate fields, while the same silhouette in a creative setting may read as constraint or conformity. Looser, draped silhouettes reverse this mapping, connoting ease and creative freedom in artistic environments but risking an undercoding signal in formal ones. Across the author's case records, the silhouette was the channel most frequently responsible for signal mismatch when clients transitioned between corporate and entrepreneurial roles.

Colour palette operates as the fastest connotative channel after silhouette. Neutral, desaturated palettes (navy, charcoal, cream, camel) connote stability, restraint, and economic confidence across most professional contexts. Saturated or warm-toned palettes connote energy, approachability, and willingness to stand out, which registers as a positive signal in social and public-speaking contexts but may trigger a competence penalty in conservative corporate fields, consistent with Howlett et al.'s [11] findings on provocativeness and perceived status.

Fabric and texture carry status information that perceivers process below conscious awareness. Oh et al. [13] demonstrated that economic status cues from clothing persist at 129-millisecond exposures, and fabric quality is among the cues most responsible for this effect. Matte, dense fabrics (cashmere, heavy silk, structured cotton) connote investment and durability; shiny or synthetic-looking surfaces connote lower economic standing regardless of actual price. Clients who invested in fewer garments of higher fabric quality reported stronger positive feedback from professional contacts than those who maintained larger wardrobes of lower-quality items.

Accessories function as focal-point signals that direct the observer's gaze and add specificity to the overall code. A single high-quality watch or structured leather bag operates as a status anchor; layered jewellery or patterned scarves signal creative expressiveness. Of all six channels, accessories proved most amenable to rapid adjustment when a client moved between social fields within a single day, because they could be added or removed without altering the base silhouette.

Grooming and hair signal self-regulation, consistency, and social awareness. Unlike garment-based channels, grooming carries a strong moral connotation: neglected grooming triggers negative trait inferences (carelessness, low self-regard) that contaminate the reading of all other channels, a finding consistent with Hester and Hehman's [9] observation that negative dress cues are weighted more heavily than positive ones in person perception.

Context adaptation, the sixth channel, is not a physical element but a meta-signal: the degree to which the wearer's overall presentation matches the expectations of the field she is entering. A perfectly assembled outfit that belongs to the wrong context reads worse than a mediocre outfit calibrated to the right one. This channel is what transforms a collection of garments into a style code, because it requires the wearer (or her stylist) to read the field before assembling the message. Table 2 presents the style code matrix, mapping primary signal strategies to five social contexts with the channel priority and mismatch risk for each.

Table 2. Style code matrix: signal strategies by social context

Context	Primary signal goal	Channel priority (highest to lowest)	Most common mismatch risk
Corporate/formal	Competence, status, reliability	Silhouette > Fabric > Colour > Grooming > Accessories > Context adaptation	Overcoding in creative sub-units; undercoding in casual-Friday drift
Creative/artistic	Originality, cultural literacy, openness	Colour > Accessories > Texture > Silhouette > Grooming > Context adaptation	Overcoding via corporate residue; identity-signal conflict when suppressing natural conservatism
Social/casual	Approachability, warmth, personal taste	Colour > Grooming > Accessories > Texture > Silhouette > Context adaptation	Undercoding ("doesn't care"); overcoding ("trying too hard")
Public speaking	Authority, memorability, visual clarity at distance	Silhouette > Colour > Context adaptation > Fabric > Accessories > Grooming	Identity-signal conflict when speaker adopts disconnected stage persona
Digital online	Thumbnail clarity, colour pop, face-framing	Colour > Grooming > Silhouette > Accessories > Fabric > Context adaptation	Undercoding (flat colours disappear on screen); overcoding for casual platforms

Source: Author's original model based on consulting records (M. Kostogryz, 2016-2025)

Channel priority shifts across contexts in ways that are not intuitive. Fabric, for instance, ranks high in corporate settings (where perceivers are close enough to assess texture) but drops to near the bottom in digital contexts (where cameras compress texture information). Colour, conversely, ranks low in corporate settings (where palettes are narrow and deviation is penalised) but dominates digital and social contexts, where it is often the only channel visible at thumbnail scale. Context adaptation consistently ranks last in priority because it is a gatekeeping function rather than a signal generator: it determines whether the other five channels are being read in the intended frame.

To illustrate how channels combine into recognisable codes in professional settings, four recurring configurations from the author's consulting records are presented below. Each represents a distinct communicative strategy that clients either adopted deliberately or carried implicitly from prior professional socialisation.

Corporate power dressing relies on silhouette and fabric as its dominant channels. In the author's records, clients in legal, financial, and executive roles who assembled codes around structured blazers with defined shoulder lines, dense matte fabrics (wool crepe, gabardine), and a narrow colour palette of navy, charcoal, and ivory consistently reported that colleagues attributed higher competence and decisional authority to them in meeting settings. The code functions by saturating the status inference stream identified by Hester and Hehman [9]: fabric density signals economic investment, silhouette structure signals self-regulation, and palette restraint signals that the wearer's attention is directed toward substance rather than display. Accessory load in this code is deliberately minimal; a single-metal watch or understated leather bag serves as a status anchor without opening an aesthetic inference stream that could dilute the authority signal.

Creative industry style, by contrast, foregrounds colour and accessories. Clients working in design studios, media production, and advertising assembled codes where saturated or unexpected colour combinations (rust paired with olive, cobalt with terracotta) functioned as the primary signal, connoting cultural literacy and willingness to take aesthetic risks. Layered accessories (stacked bracelets, oversized earrings, artisan-made bags) activated the aesthetic taste inference stream, positioning the wearer as someone whose professional competence extends to visual judgment. Silhouette in this code tends toward relaxed or deconstructed forms, which in corporate fields would register as undercoding but in creative contexts signals confidence in the wearer's own visual authority. Several clients transitioning from corporate to creative roles encountered resistance when they attempted to carry corporate silhouette norms into the new field, receiving feedback that they appeared "stiff" or "from a different world".

Minimalist status signalling operates through a deliberate reduction of visible channels. In this code, which appeared most frequently among clients in technology leadership, venture capital, and academic research, the communicative strategy rests on fabric quality and fit precision while suppressing colour variation, accessory load, and overt silhouette structure. A monochrome palette of black, grey, or navy in high-grade materials (cashmere knits, Japanese cotton, Italian merino) connotes that the wearer possesses sufficient cultural capital to signal status without recourse to conspicuous markers. Oh et al. [13] finding that economic status inferences persist at sub-200-millisecond exposures is relevant here: perceivers register fabric quality and garment fit before they consciously evaluate the outfit's aesthetic composition, meaning that the minimalist code activates the status stream while leaving other streams largely inert. Clients who adopted this code reported that it reduced decision fatigue in daily dressing while maintaining a signal level sufficient for professional credibility.

Public authority dressing, the fourth configuration, prioritises silhouette and colour for legibility at a distance. Clients preparing for conference keynotes, television interviews, and investor presentations required codes where the primary signal remained readable when fine-grained cues (fabric texture, accessory detail) were lost to stage lighting or camera compression. Structured shoulder lines, high colour contrast between top and bottom halves, and a single visually anchoring accessory (a bold necklace, a distinctive brooch) constituted the core of this code. Grooming standards in this configuration were elevated relative to daily-wear codes, reflecting the fact that cameras and large audiences amplify minor inconsistencies that go unnoticed in close-range interactions. Clients who initially undercoded for public appearances, wearing outfits calibrated for office-scale perception, reported that audience members described them as "hard to read" or "less present than expected".

5.2. Style code construction process

Building on the taxonomy and the matrix, a four-stage process was developed to formalise how a stylist constructs a style code for a specific client. Figure 1 presents this process as a flowchart.

On the left side of the model stands the Sender: the client with her identity, values, professional roles, and communicative goal. Through structured conversation (the Identity Audit), the stylist establishes what the client wants her appearance to communicate. Unlike a preference survey (which asks what the client likes to wear), the identity audit asks what the client wants to be understood as. A client may prefer minimalist Scandinavian aesthetics but need to communicate warmth and creative energy for a client-facing role in the beauty industry; the audit surfaces this gap between preference and communicative need.

On the right side stands the Receiver: the social field with its perceivers, who decode the incoming signal along four inference streams identified by Hester and Hehman [9] (status, identity, competence, aesthetic taste). Context Mapping catalogues the fields the client moves through in a typical week. Where Table 2 provides generalised channel priorities for broad context categories, context mapping operates at the individual level: a specific client who splits her time between a finance office, a co-working space, and weekend art openings navigates three fields whose expectations may not match the generic templates.

Between Sender and Receiver run six parallel semiotic channels, each carrying a portion of the total message. Code Assembly selects and configures these channels to produce alignment between the identity on the left and the field expectations on the right. Where a single configuration cannot serve all fields (which is the typical case for clients with diverse professional lives), the stylist designs a modular code: a stable base of silhouette, colour, and grooming that carries the identity signal across all contexts,

with interchangeable accessories, texture shifts, and formality adjustments that adapt the code to specific fields without dismantling it.

At the bottom of the model sit three quality filters through which the transmitted signal must pass: signal clarity (does the audience receive the intended message?), signal consistency (does the message hold across contexts?), and signal authenticity (does the client recognise herself in the code?). When any filter fails, a specific type of signal mismatch results, as shown in the lower portion of Figure 1. In the author's records, roughly one in three initial code assemblies required at least one reconfiguration, most often because signal authenticity failed: the code was readable and consistent but felt foreign to the client.

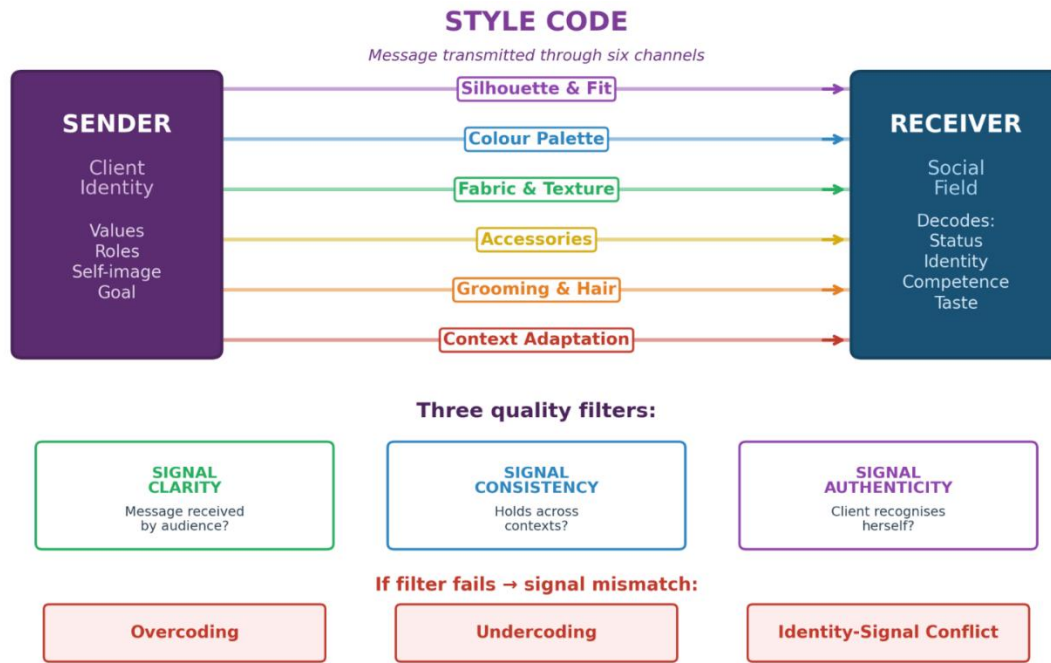


Figure 1. Style code as a semiotic communication model (Author's model: M. Kostogryz, 2025)

Source: Author's original model (M. Kostogryz, 2025)

5.3. Signal mismatch: when style undermines social capital

Calibration failures cluster into three distinct patterns, which the author classified as overcoding, undercoding, and identity-signal conflict. Figure 2 presents these three types with their defining characteristics and correction strategies. Across the author's case records, undercoding accounted for approximately 45% of documented mismatch cases, overcoding for roughly 30%, and identity-signal conflict for the remaining 25%. Despite being the least frequent, identity-signal conflict required the most consultation time to resolve and, when resolved, produced the highest reported client satisfaction.

Overcoding occurs when the style code exceeds the formality or status expectations of the social field. One recurring pattern in the author's practice involved clients transitioning from corporate finance to startup environments. These clients carried a habitus (in Bourdieu's [4] sense) shaped by years in structured organisations, and their default code (dark tailored suits, minimal jewellery, structured bags) continued to signal corporate authority in a field that read it as rigidity. Colleagues described them as "intimidating" or "hard to approach", reactions that directly eroded the social capital the clients needed to build in their new roles. Correction involved recalibrating the silhouette channel (replacing structured blazers with unstructured linen or knit jackets) and activating the texture channel (introducing varied fabric surfaces that signal sensory openness). Undercoding occurs when the style code falls below the signal threshold of the field. Clients preparing for public-facing roles (television appearances, conference keynotes, investor presentations) were most susceptible. Several arrived at consultations in outfits that were comfortable and personally authentic but lacked the silhouette definition and colour contrast necessary to project authority at a distance. On camera and on stage, where subtle fabric cues are lost, undercoded outfits produced a flat visual impression that undermined the verbal message. One client, a startup founder preparing for a series of investor meetings, reported that two separate contacts asked whether she had "just come from something else", reading her relaxed silhouette as a sign that the meeting was not her priority. Correction involved elevating the silhouette

and colour channels without disturbing the identity base: sharper shoulder lines, higher colour saturation, and a single statement accessory that functioned as a visual anchor point.

OVERCODING			
Signal problem:	Example:	Effect:	Correction:
Signal exceeds context expectations	Full corporate formality at a creative agency	Perceived as rigid, inaccessible, out of touch	Reduce formality; increase texture and colour

UNDERCODING			
Signal problem:	Example:	Effect:	Correction:
Signal falls below context threshold	Casual dress at a board presentation	Perceived as low-status, uncommitted	Elevate silhouette and fabric quality; add status accessories

IDENTITY-SIGNAL CONFLICT			
Signal problem:	Example:	Effect:	Correction:
Signal correct but fails authenticity criterion	Client wears the "right" outfit but feels unlike herself	Reduced confidence feeds back into perceiver ratings	Return to Identity Audit; reconfigure channels for both context and self

Figure 2. Three types of signal mismatch in style code failure

Source: Author's classification based on consulting records (M. Kostogryz, 2025)

Identity-signal conflict, the third and most psychologically complex type, occurs when the code satisfies clarity and consistency but fails authenticity. A client may intellectually accept that a particular outfit sends the right signal, yet feel alienated when she sees herself in it. In the author's experience, this pattern was most common among clients whose personal aesthetic diverged sharply from the expectations of their professional field: creative women in corporate law, minimalist women in fashion marketing, introverted women in public relations. Correction cannot be achieved by adjusting a single channel. Instead, the process returns to the Identity Audit, where the stylist and client negotiate a revised communicative goal that preserves a non-negotiable identity element (a colour, a silhouette, an accessory type) while meeting enough of the field's expectations to avoid exclusion. This negotiation was, in the author's records, the most time-intensive part of the consulting process and the one that yielded the highest long-term client satisfaction when resolved successfully.

6. Discussion

Hester and Hehman [9] built their model to describe what perceivers extract from dress; the style code model proposed here works in the opposite direction, describing how a wearer can engineer what perceivers extract. These two frameworks are complementary rather than competing: Hester and Hehman supply the demand side (what the audience reads), while the style code supplies the production side (what the stylist constructs). Connecting them creates a feedback architecture in which the

practitioner can predict, with reasonable confidence, which inference streams a given outfit will activate and can adjust channels before the client enters the field rather than after damage has been done.

Bourdieu's [4] habitus poses the most interesting theoretical challenge to this architecture. If taste in clothing is a durable disposition shaped by class position and socialisation, then a style code cannot simply override it. Overcoding cases in the author's practice confirmed this: clients who adopted a new field's dress norms without renegotiating their underlying disposition reported feeling "in costume" even when external feedback was positive. Where the style code model extends Bourdieu's framework is in offering a mechanism for conscious negotiation between habitus and field. Rather than asking clients to abandon their disposition, the model identifies which channels of their existing habitus align with the new field and which require adjustment, preserving continuity where possible and intervening only where the signal mismatch is measurable.

Adam and Galinsky's [1] encloded cognition findings take on a specific meaning within the mismatch framework. When a client overcodes, the garment may boost perceived competence in the perceiver's eyes while simultaneously triggering psychological discomfort in the wearer, a split that neither party is fully conscious of. When a client undercodes, the reverse occurs: the wearer feels comfortable, but the perceiver registers lower status. Identity-signal conflict represents the case where both channels (outward and inward) malfunction at once, which may explain why it requires the longest resolution time despite being the least common mismatch type. A future experimental design could test this by measuring both perceiver ratings and wearer self-report simultaneously across overcoded, undercoded, and identity-conflicted conditions.

Davis's [5] concept of undercoding gains operational specificity through the style code model. Davis used the term to describe the inherent instability of fashion signs; the model redefines it as a diagnosable condition with a measurable threshold: the point at which a style code's signal falls below the minimum required for the intended inference stream to activate. Distinguishing between Davis's systemic undercoding (a property of the semiotic system) and the practitioner's situational undercoding (a property of a specific outfit in a specific field) is useful because it separates what cannot be controlled (the ambiguity of fashion signs in general) from what can be managed (the signal level of a particular client's code in a particular context).

Several limitations constrain these findings. Client feedback was collected through unstructured verbal reports rather than standardised instruments, limiting comparability. Perceiver reactions were reported secondhand by clients rather than measured directly, introducing recall and interpretation biases. Cultural scope was restricted to Western professional norms in Ukraine and the United States; dress codes in East Asian, Middle Eastern, or Sub-Saharan African contexts operate through different semiotic conventions that the current model does not address. Gender scope was limited to women; men's style codes, while simpler in semiotic load per the literature, may follow different channel priority hierarchies. Finally, the digital context category in Table 4 is the least empirically grounded, as video calls and social media dress norms are evolving rapidly and lack the settled expectations of physical environments.

Potential applications extend in directions not covered by the results section. Corporate training programmes could use the six-channel taxonomy to replace vague dress code language ("business casual", "smart casual") with specific channel-level guidance that employees can implement without ambiguity. Political consulting, where candidate image is managed with extreme precision, could benefit from the style code model's vocabulary for discussing trade-offs between authority signals and approachability signals that campaign teams currently negotiate through intuition. Therapeutic settings present a third avenue: the mismatch typology could help clinicians identify cases where clothing-related distress stems from a solvable signal problem rather than from deeper body-image pathology.

Practical implications of the proposed framework extend across three professional domains. For personal stylists, the six-channel taxonomy and the four-stage construction process offer a diagnostic vocabulary that moves consulting beyond intuitive pattern-matching. When a client reports dissatisfaction with how she is perceived professionally, the stylist can audit each channel independently rather than redesigning the entire wardrobe. If the silhouette channel signals authority but the colour channel undermines it through excessive saturation, the corrective action is specific and limited. This channel-level diagnosis reduces consultation time and makes the rationale for each recommendation transparent to the client, which in the author's experience increases adoption rates for proposed changes.

For personal and corporate branding, the style code model provides a bridge between verbal brand identity and its visual execution in the founder's or executive's physical appearance. Brand strategists routinely define tone of voice, colour palettes, and typographic systems for corporate communications, yet the visual presentation of the people who represent the brand is typically left unstructured or delegated to ad hoc advice. Mapping a brand's core values onto specific semiotic channels (for instance, translating "innovation and accessibility" into relaxed silhouettes with high colour contrast and artisanal accessories) allows the human representative's appearance to function as a coherent extension of the brand system rather than as a separate, unmanaged variable. Consistency between verbal and visual brand signals reinforces audience trust, while misalignment between the two introduces noise that can erode perceived authenticity.

For image consulting in career transitions and executive coaching, the mismatch typology offers a structured assessment tool. Career coaches frequently encounter clients whose professional competence is undercut by visual signals misaligned with their target field, yet lack the conceptual apparatus to diagnose the source of the problem. Naming the mismatch type (overcoding in a client moving from finance to a nonprofit sector, undercoding in a client preparing for board-level visibility, identity-signal conflict in a client whose personal aesthetic clashes with the expectations of her industry) converts a vague sense of "something is off" into a specific, addressable condition. Each diagnosis points to a distinct correction pathway: channel recalibration for overcoding, channel elevation for undercoding, and identity audit renegotiation for identity-signal conflict. Integrating this vocabulary into executive coaching programmes could enhance the precision with which image-related barriers to career advancement are identified and resolved.

7. Conclusions

This study set out to develop a semiotic framework that would connect the academic understanding of dress-based social signaling with the practical work of constructing a personal style. Viewed against that aim, the framework delivers on its central promise: it provides a structured process where previously there was only intuition, pattern-matching, and rules of thumb passed between practitioners without theoretical grounding.

What the six-channel taxonomy offers is a shared vocabulary. Before this classification, a stylist advising a client to "dress more professionally" was issuing an instruction with no actionable specificity; the client had to guess which element of her appearance to change and by how much. Mapping "professional" onto specific channels (elevate silhouette structure, shift colour palette toward desaturation, increase fabric density) converts a vague directive into a sequence of discrete, testable adjustments. Whether this vocabulary proves durable will depend on whether other practitioners find it useful in their own consulting contexts, a question that lies beyond the scope of a single study.

What the style code construction process offers is accountability. By separating identity audit from context mapping and both from code assembly, the model makes it possible to locate the source of a failed outcome. If a client receives negative audience reactions, the fault may lie in misread context expectations (Stage 2 error), poorly selected channels (Stage 3 error), or insufficient calibration (Stage 4 error). Each diagnosis leads to a different corrective action. Prescriptive guides that bundle all of these into a single instruction ("wear X for occasion Y") provide no comparable diagnostic capacity.

What the mismatch typology offers is a language for discussing failure without blame. Overcoding and undercoding are systemic, arising from the gap between habitus and field; identity-signal conflict is psychological, arising from the gap between communicative strategy and self-recognition. Naming these patterns allows the stylist to normalise them for the client (signal mismatch is a navigation error, not a personal failing) and to select the appropriate correction pathway without trial and error.

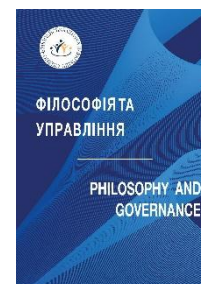
Implications extend across several applied domains. For individual styling practice, the six-channel taxonomy converts vague feedback ("something feels off about my outfits") into a channel-level diagnosis that the stylist can address through specific, bounded adjustments rather than a wholesale wardrobe overhaul. For corporate and personal branding, the style code model bridges the gap between verbal brand identity and its visual execution in the representative's physical appearance, allowing brand strategists to specify dress expectations at the level of semiotic channels rather than through ambiguous labels like "business casual". For image consulting during career transitions, the mismatch typology offers a structured assessment tool: naming the mismatch type (overcoding, undercoding, or identity-signal conflict) points directly to a correction pathway, reducing the trial-and-error that

currently characterises transition-period styling. For stylist education, the framework provides a teachable reasoning structure. Programmes that adopt the channel taxonomy and the construction process can move students from rule memorisation to diagnostic reasoning, equipping them to handle novel client situations by applying semiotic principles rather than recalling fixed garment-to-occasion pairings.

Subsequent work should move from qualitative documentation to controlled measurement. Laboratory protocols that manipulate mismatch type as an independent variable (presenting the same participant in overcoded, undercoded, and identity-conflicted outfits) and track both perceiver trait ratings and wearer cortisol or self-reported anxiety could establish whether the three types produce distinct physiological signatures, not only distinct social outcomes. Cross-cultural validation in non-Western professional contexts would reveal which channels and priorities are universal and which are culturally bound. Longitudinal tracking of clients who adopt style codes would establish whether signal clarity and signal consistency produce measurable changes in professional outcomes (promotions, network growth, public speaking invitations) over periods longer than the post-consultation window captured in the current data.

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Technological Re-Equipment of Road Transport Enterprises in the Context of Developing Technical Diagnostic Methods

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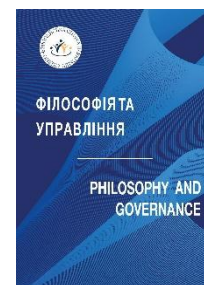
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The article investigates the comprehensive process of technological re-equipment of road transport enterprises through the prism of the evolution and implementation of the latest technical diagnostics methods. Key prerequisites and barriers (economic, technological, and personnel-related) hindering the industry's modernization are analyzed. The study highlights the historical retrospective of diagnostic tools development – from traditional instrumental control to modern cloud monitoring systems. Particular attention is paid to the practical aspects of production space reorganization within road transport enterprises. The impact of re-equipment on the efficiency of enterprise resource management is substantiated, specifically regarding inventory optimization, fuel efficiency, and the life cycle prolongation of the rolling stock. The transformation of the human factor's role, legal requirements for metrological certification, and environmental standards are examined as catalysts for change. The article outlines the futurological vector of the industry's development, which consists of the transition to the "digital twin" concept and predictive maintenance based on artificial intelligence. The social significance of modernization as a tool for the humanization of technical labor and increasing the overall level of road safety is proven.

KEYWORDS

technological re-equipment, technical diagnostics, road transport enterprise, digital transformation, cloud technologies, digital twin, predictive maintenance, environmental safety.



Технологічне переозброєння підприємств автотранспорту в контексті розвитку методів технічної діагностики

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У статті досліджено комплексний процес технологічного переозброєння автотранспортних підприємств через призму еволюції та впровадження новітніх методів технічної діагностики. Проаналізовано ключові передумови та бар'єри (економічні, технологічні, кадрові), що стримують модернізацію галузі. Висвітлено історичну ретроспективу розвитку діагностичних засобів – від традиційного інструментального контролю до сучасних хмарних систем моніторингу. Особливу увагу приділено практичним аспектам реорганізації виробничого простору автотранспортних підприємств. Обґрунтовано вплив переозброєння на ефективність управління ресурсами підприємства: оптимізацію складських запасів, паливну економічність та пролонгацію життєвого циклу рухомого складу. Розглянуто трансформацію ролі людського фактора, юридичні вимоги щодо метрологічної атестації та екологічні стандарти як каталізатори змін. Окреслено футурологічний вектор розвитку галузі, що полягає у переході до концепції «цифрового двійника» та предиктивного обслуговування на основі штучного інтелекту. Доведено соціальну значущість модернізації як інструменту гуманізації технічної праці та підвищення загального рівня безпеки дорожнього руху.



КЛЮЧОВІ СЛОВА

технологічне переозброєння, технічна діагностика, автотранспортне підприємство, цифрова трансформація, хмарні технології, цифровий двійник, предиктивне обслуговування, екологічна безпека.

1. Introduction

The current state of the global economy and the rapid digitalization of production processes pose challenges to the transport industry that cannot be solved within the framework of outdated technical and operational paradigms. In this context, technological re-equipment becomes not just an element of modernization of fixed assets, but a fundamental condition for survival and competitiveness in the transportation market.

The key vector of such a transformation is the development of methods of technical diagnostics. If earlier diagnostics were perceived as an auxiliary operation to ascertain the fact of a malfunction, now it is becoming a strategic tool for resource management. The transition to the concepts of "Industry 4.0", the introduction of artificial intelligence and cloud computing systems, makes it possible to change the very philosophy of technical operation: from reactive correction of breakdowns to predictive (predictive) management of technical condition.

2. Literature Review

The analysis of modern publications indicates a profound transformation of approaches to the technical operation of cars under the influence of digitalization and the intellectualization of technical systems. In particular, fundamental approaches to strategic planning and technical development of motor transport enterprises are highlighted in the monograph by V.V. Bilichenko and E. V. Smirnov [2]. The authors emphasize the need for systematic renewal of the fleet and means of service. In turn, O. M. Lozhachevska and R. V. Grigorenko [13] provide a classification of services of a modern car service, which is the basis for understanding the volume of necessary technological re-equipment.

The development of diagnostic systems from traditional methods to modern standards is considered in detail by V. Zoshchak [24]. The issues of on-board diagnostics and the capabilities of the OBD system are analyzed by O. Sukhomlyn [19]. Scientists pay special attention to the improvement of express methods for monitoring the condition of engines [12; 22] and fuel equipment in urban service stations [14]. The complexity of diagnosing modern electrical systems is highlighted in the works of R. Dobrovolski [6].

Methodological approaches to the selection and operation of technological equipment for vehicle maintenance are presented in the works of O. A. Trigub [23]. Practical aspects of creating and planning service centers "from scratch" are considered by S. M. Hetmanchenko [8] and D. Demchyna [4], which is important for the formation of the optimal structure of diagnostic zones.

The scientific basis of modern intellectual technology is revealed in the manual on the basics of mechatronics by O. M. Artyukh et al. [1]. The processes of digitalization of logistics and the introduction of driver assistance systems are studied by M. Shtelmashuk [19] and M. O. Presnyakov [17]. A revolutionary direction is the integration of "digital twins", which is considered in the works of V. M. Pavlenko et al. [15] in the context of transport management and O. A. Filin [7] in the field of financial management of logistics.

The issue of effective use of personnel of a motor transport enterprise in the context of personnel shortages and war is studied by A. O. Blyzniuk [3] and A. Skrypal [18]. The problem of professional identification of service specialists is raised by O. Klymenko [11]. The impact of diagnostics on resource optimization, in particular forecasting the need for spare parts, is revealed in the work of A. A. Kashkanov and M. L. Moskalyuk [10].

Adaptation of European emission standards in Ukraine and methods for testing exhaust gas recirculation systems are the subject of research by V.M. Ivasenko [9], K. Shyrokun [20] and I. Polishchuk [16]. These works confirm the legal and environmental need to re-equip the diagnostic base.

The presented sources form a holistic picture of the transition from mechanical systems to cyberphysical ones. However, there is a need for additional research on the synergistic effect of the simultaneous introduction of digital twins and new organizational structures of diagnostic zones, which is the subject of this article.

3. Problem Statement

The purpose of the study was to substantiate the strategy of technological re-equipment of motor transport enterprises through the introduction of the latest methods of diagnostics and digitalization of

service processes. To do this, it was necessary to identify barriers to modernization, analyze the evolution of diagnostic tools from local devices to “digital twins” and develop a model of functional zoning of production areas. Particular attention was paid to assessing the impact of innovations on management efficiency, environmental safety and transformation of human resources in the context of intellectualization of the industry. The implementation of these tasks will allow us to form a holistic concept of the transition of a motor transport enterprise to a predictive model of technical operation.

4. Methods and Materials

The methodological basis of the study was a systematic approach to the analysis of the processes of technical operation and technological re-equipment of motor transport enterprises. To solve the tasks, a set of general scientific and special methods was used: historical and logical – to track the evolution of diagnostic tools; analysis and synthesis – to identify barriers to modernization and formation of the structure of diagnostic zones; abstract and theoretical – to substantiate the concept “digital twin” and predictive maintenance.

The information base and materials of the study were the regulations of Ukraine and the European Union on environmental emission standards and transport safety, the results of scientific works of leading domestic and foreign scientists in the field of mechatronics, telematics and logistics. The empirical basis was the technical characteristics of innovative equipment for service centers and practical experience in the digital transformation of logistics processes. The combination of theoretical analysis of literature sources with the study of modern technological trends made it possible to ensure the reliability of the results and the validity of the proposed models of rearmament.

5. Results and Discussion

In modern conditions, a technological revolution is taking place in the global transport industry. The familiar road transport enterprise (ATP) is transforming from a simple fleet of vehicles into a complex digital node of global logistics. In this context, technological re-equipment is not just a replacement of tools, but a deep transformation of the very structure of the business, where diagnostics becomes the “nervous system” of the whole organism.

In recent decades, global supply chains have been operating on a “just-in-time” model, where the vehicle is only a moving part of the assembly line. Any unplanned truck stops due to a minor sensor malfunction or bearing wear triggers a chain reaction of damage: factory line shutdowns, huge fines and loss of reputation. This means that the market no longer forgives “repairs after the fact”. Diagnostics should now perform a predictive function - it should ensure that the car will not only leave the pit, but also reliably cover thousands of kilometers without a single failure [5].

The current stage of development of the automotive industry is characterized by the deep integration of computing power into the design of the vehicle, which makes it possible to classify the modern car as a complex cyber-physical system. In the process of evolution, there has been a leveling of the clear boundary between hardware and software control algorithms.

The key feature of the modern element base is the transition to mechatronic units and assemblies [1]. Such systems are based on a synergistic combination:

- precision mechanics and hydraulic components;
- sensor networks for real-time monitoring of parameters;
- intelligent microprocessor control modules.

This transformation of the diagnostic object requires a revision of the paradigm of technological re-equipment of motor transport enterprises. Traditional maintenance methods are giving way to high-tech procedures, where the analysis of digital codes and logical sequences of software operation is as important as the control of the physical wear parameters of mechanical pairs.

The environmental requirements of Euro-6 standards and above have added another level of complexity. Exhaust gas neutralization systems are so sensitive that the slightest deviation in the quality of fuel or the operation of the injector instantly puts the car into “emergency mode” [20]. Without re-equipment to modern diagnostic methods, the mechanic remains “blind” in the face of such equipment, and the company becomes a hostage to the expensive assistance of official dealers.

Despite the obvious need, the rearmament process faces serious obstacles. These barriers can be divided into several fundamental layers.

The first and most obvious barrier is financial. A professional diagnostic line, which includes laser geometry stands, powerful brake testers and intelligent scanners, requires capital investments commensurate with the cost of a new long-haul tractor.

For many ATP owners, a psychological barrier arises: investing in one “iron” machine seems more understandable and liquid than investing in “invisible” diagnostics. The effect of rearmament is not an instant profit: it manifests itself in the form of deferred savings on fuel, tires and the absence of fines, which requires strategic thinking from management for years to come [4].

It should be noted that most Ukrainian fleets are multi-brand. One box can contain cars of different manufacturers and generations. A technological contradiction arises: each manufacturer protects its electronics with “digital locks”. At the same time, ATP is faced with the need to purchase either dozens of specific scanners for each brand or extremely expensive universal solutions that still require regular and paid subscriptions to updates [6]. This continuous cycle of software updates becomes a new type of operating cost for the enterprise, for which many are not ready either financially or organizationally.

The need to overcome the “human” barrier deserves special attention. In the current difficult conditions of Ukraine, there is a deep gap between generations of specialists. There are experienced mechanics on the market who hear the malfunction “with their ears”, but pass in front of the touch screen of a diagnostic tablet. On the other hand, there are young IT professionals who see error codes but do not understand the physical nature of the process in the engine cylinder [3]. Rearmament is often accompanied by internal sabotage. Employees fear that automation and digital transparency of diagnostics will deprive them of the right to “copyright opinion” (and additional unofficial earnings) or reveal their incompetence in working with digital systems.

The prerequisites for rearmament lie in the plane of business survival, while the barriers lie in the plane of psychology and outdated financial models. The technological renewal of ATP today is not only about buying a stand, but about overcoming internal resistance and moving to a culture where decisions are made based on data, not assumptions. An ATP that has data on the state of its equipment becomes less vulnerable to surprises on the road and market instability.

The development of diagnostic methods took place through consistent digitalization and distancing of control means from the object. This process can be structured into four key stages [24]:

1. Organoleptic and mechanical analysis. The initial period was based on the subjective experience of a specialist and the use of the simplest measuring instruments (pressure gauges, stethoscopes). Diagnostics were exclusively reactive in nature: it was carried out only after the actual manifestation of the malfunction, which was accompanied by significant repair costs.

2. Stationary instrumental diagnostics. With the advent of specialized stands (brake, traction and economic), control has become objective. This made it possible to implement the principles of non-destructive testing, evaluating the parameters of units under load without disassembly. This stage became the foundation of the classic system of scheduled preventive repairs.

3. On-board self-diagnosis. The massive introduction of microprocessor systems transformed the car into a source of digital data. The use of scanners made it possible to localize defects at the level of software algorithms and electronic circuits. Diagnostics has moved into the format of a “dialogue” between the hardware and the diagnostician.

4. Telematics and “cloud” technologies (predictive diagnostics). The modern stage is characterized by continuous data translation to cloud storage. The use of Big Data and artificial intelligence technologies allows you to create “digital twins” of units. This enables a shift to predictive maintenance – detecting critical wear well before a failure occurs.

Thus, the evolution of diagnostic methods has shifted the focus from ascertaining breakdowns to their mathematical prediction. Technological re-equipment of a modern ATP is, first of all, integration into the global digital ecosystem for real-time technical condition management.

The effectiveness of technological re-equipment of ATP is determined not only by the list of purchased equipment, but also by a fundamentally new logic of organizing the production space. The modern model provides for the transformation of the traditional structure of workshops into a system of specialized zones, each of which is integrated into a single digital control circuit [2].

The first stage of re-equipment is the creation of an express diagnostics zone, which operates on the principle of a “passage gateway”. Unlike traditional reception, where the inspection is carried out by a master, non-contact sensor systems are involved here. Real-time laser scanners analyze wheel geometry and residual tread depth, while smart cameras identify the vehicle and pull its digital history

from the database [12]. This allows you to instantly differentiate the traffic flow, separating cars that need immediate attention from those that are ready to go on a trip.

The central link of the re-equipped enterprise is a multifunctional diagnostic hub. Heavy bench equipment is concentrated in this space, which allows for non-destructive testing of safety and power transmission systems under load. The use of roller stands with built-in scales and hydraulic backlash detectors makes it possible to simulate real road conditions, detecting hidden defects in the suspension and brake system that cannot be detected during a static inspection [23]. This is the area where physical wear parameters are converted into accurate numerical readings.

The most innovative segment in re-equipment is the creation of an area for working with intelligent driver assistance systems. This is a “clean” zone, where cameras, radars and lidars are adjusted using laser targets and calibration stands. In this space, diagnostics finally moves away from mechanical manipulations, focusing on programming and verification of control algorithms [17]. It is here that the correct operation of emergency braking and adaptive cruise control systems is ensured, which is critical for modern safe transport.

Modern technological re-equipment is impossible without a chemical and technical analysis zone. The creation of a small but high-tech laboratory allows for express diagnostics of the “health” of the engine according to the state of its oil and fuel [22]. The use of compact spectrometers makes it possible to detect microscopic particles of wear metals, which is an early signal of future failure of the unit. This approach turns diagnostics into a method of in-depth examination, which avoids expensive aggregate repairs due to timely intervention.

The organization of workplaces within the diagnostic zones is based on the principles of mobility and information accessibility. Abandoning desktop computers in favor of rugged tablets and wireless diagnostic interfaces allows the specialist to stay at the center of the process, having instant access to the manufacturer's cloud services and technical maps. This minimizes time losses and increases the overall production culture, turning the ATP into a modern engineering center. The new architecture of diagnostic zones for technological re-equipment is aimed at creating a continuous flow of information about the condition of the vehicle. Clear functional zoning allows not only to increase the throughput of the enterprise, but also to provide such a level of accuracy that guarantees trouble-free operation in the conditions of increasing complexity of modern transport.

Technological re-equipment of ATP through the development of diagnostic methods leads to fundamental changes in the management structure of fixed and current assets. The traditional model, based on reactive defect correction, is giving way to an intelligent management strategy, where diagnostic data becomes the main tool for cost optimization.

The introduction of modern diagnostic systems allows you to move from the purchase of spare parts “in reserve” to a dynamic supply model. A modern car service enterprise has the ability to predict the residual resource of critical components (turbochargers, fuel system elements, transmission units). This radically changes the warehouse policy: significant working capital that was previously accumulated in excess inventories is released [10]. Resource management becomes point-by-point – the part is ordered and delivered at the exact moment when diagnostic indicators signal that it is approaching the extreme state of wear.

One of the most tangible consequences of rearmament is a direct impact on the fuel efficiency of the fleet. Microprocessor diagnostics methods make it possible to detect hidden deviations in the operation of fuel injection systems, valve timing and aerodynamic drag due to incorrect wheel alignment angles. Even a slight deviation, invisible during visual inspection, can lead to an overconsumption of fuel by 3-7%. On the scale of a large motor transport enterprise, accurate diagnostics of fuel equipment turns into a strategic resource for reducing the cost of transportation, providing a quick return on investment in diagnostic equipment [14].

Technological renewal changes the structure of labor costs. Automation of diagnostic operations in the entry control zones allows you to reduce the time for troubleshooting the car several times. However, this requires a redistribution of resources towards the intellectualization of personnel. Resource management now involves investments not only in hardware, but also in the constant professional transformation of personnel [18]. The mechanic turns into an operator of complex diagnostic systems, which increases the productivity of individual labor and reduces the likelihood of erroneous decisions that previously led to unjustified expenditure of time and money.

The use of methods of non-destructive testing and tribodiagnostics (analysis of working fluids) allows for significantly extending the service life of fixed assets without losing their reliability. This

creates conditions for flexible management of depreciation deductions. The company gets the opportunity to reasonably extend the service life of equipment that is in excellent technical condition according to digital monitoring data. This approach increases the capitalization of the business, since the market value of a car with a confirmed diagnostic history is much higher.

In modern conditions, compliance with environmental standards is not only a legal requirement but also an economic resource [16]. Accurate diagnostics of exhaust gas treatment systems avoids large penalties and provides unhindered access to international logistics markets. Thus, technological re-equipment converts environmental safety into sustainable development and competitive advantages of the enterprise.

It should be noted that technological re-equipment in the context of the development of diagnostic methods is not a purely internal production process. It is regulated by an extensive system of legal norms and international environmental standards, which determine the framework of legitimacy and competitiveness of the enterprise in the domestic and foreign markets.

Modernization of the diagnostic base requires strict compliance with the requirements for metrological certification. Any equipment used to assess the technical condition (especially in terms of traffic safety) must be entered into the relevant state registers and undergo regular verification.

From a legal point of view, the data of diagnostic stands are the basis for the formation of technical inspection reports and protocols for checking the suitability of vehicles for operation. The legal responsibility of the ATP for the reliability of this data increases in proportion to the complexity of the digital systems used.

The development of diagnostic methods allows documenting the park's compliance with the categories of "especially green and safe" (Euro-5, Euro-6) [8]. The legal aspect here is the legitimization of the right of access to the European market of logistics services. Without modern means of diagnostics of fuel equipment and gas purification systems, it becomes impossible to obtain appropriate international certificates, which actually blocks the foreign economic activity of the ATP. Modern diagnostics transforms environmental responsibility from passive fixation of emissions to active management of them.

A specific legal barrier of our time is the issue of ownership of data generated by the car. The technological renewal of the ATP poses a challenge to the management regarding the "right to repair". Equipment manufacturers often restrict access to service protocols through "Security Gateway" systems [21]. Legal support of rearmament includes the settlement of relations with the copyright holders of the software to ensure full access to diagnostic functions, which is necessary for an independent technical service.

The ecological aspect of re-equipment also covers the internal environment of the enterprise. The introduction of automated diagnostic complexes instead of traditional methods (for example, checking the engine under load in a closed box) reduces the level of noise and gas contamination in working areas. This contributes to the implementation of labor protection standards and increases the social stability of the enterprise, forming an image of "clean" and safe production.

The prospects for the technological re-equipment of the ATP lie in the plane of complete digitalization of the life cycle of the vehicle. Modern diagnostics is transformed from a discrete process (periodic checks) into continuous intelligent monitoring, the final form of which is the creation and operation of a "digital twin" of the car [19].

A digital twin is a dynamic virtual model of a physical object that reproduces its technical condition, performance characteristics and operating history in real time. Unlike a static database, a twin is constantly "fueled" by data streams from hundreds of onboard sensors and telematics modules. In the context of ATP retrofitting, this means moving from hardware analysis to virtual copy management, where any change in injector performance, tire pressure or oil temperature is instantly reflected on the digital model.

The main advantage of integrating diagnostics with digital twin technology is the possibility of predictive modeling [15]. Using artificial intelligence and machine learning algorithms, the system compares the current twin data with reference mathematical wear models. This allows not only to record the malfunction, but to "play" scenarios of the future state: for example, to calculate the probability of turbocharger failure while maintaining the current driving style and environmental conditions. Diagnostics is turning into a tool for strategic anticipation of events.

It is to be expected that the car of the future will independently "initiate" diagnostic cycles, identify anomalies, and, in the event of software failures, carry out automatic correction of control algorithms.

In case of physical deterioration, the “digital twin” autonomously interacts with the logistics system of the enterprise: it reserves the necessary part in the warehouse, assigns a visit to the service area, and forms the terms of reference for robotic service stations [7].

The development of diagnostic methods will lead to the creation of global databases where information from the “digital twins” of millions of cars will be used by manufacturers to improve designs. For ATPs, this means a shift to the data economy. A transparent, digitally verified operating history is becoming a valuable asset that radically changes approaches to assessing the residual value of machinery, insurance, and leasing.

It should be noted that the technological re-equipment of ATP, despite its technical and economic nature, has a deep social resonance. The development of diagnostic methods radically changes not only production indicators, but also working conditions, professional standards and the prestige of technical professions in modern society.

Modernization of the diagnostic base brings the work of personnel to a qualitatively new level. The traditional image of the mechanic, whose activities were associated with hard physical labor and an aggressive production environment, is becoming a thing of the past. Modern diagnostics is the intellectual work of the operator of complex systems. The use of wireless interfaces, tablets and robotic stands makes the workplace ergonomic and clean. This not only reduces the level of occupational diseases, but also changes the psychological climate in the team, fostering responsibility for the accuracy of data, and not for the speed of “force” repair [13].

One of the most acute problems of the transport industry is the aging of personnel. Technological re-equipment is a powerful stimulus for the influx of young people. Modern graduates of technical universities are focused on working with digital technologies, IT interfaces and artificial intelligence [11]. The creation of modern diagnostic centers on the basis of ATP, reminiscent of high-tech laboratories, makes the industry attractive for a new generation of engineers. This ensures the heredity of knowledge and the integration of academic education into the real sector of the economy.

The social significance of rearmament also lies in the protection of human life and health. Automation of troubleshooting processes (for example, the use of backlash detectors or brake test stands) minimizes the risks of injuries during the inspection of rolling stock. In addition, an accurate diagnosis of the environmental parameters of each vehicle has a direct impact on the quality of life in the community where the business is based. Reducing the level of noise and emission toxicity through system control is a significant contribution of ATP to the sustainable development of the region and the social well-being of the population [9].

A modern car diagnostics company is forced to invest in the intellectual development of its employees, organizing advanced training courses, certification training, and training in working with updated software. This contributes to the overall growth of the educational level of specialists in the region, increasing their social mobility and competitiveness in the labor market.

The final social product of the modernization of the ATP is to improve the safety of all road users. Professional diagnostics allows you to exclude the human factor when assessing critical nodes. The social mission of the re-equipped ATP is to create such a system of technical control that guarantees the preservation of the lives and health of citizens due to the trouble-free operation of transport.

6. Conclusions

Summing up the results of the study of the processes of technological re-equipment of motor transport enterprises in the context of intensive development of technical diagnostic methods, it can be argued that modern industry modernization has gone beyond the simple replacement of physical equipment. It has been transformed into a deep system restructuring, where digital data on the condition of the vehicle becomes the main economic and operational asset of the enterprise.

Evolutionary analysis of diagnostic tools has made it possible to establish that the transition from on-premises controls to global cloud platforms radically changes the paradigm of technical service. Instead of the traditional elimination of defects that have already occurred, modern retrofitting offers a predictive control model based on the anticipatory detection of critical wear. This not only increases the reliability of transportation but also turns diagnostics into an intelligent filter that ensures continuous fleet performance in real time.

An important result of the work is the substantiation of the new architecture of the production environment of the ATP. The introduction of specialized express control zones and calibration areas for

intelligent driver assistance systems allows you to integrate the physical space of the enterprise into the manufacturer's digital ecosystem. Such organization of processes minimizes the impact of the human factor at the stage of entry control and ensures the compliance of the fleet with strict legal and environmental standards, in particular Euro-6 requirements, which is critical for entering international logistics markets.

A promising vector outlined in the study is the transition to the use of "digital twins" as the highest form of diagnostic monitoring. This technology allows you to convert the physical parameters of operation into a virtual model, providing accurate forecasting of the remaining life and optimization of spare parts costs. The social significance of such modernization is manifested in the humanization of engineering work and increasing the prestige of professions in the transport industry, which together create a reliable foundation for sustainable development and trouble-free operation of modern road transport.

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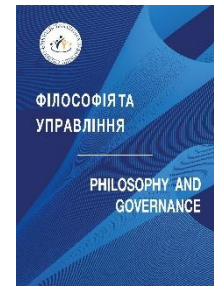
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Paradigm of Sustainable Land Resources Management: State Audit and Mine Surveying Support for Reclamation

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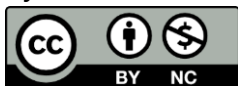
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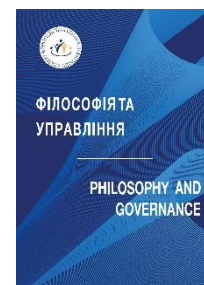


ABSTRACT

The article substantiates the conceptual foundations of sustainable land management within the Land Governance model. The role of land management design as the intellectual core of the production cycle, based on the implementation of GIS technologies and digital methods of geospatial data processing, is revealed. Particular attention is paid to the mechanism of state land management expertise, which is defined as a fundamental audit tool for preventing legal, technological, and environmental risks. It is proven that mine surveying support forms the necessary engineering framework for sustainable development, ensuring high-precision control of the geometry of the subsoil and the earth's surface. Innovative methods for monitoring disturbed areas using laser scanning and unmanned aerial systems (UAS) are analyzed, enabling the creation of dynamic digital twins of landscapes. The content and sequence of technological stages of land reclamation are determined, from technical engineering reshaping of the relief to the biological restoration of ecosystem functions. It is concluded that the synergy of state control, engineering precision, and digital management is a key condition for the capitalization of degraded lands and their return to active economic circulation to meet the needs of local communities.

KEYWORDS

sustainable management, Land Governance, state expertise, mine surveying support, land reclamation, GIS technologies, digital twins, monitoring.



Парадигма сталого управління земельними ресурсами: державний аудит та маркшейдерське забезпечення рекультивації

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СТАТТЯ	АНОТАЦІЯ
Дослідницька DOI: 10.70651/3041-248X/2026.2.12 Отримана: 10.01.2026 р. Прийнята: 12.02.2026 р. Опублікована: 16.02.2026 р. Авторське право © 2026 авторів  Цей твір ліцензовано на умовах Ліцензії Creative Commons «Із Зазначенням Авторства – Некомерційна 4.0 Міжнародна» (CC BY-NC 4.0).	У статті обґрунтовано концептуальні засади сталого управління земельними ресурсами в межах моделі Land Governance. Розкрито роль землевпорядного проектування як інтелектуального ядра виробничого циклу, що базується на впровадженні ГІС-технологій та цифрових методів обробки геопросторових даних. Особливу увагу приділено механізму державної землевпорядної експертизи, яка визначена як фундаментальний інструмент аудиту для запобігання правовим, технологічним та екологічним ризикам. Доведено, що маркшейдерське забезпечення формує необхідний інженерний каркас сталого розвитку, забезпечуючи високоточний контроль геометрії надр та земної поверхні. Проаналізовано інноваційні методи моніторингу порушених територій із застосуванням лазерного сканування та безпілотних авіаційних систем, що дозволяє створювати динамічні цифрові двійники ландшафтів. Визначено зміст та послідовність технологічних етапів рекультивації: від гірничотехнічного переформатування рельєфу до біологічного відновлення екосистемних функцій. Зроблено висновок, що синергія державного контролю, інженерної точності та цифрового менеджменту є ключовою умовою капіталізації деградованих земель та їхнього повернення в активний господарський обіг для потреб територіальних громад.



КЛЮЧОВІ СЛОВА

стале управління, Land Governance, державна експертиза, маркшейдерське забезпечення, рекультивація земель, ГІС-технології, цифрові двійники, моніторинг.

1. Introduction

In the context of modern globalization and the progressive scarcity of natural assets, a philosophical and managerial rethinking of the role of land resources is becoming a key vector of state policy in developed countries. The modern paradigm of land management is undergoing a fundamental transformation: from traditional technical land management, it is evolving to the concept of “Land Governance” – a comprehensive system of responsible regulation based on the principles of transparency, environmental ethics and sustainable development. Land in this context is considered not only as a territorial basis or means of production, but as a living ecosystem, the state of which directly correlates with the economic sustainability and social well-being of the nation.

For Ukraine, the issue of the relevance of this study is reinforced by a number of critical factors that require immediate scientific understanding. Firstly, the scale of anthropogenic load on landscapes as a result of long-term mining activities has led to the formation of significant territories of disturbed lands, which are actually excluded from active economic circulation. Secondly, institutional transformation and the opening of the land market require the introduction of new, more effective mechanisms of state audit. Traditional methods of control often turn out to be ineffective in the face of modern environmental challenges, which highlights the need to strengthen the role of state land management expertise as the main prevention of land capital degradation.

The technological aspect of sustainable management is of particular importance. The integration of surveying support into land management processes allows you to go beyond planar design, providing a transition to three-dimensional (3D) modeling and accurate forecasting of relief changes. This is critical for reclamation processes. Thus, the relevance of the chosen topic is due to the need to overcome fragmentation in the management chain “planning – control – implementation – recovery”. The creation of a holistic mechanism that combines strategic management, legal impeccability and engineering accuracy is a prerequisite for ensuring ecological balance and sustainable development of territories in the long term.

2. Literature Review

The study of the paradigm of sustainable land management and reclamation of disturbed landscapes is based on a comprehensive analysis of scientific works covering managerial, legal, technological and environmental aspects.

The theoretical and methodological foundations of sustainable development and governance are considered in the works of L. Mohylna and Chzhan [12], which focus on the problems of land use in the context of global challenges. The issues of strategic design as the intellectual basis of the industry are thoroughly covered in the textbook by I. V. Lytvynenko [11]. The digital transformation of this process and the role of geographic information systems as a tool for spatial planning and territorial management are analyzed in detail in the works of V. Lypskyi [10], as well as in the context of the operation of infrastructure facilities - in the work of A. G. Batrakova and others. [2].

Risk management and government audit make up the regulatory block of the study. I. G. Volynets [22] reveals the conceptual foundations of risk management directly for land management enterprises, while N. Andrieieva et al. [1] focus on risks in the specific field of recreational land use. The issue of legality and quality control of documentation through the prism of land management expertise is revealed by O. A. Dombrovska [4], and modern aspects of land audit as a tool for checking the compliance of resource use are in the study of L. Sakhno [18].

The engineering and surveying framework and innovative monitoring methods are represented by works describing a technological breakthrough in the industry. The role of the surveyor as a responsible specialist in mining is popularized by V. Zabashta and V. Blyzniuk [24]. The use of modern geodetic technologies for monitoring deformations of man-made objects was studied by Y. O. Zabolotna et al. [25]. Laser scanning (LiDAR) and aerial photogrammetry technologies are of particular importance for the accuracy of measurements, the methods of implementation of which in the educational and practical process are described by G. Oliinyk and K. Vasylenko [14], as well as V.O. Liulchyk and others. [9]. The issue of remote sensing for predicting dangerous geomorphological processes is covered in the dissertation study of T. A. Orlenko [15]. The use of unmanned aerial vehicles as a means of optimizing land management is analyzed by D. Bobyk and O. Mikhno [3], and the concept of “digital twins” as a future spatial modeling is revealed in the publication of I. Pylypiv [16].

Reclamation and restoration of land capital is the final block of the review. Fundamental approaches to the restoration of disturbed lands are set out in the monographs of Z. M. Tomashivskiy and others. [20], as well as in the work of P. Voitkiv and E. Ivanov [21], which details soil protection technologies. Geodetic support of specific works on the removal of the fertile layer is described by A.S. Yukhno and D. S. Butenko [23].

The biological stage of reclamation and restoration of ecosystem services is supported by the research of M. I. Romaniuk [17] on soil health and E. D. Tkach et al. [19] on the formation of stable phytocoenoses in changing climatic conditions. The importance of green manure crops as a source of soil energy recovery is emphasized by O.O. Horb and others. [6]. The practical significance of using vegetation indices (NDVI, etc.) for vegetation monitoring is revealed by B. Kruhlyk [8]. The issues of state support for land reclamation and land restoration strategies in the post-conflict period are covered by T. Kovalenko [7], O. Haidu [5] and V. Naumchuk [13].

The synthesis of these sources allows us to form a holistic scientific basis for the development of a model of sustainable land management, which integrates high engineering accuracy with state supervision and environmental feasibility.

3. Problem Statement

It is obvious that there is a need to substantiate a holistic model of land resources management based on the integration of strategic management, state audit and engineering and surveying solutions. For this purpose, the article analyzes the role of digital technologies in land management production, reveals the importance of state expertise as a guarantor of legality and studies the technological cycle of reclamation of disturbed lands. The ultimate goal was the formation of an integrated approach to the restoration of land capital within the framework of the paradigm of sustainable development.

4. Methods and Materials

The methodological basis of the study is a systematic approach, which allows us to consider land management as an integral structure, where legal, economic and technical components are inextricably linked. To achieve this goal, a set of general scientific and special methods was applied. In particular, the logical-semantic method was used to clarify the conceptual apparatus of the sustainable management paradigm, and the comparative legal analysis made it possible to assess the effectiveness of the current mechanisms of state land management expertise in Ukraine.

The analytical base of the study was made up of regulatory legal acts of Ukraine, statistical data on the state of the land fund, as well as the results of the introduction of geographic information systems in land management production.

5. Results and Discussion

Land management is a high-tech industry that combines engineering, law and economics. Management of this process requires an understanding of the life cycle of a land plot.

In the architecture of sustainable land management, design is the main intelligent filter where a model of the future landscape is formed. This is the stage at which the theoretical principles of rational land use are transformed into specific spatial solutions [12]. Design is the “core”, since it is here that the economic interests of the customer, the legal restrictions of the state and the environmental needs of the territory are integrated.

Modern land management design is based on three intellectual components:

1) predictive modeling – the specialist does not just record the existing state, but predicts the consequences of intervention in the ecosystem. This includes the analysis of changes in the hydrological regime, the risks of erosion and soil degradation after land allotment or the start of their development.

2) variability of solutions – an intelligent approach involves the development of several scenarios for the use of the site. Managerial choice in favor of the most sustainable option allows you to balance instant profit with long-term preservation of natural potential.

3) Integration of constraints – the project is the result of a complex synthesis of data on protection zones, engineering networks, rights of adjacent owners, and legal requirements. High-quality design minimizes future legal conflicts and technical errors at the implementation and reclamation stages [11].

Thus, the efficiency of the entire land management process is determined precisely at the stage of the intellectual search for optimal spatial forms. Any error in the “core” – at the project level – inevitably leads to an increase in costs at the examination stage or, more critically, to the impossibility of high-quality restoration of land in the future.

Taking into account current global trends, it should be noted that the digitalization of land management production shifts the emphasis from the simple accumulation of information to its in-depth analysis and operational use. GIS management in the modern paradigm of sustainable management serves as an integrating environment in which cadastral data, Earth remote sensing results, and engineering and geodetic surveys are combined [10].

The main vectors of digital transformation in land management are:

- Creation of a single information space. GIS allows you to impose layers of legal restrictions, environmental easements and engineering networks on a digital map. This provides the manager with a complete picture of the state of the object, eliminating the risk of making contradictory decisions (for example, allocating a plot in a protected zone).

- Automation of control and monitoring. Thanks to the integration of GIS with satellite monitoring data and UAVs, the process of monitoring the intended use of land becomes continuous. This allows for real-time detection of unauthorized land grabbing, boundary violations, or the beginning of unwanted erosion processes.

- Support for managerial decision-making. Digital models allow scenario analysis. For example, with the help of GIS tools, it is possible to simulate how a change in relief during quarry development will affect the hydrology of the area, which is critical for further reclamation.

Thus, GIS management transforms land management from reactive (error correction) to proactive (risk prevention). Digital transformation ensures transparency of all management processes, which is a fundamental requirement for the sustainable development of territories and effective interaction between the state, business and community.

An important critical audit tool that guarantees the compliance of project documentation with the requirements of current legislation, environmental standards, and the interests of territorial communities is the state land management expertise. It acts as a safeguard against technological errors and legal conflicts, ensuring the safety of land use and the economic sustainability of future reclamation facilities [4].

The mechanism of state audit within the framework of land management expertise is based on the principles of independence, objectivity and comprehensiveness. This is a multi-level verification process, where project documentation is analyzed for compliance with the norms of land, water, forestry and environmental legislation. The main task of this mechanism is to confirm that the solutions proposed by the draft (for example, regarding the allocation of a plot or its reclamation) will not lead to a violation of the rights of other entities or irreversible degradation of natural complexes.

The procedural structure of this audit includes the following stages [18]:

- 1) Regulatory compliance check is an analysis of whether the project takes into account the established restrictions (easements, protection zones, sanitary gaps). This prevents conflicts of interest between owners and the state.

- 2) Ecological and technological control – the expert assesses the validity of the selected methods of land restoration. For example, whether the depth of application of the fertile soil layer is sufficient and whether it corresponds to the future purpose of the site.

- 3) Scientific and methodological confirmation is an assessment of the accuracy of the calculations made. In the context of reclamation, this is a check of the correctness of the volume of earthworks and the stability of the designed landscape forms.

The result of this mechanism is an expert opinion, which serves as a legal guarantee for the investor and the community. Thus, the state audit transforms the theoretical plan into a legitimate document, providing a “safeguard” against making voluntaristic or environmentally dangerous management decisions.

The effectiveness of the sustainable land management system directly depends on its ability to identify and neutralize threats at the stage of pre-project decisions. In this context, the state land management expertise acts not only as a control mechanism, but as a tool for preventive risk management [22]. It allows for a systematic assessment of three main groups of risks: legal (prevention of litigation due to the imposition of boundaries or violation of easements), technological (checking the

sustainability of the designed landscapes) and environmental (avoiding secondary land degradation and pollution of adjacent areas).

The economic effect of the implementation of such an audit is cumulative and manifests itself in the long term. Firstly, expert confirmation of the feasibility of the selected reclamation methods allows you to optimize capital costs, excluding the financing of unnecessary or inefficient technological operations. Secondly, high-quality prepared and verified documentation minimizes the likelihood of man-made accidents, the elimination of which is usually ten times higher than the cost of examination itself [1].

From a managerial point of view, the successful completion of a state audit capitalizes a land asset. Land that has been professionally tested and restored according to a scientifically based project has higher market liquidity. It quickly returns to active economic circulation – whether as agricultural land or as a platform for renewable energy – ensuring stable budget revenues and investment attractiveness of the region. Thus, the state expertise transforms environmental requirements into a real economic resource, guaranteeing the safety and profitability of land use.

The engineering foundation of sustainable land use is based on surveying support, which ensures control of geometric parameters and flawless delivery of projects in kind. In the system of sustainable management, this direction ensures the spatial reliability of data and technological stability of territories, which is critically important for the successful restoration of disturbed lands [24].

The basis of surveying support for sustainable management is the principle of geometrization – the creation of an accurate mathematical model of an object in three-dimensional space. Unlike classical land management, which mainly operates with planar coordinates, surveying considers a land plot as a three-dimensional body. This allows you to synchronize the state of the subsoil (voids, layers, deposits) with the processes taking place on the surface (soil subsidence, relief changes, deformations of structures).

The key aspects of surveying support are [25]:

- The unity of the measurement network is the creation of reference points that connect underground workings with the ground situation. This ensures that any management decision on the use of the surface (for example, the construction of renewable energy facilities) is based on real data on the stability of the array underneath.

- Spatial dynamics of the landscape – the geometry of the surface on disturbed lands is not static. Surveying control allows you to record the dynamics of relief changes over time, which is a fundamental condition for safe reclamation planning.

- Mass balance and volumetric modeling – for effective land restoration, it is necessary to accurately calculate the volumes of rock required to fill the produced space or form terraces. Geometric accuracy in excavation-embankment calculations directly affects the economics of the project and prevents irrational movement of soils.

Thus, understanding the geometry of the subsoil and surface transforms a land plot from an abstract cadastral number into a physically defined and predictable engineering object. This creates the conditions for the transition to sustainable management, where each stage of intervention in the landscape has a clear spatial justification.

The introduction of innovative methods of remote sensing and intelligent analysis of geospatial data radically changes the architecture of monitoring the state of disturbed lands [2]. In the modern paradigm of Land Governance, monitoring is transformed from a tool of episodic fixation of consequences into a dynamic decision-support system based on the principles of objectivity, continuity and high spatial fragmentation.

The foundation of innovative monitoring is the transition to three-dimensional modeling using LiDAR (Light Detection and Ranging) technology. Unlike traditional tacheometry, laser scanning (ground, mobile or airborne) allows you to obtain “point clouds” with a density of up to several thousand reflections per square meter.

For reclamation processes, this means the possibility of conducting an automated analysis of deviations (“Diff analysis”). By superimposing the current point cloud on the design 3D model, the system automatically highlights areas of soil lack of sleep, subsidence of quarry sides, or inconsistency with design slope angles [14]. This approach eliminates technological defects, which usually lead to water erosion or landslides at the stage of exploitation of restored land.

The use of unmanned aircraft systems with multispectral sensors allows to implement biological monitoring at a qualitatively new level [3]. The key tool here is the analysis of the spectral reflectivity of the vegetation cover:

1) Vegetation indices. Using a combination of the red and near-infrared channels of the spectrum, experts calculate the chlorophyll index [8]. This allows remotely, over huge areas, to detect areas of vegetation “stress” (nitrogen, moisture deficiency or soil salinity) 2-3 weeks before these signs become noticeable to the human eye.

2) Thermal infrared imaging helps to detect hidden spontaneous ignition foci in dumps or anomalous groundwater filtration zones, which is critical for the environmental safety of the areas surrounding industrial facilities.

To monitor areas with a large area (for example, entire mining regions), satellite radar interferometry technology is used. By comparing the phase shifts of radar signals received from satellites (for example, Sentinel-1), it is possible to record vertical displacements of the earth’s surface with an accuracy of 2-5 millimeters [15]. This allows you to create subsidence maps in the zones of mine forgeries and predict potential soil failures, which is an indispensable tool for ensuring life safety within the disturbed areas.

The final stage of innovative monitoring is the integration of all data streams (LiDAR, UAVs, satellites, IoT sensors) into a single geographic information platform. A “Digital Landscape Twin” is being formed – a complex multilayer model that allows scenario modeling [16]. For example, the manager can simulate how extreme precipitation will affect the stability of the restored terrain and design the necessary drainage structures in advance.

Thus, innovative monitoring technologies transform land management production into a high-tech industry, where each management decision is supported by verified digital data [7]. This creates a transparent control mechanism for the state, guarantees safety for the community and minimizes financial risks for investors, laying the foundation for true sustainable development.

The final and most crucial stage of the sustainable cycle of land management is reclamation. This is the process of “healing” the landscape after anthropogenic intervention.

The mining stage is the primary and most resource-intensive stage of restoration of disturbed lands. Its main goal is to transform the degraded industrial landscape (quarries, dumps, tailings dumps) into a safe and functional geomorphological structure [13]. This is a process of “engineering reformatting”, where chaotic anthropogenic landforms are brought into line with a pre-developed land management project.

The main technological operations of this stage are:

1) Surface planning and slope formation. This is a critical stage in the creation of a stable relief. Surveying control ensures compliance with the design angles of slopes, which prevents landslide processes and erosion.

2) Hydraulic organization of the territory. Creation of drainage systems, drainage ditches and, if necessary, arrangement of the bed of future reservoirs (in the case of water reclamation) [5]. Proper management of surface runoff at this stage is a guarantee that the restored fertile layer will not be washed away by the first precipitation.

3) Selective formation of dumps and shielding. If overburden rocks contain toxic compounds or salts, the mining stage involves their isolation (shielding) with layers of inert rocks [21]. This creates a geochemical barrier that protects the future root system of plants and groundwater from contamination.

4) Transportation and application of a fertile soil layer. The final chord of the engineering stage. A layer of humus or potentially fertile rocks is applied to the prepared “planning and technical” base [23]. It is important to ensure the uniformity of the layer thickness, which directly affects the future productivity of the restored lands.

From a managerial point of view, the successful completion of the mining stage means the capitalization of the territory. The facility ceases to be an environmental disaster zone and becomes a prepared land asset, ready for biological revitalization and return to the economic circulation of the community.

The biological stage is the culmination of the reclamation process, aimed at restoring soil fertility, forming stable phytocoenoses and returning the territory of ecosystem functions. If the mining stage creates the “skeleton” of the landscape, then the biological stage fills it with life, transforming the disturbed lands into a full-fledged natural or agrarian asset [20].

The main components of this stage in the context of sustainable management are:

- Reclamation preparation and green manure. Since man-made soils often have a disturbed microbiological balance, the first step is to “revitalize” the substrate. Sowing legumes (lupine, alfalfa, weeds) allows you to naturally enrich the soil with nitrogen, improve its structure and activate soil biota [6].

- Formation of target phytocoenoses. The choice of vegetation depends on the future purpose of the site. For the agricultural direction, this is the creation of perennial pastures or arable land; for forestry – the planting of adapted tree species; for recreational – the creation of landscape parks [19]. It is important to use autochthonous (local) species, which guarantees the resilience of the ecosystem to the local climate.

- Biodiversity management. Sustainable management involves the creation of not just monocultures (for example, only pine), but complex multi-tiered systems [17]. This contributes to the return of wild animals, pollinating insects and birds, which is an indicator of the successful restoration of ecological balance.

- Survival monitoring and care. The biological stage does not end with planting. It includes a period of active care (watering, fertilizing, pest control) until the ecosystem becomes self-sufficient. The use of unmanned aerial vehicles with NDVI cameras at this stage allows you to pinpoint identify areas in need of assistance.

From the point of view of land capital restoration, successful biological reclamation relieves the environmental burden on the enterprise and the community. Land is starting to benefit again: generating oxygen, sequestering carbon, producing crops or serving as a resting place. This is the ultimate goal of the model of transforming “dead” industrial areas into living space for future generations.

6. Conclusions

Thus, based on the analysis of the regulatory, institutional, technological and organizational foundations of the digital transformation of social protection, it has been established that its effectiveness during the recovery period is determined not so much by the implementation of individual IT solutions as by the formation of an integral sociotechnical system. Such a system should ensure territorial independence of access to support, increased targeting based on integrated data, reduction of administrative burden on recipients and personnel, a guaranteed level of cyber resilience and legal protection of personal data, as well as institutionally enshrined inclusivity.

It has been proven that Ukraine has the basic institutional prerequisites for the formation of a full-fledged digital public infrastructure of social protection, in particular due to the development of the UISSS as an integration platform, the functioning of interoperability mechanisms through the Trembita system, and the availability of a scalable digital channel for interaction with citizens – the Diia portal and application. At the same time, the key challenge remains the transformation of these elements into a consistent DPI stack, within which data governance, cybersecurity, privacy-by-design principles, and inclusion standards are built-in components of the architecture.

It is substantiated that the optimal model of implementation is a step-by-step approach, which includes: at the first stage – the creation of minimally viable end-to-end digital chains for the provision of priority services; at the second stage, scaling integrations and forming a dynamic social register with proper data quality management; the third is the institutionalization of analytical and AI tools with audit procedures and ensuring European compatibility. Such a sequence allows you to ensure the manageability of changes, minimization of risks and long-term sustainability of the digital model of social protection.

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