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THE DIGITAL SOCIETY AS A NEW CHALLENGE FOR LEGAL REGULATION: A GENERAL THEORETICAL ANALYSIS

Abstract. Purpose. The purpose of this article is to carry out a general theoretical analysis of the digital society as a social phenomenon that transforms the structure, nature, and mechanisms of legal regulation; to identify the main characteristics of the digital age that complicate traditional legal approaches; and to substantiate the need to revise classical paradigms of legal understanding, normativity, and social control in the context of digital transformation. **Results.** The study theoretically substantiates that the digital society creates a new social reality within which not only social relations but also the very nature of normativity is being transformed. The digital age changes the sources, structure, and forms of social norms, which generates new challenges for the traditional legal system. It has been established that the key characteristics of the digital society include the virtualization of legal relations, decentralization of authority, algorithmization of decision-making, growth of informational redundancy, and emergence of new forms of subjectivity. These factors disrupt established notions of the legal subject, the boundaries of legal regulation, and sources of legitimacy. It has been shown that the technological revolution acts as an independent factor in the transformation of social norms, leading to the emergence of new (sometimes unconscious) normative structures that function beyond the legal sphere. Particular attention is paid to the phenomenon of *technical normativity*, when behavioral regulation is exercised through the architecture of digital platforms rather than through a legal norm in the classical sense. It is substantiated that the emergence of new social risks—such as cyber threats, manipulative algorithms, and automated decision-making—actualizes the need for flexible, adaptive, and proactive legal responses. **Conclusions.** It is concluded that legal methodology requires renewal, in particular a transition from a rigidly formal to an adaptive and situational approach to the regulation of social processes. What becomes decisive here is not so much stability as the ability of law to function effectively under conditions of change while maintaining the basic principles of justice, equality, freedom, and human dignity. In view of the foregoing, it is argued that understanding the transformation of social norms under the influence of the technological revolution is an extremely relevant and necessary task for modern legal science. This understanding has both theoretical and practical significance, as it makes it possible to develop effective mechanisms of legal response to digital challenges while preserving the humanistic essence of law as a social regulator.

Key words: digital society, legal regulation, social norm, flexibility of law, technological transformation, algorithmization, legal subjectivity in the digital age, virtualization of legal relations, digital risks, normative legitimacy, technical regulation, law and technology, general theory of law.

1. Introduction

The digital transformation of society, encompassing all spheres of social life—from the economy and public administration to education, healthcare, and everyday life—has led to the emergence of qualitatively new forms of social interaction that do not fit into classical schemes of legal regulation. In the digital era, the principles, mechanisms, and instruments that have traditionally

determined the effectiveness of law as a social regulator undergo profound transformation. Law proves to be insufficiently adapted to virtualized legal relations, the transnational nature of digital platforms, the technical normativity of program code, and the phenomenon of algorithmized governance.

Moreover, the digital society generates a new typology of social risks—cyber threats,

automated discrimination, and informational manipulation—that cannot be effectively eliminated through traditional legal mechanisms. This actualizes the need to rethink not only the tools but also the fundamental categories of legal regulation: normativity, legitimacy, subjectivity, the boundaries of legal action, and the relationship between the public and the private in law.

Thus, there arises an urgent need for a general theoretical analysis of the digital society as a new environment of legal functioning capable of transforming the very paradigm of legal understanding. The issue lies not only in adapting legislation to new technologies, but, more deeply, in determining whether law retains its regulatory capacity in a constantly changing technological reality, and what transformations are necessary to ensure this capacity.

It should be noted that most research devoted to digital transformations focuses primarily on particular sectoral aspects (information law, personal data protection, AI regulation), while a systematic elaboration of the general theoretical foundations of legal adaptation to the digital environment remains fragmentary.

The relationship between technical normativity and legal legitimacy, the balance between private and public forms of regulation in the digital space, and the limits of legal flexibility without the loss of its value core remain insufficiently elucidated. Despite significant theoretical developments, the issue of the digital society as a systemic challenge for legal regulation requires further comprehension within the framework of the general theory of law, which determines the relevance of this research.

2. The Digital Society as a Phenomenon of Modern Civilization

It is worth starting with the fact that one of the key phenomena of modern civilization is the formation of a *digital society*—a new social order that develops on the basis of information and communication technologies, the digital economy, artificial intelligence, and global communication networks. This type of society is not merely a technological superstructure over the industrial or post-industrial formation; it possesses its own logic of social existence, legal regulation, value system, and structure of power relations.

Thus, the digital society represents a social formation in which digital technologies, data, and network algorithms play a central role in production, communication, governance, education, security, and everyday life. As the German philosopher **Jürgen Habermas** emphasizes, “in the new reality, digital platforms transform not only communication but also the very institutions of legitimacy” (Habermas, 1991).

Manuel Castells, one of the most prominent researchers of this phenomenon, introduced the concept of the *network society*, in which the main form of social organization consists of dynamic communication links functioning through information technologies. He notes that “in the network society, power relations are increasingly defined not by institutions, but by the ability to control information flows” (Castells, 2004).

According to Ukrainian scholar **V. P. Kolpakov**, the digital society is “a qualitatively new stage in the development of social organization, characterized by the dominance of virtual interactions, decentralization of power functions, the emergence of new forms of legal subjectivity, and the blurring of the boundaries of legal regulation” (Kolpakov, 2020).

Max Weber pointed out that in the modern world, bureaucratic rationality is gradually being replaced by algorithmic rationality, where decisions are made not by human subjects but by data-driven systems, giving rise to the phenomenon of *anonymous governance* (Weber, 2014).

It should be noted that the digital society, which today appears as the defining form of contemporary social organization, is distinguished by a number of features that directly affect the sphere of legal regulation. First and foremost, this concerns an unprecedented level of informational saturation—the so-called *information redundancy*—which generates the hyperdynamics of social processes and creates new challenges for the legal system built on the textual stability of norms.

Legal instruments designed for relatively slow changes in social relations turn out to be unprepared for the regulation of situations that evolve in real time. This informational dynamism is closely connected with the processes of *virtualization*, which encompass not only communication but also legal relations themselves. Most social transactions now occur within a digital environment, which complicates the clear definition of spatial and subjective boundaries of legal interaction.

In this regard, the problem of identification becomes increasingly relevant, since a legal subject often exists only as a *digital entity*—a virtual identity, a digital profile, or a software agent whose actions may produce legal consequences.

Significant transformation also occurs within the very structure of regulatory authority. In the digital society, law is no longer the sole or even necessarily the primary mechanism of social ordering. Its place is partly taken by the architectures of program code, technical standards, and corporate terms of service (Talebayeva, 2021). This phenomenon, as formu-

lated by **Lawrence Lessig**, demonstrates that the behavior of millions of users may be determined not by parliamentary laws, but by the service conditions written by software developers. Thus, regulation acquires a technocratic and apolitical character, which in turn gives rise to new challenges of legitimacy and responsibility (Lessig, 1999).

Special attention should be paid to the *algorithmization* of decision-making processes. Automated systems increasingly influence resource allocation, content moderation, the provision of administrative services, and even judicial decision-making. Algorithms trained on vast datasets often conflict with the principles of transparency, accountability, and the right to appeal. In legal discourse, this raises discussions on the need to develop legal regimes for algorithmic liability, digital ethics, and control over artificial intelligence.

Another systemic feature of the digital society is its *unequal accessibility*. Despite the widespread notion of the democratization of information, in practice, digital transformation creates new forms of inequality—between those who possess the technical, financial, and cognitive resources for full access to digital services and those who remain outside the digital environment. This inequality also has a legal dimension: from limited access to justice and administrative services to discrimination based on algorithmic models.

Thus, the digital society emerges as a multidimensional, non-linear social formation in which not only the modes of interaction but also the very logic of regulation are changing (Cohen, 2019). For law to retain its ability to perform its classical functions effectively, it must adapt to a new reality in which norms compete with code, subjectivity extends beyond natural persons, and jurisdictions are blurred by global networks.

One of the key sociogenic factors determining the dynamics of modern social development is the *technological revolution*—a complex, multi-level process involving the introduction of digital, informational, biotechnological, and cognitive innovations that radically alter not only the tools of human activity but also the very foundations of social interaction. This process involves not only the modification of the technical environment but also a profound re-evaluation of norms, values, expectations, and regulatory mechanisms in society—transforming what social science refers to as the *normative system*.

Attention should be drawn to the fact that the technological revolution, conventionally referred to as the *Fourth Industrial Revolution* (according to **Klaus Schwab**), has a multidimen-

sional impact on the structure of social norms. First, it determines the blurring of traditional boundaries between public and private, physical and virtual, natural and techno-artificial, which makes it impossible to preserve classical normative constructions in their original form. What once belonged to the intimate sphere of the individual has now become public due to the widespread use of social networks, digital identification systems, biometric platforms, and surveillance technologies. This gives rise to a *crisis of privacy* as a fundamental social reference point, and consequently, a transformation of the corresponding legal norms (Schwab, 2017).

Technological innovations are transforming the mechanisms of legitimizing social norms, diminishing the role of traditional culture, authoritative institutions, and social experience. In the digital environment, an increasing number of decisions are made not by humans but by algorithms trained on vast datasets, independent of ethical or normative context. Algorithmic models such as automated user rating systems, online content moderation, or employee monitoring based on big data emerge as new sources of normative influence that, however, do not undergo classical procedures of public deliberation, legal review, or democratic approval.

As Shoshana Zuboff emphasizes, this gives rise to the phenomenon of **“anonymous normative control,”** implemented through engineering means rather than through the legal system. The technological revolution thus contributes to the complication and **hyper-personalization of normative expectations**, which are becoming increasingly contextual, variable, and dependent on specific digital environments. In a space where users interact through dozens of platforms—each with its own terms, policies, algorithms, and rules of conduct—**universal social norms lose their authority** in favor of fragmented, dynamic, and often invisible structures of regulation (Zuboff, 2020).

As Stanislav Dvornichenko notes, this leads to the gradual **degradation of traditional institutions of socialization**—the family, school, and legal culture—which are unable to keep pace with the rate of digital transformation (Dvornichenko, 2021).

It is also essential to emphasize that the technological revolution **changes the very nature of the social norm**, replacing it with a *technical* or *behavioral* one—i.e., a norm that is not the result of normative agreement but is determined by the functioning of software code or interface design. An example of this can be found in **digital restrictions** (e.g., prohibition of copying), which are implemented not through sanctions but through **architectural blocking**

of actions, or in **behavioral patterns** shaped by interface design. All this requires a profound **reconsideration of the concept of the norm** in legal theory: it is no longer merely a textual product but acquires **functional, procedural, and programmatic forms**.

Thus, the technological revolution is not only a factor of progress but also a **fundamental challenge for law**, as it transforms the very foundation upon which social norms, behavioral expectations, and institutions of legitimacy are formed. In this context, the legal system must either **adapt to new forms of normativity** or lose its ability to effectively perform its social functions. This places before legal theory the task not only of responding to technological transformations but also of **initiating an interdisciplinary reflection** on what law should be in conditions where the social norm arises not as a result of collective agreement but as a **product of engineering logic** (Celeste, 2024).

3. Features of the Formation of the Digital Society

The formation of a digital society is accompanied not only by innovative achievements and technological progress but also by the emergence of qualitatively new social risks that require a rethinking of traditional mechanisms of legal response. These risks are multi-dimensional in nature, as they arise not only in the sphere of security but also in the domains of privacy, autonomy, democratic governance, ethical regulation, and transhumanist perspectives. Their nature cannot be reduced to classical threats typical of industrial society, since they are **hybrid, non-classical, and potential**, which fundamentally complicates their legal conceptualization.

In scholarly discourse, this phenomenon is described through the concept of the **“risk society”** proposed by Ulrich Beck, who emphasized that under post-industrial development, the main problem is no longer the distribution of benefits but the distribution of dangers. In the digital age, this assertion acquires new depth: modern technologies generate **existentially unpredictable consequences** that are difficult to foresee at the stage of innovation implementation, yet they already transform the structure of legal risk. These include **algorithmic errors in the sphere of justice, unauthorized collection and use of biometric data, abuse of artificial intelligence, cybersecurity threats, and manipulation of public opinion through automated information campaigns** (Beck, 1992).

These risks are further complicated by the **transnational nature of the digital environment**, which causes the erosion of traditional mechanisms of legal jurisdiction. A situation arises when an act or omission that generates

a risk occurs in a technical environment that does not coincide with the physical space of law enforcement. Therefore, classical legal categories such as *territory, state affiliation, and subject of jurisdiction* lose their effectiveness as tools for identifying legal responsibility.

Under conditions of uncertainty and rapid technological change, the problem of **flexibility of law** becomes increasingly relevant. Flexibility, in this context, is not synonymous with chaos or the absence of regulation, but rather a manifestation of the **adaptive potential of the legal system** in response to new types of social dynamics. Modern legal science speaks of a transition from *rigid normativity* to **contour-based, open, and risk-oriented regulation**, which allows for consideration not only of existing legal violations but also of potentially dangerous behavioral patterns.

A telling example in this context is the development of instruments such as **international ethical codes for AI developers, European Commission guidelines on platform economy regulation, and UNESCO recommendations on digital literacy and data protection**. Although these documents do not possess binding legal force, they serve as **preventive regulators**, enabling the formation of normative benchmarks in areas where the legislative framework is absent or developing too slowly (Bauman, 2000).

The danger of technological risk also lies in its **“silent” and “distributed” nature**, meaning that it manifests itself neither immediately nor in a specific location. For instance, the influence of digital systems on decision-making bias becomes apparent only after the mass deployment of algorithms trained on heterogeneous data—or only after millions of users have become victims of **automated discrimination** (Graber, 2021). This makes classical forms of legal protection based on *ex post* response impossible and instead requires the **institutionalization of preventive thinking** within the legal system.

Another form of flexible legal response is the **concept of regulatory sandboxes**, which provide experimental legal regimes for new technologies to test their compatibility with fundamental rights and public interests without compromising normative stability. Such approaches are already applied in the spheres of **financial technologies, telemedicine, and digital identification** in several jurisdictions, including the **United Kingdom, Singapore, and Estonia**.

Thus, the new social risks generated by digital transformation represent a challenge not only for positive law but also for its **theoretical and methodological foundations**. In order to remain an effective social regulator, law must not only respond to existing threats but also **anticipate possible scenarios** of their realization,

forming a **multilevel, flexible, and proactive system of legal response** (Baranov, Kostenko, Dubniak, 2023). The new role of the general theory of law therefore lies in its capacity to act not as a retrospective commentator on legal decisions but as a **proactive intellectual mechanism** capable of anticipating and shaping the normative horizon of the technological future.

In our view, the **technological revolution acts simultaneously as a catalyst for social progress and as a source of profound normative imbalances** that cannot be ignored in modern legal discourse. Its impact on the transformation of social norms is undeniable and multidimensional; however, the assessment of this impact must be comprehensive, taking into account not only the **innovative advantages** but also the **systemic risks** arising from digital transformation.

The unquestionably positive aspects include the enhancement of **communicative accessibility, mobility of social interaction, and transparency** of many public governance processes. Digitalization enables the rapid formation and dissemination of normative orientations, promotes **greater citizen participation** in the development of social rules (particularly through mechanisms of e-democracy), and allows for the creation of **new types of social norms**—flexible, situational, and contextualized (Frytskyi, 2021). In this sense, technology opens the prospect of **decentralized, horizontal normativity** that may better correspond to the complexity of postmodern society.

At the same time, the **negative aspects of technological influence on social norms** are no less significant. First of all, there is the threat of **norm creation without the participation of human will**, through program code, algorithms, and the architecture of digital platforms. This means that norms are increasingly established not as a result of collective consensus or legal procedure but through **technical decisions made by private companies** that are not accountable to society. Such transformation threatens the **loss of democratic control** over processes of social regulation (Baranov, Kostenko, Dubniak, 2023). Moreover, the **fragmentation of the normative field, inequality of access to information, and potential for manipulation** through digital environments indicate that the technological revolution not only generates new forms of normativity but also **undermines the authority of traditional norms**, including moral and legal ones.

4. Conclusions

In our view, one of the key tasks of modern legal theory is to search for such models of legal response that will make it possible to **reconcile the dynamics of technological development with the principles of normative legitimacy**. The goal is not to stop or slow down innovation,

but rather to embed mechanisms of **ethical, legal, and public accountability** into the technological environment (Bauman, 2000). This presupposes the development of **normative models for software code**, the creation of conditions for **transparent and controllable algorithmic functioning**, and the strengthening of **public participation in digital norm-making**.

Furthermore, we believe that **legal methodology itself requires renewal**. It is necessary to move from a rigidly formal to an **adaptive and situational approach** in regulating social processes. What should be decisive here is not stability per se, but the **ability of law to act effectively under conditions of change**, while ensuring the core principles of **justice, equality, freedom, and human dignity**.

In light of the above, we conclude that **understanding the transformation of social norms under the influence of the technological revolution** is an extremely relevant and necessary task for contemporary legal science. It has not only theoretical but also practical significance, as it allows for the development of **effective mechanisms of legal response to digital challenges** while preserving the **humanistic essence of law as a social regulator**.

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ЦИФРОВЕ СУСПІЛЬСТВО ЯК НОВИЙ ВИКЛИК ДЛЯ ПРАВОВОЇ РЕГУЛЯЦІЇ: ЗАГАЛЬНОТЕОРЕТИЧНИЙ АНАЛІЗ

Анотація. *Метою* цієї статті є здійснення загальнотеоретичного аналізу цифрового суспільства як соціального феномену, що трансформує структуру, природу та механізми правового регулювання; виявлення основних характеристик цифрової доби, які ускладнюють традиційні юридичні підходи; а також обґрунтування потреби у перегляді класичних парадигм праворозуміння, нормативності та соціального контролю в умовах цифрової трансформації. **Результати.** У результаті проведеного дослідження було теоретично обґрунтовано, що цифрове суспільство формує нову соціальну реальність, у межах якої відбувається трансформація не лише соціальних відносин, а й самої природи нормативності. Цифрова епоха змінює джерела, структуру та форми соціальних норм, що зумовлює появу нових викликів для традиційної правової системи. З'ясовано, що ключовими характеристиками цифрового суспільства є віртуалізація правовідносин, децентралізація владних повноважень, алгоритмізація управлінських рішень, зростання інформаційної надлишковості та виникнення нових форм суб'єктності. Ці чинники порушують сталі уявлення про суб'єкта права, межі правового регулювання та джерела легітимності. Показано, що технологічна революція виступає самостійним фактором трансформації соціальних норм, зумовлюючи появу нових (іноді неусвідомлених) нормативних структур, які функціонують поза межами юридичної сфери. Особливу увагу приділено феномену технічної нормативності коли регуляція поведінки відбувається через архітектуру цифрових платформ, а не через правову норму в класичному сенсі. Обґрунтовано, що виникнення нових суспільних ризиків таких як кіберзагрози, маніпулятивні алгоритми, автоматизовані рішення актуалізує необхідність гнучкого, адаптивного, випереджального правового реагування. **Висновки.** Зроблено висновок, що потребує оновлення правова методологія, а саме необхідно перейти від жорстко-формального до адаптивно-ситуаційного підходу в регулюванні соціальних процесів. Визначальною тут є не стільки стабільність, скільки здатність права ефективно діяти в умовах змін, забезпечуючи при цьому базові принципи: справедливість, рівність, свободу і гідність особи. З огляду на викладене, вважаємо, що осмислення трансформації соціальних норм під впливом технологічної революції є надзвичайно актуальним і потрібним завданням для сучасної правової науки. Воно має не лише теоретичне, а й прикладне значення, адже дозволяє розробити ефективні механізми правової відповіді на цифрові виклики, не втрачаючи при цьому гуманістичну сутність права як соціального регулятора.

Ключові слова: цифрове суспільство, правове регулювання, соціальна норма, гнучкість права, технологічна трансформація, алгоритмізація, правосуб'єктність у цифрову епоху, віртуалізація правовідносин, цифрові ризики, нормативна легітимація, технічне регулювання, право і технології, загальна теорія права.

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